

**2007 CALIFORNIA BUILDING STANDARDS CODE  
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**CODE APPLICATION NOTICE****FILE NO.:** 1-0**Subject:** Enforceable Codes**EFFECTIVE:** 06/19/08**Enforceable Codes**

The following are the enforceable codes for facilities under the authority of the Alfred E. Alquist Hospital Facilities Seismic Safety Act of 1983:

**Application** means the submission of a Preliminary or Final Application for Plan Review.

**APPLICATION**

**All applications submitted on or after January 1, 2008**

**CODE**

- 2007 California Administrative Code (CAC)**  
Part 1, Title 24, California Code of Regulations (CCR)
- 2007 California Building Code (CBC)**  
Part 2, Title 24, CCR  
(2006 IBC and 2007 California Amendments)
- 2007 California Electrical Code (CEC)**  
Part 3, Title 24, CCR  
(2005 NEC and 2007 California Amendments)
- 2007 California Mechanical Code (CMC)**  
Part 4, Title 24, CCR  
(2006 UMC and 2007 California Amendments)
- 2007 California Plumbing Code (CPC)**  
Part 5, Title 24, CCR  
(2006 UPC and 2007 California Amendments)
- 2007 California Fire Code (CFC)**  
Part 9, Title 24, CCR  
(2006 IFC and 2007 California Amendments)

**All applications submitted between March 17, 2007 and December 31, 2007.**

- 2007 California Administrative Code**  
Part 1, Title 24, CCR
- 2001 California Building Code**  
Part 2, Title 24, CCR  
(1997 UBC and 2001 California Amendments)
- 2004 California Electrical Code**  
Part 3, Title 24, CCR  
(2002 NEC and 2004 California Amendments)
- 2001 California Mechanical Code**  
Part 4, Title 24, CCR  
(2000 UMC and 2001 California Amendments)
- 2001 California Plumbing Code**  
Part 5, Title 24, CCR  
(2000 UPC and 2001 California Amendments)
- 2001 California Fire Code**  
Part 9, Title 24, CCR  
(2000 UFC and 2001 California Amendments)

**State of California**

**Office of Statewide Health Planning and Development**

**All applications submitted between August 1, 2005 and March 16, 2007**

- 2001 California Administrative Code**  
Part 1, Title 24, CCR
- 2001 California Building Code**  
Part 2, Title 24, CCR  
(1997 UBC and 2001 California Amendments)
- 2004 California Electrical Code**  
Part 3, Title 24, CCR  
(2002 NEC and 2004 California Amendments)
- 2001 California Mechanical Code**  
Part 4, Title 24, CCR  
(2000 UMC and 2001 California Amendments)
- 2001 California Plumbing Code**  
Part 5, Title 24, CCR  
(2000 UPC and 2001 California Amendments)
- 2001 California Fire Code**  
Part 9, Title 24, CCR  
(2000 UFC and 2001 California Amendments)

**All applications submitted between November 1, 2002 and July 31, 2005**

- 2001 California Administrative Code**  
Part 1, Title 24, CCR
- 2001 California Building Code**  
Part 2, Title 24, CCR  
(1997 UBC and 2001 California Amendments)
- 2001 California Electrical Code**  
Part 3, Title 24, CCR  
(1999 NEC and 2001 California Amendments)
- 2001 California Mechanical Code**  
Part 4, Title 24, CCR  
(2000 UMC and 2001 California Amendments)
- 2001 California Plumbing Code**  
Part 5, Title 24, CCR  
(2000 UPC and 2001 California Amendments)
- 2001 California Fire Code**  
Part 9, Title 24, CCR  
(2000 UFC and 2001 California Amendments)

**All applications submitted between July 1, 1999 and October 31, 2002**

- 1998 California Administrative Code**  
Part 1, Title 24, CCR
- 1998 California Building Code**  
Part 2, Title 24, CCR  
(1997 UBC and 1998 California Amendments)
- 1998 California Electrical Code**  
Part 3, Title 24, CCR  
(1996 NEC and 1998 California Amendments)
- 1998 California Mechanical Code**  
Part 4, Title 24, CCR  
(1997 UMC and 1998 California Amendments)
- 1998 California Plumbing Code**  
Part 5, Title 24, CCR  
(1997 UPC and 1998 California Amendments)
- 1998 California Fire Code**  
Part 9, Title 24, CCR  
(1997 UFC and 1998 California Amendments)

**State of California**

**Office of Statewide Health Planning and Development**

**All applications submitted  
between February 19, 1996 and  
June 30, 1999**

- 1995 California Administrative Code**  
Part 1, Title 24, CCR
- 1995 California Building Code**  
Part 2, Title 24, CCR  
(1994 UBC and 1995 California Amendments)
- 1995 California Electrical Code**  
Part 3, Title 24, CCR  
(1993 NEC and 1995 California Amendments)
- 1995 California Mechanical Code**  
Part 4, Title 24, CCR  
(1994 UMC and 1995 California Amendments)
- 1995 California Plumbing Code**  
Part 5, Title 24, CCR  
(1994 UPC and 1995 California Amendments)
- 1995 California Fire Code**  
Part 9, Title 24, CCR  
(1994 UFC and 1995 California Amendments)

**All applications submitted between  
December 28, 1995 and February  
18, 1996**

- 1995 California Administrative Code**  
Part 1, Title 24, CCR
- 1995 California Building Code**  
Part 2, Title 24, CCR  
(1994 UBC and 1995 California Amendments)
- 1995 California Electrical Code**  
Part 3, Title 24, CCR  
(1993 NEC and 1995 California Amendments)
- 1992 California Mechanical Code**  
Part 4, Title 24, CCR  
(1991 UMC and 1995 California Amendments)
- 1995 California Plumbing Code**  
Part 5, Title 24, CCR  
(1994 UPC and 1995 California Amendments)
- 1995 California Fire Code**  
Part 9, Title 24, CCR  
(1994 UFC and 1995 California Amendments)

**All applications submitted between  
August 14, 1992 and December 27,  
1995**

- 1992 California Administrative Code**  
Part 1, Title 24, CCR
- 1992 California Building Code**  
Part 2, Title 24, CCR  
(1991 UBC and 1992 California Amendments)
- 1991 California Electrical Code**  
Part 3, Title 24, CCR  
(1990 NEC and 1990 California Amendments)
- 1992 California Mechanical Code**  
Part 4, Title 24, CCR  
(1991 UMC and 1992 California Amendments)
- 1992 California Plumbing Code**  
Part 5, Title 24, CCR  
(1991 UPC and 1992 California Amendments)

**State of California**

**Office of Statewide Health Planning and Development**

**All applications submitted between June 30, 1991 and August 13, 1992**

- 1989 California Administrative Code**  
Part 1, Title 24, CCR
- 1989 California Building Code**  
Part 2, Title 24, CCR  
(1988 UBC and 1989 California Amendments)
- 1991 California Electrical Code**  
Part 3, Title 24, CCR  
(1990 NEC and 1990 California Amendments)
- 1989 California Mechanical Code**  
Part 4, Title 24, CCR  
(1988 UMC and 1989 California Amendments)
- 1989 California Plumbing Code**  
Part 5, Title 24, CCR  
(1988 UPC and 1989 California Amendments)

**All applications submitted between September 1, 1989 and June 29, 1991**

- 1989 California Administrative Code**  
Part 1, Title 24, CCR
- 1989 California Building Code**  
Part 2, Title 24, CCR  
(1988 UBC and 1989 California Amendments)
- 1989 California Electrical Code**  
Part 3, Title 24, CCR  
(1987 NEC and 1989 California Amendments)
- 1989 California Mechanical Code**  
Part 4, Title 24, CCR  
(1988 UMC and 1989 California Amendments)
- 1989 California Plumbing Code**  
Part 5, Title 24, CCR  
(1988 UPC and 1989 California Amendments)

**All hospital, SNF, ICF (excluding type V, single story wood or light steel frame SNF's and ICF's) applications submitted prior to September 1, 1989**

- 1985 Triennial edition of Part 1, Title 24, California Administrative Code (CAC)**
- 1979 UBC and 1985 Triennial edition of Part 2, Title 24, CAC**
- 1981 NEC and 1985 Triennial edition of Part 3, Title 24, CAC**
- 1985 UMC and 1987 Triennial edition of Part 4, Title 24, CAC**
- 1985 UPC and 1986 Supplement of Part 5, Title 24, CAC (based upon 1985 edition)**

**All type V, single story wood or light steel frame SNF and ICF applications submitted prior to September 1, 1989**

- 1985 Triennial edition of Part 1, Title 24, CAC**
- 1982 UBC and 1985 Triennial edition of Part 2, Title 24, CAC**
- 1981 NEC and 1985 Triennial edition of Part 3, Title 24, CAC**
- 1985 UMC and 1987 Triennial edition of Part 4, Title 24, CAC**
- 1985 UPC and 1986 Supplement of Part 5, Title 24, CAC (based upon 1985 edition)**

Original Signed \_\_\_\_\_ 06/19/08  
John D. Gillengerten \_\_\_\_\_ Date

**CODE APPLICATION NOTICE****Subject:** Original Reproducible Drawings**FILE NO.:** 1-7-125(d)**EFFECTIVE:** 06/19/08

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**CODE SECTIONS:** Sections 7-125(d) and 7-131(g),  
2007 California Administrative Code (CAC)

**7-125(d)** . . . The Office places its stamp on the original reproducible drawings and the master cover sheet of the specifications when they have been corrected to comply with these regulations. . . .

**7-131(g)** After the Office has made its check of the submitted documents and the applicant has corrected the originals accordingly, the stamp of the Office of Statewide Health Planning and Development, shall be placed on the original reproducible drawings and the master cover sheet of the specifications. . . .

**PURPOSE:**

To define the contemporary use of the term “original reproducible drawings”.

**BACKGROUND:**

In the past, “original reproducible drawings” were understood to be drawings produced by the manual use of pencil or pen on drafting paper or other similar material. The original document was unique because it was the product of direct manual drafting.

Reproduction was commonly performed through the use of a diazo-type blue-printing machine which would make blue-line prints from the original drawings. The blue-printing process involved a machine that “read” through the translucent original drawing paper and made opaque blue-lined copies. A limitation of the reproduction process was that copies could not be made from copies, only from the translucent originals. The original drawings were therefore irreplaceable.

Today, however, drawings are universally produced with Computer Aided Design and Drafting (CADD) programs. The drawings are developed on a computer screen, then printed for plan review, and ultimately contractor’s use. There is no unique, manually created original. Furthermore, the industry standard for reproduction is now a photographic process, which allows copies to be made from copies, as well as from the originals. Therefore, the term “original reproducible drawings” must be interpreted for contemporary use.

**INTERPRETATION:**

“Original reproducible drawings” as interpreted by OSHPD, are any documents that bear the stamp and signature of the design professionals responsible for their submission to OSHPD. For more information regarding stamp and signature requirements, see Section 7-115, 2007 CAC.

This new interpretation acknowledges that with today’s technology, **all** drawings can be considered as an original, and **all** drawings can be easily reproduced. The OSHPD

interest in this regard is **only** in confirming that the drawings in fact bear the stamp and signature of the design professionals required by Section 7-115 CAC prior to stamping the drawings with the OSHPD identification stamp.

The following are all acceptable scenarios to submit "original reproducible drawings" to OSHPD for approval:

1. One set of drawings with design professional's original stamp and wet-signature and one set of copies made from the wet-stamped drawings are presented to OSHPD.

OSHPD stamps all sheets of the wet-signed set, and returns them to the design professional with an approval letter. OSHPD also stamps the cover sheet of the print set, and retains the print set for OSHPD records.

2. Drawings are stamped and signed by the design professional and retained by the design professional's office. Two sets of copies made from those stamped and signed drawings are presented to OSHPD.

OSHPD stamps all sheets of one set, and returns them to the design professional with an approval letter. OSHPD also stamps the cover sheet of the other set, and retains that set for OSHPD records.

3. Drawings are stamped and signed by the design professional and retained by the design professional's office. One set of copies made from those originals are presented to OSHPD. (Alternately, the actual wet-signed drawings are presented to OSHPD)

OSHPD stamps the drawings, and returns to the design professional with a 'Confirmed Stamped' letter. The design professional then makes a copy from the OSHPD stamped set and submits it back to OSHPD. OSHPD issues an approval letter to design professional and retains copy of drawings for OSHPD records.

<u>Original Signed</u>	<u>06/19/08</u>
John D. Gillengerten	Date

**CODE APPLICATION NOTICE**

FILE NO.: 1-7-2100

Subject: Clinics

EFFECTIVE: 06/19/08

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**CODE SECTIONS:**

- a. Article 21, Plan Review, Building Inspection and Certification of Surgical Clinics, Chronic Dialysis Clinics and Outpatient Services Clinics, 2007 California Administrative Code (CAC)
- b. OSHPD 3 amendments, Section 1226, and other applicable provisions in the 2007 California Building Code (CBC)
- c. 2007 California Mechanical Code (CMC), including Tables 4-A and 4-B
- d. 2007 California Plumbing Code (CPC)
- e. 2007 California Electrical Code (CEC)
- f. 2007 California Fire Code (CFC)

**PURPOSE:**

The determination of which clinics and outpatient facilities are subject to the OSHPD 3 requirements found in the California Building Standards Code is complex. This results in a lack of consistency in application of the model code and OSHPD 3 requirements to clinic facilities, and uncertainty regarding the roles of the local building jurisdiction and OSHPD in the plan review, certification and construction inspection processes.

Confusion exists, in part, because the use of the generic terms “outpatient facilities and clinics.” The OSHPD 3 requirements found in the code apply only to those outpatient facilities and clinics that are licensed pursuant to Health and Safety Code Section 1200 or 1250. There are variables in statute and regulations regarding the use and licensing of these clinic facilities, making consistent application of the regulations complex.

Another source of confusion is that the applicability of certain requirements is determined by factors that are normally out of the scope of work of the building department and designer. For example, sources of financial reimbursement and the specific type of license a clinic owner desires to obtain determine what regulations apply and who has jurisdiction for the project.

**INTERPRETATION:**

In order to determine the applicability of OSHPD 3 requirements, it is necessary to know if the clinic facility is licensed, and if so, how it is licensed. OSHPD 3 requirements for clinics only apply to clinics that are licensed pursuant to Health and Safety Code (H&S) Section 1200 (which includes primary care clinics and specialty clinics) or H&S 1250 (which includes outpatient clinical services of a licensed hospital). Where the term “clinic” or “outpatient facility” is used relative to OSHPD 3 requirements in the California codes, it shall mean a clinic or outpatient facility licensed pursuant to H&S 1200 or 1250.

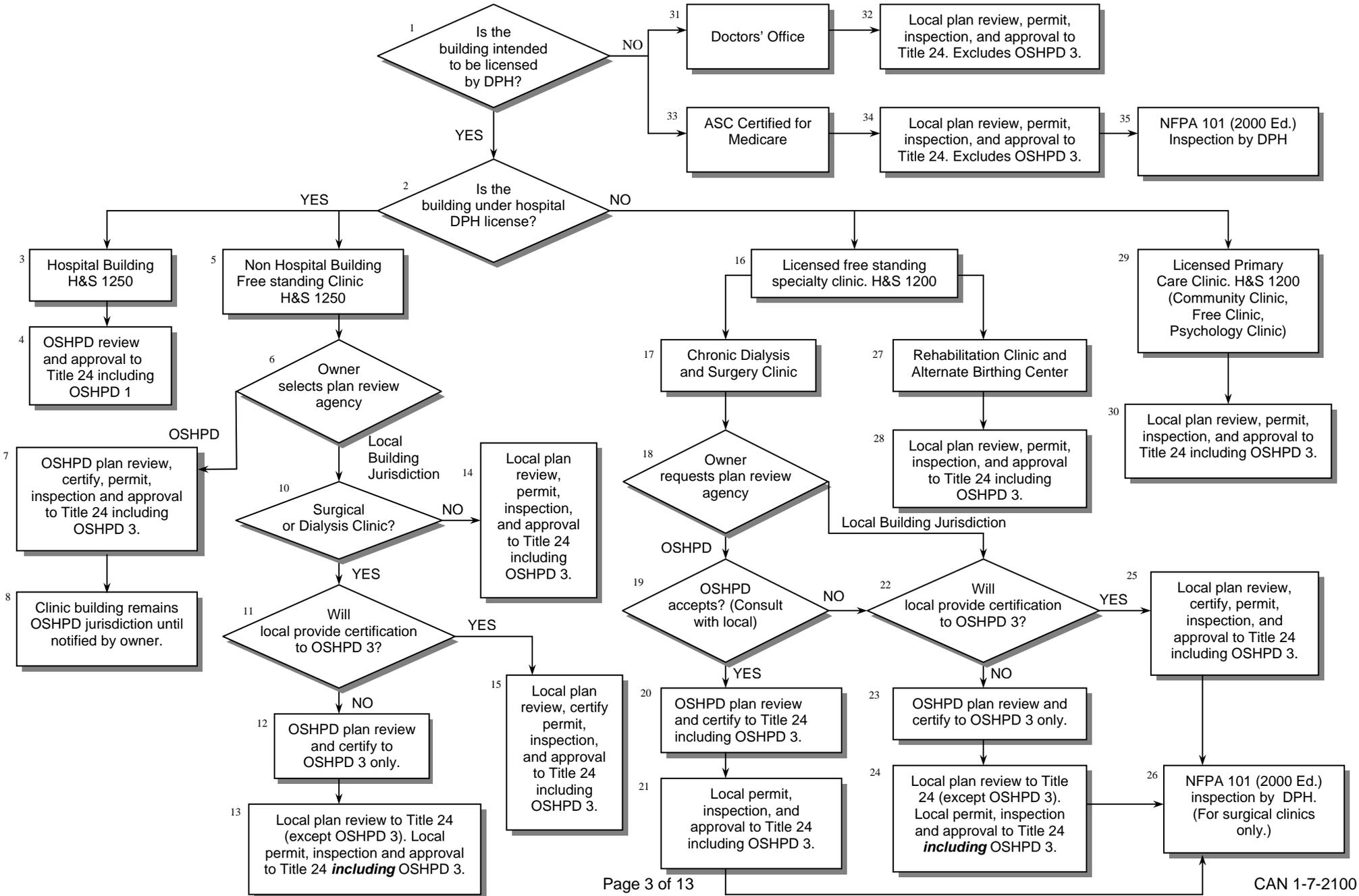
The application of OSHPD 3 requirements is independent of the determination of occupancy classification. A Group B Occupancy doctor’s office is subject to OSHPD 3 requirements if the office is licensed as a clinic pursuant to H&S 1200. Conversely, a surgical clinic classified as a Group I-2.1 occupancy is not subject to OSHPD 3 requirements if it is not licensed pursuant to H&S 1200 or 1250.



# California Medical Clinic Guidelines Plan Review, Approval, Inspection and Certification

(Note: Unless otherwise noted, compliance to CCR Title 24 including OSHPD 3 is required.)

Number at upper left hand corner of boxes indicate notes in following section.



**California Medical Clinic Guidelines****Plan Review, Approval, Inspection and Certification**

Explanatory Notes (Keyed to numbers at upper left corners of boxes on flowchart.)

Citations are from the Health and Safety Code and the California Administrative Code (CAC) Chapter 7.

1. If the clinic is not licensed by DPH, Licensing and Certification, compliance and certification to the requirements of OSHPD 3 are not required.
2. How a clinic is licensed will affect which sections of the regulations apply, how they are applied and by what agency (local building jurisdiction or OSHPD).
3. "Hospital building" is defined in Health and Safety Code section 1250. OSHPD preempts the local building jurisdiction for enforcement of the California Building Standards Code.
4. Hospital buildings are subject to OSHPD jurisdiction, and must comply with OSHPD 1 requirements in the 2007 CBC.
5. Free standing clinic buildings under the hospital license are normally subject to the local building jurisdiction, although they are licensed under Health and Safety Code section 1250.
6. The owner or governing authority may submit directly to the local building jurisdiction, or may select OSHPD to perform the plan review and certification for free standing hospital outpatient clinics.
7. If the governing authority selects OSHPD to perform the plan review and certification responsibilities for a free standing hospital licensed outpatient clinic, then the entire project, including plan review and approval (to Title 24 including OSHPD 3 requirements), building permit and construction inspection is under OSHPD jurisdiction. The requirement for written certification to OSHPD 3 requirements applies to surgical and dialysis clinics only.
8. Clinic buildings that have been reviewed by OSHPD will remain under the jurisdiction of the Office until the owner or governing authority notifies OSHPD otherwise in writing.
9. Not used.
10. Written certification of compliance to OSHPD 3 is required for surgical and dialysis clinics.
11. If plans are submitted to the local building jurisdiction, the local building jurisdiction must notify the owner or governing authority if their review will include written certification for OSHPD 3 conformance.

12. If the local building jurisdiction will not provide written certification to OSHPD 3 requirements, then plans shall be submitted to OSHPD for plan review and certification to OSHPD 3 requirements only. The local building jurisdiction shall review the plans for compliance to Title 24 excluding OSHPD 3.
13. Concurrent with OSHPD's review to OSHPD 3 requirements, the local building jurisdiction reviews the plans for compliance to Title 24, CCR, except OSHPD 3. The local building jurisdiction shall also issue the building permit and perform construction inspection to Title 24 including OSHPD 3 requirements.
14. Written certification from the local building jurisdiction to OSHPD 3 is not required for clinics other than surgical and dialysis clinics. However, conformance to OSHPD 3 requirements is required.
15. If the local building jurisdiction will provide written certification to OSHPD 3 requirements, then the entire project, including plan review and approval, building permit and construction inspection for the project is under the local building jurisdiction.
16. Licensed free standing specialty clinics are defined in Health and Safety Code Section 1200. Specialty clinics include surgical, chronic dialysis, and rehabilitation clinics and alternate birthing centers. All specialty clinics are required to conform to the requirements of OSHPD 3.
17. Written certification to OSHPD 3 is required for licensed surgical and dialysis specialty clinics and only these specialty clinics may be reviewed and certified by OSHPD.
18. The owner or governing authority must submit plans directly to the local building jurisdiction, or may request OSHPD to perform the plan review and certification for surgery and dialysis specialty clinics.
19. OSHPD must consult with the local building jurisdiction, and either accept or not accept the clinic project for plan review. One purpose for this consultation is to determine whether or not the local building jurisdiction will issue a building permit and inspect construction for a project for which OSHPD did the plan review. If the local building jurisdiction is unwilling or unable to do this, OSHPD cannot accept the review.
20. If, after consultation with the local building jurisdiction, OSHPD accepts plan review, then OSHPD must perform a complete plan review of Title 24 requirements, including OSHPD 3. The local building jurisdiction is not involved in plan review.
21. The local building jurisdiction must issue the building permit and perform construction inspection to Title 24 including OSHPD 3.

22. If plans are submitted to the local building jurisdiction, the local building jurisdiction must notify the owner or governing authority if their review will include certification for OSHPD 3 conformance.
23. If the local building jurisdiction will not provide written certification to OSHPD 3 requirements, then plans shall be submitted to OSHPD for plan review and certification to OSHPD 3 requirements only. The local building jurisdiction shall review the plans for compliance to Title 24 excluding OSHPD 3.
24. Concurrent with OSHPD's review to OSHPD 3 requirements, the local building jurisdiction reviews the plans for compliance to Title 24, CCR, except OSHPD 3. The local building jurisdiction shall also issue the building permit and perform construction inspection to Title 24 including OSHPD 3.
25. If the local building jurisdiction will provide written certification to OSHPD 3 requirements, then the entire project, including plan review and approval, building permit and construction inspection for the project is under the local building jurisdiction.
26. The Department of Public Health will inspect surgical clinics for compliance to NFPA 101.
27. Rehabilitation clinics and alternate birthing centers are not subject to OSHPD review or certification.
28. Rehabilitation clinics and alternate birthing centers are under the jurisdiction of the local building jurisdiction only. Conformance to OSHPD 3 is required.
29. Primary care clinics, as defined in Health and Safety Code Section 1200 are required to conform to the requirements of OSHPD 3, and certification to Primary Care Clinic OSHPD 3 may be required. Primary Care Clinics may include Community Clinics, and Free Clinics.
30. Primary Care Clinics are under the jurisdiction of the local building jurisdiction only. Conformance to OSHPD 3 is required.
31. Doctor offices not licensed as clinics are not subject to OSHPD 3 regulations or certification.
32. These buildings are reviewed by the local building jurisdiction, and are not subject to OSHPD 3 regulations or OSHPD plan review.
33. If an Ambulatory Surgical Center (ASC) licensed for Medicare reimbursement only is not licensed as a specialty clinic, conformance and certification to OSHPD 3 are not required.
34. These facilities are reviewed by the local building jurisdiction, and are not subject to OSHPD 3 regulations or OSHPD plan review.

35. The Department of Public Health will inspect Ambulatory Surgical Centers for compliance to NFPA 101.

**DEFINITIONS****Certification:**

**Certification for Medicare and/or Medicaid** – (Not related to OSHPD 3 certification requirements) A process to determine the eligibility of health care providers for reimbursement under the Medicare and/or Medicaid (Medi-Cal) programs. Certification for Medicare is provided by CMS, based on recommendation by DPH. Certification for Medi-Cal is provided by DPH.

**OSHPD 3:**

**Certification of Nonhospital Freestanding Building Outpatient Clinical Services (H&S 1250 and 129730):** A written document from the local building jurisdiction or OSHPD stating that design drawings, specifications and/or construction for surgical or dialysis services licensed clinics are in compliance with applicable OSHPD 3 requirements. This certification is only for OSHPD 3 requirements, and is in addition to the normal plan review process provided by the local building official. Certification to OSHPD 3 requirements is a completely separate process from certification for Medicare and/or Medicaid.

**Certification of Licensed Freestanding Specialty Clinics (H&S 1200):** A written document from the local building jurisdiction or OSHPD stating that design drawings, specifications and/or construction for surgical or dialysis licensed clinics are in compliance with applicable OSHPD 3 requirements. This certification is only for OSHPD 3 requirements, and is in addition to the normal plan review process provided by the local building jurisdiction. Certification to OSHPD 3 requirements is a completely separate process from certification for Medicare and/or Medicaid.

**Certification to Primary Care Clinic (H&S 1200)** – A primary clinic may establish compliance with the minimum construction standards of adequacy and safety for the physical plant by submitting written certification from a licensed architect or a written statement from a local building jurisdiction that design drawings, specifications and/or construction for specified licensed clinics are in compliance with applicable OSHPD 3 requirements

**Clinic** – An outpatient health facility which provides direct medical, surgical, dental, optometric, or podiatric advice, services, or treatment to patients who remain less than 24 hours. (H&S 1200.1) (See also Outpatient Clinical Services of a Licensed Hospital.)

**Dental Clinic** – Provides comprehensive dental services, and is licensed as a Primary Care Clinic by DPH. A Dental Office provides comprehensive dental services to patients, but is not a licensed clinic.

**Employee Clinic** – Operated by an employer or jointly by two or more employers for their employees only, or by a group of employees, or jointly by employees and employers, without profit to the operators thereof or to any other person, for the

prevention and treatment of accidental injuries to, and the care of the health of, the employees comprising the group. Employee clinics are specifically exempted from licensure requirements of H&S Code, Division 2, Chapter 1, Clinics. (H&S 1206(n))

**Optometric Clinic** – Provides comprehensive eye services to patients. May be licensed as a Primary Care Clinic or Surgical Clinic. An Optometric Office provides optometric services, but is not a licensed clinic.

**Primary Care Clinic** – Clinics specified in subdivision (a) of Health and Safety Code Section 1204:

**Community Clinic** – a clinic operated by a tax-exempt nonprofit corporation that is supported and maintained in whole or in part by donations, bequests, gifts, grants, government funds or contributions, that may be in the form of money, goods, or services. In a community clinic, any charges to the patient shall be based on the patient's ability to pay, utilizing a sliding fee scale. No corporation other than a nonprofit corporation, exempt from federal income taxation under paragraph (3) of subsection (c) of Section 501 of the Internal Revenue Code of 1954 as amended, or a statutory successor thereof, shall operate a community clinic; provided, that the licensee of any community clinic so licensed on the effective date of this section shall not be required to obtain tax-exempt status under either federal or state law in order to be eligible for, or as a condition of, renewal of its license. No natural person or persons shall operate a community clinic. (H&S 1204(a)(1))

**Free Clinic** – a clinic operated by a tax-exempt, nonprofit corporation supported in whole or in part by voluntary donations, bequests, gifts, grants, government funds or contributions, that may be in the form of money, goods, or services. In a free clinic there shall be no charges directly to the patient for services rendered or for drugs, medicines, appliances, or apparatuses furnished. No corporation other than a nonprofit corporation exempt from federal income taxation under paragraph (3) of subsection (c) of Section 501 of the Internal Revenue Code of 1954 as amended, or a statutory successor thereof, shall operate a free clinic; provided, that the licensee of any free clinic so licensed on the effective date of this section shall not be required to obtain tax-exempt status under either federal or state law in order to be eligible for, or as a condition of, renewal of its license. No natural person or persons shall operate a free clinic. (H&S 1204(a)(2))

**Psychology Clinic** – a clinic which provides psychological advice, services, or treatment to patients, under the direction of a clinical psychologist as defined in Section 1316.5, and is operated by a tax-exempt nonprofit corporation which is supported and maintained in whole or in part by donations, bequests, gifts, grants, government funds, or contributions which may be in the form of money, goods, or services. In a psychology clinic, any charges to the patient shall be based on the patient's ability to pay, utilizing a sliding fee scale. No corporation other than a nonprofit corporation, exempt from federal taxation under paragraph (3), subsection (c) of Section (501 of the Internal Revenue Code of 1954, as amended, or a statutory successor thereof, shall operate a psychology clinic. (H&S 1204.1)

Psychology clinics are eligible for licensure pursuant to H&S Code, Division 2, Chapter 1, Clinics, but are not required to be licensed. (H&S 1206.1)

**Specialty Clinic** – Types of clinics specified in Health and Safety code subdivision (b) of Section 1204, including surgical clinics, chronic dialysis clinics, rehabilitation clinics and alternate birth centers. Specialty clinics must be licensed by Department of Public Health, **EXCEPT** for surgical clinics that are under a physician's medical license or corporation.

**Alternative Birth Center (ABC's)** – a clinic that provides comprehensive perinatal services and delivery care to pregnant women who remain less than 24 hours at the facility (H&S 1204(b)(4)).

**Chronic Dialysis Clinic (ESRD, End-Stage Renal Dialysis)** – a clinic that provides less than 24-hour care for the treatment of patients with end-stage renal disease, including renal dialysis services. (H&S 1204(b)(2))

**Rehabilitation Clinic** – A clinic that, in addition to providing medical services directly, also provides physical rehabilitation services for patients who remain less than 24 hours. Rehabilitation clinics shall provide at least two of the following rehabilitation services: physical therapy, occupational therapy, social, speech pathology, and audiology services. A rehabilitation clinic does not include the offices of a private physician in individual or group practice. (H&S 1204(b)(3))

**Surgical Clinic** – Provides ambulatory surgical care for patients who remain less than 24 hours. A surgical clinic does not include any place or establishment owned or leased and operated as a clinic or office by one or more physicians or dentists in individual or group practice, regardless of the name used publicly to identify the place or establishment, provided, however, that physicians or dentists may, at their option, apply for licensure. (H&S 1204(b)(1))

**Health and Safety Code Section 1200** (and following) – Pertains to licensed clinics not under a hospital license.

**Health and Safety Code Section 1250** (and following) – Pertains to "health facilities," which include general acute care hospitals, and outpatient clinics under a hospital license.

**Hospital Building** – Hospital building is any building used for a health facility of a type required to be licensed pursuant to Section 1250 of the Health and Safety Code. The facility may also need to comply with NFPA 101 requirements for CMS and JCAHO standards under the Environment of Care. "Hospital building" does not include any building in which outpatient clinical services of a health facility licensed pursuant to Section 1250 are provided that is separated from a building in which hospital services are provided. If any one or more outpatient clinical services in the building provide services to inpatients, the building shall not be included as a "hospital building" if those services provided to inpatients represent no more than 25 percent of the total outpatient visits provided at the building. Hospitals shall maintain on an ongoing basis, data on the

patients receiving services in these buildings, including the number of patients seen, categorized by their inpatient or outpatient status. Hospitals shall submit this data annually to the Department of Public Health.

**License** – A written authorization to operate a health facility and/or clinic issued by the Department of Public Health.

**Local** – See Local Building Jurisdiction.

**Local Building Jurisdiction (LBJ)** – city, county, or city and county building department, and fire authority responsible for enforcing the California Building Standards Code.

**National Fire Protection Association (NFPA) STANDARD #101** – Life Safety Code, published by NFPA. Inspections for compliance to 2000 edition of NFPA 101 are performed by DPH.

**Outpatient Clinical Services of a Licensed Hospital** – A service under a hospital license that provides non-emergency health care services to patients. The Clinic needs to comply with Title 24 requirements including OSHPD 3. NFPA 101 requirements for CMS and JCAHO standards under the Environment of Care may also be applicable. The number of inpatients may represent no more than 25% of the total number of patients served by the clinic. Services provided may include those enumerated in Health and Safety Code section 129730.

**OSHPD 3** – Regulations promulgated by OSHPD that apply to licensed clinics and hospital outpatient clinical services provided in freestanding, nonhospital building. See Title 24, Parts 1, 2, 3, 4 and 5 for requirements.

**Title 24 (T24)** – California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code. It includes the following parts:

Part 1 – California Building Standards Administrative Code

Part 2 – California Building Code

Part 3 – California Electrical Code

Part 4 – California Mechanical Code

Part 5 – California Plumbing Code

Part 6 – California Energy Code

Part 7 – California Elevator Safety Construction Code (See Title 8 CCR)

Part 8 – California Historical Building Code

Part 9 – California Fire Code

Part 10 – California Code for Building Conservation

Part 12 – California Reference Standards Code

## Roles of Agencies Involved

**California Medical Board** – Responsible for licensing physicians to provide medical care.

**Department of Public Health (DPH)** – Verifies that operational requirements are met and issues a license to operate a licensed clinic. DPH also conducts the life safety portion of the survey, enforcing the 2000 edition of NFPA 101, Life Safety Code. Clinics must meet both State and Federal standards as a condition of participation in the Medicare program.

**Local Building Jurisdiction (LBJ)** – Responsible for plan review, building permit issuance, building construction inspection, and issuance of certificate of occupancy. A written certification of conformance with OSHPD 3 amendments is required for Surgical and Dialysis Clinics. When the local building jurisdiction provides certification, it shall certify within 30 days of the completion of construction that the applicable clinic provisions have been met. The local building jurisdiction may choose not to provide this certification, requiring submittal to OSHPD for plan review and certification.

**Local fire department** – Enforces all fire and life safety requirements of SFM in Title 24.

**Office of Statewide Health Planning and Development (OSHPD)** – In consultation with the Community Clinics Advisory Committee, OSHPD shall prescribe minimum construction standards of adequacy and safety for the physical plant of clinics as found in the California Building Standards Code. Additionally, OSHPD may perform a role in the plan review, building inspection and certification process as described in Title 24, Part 1, Article 21, “Plan Review, Building Inspection and Certification of Surgical Clinics, Chronic Dialysis Clinics and Outpatient Services Clinics.”

**ACRONYMS**

<b>ABC</b>	Alternative Birthing Center
<b>ASC</b>	Ambulatory Surgical Center
<b>CCR</b>	California Code of Regulations
<b>CMS</b>	Center for Medicare/Medicaid Services (formerly known as Healthcare Financing Association (HCFA))
<b>DPH</b>	Department of Public Health
<b>ESRD</b>	End Stage Renal Dialysis
<b>H&amp;S</b>	Health and Safety Code
<b>JCAHO</b>	Joint Commission Accreditation Hospitals and Organizations known as the Joint Commission
<b>LBJ</b>	Local Building Jurisdiction
<b>NFPA</b>	National Fire Protection Association
<b>OSHPD</b>	Office of Statewide Health Planning and Development
<b>SFM</b>	State Fire Marshal

**CODE APPLICATION NOTICE****Subject:** Installation of Combustion Engines  
and Gas Turbines**FILE NO.:** 2-432.1  
(Previously 2-413A.1)  
**EFFECTIVE:** 06/19/08**CODE SECTIONS:** Sections 432.1, 2702.1, 2007 California Building Code  
Section A.1.3.1 of Annex A, NFPA-37, 2002 Edition***2007 California Building Code*****SECTION 432 COMBUSTION ENGINES AND GAS TURBINES****432.1 General.** *The installation of combustion engines and gas turbines shall be in accordance with NFPA-37 and this chapter.***SECTION 2702 EMERGENCY AND STANBY POWER SYSTEMS****2702.1 Installation.** Emergency and standby power systems required by this code or the *California Fire Code* shall be installed in accordance with this code, NFPA 110 and 111.**NFPA 37, 2002 Edition****Annex A Explanatory Material****A.1.3.1** ...For engines used in essential electrical systems in health care facilities, also see NFPA-99, *Standard for Health Care Facilities*. For engines used in emergency power supplies, also see NFPA 110, *Standard for Emergency Standby Power Systems*.**PURPOSE:**

The code does not specifically state which special provisions of NFPA 99, 2005 shall be enforced for essential electrical systems. In addition, appropriate sections from NFPA 110, 2005 edition, are enforced when current code or NFPA 99 does not specifically cover a subject relating to on-site generator sets.

**INTERPRETATION:**

For engines used in essential electrical systems in health care facilities, the following special provisions of NFPA 99, 2005 edition shall be enforced by the Office:

- (a) Section 4.4.1.1.10 Load Pickup
- (b) Section 4.4.1.1.11 Maintenance of Temperature
- (c) Section 4.4.1.1.12 Heating, Cooling, and Ventilating
- (d) Section 4.4.1.1.13 Cranking Batteries
- (e) Section 4.4.1.1.16 Requirements for Safety Devices
- (f) Section 4.4.1.1.17 Alarm Annunciator

In addition, the following requirements of the 2005 NFPA 110 Standard for Emergency and Standby Power Systems will be applied.

- (a) Section 5.3 Energy Converters - Temperature.
- (b) Section 5.5 Energy Converters - Fuel Supply
- (c) Section 5.6 Rotating equipment (Option: Safety devices may comply with either 2005 NFPA-99 Section 4.4.1.1.16 or 2005 NFPA 110, Sections 5.6.5 and 5.6.6)
- (d) Section 7.2.5 Location, clearances
- (e) Section 7.8 EPS cooling system
- (f) Sections 7.9.2 & 7.9.2.1 and 7.9.4, 7.9.4.1, & 7.9.4.2 Fuel system (see Note below)
- (g) Section 7.10.4 Exhaust system backpressure
- (h) Section 7.12 Distribution

Note: The minimum required fuel supply for generator sets shall comply with Article 700.12(B)(2) of the 2007 CEC, Exceptions 1-3.

For additional requirements related to combustion engines and gas turbines, refer to CAN 3-700.4(A).

<u>Original Signed</u>	<u>06/19/08</u>
John D. Gillengerten	Date

**CODE APPLICATION NOTICE**

FILE NO.: 2-11B

**Subject:** Accessibility in Health Facilities**EFFECTIVE:** 8-22-08

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**CODE SECTIONS**

- A. Chapter 2, 2007 California Building Code (CBC): Section 202
- B. Chapter 11B, 2007 CBC: Sections 1109B.2, 1109B.3, 1109B.5, 1109B.6, 1123B.1, 1115B.4, 1123B.2, 1134B.1, 1134B.2, 1134B.2.1 Exception 1, 1134B.2.1 Exception 4, and 1134B.2.2.

**BACKGROUND**

The Division of the State Architect – Access Compliance (DSA – AC) adopts code requirements relating to accessibility for persons with disabilities. The purpose of these code requirements is to ensure that barrier-free design is incorporated in all buildings, facilities, site work, additions, alterations, and structural repairs. The Office of Statewide Health Planning and Development (OSHPD) enforces the DSA – AC accessibility code requirements for hospitals, skilled nursing facilities, and intermediate care facilities. OSHPD does not have authority to enforce the provisions of the Americans with Disabilities Act (ADA), which is enforced by the federal government. Health facilities are responsible for compliance with the ADA and any local jurisdiction requirements.

**PURPOSE**

The purpose of this Code Application Notice (CAN) is to clarify and interpret code sections in the 2007 California Building Code (CBC) to provide consistent interpretation and application of regulations for accessibility as they relate to the construction and alteration of health facilities under the jurisdiction of OSHPD.

**NOTE**

Unless otherwise noted, all code sections cited in this CAN are from the 2007 CBC. Code section language requiring interpretation is shown in *italics* followed by OSHPD's interpretation. In some instances, an entire code section is interpreted. In other instances, specific language within the code section is interpreted. For these instances, the specific language within the code section is identified in **bold underlined italics** followed by the interpretation.

The interpretations contained in this CAN shall not be applied to the 2001 CBC.

**CHAPTER 2  
DEFINITIONS****CODE SECTION: 202 DEFINITIONS – ALTERATION or ALTER**

**ALTERATION or ALTER.** Any construction or renovation to an existing structure other than repair or addition.

**[DSA-AC]** “ALTERATION or alter” is any change, addition or modification in construction or occupancy or **structural repair** or **change in primary function** to an existing structure made by, on behalf of or for the use of a public accommodation or commercial facility that affects or could affect the usability of the building or facility or part thereof. Alterations include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, changes or rearrangement of the structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions.

**INTERPRETATION****Structural repair**

See Section 1134B.1 of this CAN.

**Change in primary function**

A change in primary function is a change in the major activity for which the room, space, unit, or facility is intended. A change in primary function can occur regardless of whether or not construction is performed. Examples of a change in primary function include the following: changing a patient bedroom to a storage room; changing a nursing service space to an administrative space; changing an intensive care unit to a perinatal unit; and changing a general acute-care hospital to a skilled nursing facility. Changing patient bedrooms in a nursing service space from nursing to antepartum and postpartum bedrooms is not a change in primary function.

Placing patient bedrooms in suspense without performing construction and not using the space during the period they are in suspense is not a change in primary function and does not initiate compliance with accessibility requirements. Placing patient bedrooms in suspense without construction and using the space for another purpose during the period they are in suspense may be a change in primary function and may initiate compliance with accessibility requirements. For example, if the suspended patient bedroom contains an adjoining toilet room and the bedroom is used as a waiting room, the adjoining toilet room must be accessible. If the suspended patient bedroom is used as an office, the adjoining toilet room is not required to be accessible. Removing patient bedrooms from suspense without performing construction is not a change in primary function and does not initiate compliance with accessibility requirements. Compliance with Section 1134B is required if construction is performed in placing patient bedrooms in suspense or removing them from suspense.

**CODE SECTION: 202 DEFINITIONS – UNREASONABLE HARDSHIP**

***UNREASONABLE HARDSHIP [DSA-AC]*** exists when the enforcing agency finds that compliance with the building standard would make the specific work of the project affected by the building standard infeasible, based on an overall evaluation of the following factors:

1. *The cost of providing access.*
2. *The cost of all construction contemplated.*
3. *The impact of proposed improvements on financial feasibility of the project.*
4. *The nature of the accessibility which would be gained or lost.*
5. *The nature of the use of the facility under construction and its availability to persons with disabilities.*

*The details of any finding of unreasonable hardship shall be recorded and entered in the files of the enforcing agency.*

**INTERPRETATION**

Two types of unreasonable hardship exist in the 2007 CBC. One type, as defined in Section 202, applies to all projects regardless of the construction cost of the project. The second type applies to alterations, structural repairs, or additions that do not exceed a valuation threshold specified in Section 1134B.2.1, Exception 1.

1. All Projects

All projects, regardless of construction cost, are eligible for unreasonable hardship as defined in Section 202. Requests for unreasonable hardship for accessibility requirements must be submitted by the applicant to the OSHPD Region Supervisor on OSHPD Form OSH-FD-800 "Application for Unreasonable Hardship Exception to Accessibility Requirements." Such finding of unreasonable hardship does not constitute a waiver from other applicable accessibility code requirements.

Unless otherwise specified in the code, equivalent facilitation must be provided when unreasonable hardship is requested and granted. Section 1102B defines equivalent facilitation as "an alternate means of complying with the literal requirements of these standards and specifications that provides access in terms of the purpose of these standards and specifications." In some instances, the code specifies the equivalent facilitation requirements. In instances where the code does not specify the equivalent facilitation requirement, the applicant requesting the unreasonable hardship must propose the means by which equivalent facilitation will be achieved. The proposed equivalent facilitation must be submitted with the request for unreasonable hardship.

2. Alterations, Structural Repairs, or Additions Below Valuation Threshold

See Section 1134B.2.1, Exception 1 of this CAN.

**SECTION 1109B  
ACCESSIBILITY FOR GROUP "I" OCCUPANCIES****CODE SECTION: 1109B.2 Entrance**

**1109B.2 Entrance.** *At least one accessible entrance shall be protected from the weather by canopy or roof overhang. Such entrances shall incorporate a passenger loading zone. Passenger loading zones shall provide an access aisle at least 60 inches (1524mm) wide and 20 feet (6096mm) long adjacent and parallel to the vehicle pull-up space. If there are curbs between the access aisle and the vehicle pull-up space, then a curb ramp complying with Chapter 11B shall be provided. Vehicle standing spaces and access aisles shall be level with surface slopes not exceeding one unit vertical in 50 units horizontal (2-percent slope) in all directions. Minimum vertical clearance of 114 inches (2896 mm) at accessible passenger loading zones and along vehicle access routes to such areas from site entrances shall be provided.*

**INTERPRETATION**

1. Section 1109B.2 requires **at least one accessible entrance** to be provided with weather protection, passenger loading zone, and vehicle pull-up space. The code does not require more than one entrance with these features.
2. The protected accessible entrance is not required to be the primary entrance to the facility.
3. Only the passenger loading zone is required to be protected from the weather. The vehicle pull-up space is not required to be protected from the weather.
4. For existing buildings that do not have a protected accessible entrance, projects subject to Section 1134B, are not required to provide one. A protected accessible entrance is required when an addition is proposed for a facility that does not have an existing protected accessible entrance. The protected accessible entrance may be provided at the addition or at an appropriate location in the existing building.

**CODE SECTION: 1109B.3 Patient Bedrooms and Toilet Rooms**

**1109B.3 Patient bedrooms and toilet rooms.** *Patient bedrooms and associated toilet facilities shall be made accessible as follows:*

1. *Long-term-care facilities, including skilled nursing facilities, intermediate care facilities, bed and care, and nursing homes shall have at least 50 percent of patient bedrooms and toilet rooms, and all public use and common use areas, accessible.*

2. *General-purpose hospitals, psychiatric facilities, and detoxification facilities shall have at least 10 percent of patient bedrooms and toilets, and all public use and common use areas accessible.*
3. *Hospitals and rehabilitation facilities that specialize in treating conditions that affect mobility, or units within either that specialize in treating conditions that affect mobility, shall have all patient bedrooms and toilet and all public use and common use areas accessible.*

## INTERPRETATION

1. The following hospital patient bedrooms and their associated toilet rooms are subject to the 10 percent requirement indicated in Section 1109B.3, item 2 above:
  - A. Nursing Service Space patient bedrooms (general acute care bedrooms)
  - B. Labor/delivery/recovery/postpartum rooms (LDRP)
  - C. Individually enclosed Intensive-care rooms with or without adjoining accessible toilet rooms
2. The CBC does not specify where or how accessible patient bedrooms must be distributed throughout the facility. The hospital owner and design professional must decide where and how accessible patient bedrooms should be distributed.
3. Only the patient bedrooms designated as accessible are required to comply with accessibility requirements (Sections 1109B.4, 1109B.5, 1133B.2.4.2, and 1133B.2.4.3)
4. When patient bedrooms are added or altered, the requirements of 1109B.3 shall apply to only the patient bedrooms being added or altered and shall be consistent with the percentages required by 1109B.3.

Example: In a hospital with 100 acute care bedrooms, of which only 5 are currently accessible, 20 acute-care patient bedrooms are proposed to be altered in the obstetrics department.

As required by 1109B.3, two of the altered acute-care bedrooms must be made accessible (10% of 20). As a result, the facility would then have 7% of the acute care patient bedrooms accessible. Future remodel projects would continue to be subject to the 10% requirement, until the 10% requirement for the entire facility has been met.

5. If a facility is already in compliance with the percentages required by 1109B.3 as calculated for the entire building, then future remodel projects are not required to provide accessibility beyond the percentages required in 1109B.3.

Example: In a hospital with 100 acute-care bedrooms of which 10 are currently accessible, 20 existing acute-care obstetrics patient bedrooms are proposed to be altered.

None of the altered obstetrics patient bedrooms need to be made accessible, because the facility can already demonstrate facility-wide compliance. Note that the project may not remove accessible patient bedrooms from service if the result would be to drop below the 10% requirement.

6. The requirements in Section 1109B.3 are to be calculated independently of each other. For example, an excess of long-term care bedrooms (50% required to be accessible) shall not be used to compensate for a lack of general acute-care bedrooms (10% required to be accessible).

Example: In a hospital with 100 bedrooms, 80 bedrooms are acute-care, of which 5 are accessible, and 20 bedrooms are in a distinct part skilled nursing facility (SNF) of which all 20 are currently accessible. The facility proposes to remodel 20 of the acute-care patient bedrooms, none of which are currently accessible.

Two of the 20 remodeled bedrooms must be made accessible to meet the 10% requirement (10% of acute-care bedrooms being remodeled). The fact that the facility has exceeded the 50% requirement for long-term care patient bedrooms, does not allow the facility to provide less than 10% of accessible patient bedrooms in acute-care. As a result, the facility would then have 7 accessible acute-care bedrooms out of 80, still short of the 10% requirement. Future remodel projects would continue to be subject to the 10% requirement, until the 10% acute care standard has been met.

7. The requirements in Section 1109B.3 are based on patient bedrooms, not patient beds. Placing more than one bed in a patient bedroom does not affect the requirements of 1109B.3.

## **CODE SECTION: 1109B.5 Patient Toilet Rooms and Bathing Facilities**

**1109B.5 Patient toilet rooms and bathing facilities.** *Patient toilet rooms and bathing facilities required to be accessible shall comply with Section 1115B.*

### **INTERPRETATION**

#### ***Required to be accessible***

Patient toilet rooms and bathing facilities that are accessed from patient bedrooms that are not required to be accessible are not subject to the accessibility requirements of Section 1115B.

Patient toilet rooms adjoining intensive care patient sleeping rooms are not required to be accessible.

#### **CODE SECTION: 1109B.6 Diagnostic and Treatment Areas**

**1109B.6 Diagnostic and treatment areas.** Diagnostic and treatment areas and, where applicable, at least one dressing room, sanitary facility, etc., for each unit or suite, shall be made accessible.

#### **INTERPRETATION**

Diagnostic and treatment areas include but are not limited to: exam rooms, treatment rooms, imaging rooms, operating rooms, emergency rooms, post anesthesia recovery rooms/units, dialysis rooms/units, infusion rooms/units, labor/delivery/recovery rooms and observation rooms/units. All (100%) diagnostic and treatment rooms shall be accessible. Toilet rooms that are accessed from a diagnostic and treatment room shall also be accessible.

Where applicable refers to dressing rooms, sanitary facilities etc. that are required by the code **and** to those that are provided voluntarily. For example, Section 1224.18.1, item 7, requires dressing rooms be provided in a radiology unit. If multiple dressing rooms are provided, at least one shall be made accessible. If the facility voluntarily provides two dressing rooms in a unit that is not required to have dressing rooms, at least one shall be made accessible.

For each unit or suite means the dressing room, sanitary facility, etc. must be located within the unit and be readily available to the patient, staff, or public, as applicable. The dressing room, sanitary facility, etc. shall not be in a location that will limit its use to a single diagnostic or treatment room. For example, the toilet room adjoining the fluoroscopy room cannot be used to serve the entire unit or suite.

#### **SECTION 1115B BATHING AND TOILET FACILITIES (SANITARY FACILITIES)**

#### **CODE SECTION: 1115B.4.3 Accessible Lavatories**

**1115B.4.3 Accessible lavatories.** *Lavatories required to be accessible shall comply with this subsection. The requirements of this subsection shall apply to lavatory fixtures, vanities and built-in lavatories.*

**INTERPRETATION**

1. Application: The requirements of Section 1115B.4.3 applies to all lavatories, sinks, and handwashing fixtures for public use, patient use, and employee use, unless otherwise specifically exempted by the code. Lavatories, sinks, and handwashing fixtures are, by their nature, “common use” areas, and therefore, require accessibility.

Exceptions:

- A. Kitchen sinks.  
(See Section 1115B.4.7 item 1 for requirements)
- B. Non-commercial kitchen and counter bar sinks.  
(See Section 1115B.4.7 item 2 for requirements)
- C. Scrub Sinks  
(Due to impracticality)
- D. Specific Work Stations  
(See Section 1123B.2 for requirements)  
This applies only where the sink is the actual work station.

Example: A sink used exclusively for cleaning endoscopes. The sink is the actual area where the work is performed; as opposed to a place where the employee cleans up before and after performing their work elsewhere in the room.

2. Knee space required: All accessibility requirements of Section 1115B.4.3 applies to lavatories, sinks, and hand washing fixtures required to be accessible, specifically including Section 1115B.4.3 item 2 as noted below:

*“...All lavatories that are designated to be accessible shall be a minimum 17 inches (432 mm) in horizontal depth and mounted with the rim or counter edge no higher than 34 inches (864 mm) above the finished floor and with vertical clearance measured from the bottom of the apron or outside edge of the lavatory of 29 inches (737 mm) reducing to 27 inches (686 mm) at a point located 8 inches (203 mm) back from the front edge. In addition, a minimum 9- inch- high (203 mm) toe clearance must be provided extending back toward the wall to a distance no more than 6 inches (150 mm) from the back wall. Toe clearance space must be free of equipment or obstructions.”*

**SECTION 1123B  
ACCESS TO EMPLOYEE AREAS****CODE SECTION: 1123B.1 General**

**1123B.1 General.** Employee areas shall conform to all requirements of Division of the State Architect – Access Compliance in the California Building Code, Plumbing Code and Electrical Code.

**INTERPRETATION****Employee areas**

Doctor's sleep rooms or "on call" rooms are a unique form of employee areas. Section 1109B specifies accessibility requirements for various areas within hospitals but does not specify requirements for doctor's sleep rooms. Section 1103B.1 states that when a facility contains more than one use, the occupancy specific accessibility provisions for each portion of the facility shall apply. Doctor's sleep rooms most closely resemble transient lodging described in Section 1111B.4. Transient means temporary, or brief and best describes the manner in which these sleeping rooms are used. For the purpose of determining accessibility requirements, doctor's sleep rooms and their associated sanitary facilities shall comply with Section 1111B.4.2 and Table 11B-3.

**CODE SECTION: 1123B.2 Work Stations**

**1123B.2 Work stations.** Specific work stations need only comply with aisle width (Sections 1133B.6.1 and 1133B.6.2) and floors and levels (Section 1120B), and entryways shall be 32 inches (813 mm) in clear width.

**INTERPRETATION**

**Specific work stations** in health facilities include, but are not limited to: nurses' stations, operating room tables, counters in clinical laboratories, imaging equipment, and control/work stations in imaging rooms. For imaging equipment, the aisle width requirements shall apply to only those sides of the equipment where staff typically work to provide medical care to patients.

Work Station definition in Section 1102B states that a Work Station is "...generally for one or a small number of employees." Therefore, a specific work station is not typically interpreted as an entire room.

**SECTION 1134B  
ACCESSIBILITY FOR EXISTING BUILDINGS****CODE SECTION: 1134B.1 Scope**

**1134B.1 Scope.** *The provisions of this division apply to renovation, structural repair, alteration and additions to existing buildings, including those identified as historic buildings. This division identifies minimum standards for removing architectural barriers, and providing and maintaining accessibility to existing buildings and their related facilities.*

**INTERPRETATION****Structural repair**

For the purposes of this CAN, structural repair is divided into two categories – structural work and nonstructural work.

**1. Structural Work:**

In Attorney General's Opinion Number 94-1109, dated May 10, 1995, the Attorney General for the State of California concluded that seismic strengthening work in an existing building constitutes a "building alteration, structural repair or addition" for purposes of providing access to the building for disabled persons. Therefore, seismic retrofit projects, structural repair projects, and seismic retrofit projects for the purpose of compliance with the Structural Performance Category (SPC) requirements of the 2007 California Administrative Code (CAC) and the 2007 CBC **are** subject to the access requirements of Section 1134B.

Compliance with 1134B shall be provided as follows:

- A. The requirements in Section 1134B.2 to provide an accessible primary entrance, sanitary facilities, drinking fountains, signs, public telephones, and an accessible path of travel connecting these elements throughout the building must be met.
- B. The specific area of alteration shall comply with all accessibility requirements as noted in Section 1134B.2. Note that for some structural repair or retrofit work, the specific area of alteration may not occur in a room or space intended for human occupancy. In such cases, the requirements of 1134B.2, while enforceable, have no practical application. Similarly, providing a "path of travel" (see 1134B.2.1 below) to such area has no practical application.
- C. The requirements of Section 1134B shall not be construed to require an entire building to be subject to accessibility upgrades due to a structural repair or retrofit project. Authority for Section 1134B derives from Section

19959 of the Health and Safety Code, which states: "Every existing public accommodation constructed prior to July 1, 1970, which is not exempted by Section 19956, shall be subject to the requirements of this chapter when any alterations, structural repairs or additions are made to such public accommodation. This requirement shall only apply to the area of specific alteration, structural repair or addition and shall not be construed to mean that the entire building or facility is subject to this chapter." Clearly, it is not the intent of Section 1134B that a structural repair, structural retrofit, or an addition, be construed to mean that the entire building or facility be subject to a complete accessibility upgrade.

2. Nonstructural Work:

Projects consisting **entirely** of anchorage and bracing of equipment and components will **not** be considered a building alteration, renovation, structural repair, or retrofit project subject to the Attorney General's Opinion 94-1109 noted above, and therefore are **not** subject to the accessibility requirements of Section 1134B. Similarly, seismic retrofit projects for the purpose of compliance with the Nonstructural Performance Category (NPC) requirements of the 2007 CAC and the 2007 CBC are **not** subject to the accessibility requirements of Section 1134B.

### CODE SECTION: 1134B.2 General

**1134B.2 General.** *All existing buildings and facilities, when alterations, structural repairs or additions are made to such buildings or facilities, shall comply with all provisions of Division I - New Buildings, except as modified by this division. These requirements shall apply only to the area of specific alteration, structural repair or addition and shall include those areas listed below:*

**1134B.2.1** *A primary entrance to the building or facility and the primary path of travel to the specific area of alteration, structural repair or addition, and sanitary facilities, drinking fountains, signs and public telephones serving the area.*

### INTERPRETATION

1. **Area of specific alteration**

The area of specific alteration is relevant to A) projects occurring within the confines of a space(s) or room(s) or B) projects not occurring within the confines of a space(s) or room(s).

A. Projects occurring within the confines of a space(s) or room(s):

For projects that occur within the confines of a space(s) or room(s), the area of specific alteration is the **entire** altered space(s) or room(s).

Example: A project proposes to replace the ceiling in the entrance lobby of a hospital. The area of specific alteration is the **entire** entrance lobby. As required by 1134B.2, the entire lobby must meet the requirements of Chapter 11B, Division 1 – New Buildings.

A room or area outside of the area of specific alteration is **not** required to be made accessible, even if it is a required element of the unit in which the work is proposed.

Example: A project proposes to alter two CT scan rooms. The work will include equipment replacement, new flooring, new ceiling work, and modifications to the mechanical and electrical systems. The area of specific alteration is the two CT scan **rooms**. A dressing room elsewhere in the same radiological / imaging service space is not within the area of specific alteration; and, therefore accessibility of the dressing room is not required as part of the proposed project. Note that a dressing room is not a “sanitary facility” that “serves” the area of alteration. See item 5 below.

B. Projects not occurring within the confines of a space(s) or room(s):

For projects not occurring within the confines of a space(s) or room(s), the area of specific alteration shall be defined by the physical area in which work is to occur. It is understood that in some cases the area of specific alteration is best defined as a series of specific areas that may or may not be physically connected.

Example 1: A facility proposes to replace several of the windows and doors in a hospital. This type of replacement project affects a small portion of many rooms within a building. The area of specific alteration may be defined as the immediate area of construction at each individual window and each individual door. Therefore, in this example, the area of specific alteration is a small portion of several different rooms. The requirements of Division I – New Buildings apply to each door, door hardware, and each window. Section 1134B.2.1 requires an accessible path of travel to each individual door and window being replaced; an accessible primary entrance; and sanitary facilities, drinking fountains, signs and telephones serving the area.

Example 2: A facility proposes to repair various fire / life safety deficiencies in a hospital. The scope of the project includes many locations throughout the hospital where fire dampers are added and wall penetrations are sealed. Much of the proposed work occurs above the ceiling, but some work occurs below the ceiling. In this example, the area of specific alteration shall be defined as the immediate area of construction work, whether above the ceiling or below. The area of specific alteration does not automatically become the entire room in which

a small repair occurs. In this case, a small portion of the rooms are being altered, and the area of specific alteration shall be defined as the immediate area in which alteration work occurs. If any of the proposed work affects any accessibility requirements of Division 1 – New Buildings, it shall be made to comply with those requirements. In this example, it is probable that there would be no Division 1 – New Building requirements that would be affected by fire damper and penetration sealing work. However, as required by 1134B.2.1, this project shall provide an accessible primary entrance; and sanitary facilities, drinking fountains, signs and public telephones serving the area.

Note: For projects without a well-defined area of specific alteration, the facility may provide the required accessibility features (path of travel, accessible sanitary facilities, drinking fountains, signs and public telephones) in a central location.

2. **...and shall include those areas listed below**

The language “...and shall include those areas listed below:” indicates that accessibility must be demonstrated and/or provided **outside** of the area of specific alteration as required by 1134B.2.1. Every project subject to the requirements of 1134B.2 shall demonstrate compliance for a primary entrance; primary path of travel to the specific area; and sanitary facilities, drinking fountains, signs, and public telephones serving the area. These elements are required pursuant to 1134B.2 and yet are expressly outside of the area of specific alteration.

3. **A primary entrance**

Primary Entry is defined in Section 202, which references Section 1107A.16-P. Section 1107A.16-P states:

*“PRIMARY ENTRY is the principal entrance through which most people enter the building, as designated by the building official.”*

For the purposes of this CAN, the primary entrance is equivalent to the primary entry.

4. **The primary path of travel to the specific area of alteration, structural repair or addition**

*“Path of travel”* is defined in Section 1102B.

Primary path of travel means the common route that is used to arrive at the specific area of alteration. For example, in a multi-story building, the path starts at the accessible parking stall, continues to the primary entrance, through accessible elevators, up to the floor of the alteration, and finally to the area of specific alteration, structural repair or addition. If the elevators are not

accessible, one of them must be made accessible as part of the primary path of travel.

The “path of travel” shall also extend to the sanitary facilities, drinking fountains, signs and public telephones serving the altered area.

5. **Sanitary facilities, drinking fountains, signs and public telephones serving the area**

- A. “Sanitary facilities” are defined in Section 202 as “...any single water closet, urinal, lavatory, bathtub or shower, or a combination thereof, together with the room or space in which they are housed.” “*Serving the area*” is specific to those “*sanitary facilities, drinking fountains, signs and public telephones*” that are most directly related to the area of alteration. Sanitary facilities, drinking fountains and public telephones are not required to be on the immediate path of travel to the area to be considered as “servicing the area”, but they must be within a reasonable distance of the area. In no case shall the distance exceed 200 feet of travel, nor more than one floor above or below the area.

Example 1: A nurse’s station is remodeled on the first floor of a hospital, but the sanitary facilities for those nurses are not accessible and are located on the second floor. As a result of this remodel project, the inaccessible sanitary facilities must be made accessible, because they are the only staff sanitary facilities within a reasonable distance that serve the area.

Example 2: Alternately, given the same situation as in Example 1 above, the facility could choose to provide new accessible toilet rooms to serve that specific nurses’ station on the same floor and in close proximity to the remodeled nurses’ station. In this case, they would not be required to upgrade the toilet rooms on the second floor, because they would be providing new toilet rooms to serve the area.

- B. When there is more than one sanitary facility that is within a reasonable distance from the area of specific alteration and it can be considered as serving the area, only one of each required sanitary facility must be made accessible. The facility may designate the sanitary facilities that will be considered as serving the area as long as they are within a reasonable distance, even if they are located further from the area of specific alteration than other sanitary facilities.

Example: A pharmacy remodel project on the second floor of a hospital requires that accessible toilet rooms be provided (both male and female) for the public, as well as separate accessible toilet rooms for staff. Accessible public toilet rooms (both male and female) are already

available approximately 80 feet away, which satisfies 1134B.2.1 for public use. There are existing staff toilet rooms that are not accessible, approximately 40 feet from the pharmacy, but there are also accessible separate male and female staff toilet rooms on the first floor, with a total distance to the area of specific alteration of 120 feet (including elevator travel). The facility may designate the first floor staff toilet rooms as “serving the area of specific alteration” for the purpose of this remodel project and additional construction work will not be required.

- C. Section 412.3 of the 2007 California Plumbing Code requires separate sanitary facilities for patients, staff, and the public. When an alteration project interacts with all three types of users, the project must show or provide for accessible sanitary facilities for each user.

### **CODE SECTION: 1134B.2.1, Exception 1**

#### **1134B.2.1 Exceptions:**

1. When the **total construction cost** of alterations, structural repairs or additions does not exceed a valuation threshold of \$50,000, based on January 1981, "ENR US20 Cities" average construction cost index of 3372.02 (Engineering News Record, McGraw Hill Publishing Company), and the enforcing agency finds that compliance with this code **creates an unreasonable hardship**, compliance shall be limited to the actual work of the project. The enforcing agency shall annually update the valuation threshold to a current amount based on the increase in the index since the last figure used. (For example, the January 2008 amount is \$119,958.65.) (OSHPD Note: For current and past valuation thresholds, visit <http://www.dsa.dgs.ca.gov/Access> ) For purposes of this exception, an unreasonable hardship exists where the cost of providing an accessible entrance, path of travel, sanitary facilities, public phones and drinking fountains, is disproportionate to the cost of the project; that is, where it exceeds 20 percent of the cost of the project without these features. Where the cost of alterations necessary to make these features fully accessible is disproportionate, access shall be provided to the extent that it can be without incurring disproportionate cost. In choosing which accessible elements to provide, priority should be given to those elements that will provide the greatest access in the following order:

- 1.1 An accessible entrance,
- 1.2 An accessible route to the altered area,
- 1.3 At least one accessible restroom for each sex,
- 1.4 Accessible telephones,
- 1.5 Accessible drinking fountains, and

1.6 When possible, additional accessible elements such as parking, storage and alarms.

## INTERPRETATION

### **Total construction cost**

The total construction cost shall be provided by the applicant as either an estimate of construction costs or as an actual contract amount and shall include the cost of fixed equipment, radiology equipment, and the fair market value of any labor or materials provided by the owner. The construction cost shall exclude design fees, inspection fees, and off site work.

### **Creates an unreasonable hardship**

Applicants may file a request for unreasonable hardship if the cost of upgrading all the elements listed above exceeds 20% of the project cost without these elements. The request must be submitted on OSHPD Form OSH-FD-800 "Application for Unreasonable Hardship Exception to Accessibility Requirements." The applicant must submit the request to the Regional Supervisor and must substantiate the hardship with detailed construction cost estimates. If the unreasonable hardship request is approved, a maximum of 20% of the project cost without accessible features is required to be spent on accessible features. Applicants may use the Comment and Process Review (CPR) procedure when OSHPD denies a hardship request.

## CODE SECTION: Section 1134B.2.1, Exception 4

### ***Section 1134B.2.1, Exception 4***

**Projects which consist only of** heating, ventilation, air conditioning, re-roofing, electrical work not involving placement of switches and receptacles, cosmetic work that does not affect items regulated by this code, such as painting, equipment not considered to be a **part of the architecture of the building** or area, such as computer terminals, office equipment, etc., are not considered alteration projects for the purposes of accessibility for persons with disabilities and shall not be subject to this code. For the purposes of this section, the term "construction cost" does not include building permit fees or discretionary permit fees.

The only purpose of this exception is to exclude projects from activating the provisions of this section. The exceptions are not intended to relieve projects from complying with other applicable provisions of this code (e.g., replacement of carpet does not activate the provisions of this section; however, it still must comply with Section 1124B.3).

## INTERPRETATION

### 1. **Projects which consist only of**

The phrase, projects which consist only of, shall be understood to allow work that is incidental to projects covered under Exception 4. For example, an HVAC

replacement project may require incidental electrical work as well as incidental support and anchorage work associated with the HVAC equipment. This incidental work shall be considered part of the equipment replacement project and will not initiate compliance with accessibility requirements.

2. **Part of the architecture of the building**

A. Replacement of Imaging Equipment

Permanently secured imaging equipment is considered part of the architecture of the building; and therefore, projects consisting solely of the replacement of imaging equipment are not eligible for Exception 4.

B. Mobile Equipment

Equipment that is designed to be mobile and can be easily moved from one room to another is not considered part of the architecture of the building; and therefore, is eligible for Exception 4.

**CODE SECTION: 1134B.2.2**

**1134B.2.2** *Where it is **technically infeasible** in the area of an alteration to make existing restroom facilities code compliant and to install separate sanitary facilities for each sex, then the installation of at least one unisex toilet/bathroom per floor being altered, located in the same area as existing toilet facilities, will be permitted. Such a facility shall meet the requirements of Section 1115B.7.2.*

**INTERPRETATION:**

**Technically infeasible**

Technically infeasible does not mean a financial or operational inconvenience. As defined in Section 202 of the 2007 CBC:

“Technically infeasible means, with respect to an alteration of a building or a facility, that it has little likelihood of being accomplished because existing structural conditions would require removing or altering a load-bearing member which is an essential part of the structural frame; or because other existing physical or site constraints prohibit modification or addition of elements, spaces, or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.”

Original Signed \_\_\_\_\_ 8-22-08  
John D. Gillengerten Date

**CODE APPLICATION NOTICE****FILE NO.:** 2-1109B.3**Subject:** 18 Inch Strike Zone for Accessibility**EFFECTIVE:** 06/19/08**CODE SECTION:** Section 1109B.3, 2007 California Building Code (CBC)

**1109B.3 Patient Bedrooms and Toilet Rooms.** *Patient bedrooms and associated toilet facilities shall be made accessible as follows:*

1. *Long-term-care facilities, including skilled nursing facilities, intermediate care facilities, bed and care, and nursing homes shall have at least 50 percent of patient bedrooms and toilet rooms, and all public-use and common-use areas, accessible.*
2. *General-purpose hospitals, psychiatric facilities, and detoxification facilities shall have at least 10 percent of patient bedrooms and toilets, and all public-use and common use areas, accessible.*
3. *Hospitals and rehabilitation facilities that specialize in treating conditions that affect mobility, or units within either that specialize in treating conditions that affect mobility, shall have all patient bedrooms and toilets and all public-use and common-use areas accessible.*

**PURPOSE:**

To clarify accessibility requirements at patient room doors. Section 1114B suggests that all doors used by the public must meet all accessibility requirements. However, to place accessibility requirements on all patient room and associated toilet room doors would in essence be requiring 100 percent patient room accessibility. This is clearly not the intent of the code. If it had been the intent, the specific percentages and associated modifications would not have been given.

Further, an accessible route of travel, as discussed in Section 1114B.1, 2007 CBC must by definition (See Section 1102B, 2007 CBC) connect all accessible elements and spaces. Therefore, an accessible route of travel need only connect the accessible patient bedrooms and toilets not all patient bedrooms and toilets.

**INTERPRETATION:**

The **scoping** portion of chapter 1109B, 2007 CBC is found in sections 1109B.1 through 1109B.8 of the 2007 CBC, and specifically includes the 1109B.3 language as printed above. The scoping sections are intended to define **which areas** of an "I" occupancy must be made accessible.

The **technical requirements** that must be applied to accessible facilities are provided in section 1114B, 2007 CBC "Facility Accessibility", but are **only** required in the areas that must be made accessible. Therefore, the technical requirements of section 1114B **do not** apply to areas of a facility that are not required to be made accessible.

Specifically, section 1114B.1.1 notes that doors shall comply with the requirements of 1133B.2 which further requires an 18" side strike clearance per 1133B.2.4.3, 2007 CBC. These requirements **do not** apply to doors that are not required to be accessible.

This interpretation is consistent with the Division of the State Architect Access Policy #98-04 (Accessibility Requirements in Group I Occupancies) effective October 15, 1998, revised April 5, 2000.

<u>Original Signed</u>	<u>06/19/08</u>
John D. Gillengerten	Date

## CODE APPLICATION NOTICE

**Subject:** Next Generation Attenuation Relations for  
Use With the 2007 California Building Code

**File No.:** 2-1802A.6.2  
**Effective:** 9/30/08

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### CODE SECTIONS

Section 1802A.6.2, 2007 California Building Code (CBC)

Section 21.2, ASCE/SEI 7-05 Minimum Design Loads for Buildings and Other Structures

#### 2007 California Building Code

**1802A.6.2 Supplemental ground-response report.** *If site specific ground-motion procedures, as set forth in ASCE 7 Chapter 21, or ground-motion time-history analysis, as set forth in ASCE 7 Chapter 16, Section 17.3 or 18.2.3, are used for design, then a supplemental ground-response report may be required. All conclusions and ground-motion parameters shall be fully supported by satisfactory data and analysis.*

...

#### ASCE/SEI 7-05 Minimum Design Loads for Buildings and Other Structures

##### 21.2 Ground Motion Hazard Analysis

The requirements for Section 21.2 shall be satisfied where a ground motion hazard analysis is performed or required by Section 11.4.7. The ground motion hazard analysis shall account for the regional tectonic setting, geology, and seismicity, the expected recurrence rates and maximum magnitudes of earthquakes on known faults and source zones, the characteristics of ground motion attenuation, near source effects, if any, on ground motions, and the effects of subsurface site conditions on ground motions. The characteristics of subsurface site conditions shall be considered either using attenuation relations that represent regional and local geology or in accordance with Section 21.1. The analysis shall incorporate current seismic interpretations, including uncertainties for models and parameter values for seismic sources and ground motions. The analysis shall be documented in a report.

...

### PURPOSE

The purpose of this Code Application Notice (CAN) is to clarify the application of ASCE/SEI 7-05 Section 21.2 with respect to Next Generation Attenuation (NGA) relations that will be utilized to determine site-specific ground motion.

## BACKGROUND

Attenuation relations are applied to estimate the ground motion distribution for each earthquake of a given magnitude, distance, and rupture mechanism. The U.S. Geological Survey (USGS) ground motion mapping of spectral acceleration has formed the basis of the Deterministic Site Hazard Analyses (DSHA) and Probabilistic Site Hazard Analyses (PSHA) that are submitted for specific hospital construction projects and are currently enforced in the 2007 CBC.

The attenuation relations used under the *USGS Project '97* and the *1997 California Probabilistic Seismic Hazard Mapping*, consist of Boore et al (1993), Geomatrix-Sadigh (1995) and Campbell and Bozorgnia (1994). Newer attenuation relations were used to develop the seismic hazard maps of the 2007 California Building Code, specifically, *USGS Project '02* and the *2002 California Probabilistic Seismic Hazard Maps*, which consist of Boore et al (1997), Sadigh et al (1997), Abrahamson and Silva (1997), Campbell and Bozorgnia (2003) and Spudich et al (1999). Changes in the PSHA due to these attenuation relations and other changes from the *1997 California Probabilistic Seismic Hazard mapping* are published in Cao et al 2003.

New data suggests an alternative to the current attenuation relations values. The 2008 National Seismic Hazard Maps published by USGS are based on NGA relations. These new maps are being proposed for inclusion in ASCE/SEI 7-10. These NGA relations are currently being proposed in geotechnical/geohazard reports for the DSHA and PSHA for hospital buildings.

The 2008 USGS seismic hazard maps used the NGA relations listed below:

1. Boore and Atkinson (2007)
2. Campbell and Bozorgnia (2007)
3. Chiou and Youngs (2006)

Two other NGA relations that are available but not part of the 2008 USGS seismic hazard maps are:

4. Abrahamson & Silva (2008)
5. Idriss (2008)

## INTERPRETATION

1. If NGA relations are applied to a hospital building project, the three NGA relations used for the 2008 USGS seismic hazards maps (1, 2, and 3 above) shall be utilized to determine the site-specific ground motion. When supported by data and analysis, the two NGA relations (4 and 5 above) that were not used for the 2008 USGS maps shall be permitted as additions or substitutions. No fewer than three NGA relations shall be utilized.



**CODE APPLICATION NOTICE****Subject:** Component Importance Factor**FILE NO.** 2-1613A.1**EFFECTIVE:** 10/31/08

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**CODE SECTIONS****Section 1613A.1, 2007 California Building Code**

**1613A.1 Scope.** Every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with *ASCE 7 with all the modifications incorporated herein*, excluding Chapter 14 and Appendix 11A. The seismic design category for a structure *shall* be determined in accordance with Section 1613A.

**Section 13.1.3, ASCE/SEI 7-05 Minimum Design Loads for Buildings and Other Structures**

**13.1.3 Component Importance Factor.** All components shall be assigned a component importance factor as indicated in this section. The component importance factor,  $I_p$ , shall be taken as 1.5 if any of the following conditions apply:

1. The component is required to function for life-safety purposes after an earthquake, including fire protection sprinkler systems.
2. The component contains hazardous materials.
3. The component is in or attached to an Occupancy Category IV structure and it is needed for continued operation of the facility or its failure could impair the continued operation of the facility.

**PURPOSE**

The purpose of this Code Application Notice (CAN) is to interpret item 3, Section 13.1.3 of American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI) standard 7-05 (ASCE 7-05). Editions of the California Building Code prior to 2007, which are based on the Uniform Building Code (UBC), had a direct correlation between the component importance factor and building occupancy categories for essential facilities. The 2007 California Building Code (CBC), which is based on the 2006 International Building Code (IBC), refers to ASCE 7-05 for the component importance factor. Item 3, Section 13.1.3, ASCE 7-05 provides for flexibility in using a component importance factor lower than 1.5 for essential facilities provided the component is not needed for continued operation of the facility or the component failure will not impair the continued operation of the facility. This CAN provides an interpretation for determining the component importance factor relative to Item 3, Section 13.1.3, ASCE 7-05.

**INTERPRETATION**

For position retention, the design of supports and attachments for all nonstructural components in OSHPD 1 facilities shall have a component importance factor,  $I_p$ , equal to 1.5.

Seismic Certification of components in accordance with ASCE 7-05 Section 13.2.1.2 and Special Seismic Certification for designated seismic systems in accordance with ASCE 7-05 Section 13.2.2 are addressed in CAN 2-1708A.5.

<u>Original Signed</u>	<u>10/31/08</u>
John D. Gillengerten	Date

## CODE APPLICATION NOTICE

**Subject:** Certification of Equipment and  
Nonstructural Components

**FILE NO.** 2-1708A.5  
**EFFECTIVE:** 10/31/08

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### CODE SECTIONS

Sections 1708A.2, 1708A.5, 1702A, and 1707A.9, 2007 California Building Code (CBC)

Sections 13.2.1, 13.2.2, 13.2.5, 13.2.6, 13.1.3, and 13.1.4, American Society of Civil Engineers (ASCE/SEI) 7-05 Minimum Design Loads for Buildings and Other Structures

### BACKGROUND

The 2007 California Building Code (CBC) and ASCE/SEI 7-05 introduces new concepts for seismic design of nonstructural components. These concepts are intended to improve the performance of essential nonstructural systems subject to strong ground shaking. The full text of the related code sections are included in Appendix A of this document.

### PURPOSE

The purpose of this Code Application Notice (CAN) is to clarify the requirements for seismic qualification/certification of mechanical and electrical equipment/components. This CAN also provides an interpretation for code sections of the 2007 CBC and ASCE/SEI 7-05 that appear to be in conflict.

Note: This CAN will be updated regularly as additional data on seismic qualification and certification of critical components becomes available.

### INTERPRETATION

#### 1.0 Identification of Seismic Design requirements

The design and documentation requirements for nonstructural components and systems vary, depending upon the importance of component and whether the component is required to be functional immediately following the design earthquake. Figure 1-1 provides a process for determining the appropriate design and documentation approach. Definitions of useful terms are presented in Appendix B.

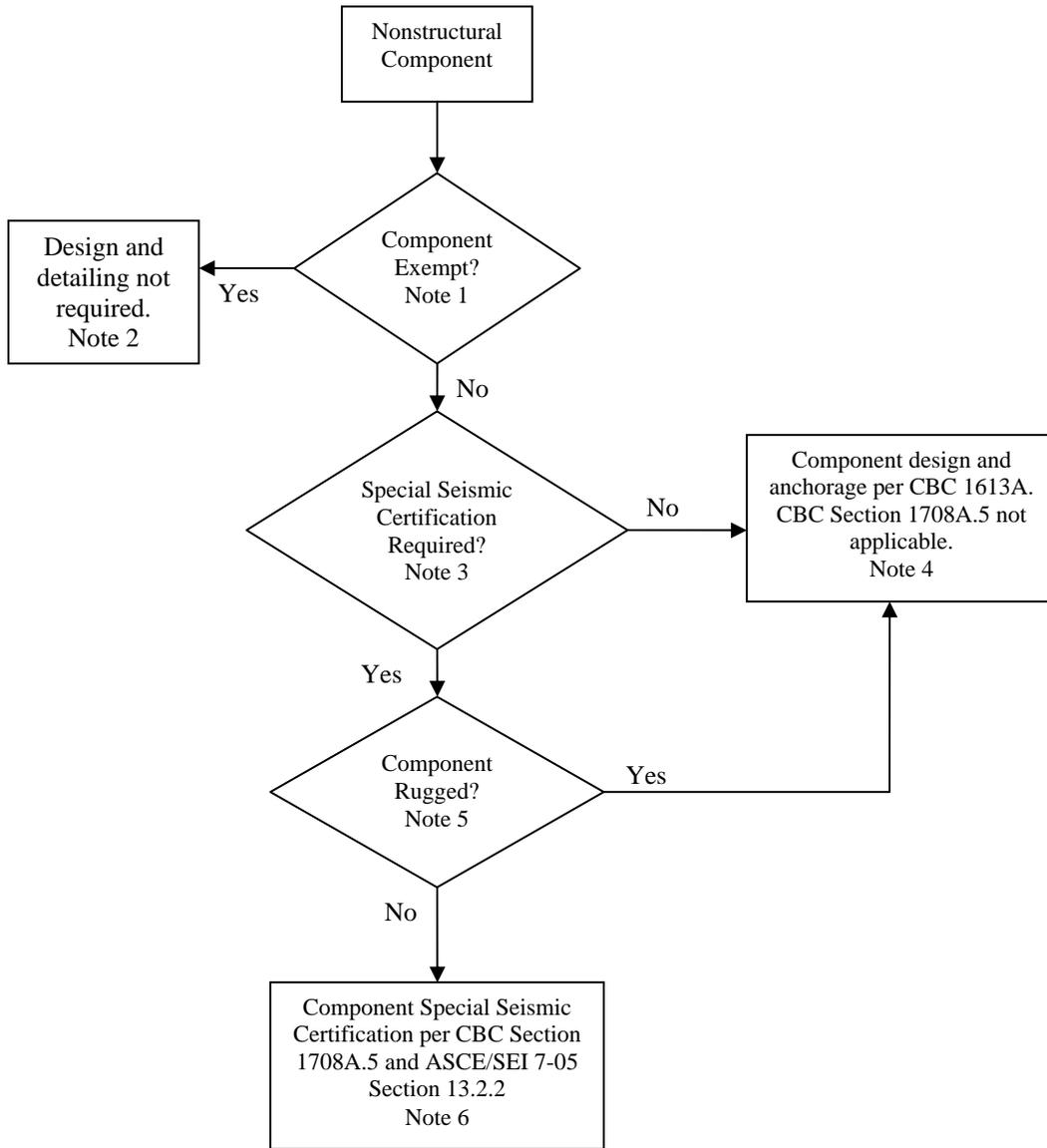


Figure 1-1. Identification of Seismic Design Requirements

**Notes**

1. Certain components are exempt from seismic design requirements. The exemptions are listed in Section 1614A.1.14 of the 2007 CBC; Sections 13.1.4, 13.6.5.5, 13.6.7, 13.6.8 of ASCE/SEI 7-05; and Section 7-125(c) 3.C., 2007 California Administrative Code (CAC).
2. See Appendix A for important corrections to ASCE/SEI 7-05 Section 13.1.4 that are based on errata to ASCE/SEI 7-05 dated May 3, 2007.
3. Special Seismic Certification is required for certain equipment and components that are part of the designated seismic system pursuant to Section 13.2.2 of ASCE/SEI 7-05. Equipment and components requiring Special Seismic Certification are identified in Item 2.1 of this CAN.
4. Equipment and components not requiring Special Seismic Certification must comply with the requirements of Section 13.2.1 in ASCE/SEI 7-05. Two options are available: 1) project-specific calculations and details, or 2) manufacturer's (Seismic) certification, including anchorage pre-approval. The testing alternative in Section 13.2.5 of ASCE/SEI 7-05 is also available. These options are discussed in Items 3.0 and 4.0 of this CAN.

Component supports, and attachments design for position retention shall use importance factor,  $I_p = 1.5$ , in accordance with CAN 2-1613A.1.

5. Experience in past earthquakes has shown that certain types of equipment are inherently rugged, as defined in Appendix B. A list of equipment and components deemed to be rugged is presented in Item 2.2 of this CAN. Rugged equipment and components are considered to satisfy the requirements of Section 13.2.6 of ASCE/SEI 7-05.
6. Equipment and components that require Special Seismic Certification must meet the requirements of Section 13.2.2 of ASCE/SEI 7-05 and Section 1708A.5 of 2007 CBC. Acceptable procedures for Special Seismic Certification are presented in Item 3.2 of this CAN.

**2.0 Equipment and Components Requiring Special Seismic Certification.**

Special Seismic Certification is required for certain equipment and components that are part of the designated seismic system pursuant to Section 13.2.2, ASCE/SEI 7-05. Only active mechanical and electrical components that must remain operable following the design earthquake require Special Seismic Certification.

## 2.1 List of Equipment and Components Requiring Special Seismic Certification.

The following equipment and components require Special Seismic Certification:

1. Emergency and standby power systems equipment including generators, turbines and fuel tanks.
2. Components with hazardous contents excluding pipes, and ducts.
3. Smoke control fans.
4. Switchgear.
5. Motor control centers.
6. Built-up or field assembled mechanical equipment.
7. Elevator equipment (except elevator cabs).
8. X-Ray machine(s) in the fluoroscopy room (as required to meet the minimum basic radiological/imaging service space requirements of Section 1224.18, 2007 CBC).
9. Air conditioning units.
10. Air handling units.
11. Chillers used for HVAC.
12. Cooling Towers designed as components.
13. Transformers.
14. Electrical substations.
15. UPS and associated batteries.
16. Distribution panels.

Equipment and components that are considered to be rugged pursuant to Item 2.2 of this CAN are deemed to comply with Section 13.2.6, ASCE/SEI 7-05 and are exempt from the requirements of this section.

## 2.2 Rugged Equipment and Components.

The equipment and components listed below are considered rugged and shall not require Special Seismic Certification:

1. Valves (not in cast-iron housings, except for ductile cast iron).
2. Pneumatic operators.
3. Hydraulic operators.
4. Motors and motor operators.
5. Horizontal and vertical pumps (including vacuum pumps).
6. Air compressors.
7. Sterilizers.
8. Blanket warmers.
9. Anesthesia power columns, ceiling or wall mounted.
10. Refrigerators and freezers.
11. Microwave ovens for patient service.
12. Film illuminators.
13. Elevator cabs.

Exemptions in this section are for factory assembled discrete equipment and components only and do not apply to site assembled or field assembled equipment or equipment anchorage. The list is based in part on the 1999 SEAOC Blue Book commentary Section C 107.

**3.0 General Seismic Design Requirements.**

There are several approaches to comply with the general seismic design requirements for nonstructural components. The steps to complete the design, certification, and OSHPD approval process are summarized in Figure 3 -1.

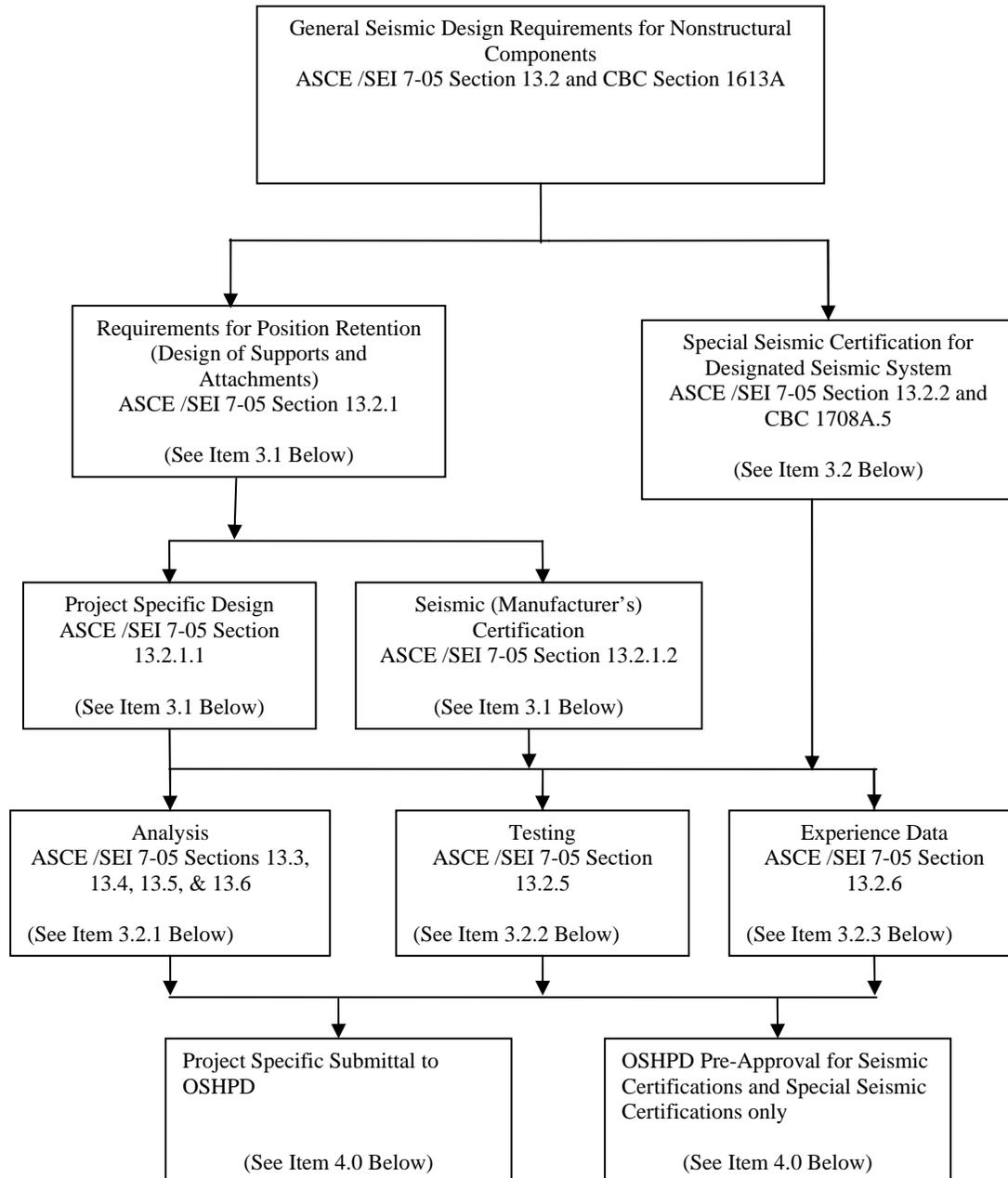


Figure 3 -1. General Seismic Design Requirements for Nonstructural Components

### 3.1 Seismic Certification.

A manufacturer may provide seismic certification in accordance with Section 13.2.1.2 of ASCE/SEI 7-05, as a voluntary alternative to project-specific design and documentation in accordance with Section 13.2.1.1 of ASCE/SEI 7-05. Seismic certification of architectural, mechanical, and electrical components, supports, and attachments, if provided, shall be pursuant to Section 13.2.1.2 of ASCE/SEI 7-05. Seismic certifications can be a project-specific submittal or a pre-approval.

### 3.2 Special Seismic Certification.

Special Seismic Certification is required for certain equipment and components pursuant to ASCE/SEI 7-05 Section 13.2.2. The following three methods are acceptable for Special Seismic Certification.

**3.2.1 Analysis.** Section 1708A.5, 2007 CBC, permits Special Seismic Certification by analytical method for active mechanical and electrical equipment, even though it is not permitted by Section 13.2.2.a of ASCE/SEI 7-05.

**3.2.2 Test.** Active mechanical/electrical equipment and components with hazardous contents may be certified by an actual test on a shake table or by three dimensional shock tests pursuant to Section 13.2.5 of ASCE/SEI 7-05.

**3.2.3 Experience Data.** Active mechanical/electrical equipment and components with hazardous contents may be certified by experience data pursuant to Section 13.2.6 of ASCE/SEI 7-05. Rugged equipment listed in Item 2.2 of this CAN shall be considered to satisfy the experience data requirements of Section 13.2.6 of ASCE/SEI 7-05.

When experience data is used to certify equipment/components, it shall be shown that the database used contains the similar type/model equipment that is manufactured with the similar structural integrity. The Owner of the special seismic certification shall maintain a quality assurance program that will continually evaluate the performance of installed equipment experiencing new earthquake to determine if a new type of failure may exist.

### 4.0 OSHPD Approval.

Seismic Certification and Special Seismic Certification approval by OSHPD can be either a project-specific approval or a pre-approval. When repetitive review of the same equipment or component is anticipated, a pre-approval is encouraged.

#### 4.1 Approval by Analysis.

All analysis submitted to OSHPD shall be prepared pursuant to Section 7-115 of the 2007 CAC.

#### 4.2 Approval by Testing.

All tests shall be performed by an independent laboratory having accreditation to the International Standards Organization (ISO) accreditation standard 17025 by an organization such as the International Accreditation Service (IAS) of the International Code Council (ICC) or shall be under the responsible charge of a registered design professional. Test reports shall be prepared by a registered design professional. Test reports shall be reviewed and accepted by an independent California licensed structural engineer.

Testing at the manufacturer's facility will be accepted if it is performed under the responsible charge of an independent registered design professional, not permanently employed by the manufacturer, who must witness the test and certify the report. Test reports shall be reviewed and accepted by an independent California licensed structural engineer.

Use of specific test results shall be limited to the configuration tested, unless otherwise approved by OSHPD. The mounting brackets shall be part of the equipment qualified by testing and shall contain provisions for anchorage of the equipment to the supporting structure at the site. The components from the mounting brackets to the supporting structure shall have the similar flexibility and strength to what is used in the equipment qualification test and may be qualified by a supporting analysis. The flexibility of the support structure shall be considered when certifying the anchorage by analysis.

For special seismic certification of a multi-component system, where individual components are certified by tests or exempted by Item 2.2 of this CAN, connecting elements and supports can be justified by supporting analysis.

**4.2.1 Acceptable Test.** Any dynamic or static test standard adopted in the 2007 CBC or reference standards adopted by the 2007 CBC are acceptable.

**4.2.1.1 Dynamic Test.** Unless specified otherwise in the test standard, a minimum of two tests is required. Where a range of products is tested, the two tests can be on different size products as required by design changes in the internal structures.

**4.2.1.2 Static Test.** Unless specified otherwise in the test standard, a minimum of three tests is required. The average of three tests shall be used in determining the capacity. The Co-efficient Of Variation (COV) of the test results shall not exceed 12%. If the COV exceeds 12% either the number of test shall be increased to reduce the COV or the minimum tests value shall be used in determining the capacity. Alternatively, a minimum

of two tests is acceptable when the lesser of the two test results is used, provided the results from the two tests are within 10% of the lesser value.

**4.2.2 Test Report.** The test report shall include a complete force-deformation curve of the tested specimens, to the point where residual strength is no greater than 20% of the peak strength, complete fracture occurs, or the loading protocol stops. The failure modes from the individual tests shall be documented with descriptions and photos.

<u>Original Signed</u>	<u>10/31/08</u>
John D. Gillengerten	Date

**APPENDIX A**

**2007 California Building Code**

**SECTION 1708A STRUCTURAL TESTING FOR SEISMIC RESISTANCE**

...

**1708A.2 Testing for seismic resistance.** The tests specified in Section 1708A.3 through 1708A.6 are required for the following:

...

2. Designated seismic systems in structures assigned to Seismic Design Category D, E, or F.
3. Architectural, mechanical and electrical components in structures assigned to Seismic Design Category D, E, or F that are required in Section 1708A.5.

**1708A.5 Seismic qualification of mechanical and electrical equipment.** The registered design professional in responsible charge shall state the applicable seismic qualification requirements for designated seismic systems on the construction documents. Each manufacturer of designated seismic system components shall test or analyze the component and its mounting system or anchorage and submit a certificate of compliance for review and acceptance by the registered design professional in responsible charge of the design of the designated seismic system and for approval by the building official. Qualification shall be by an actual test on a shake table, by three-dimensional shock tests, by an analytical method using dynamic characteristics and forces, by the use of experience data (i.e., historical data demonstrating acceptable seismic performance) or by a more rigorous analysis providing for equivalent safety.

...

**SECTION 1702A DEFINITIONS**

**1702A.1 General.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

...

**CERTIFICATE OF COMPLIANCE.** A certificate stating that materials and products meet specified standards or that work was done in compliance with approved construction documents.

**DESIGNATED SEISMIC SYSTEM.** Those architectural, electrical and mechanical systems and their components that require design in accordance with Chapter 13 of ASCE 7 and for which the component importance factor,  $I_p$ , is greater than 1 in accordance with Section 13.1.3 of ASCE 7.

...

**INSPECTION CERTIFICATE.** An identification applied on a product by an approved agency containing the name of the manufacturer, the function and performance characteristics, and the name and identification of an approved agency that indicates that the product or material has been inspected and evaluated by an approved agency (see Section 1703A.5 and "Label," "Manufacturer's designation" and "Mark").

**LABEL.** An identification applied on a product by the manufacturer that contains the name of the manufacturer, the function and performance characteristics of the product or material, and the name and identification of an approved agency and that indicates that the representative sample of the product or material has been tested and evaluated by an approved agency (see Section 1703A.5 and "Inspection certificate," "Manufacturer's designation" and "Mark").

...

**MANUFACTURER'S DESIGNATION.** An identification applied on a product by the manufacturer indicating that a product or material complies with a specified standard or set of rules (see also "Inspection certificate," "Label" and "Mark").

**MARK.** An identification applied on a product by the manufacturer indicating the name of the manufacturer and the function of a product or material (see also "Inspection certificate," "Label" and "Manufacturer's designation").

.....

## **SECTION 1707A SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE**

...

**1707A.9 Designated seismic system verifications.** The special inspector shall examine designated seismic systems requiring seismic qualification in accordance with Section 1708A.5 and verify that the label, anchorage or mounting conforms to the certificate of compliance.

## **ASCE/SEI 7-05 Minimum Design Loads for Buildings and Other Structures**

### **13.2 GENERAL DESIGN REQUIREMENTS**

**13.2.1 Applicable Requirements for Architectural, Mechanical, and Electrical Components, Supports, and Attachments.** Architectural, mechanical, and electrical components, supports, and attachments shall comply with the sections referenced in Table 13.2-1. These requirements shall be satisfied by one of the following methods:

1. Project-specific design and documentation prepared and submitted by a registered design professional.
2. Submittal of the manufacturer's certification that the component is seismically qualified by

- a. Analysis.
- b. Testing in accordance with the alternative set forth in Section 13.2.5.
- c. Experience data in accordance with the alternative set forth in Section 13.2.6.

**13.2.2 Special Certification Requirements for Designated Seismic Systems.**

Certifications shall be provided for designated seismic systems assigned to Seismic Design Categories C through F as follows:

- a. Active mechanical and electrical equipment that must remain operable following the design earthquake shall be certified by the supplier as operable based on approved shake table testing in accordance with Section 13.2.5 or experience data in accordance with Section 13.2.6. Evidence demonstrating compliance of this requirement shall be submitted to the authority having jurisdiction after review and approval by the registered design professional.
- b. Components with hazardous contents shall be certified by the supplier as maintaining containment following the design earthquake by (1) analysis, (2) approved shake table testing in accordance with Section 13.2.5, or (3) experience data in accordance with Section 13.2.6. Evidence demonstrating compliance of this requirement shall be submitted to the authority having jurisdiction after review and approval by the registered design professional.

...

**13.2.5 Testing Alternative for Seismic Capacity Determination.** As an alternative to the analytical requirements of Sections 13.2 through 13.6, testing shall be deemed as an acceptable method to determine the seismic capacity of components and their supports and attachments. Seismic qualification by testing based upon a nationally recognized testing standard procedure such as ICC-ES AC 156, acceptable to the authority having jurisdiction shall be deemed to satisfy the design and evaluation requirements provided that the substantiated seismic capacities equal or exceed the seismic demands determined in accordance with Sections 13.3.1 and 13.3.2.

**13.2.6 Experience Data Alternative for Seismic Capacity Determination.** As an alternative to the analytical requirements of Sections 13.2 through 13.6, use of experience data shall be deemed as an acceptable method to determine the seismic capacity of components and their supports and attachments. Seismic qualification by experience data based upon nationally recognized procedures acceptable to the authority having jurisdiction shall be deemed to satisfy the design and evaluation requirements provided that the substantiated seismic capacities equal or exceed the seismic demands determined in accordance with Sections 13.3.1 and 13.3.2.

...

## 13.1 GENERAL

**13.1.3 Component Importance Factor.** All components shall be assigned a component importance factor as indicated in this section. The component importance factor,  $I_p$ , shall be taken as 1.5 if any of the following conditions apply:

1. The component is required to function for life-safety purposes after an earthquake, including fire protection sprinkler systems.
2. The component contains hazardous materials.
3. The component is in or attached to an Occupancy Category IV structure and it is needed for continued operation of the facility or its failure could impair the continued operation of the facility.

All other components shall be assigned a component importance factor,  $I_p$ , equal to 1.0.

...

**13.1.4 Exemptions.** The following nonstructural components are exempt from the requirements of this section:

1. Architectural components in Seismic Design Category B other than parapets supported by bearing walls or shear walls provided that the component importance factor,  $I_p$ , is equal to 1.0.
2. Mechanical and electrical components in Seismic Design Category B.
3. Mechanical and electrical components in Seismic Design Category C provided that the component importance factor,  $I_p$ , is equal to 1.0.
4. Mechanical and electrical components in Seismic Design Categories D, E, or F where the component importance factor,  $I_p$ , is equal to 1.0 and both of the following conditions apply:
  - a. Flexible connections between the components and associated ductwork, piping, and conduit are provided and
  - b. Components are mounted at 4 ft (1.22 m) or less above a floor level and weigh 400 lb (1780 N) or less.
5. Mechanical and electrical components in Seismic Design Categories D, E, and F where the component importance factor,  $I_p$ , is equal to 1.0 and both of the following conditions apply:
  - a. Flexible connections between the components and associated ductwork, piping, and conduit are provided and
  - b. The components weigh 20 lb (89 N) or less or, for distribution systems, weighing 5 lb/ft (73 N/m) or less.

## Appendix B - Definitions

The following words and terms shall, for the purposes of this CAN, have the meanings shown herein:

**Active Equipment.** Equipment containing moving or rotating parts, electrical parts such as switches or relays, or other internal components that are sensitive to earthquake forces and critical to the function of the equipment.

**Rugged Equipment.** Rugged equipment refers to an amplexness of construction that gives such equipment the ability to survive earthquake strong motions without significant loss of function.

**Seismic Certification.** Seismic certification refers to a manufacturer's certification for architectural, mechanical, and electrical components, supports, and attachments pursuant to ASCE/SEI 7-05 Section 13.2.1.2.

**Seismic Qualification.** Same as Special Seismic Certification.

**Significant Loss of Function.** Significant loss of function for equipment or components means the equipment or component can't be restored to its original function by competent technicians after a design earthquake because the equipment or component require parts that are not normally stocked by the hospital or not readily available.

**Special Seismic Certification.** Seismic certification of mechanical and electrical equipment based on ASCE/SEI 7-05 Section 13.2.2. Special Seismic Certification is required for active mechanical and electrical equipment that must remain operable following the design earthquake.

**Appendix C – Frequently Asked Questions**

- 1. We have equipment and components certified as Mission Critical Level 2 (MC-2) components under Uniform Facilities Criteria, UFC 3-310-04 (2007). Does OSHPD accept certified MC-2 components to be seismically qualified? If so, what documentation does OSHPD require?**

Yes, all equipment and components certified as MC-1 or MC-2 components under UFC 3-310-04 (2007) shall be considered to satisfy Special Seismic Certification (Seismic Qualification) requirements of the CBC 2007, Section 1708A.5, pursuant to section 4 of CAN 2-1708A.5.

Copies of the supporting documents for certification as MC-1/MC-2 along with peer review reports is required by OSHPD.

- 2. The 2007 CBC and ASCE/SEI 7-05 Special Seismic Certification requirements by experience data are vague at best. Is there a usable procedure and/or example of Seismic Certification by experience data anywhere?**

Yes, appendix F of Uniform Facilities Criteria, UFC 3-310-04 (2007), has a detailed procedure and example for Special Seismic Certification by experience data.

- 3. Is there a way I can get Special Seismic Certification of my oxygen tank by analysis?**

Yes. Boilers and pressure vessels without vibration isolators designed by a registered design professional in accordance with ASME Boiler and Pressure Vessel Code, 2004 (BPVC 2004), and satisfying the force and displacement requirements of Sections 13.3.1 and 13.3.2 of ASCE 7-05 having an importance factor,  $I = 1.5$  and reviewed by OSHPD shall be considered to satisfy the Special Seismic Certification requirements on the basis of ASCE 7-05 Section 13.6.9.

- 4. Since we have to obtain Special Seismic Certification for most jurisdictions now, if we get the Special Seismic Certification through the International Code Council – Evaluation Service (ICC-ES) based on AC-156, is that acceptable to OSHPD?**

Yes. Special Seismic Certification based on ICC AC-156 by ICC ES is acceptable to OSHPD pursuant to Item 4.2 of CAN 2-1708A.5.

- 5. We have obtained a Special Seismic Certification in Japan based on ICC AC-156. Is that acceptable to OSHPD?**

Yes, provided testing was done in a laboratory accredited under International Standards Organization (ISO) 17025 by an organization that has a reciprocity agreement with

ICC-IAS. The complete original laboratory test report must be available in English, which shall be reviewed and accepted by a California licensed structural engineer pursuant to section 4.2 of CAN 2-1708A.5.

**6. Will OSHPD accept third party listing for Special Seismic Certification? If so, what are the requirements for such acceptance?**

Yes. OSHPD will accept third party certification if all of the following are satisfied:

- 1) A Certification of Compliance is provided with the seismic capacity of the equipment in terms of g-levels and the site demand of the project or blanket certificate with the demand for the region or location where the equipment is planned to be installed.
- 2) The Certificate of Compliance identifies the manufacturer of the equipment and the certification agency (test laboratory or company performing analysis).
- 3) For certification by testing, the Certificate of Compliance identifies the Listing Agency as an accredited agency by ICC-IAS. The designation on the certificate shall ensure the following:
  - a. Listing Agency is accredited by ICC-IAS.
  - b. Accredited Listing Agency employs at least one inspector certified to the international inspection standard ISO 17020 by ICC-IAS.
  - c. The Listing Agency performs triennial reviews of the manufacturer's Quality Assurance Plan and verifies the equipment is still in compliance with the design basis used for seismic qualification.
- 4) Certification by analysis shall satisfy the requirements of Section 4.1 of the CAN.
- 5) Special Seismic Certification documentations shall be reviewed and accepted by a California Registered Structural Engineer.

**7. Can the Special Seismic Certification be submitted to OSHPD as a deferred submittal on a project?**

Yes. See OSHPD Policy Intent Notice (PIN) 41.

**8. Are there any exemptions for equipment and components in non-conforming OSHPD 1 buildings?**

Yes. See OSHPD Policy Intent Notice (PIN) 42.

**9. Can a facility request exemption from the Special Seismic Certification requirements for emergency replacement of Equipment or Components?**

Yes. On a case-by-case basis, the Office may grant an exemption for emergency replacement of equipment or components. See Policy Intent Notice (PIN) 43.

## CODE APPLICATION NOTICE

**Subject:** Qualification, Design, and Use  
of Anchors Installed in Concrete

**FILE NO.:** 2-1912A.1  
**EFFECTIVE:** 07/01/08

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**CODE SECTION:** Section 1912A.1, 2007 California Building Code (CBC)

**1912A.1 Scope.** The provisions of this section shall govern the strength design of anchors installed in concrete for purposes of transmitting structural loads from one connected element to the other. Headed bolts, headed studs and hooked (J- or L-) bolts cast in concrete and expansion anchors and undercut anchors installed in hardened concrete shall be designed in accordance with Appendix D of ACI 318 as modified by *Section 1908A.1.47*, provided they are within the scope of Appendix D.

**Exception:** Where the basic concrete breakout strength in tension of a single anchor,  $N_b$ , is determined in accordance with Equation (D-7), the concrete breakout strength requirements of Section D.4.2.2 shall be considered satisfied by the design procedures of Sections D.5.2 and D.6.2 for anchors exceeding 2 inches (51 mm) in diameter or 25 inches (635 mm) tensile embedment depth.

The strength design of anchors that are not within the scope of Appendix D of ACI 318, and as amended above, shall be in accordance with an approved procedure.

### PURPOSE:

Section 1912A.1 requires an approval procedure to determine the design strength of anchors that are not within the scope of Appendix D of ACI 318 as amended by the 2007 CBC. This CAN establishes the OSHPD approved procedure and requirements for the qualification, design, and use of anchors that are within and are not within the scope of Appendix D of ACI 318. Anchors that are not within the scope of Appendix D of ACI 318 include screw anchors, specialty inserts, chemical/adhesive anchors, and power actuated fasteners.

See CAN 2-1912A.1 for field testing of post-installed anchors.

### INTERPRETATION:

#### 1.0 Procedure and Requirements

#### 1.1 Design Strength of Mechanical Anchors

Design strength of mechanical anchors determined in accordance with ICC Evaluation Services, Inc. (ICC-ES) AC193, Acceptance Criteria for Mechanical Anchors in Concrete Elements (edition citing 2006 IBC as a reference standard) satisfies the requirements of Section 1912A.1, 2007 CBC. For the purpose of AC193, mechanical anchors include screw anchors, displacement controlled anchors, torque controlled anchors, and undercut anchors. The use of specific mechanical anchors shall be

limited to the same configuration as tested in accordance with AC193, unless otherwise approved by OSHPD.

Installation of mechanical anchors in concrete where cracking is likely to occur over the service life of the anchor shall be based on qualification tests in cracked concrete. Installation of mechanical anchors at the underside of the beam/slab shall be based on tests on cracked concrete.

**Exceptions:**

- a. Mechanical anchors installed in the compression region of the beam/slab, when the design engineer provides dimensions and details to confirm anchor placement.
- b. Mechanical anchors installed in the high flute (rib) of the metal deck in a concrete on metal deck assembly.
- c. Mechanical anchors installed with sufficient embedment so the load-transfer zone is above the neutral axis of the beam or slab, except when the slab is intended to serve as a diaphragm for transferring earthquake forces to other lateral load resisting elements.

Installation of mechanical anchors subjected to wind or seismic forces shall be based on a seismic qualification test in concrete.

All mechanical anchors shall have an identification number or letter at the head, observable after installation, which indicates the length of the anchor installed.

Specialty inserts, including cast-in-place specialty inserts, tested in accordance with AC193 shall be considered to satisfy the requirements of Section 1912A.1, 2007 CBC. Sensitivity tests, which are unique to post-installed anchors and have no effect on cast-in-place specialty insert capacities, need not be performed to qualify cast-in-place inserts.

**1.1.1 Power Actuated Fasteners**

Power actuated fasteners shall be qualified on the basis of ICC-ES AC70, Acceptance Criteria for Fasteners Power-Driven into Concrete, Steel and Masonry Elements (edition citing 2006 IBC as a reference standard). Power actuated fasteners shall not be used where they are prohibited by ICC-ES AC70, unless specifically permitted by this CAN.

Section 13.4.5 of ASCE 7-05 does not permit power actuated fasteners for seismic tension load applications. Power actuated fasteners shall not be used to carry seismic tension loads (except for vertical seismic load produced by self-weight of the components supported as provided in the paragraph below) or in cracked concrete unless approved for such loading by OSHPD. Power actuated fasteners may be permitted for interior conditions subject to gravity loads. Allowable loads in tension, shear, or tension and shear combinations shall

not exceed the smaller of: 1) 100 pounds or 2) loads provided in the relevant ICC-ES Report (ESR) using ICC-ES AC70.

Design loads shall be increased for vertical seismic load effect in accordance with Section 12.4.2.2 of ASCE 7-05 and total loads shall be increased by a factor of 1.3 in accordance with Section 13.4.2 of ASCE 7-05, for anchors embedded in concrete. Power actuated fasteners may be used for interior non-shear wall partitions and seismic shear, when they are specifically listed for service in resisting lateral loads in areas subject to earthquakes. See limitations in Section 3 of this CAN, Anchorage Design Limitations.

**Exception:** Power actuated fasteners shall not be used to anchor exterior cladding or curtain wall systems.

### 1.1.2 Installation of Mechanical Equipment

Expansion anchors for non-vibration isolated mechanical equipment rated over 10 hp are not permitted by Section 13.6.5.5 of ASCE 7-05. Anchors installed in overhead conditions for non-vibration isolated equipment with reciprocating or rotating mechanisms shall be undercut anchors.

### 1.1.3 Other Anchors

Attachments into concrete utilizing non-expanding or cast iron inserts shall require prior approval by OSHPD. Internally threaded shell-type anchors/displacement-controlled anchors (drop-ins, etc.) shall not be permitted at the underside of beam/slab.

Use of screw anchors shall be limited to dry interior conditions. Screw anchors shall not be permitted at the underside of beam/slab. Re-use of screw anchors or screw anchor holes shall not be permitted. Assessment of screw anchors that are set with an impact wrench shall include the reliability tests described in Section 8.8.2.2.3 of AC193 (anchors qualified for re-tightening).

## 1.2 Design Strength of Chemical/Adhesive Anchors

Design strength of chemical/adhesive anchors determined in accordance with ICC-ES AC308, Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements (edition citing 2006 IBC as a reference standard) satisfies the requirements of Section 1912A.1, 2007 CBC. Use of specific anchors shall be limited to the same configuration as tested in accordance with AC308, unless otherwise approved by OSHPD. The long term durability, stability, and temperature sensitivity of chemical/adhesive anchors shall be considered as required by AC308.

Chemical/adhesive anchors do not include the use of surface bonding applications, such as the base of support pedestals used in access floor systems.

Core bits may be used to drill holes for chemical/adhesive anchors when permitted by ICC-ESR for the specific anchor system.

Installation of anchors in concrete where cracking is likely to occur over the service life of the anchor shall be based on qualification test in cracked concrete. The use of chemical/adhesive anchors in overhead applications or applications with sustained (continuous) tension load that can lead to creep is not allowed.

Installation of anchors subjected to wind or seismic forces shall be based on seismic qualification test on cracked concrete.

Chemical/adhesive anchors should be installed in only interior conditioned spaces.

**Exceptions:**

- a. Where chemical/adhesive anchors are used as shear dowels at the perimeter of an existing opening (slab or wall) to be filled with concrete, or are being used to connect new concrete elements to existing concrete elements, they may be installed in exterior locations with prior approval by OSHPD.
- b. When chemical/adhesive anchors are tested in accordance with AC308 and approved in an ICC-ESR, they shall be permitted for the tested conditions.

If chemical/adhesive anchors are exposed to fire, all chemical/adhesive anchors in the affected area should be inspected and evaluated by a qualified person to ensure that their load carrying capability has not been compromised.

**1.2.1 Structural Applications**

Where chemical/adhesive anchors are used for structural applications, such as dowels between new and existing concrete, the anchor shall be installed in a manner such that the ultimate tensile capacity of the steel element can be reliably developed, i.e., the anchor capacity is controlled by the ultimate strength of the steel element.

**Exception:** Chemical/adhesive anchors that cannot develop the tensile capacity of the steel element may be used to transfer forces, provided that the loads on the anchor are amplified by the system overstrength factor ( $\Omega_0$ ) in Table 12.2-1 of ASCE 7-05 or where unreduced forces are used in accordance with ASCE 41-06 for existing hospital buildings.

When chemical/adhesive anchors are used to resist tensile forces in structural applications, the minimum depth of embedment shall be greater than or equal to the development length ( $l_d$ ) determined in Section 12.1 of ACI 318 for a cast in place reinforcing bar of the same diameter and grade, unless it can be shown by calculation, or testing approved by OSHPD, that the anchor spacing and edge distance is sufficient to develop the tensile strength of the anchor in a lesser depth of embedment.

## **2.0 Installation**

### **2.1 Procedure**

All anchors shall be installed in accordance with the requirements of the ICC-ESR for the specific anchor, or as required by the manufacturer. If the concrete cracks during installation of the anchor, the anchor shall be removed or abandoned. Where post installed mechanical anchors are used in a standoff configuration (i.e., where the attachment is separated from the concrete in which the anchor is installed), a nut and washer shall be provided at the concrete surface to facilitate setting of the anchor and to transmit axial compression loads into the concrete. Axial compression loads shall not be carried by the mechanical anchor body or anchor rod into the concrete.

### **2.2 Holes for Post-Installed Anchors**

All holes for post-installed anchors shall be drilled, cleaned, and prepared in accordance with manufacturer's recommendations or the applicable ICC-ESR. All debris shall be removed by in-hole brushing combined with vacuum or oil-free compressed air. Jetting holes with water is not permitted. When an anchor does not set properly or fails a tension test, the drilled hole may not be reused. Abandoned holes shall be filled with non-shrink grout. The minimum spacing between an abandoned hole and a drilled hole used for a post-installed anchor shall not be less than 1-1/2 anchor diameters unless otherwise approved by OSHPD.

### **2.3 Application of Torque**

Where the manufacturer's installation instructions or applicable ICC-ESR specify the application of an installation torque, the specified torque shall be applied with a calibrated torque wrench. The specified installation torque shall not be exceeded. Prior to the application of torque, the anchor threads shall be protected from damage. Supplemental lubricants shall not be applied to the threads.

Torque-controlled expansion anchors and torque-controlled chemical/adhesive anchors are anchors that require the application of torque to set the anchor and produce expansion forces in the concrete. Following attainment of 10% of the specified torque, 100% of the specified torque shall be reached within seven (7) or fewer complete turns of the nut. If the specified torque is not achieved within the required number of turns, the anchor shall be removed or abandoned. Torque-controlled expansion anchors shall not be used in a manner that requires loosening of the nut following the application of the installation torque unless otherwise approved by OSHPD.

### **2.4 Embedment, Spacing, and Edge Distance**

All anchors shall meet the minimum embedment, edge distance, spacing, and slab thickness criteria established by the relevant ICC-ESR.

Edge distance shall be a minimum of ten (10) bolt diameters from the free edge of the slab; and center-to-center spacing shall be a minimum of twelve (12) bolt diameters, unless data is submitted indicating full anchor tension and shear capacity at a closer

distance. If the edge distance is less than ten (10) diameters and the load is directed toward the free edge, the shear capacity shall be reduced in accordance with Appendix D of ACI 318.

Minimum edge distance for power-driven fasteners shall be the value give in ASTM E 1190 or the relevant ICC-ESR, whichever is larger.

Post-installed anchors shall be installed to comply with the minimum slab thickness requirements established by the manufacturer's technical guide for the specified anchor, provided sufficient test data is provided to support the installation.

When installing expansion-type anchors through the low flutes of metal decking into concrete, the anchors shall be placed as close to the center of the flute width as practicable, to avoid the deck seam or as provided in the relevant ICC-ESR. The deck must be a minimum 20 ga. thickness in accordance with Section 2209A.3 of the 2007 CBC and the flute width must meet or exceed the value set forth in the relevant ICC-ESR for the anchor or as otherwise tested, but not less than four (4) inches. The minimum effective depth of embedment shall be as noted in the ICC-ESR for the anchor.

### 3.0 Anchorage Design Limitations

For consistency with the requirements of Section D.3.3.3 of ACI 318-05, only 75% of the design strength shall be considered as available strength for structures located in Seismic Design Categories D, E, and F. Requirements of Section 13.4.2 of ASCE 7-05 shall apply for nonstructural component anchorage, which require anchor design forces for concrete to be increased by a factor of 1.3 and  $R_p$  limited to 1.5, except as provided in Section 13.4.2 of ASCE 7-05. All internally threaded expansion anchors (e.g. drop-ins, etc) and screw anchors shall be considered to have brittle failure and shall have their  $R_p$  limited to 1.5 in accordance with Section 13.4.2 of ASCE 7-05. Anchors shall also satisfy the requirements of Section 1908A.1.47 of the 2007 CBC, where applicable.

<u>Original Signed</u>	<u>07/01/08</u>
John D. Gillengerten	Date

## CODE APPLICATION NOTICE

**Subject:** Field Tests for Post-Installed  
Anchors in Concrete

**FILE NO.:** 2-1916A.8  
**EFFECTIVE:** 07/01/08

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**CODE SECTION:** Section 1916A.8, 2007 California Building Code (CBC)

**1916A.8 Tests for Post-Installed Anchors in Concrete.** *When drilled-in expansion-type anchors or other post-installed anchors acceptable to enforcement agency are used in lieu of cast-in place bolts, the allowable shear and tension values and installation verification test loads shall be acceptable to the enforcement agency.*

*When expansion-type anchors are listed for sill plate bolting applications, 10 percent of the anchors shall be tension tested.*

*When expansion-type anchors are used for other structural applications, all such expansion anchors shall be tension tested. Expansion-type anchors shall not be used as hold down bolts.*

*When expansion-type anchors are used for nonstructural applications such as equipment anchorage, 50 percent or alternate bolts in a group, including at least one-half the anchors in each group, shall be tension tested.*

*The tension testing of the expansion anchors shall be done in the presence of the special inspector and a report of the test results shall be submitted to the enforcement agency. If any anchors fail the tension-testing requirements, the additional testing requirements shall be acceptable to the enforcement agency. The above requirements shall also apply to other post-installed anchors acceptable to enforcement agency and bolts or anchors set in concrete with chemical if the long-term durability and stability of the chemical material and its resistance to loss of strength and chemical change at elevated temperatures are established to the satisfaction of the enforcement agency.*

### **PURPOSE:**

Section 1916A.8 of the 2007 CBC requires that the enforcement agency establish allowable shear and tension values and installation verification test loads for post-installed anchors. This CAN establishes installation verification test loads for post-installed anchors installed in health care facilities subject to Section 1916A.8.

See CAN 2-1912A.1 for allowable shear and tension values for post-installed anchors.

### **INTERPRETATION:**

#### **1.0 Testing Requirements**

Anchors shall be field tested in place for installation verification in accordance with Section 1916A.8, 2007 CBC. Test loads and torques and acceptance criteria shall be shown on the approved construction documents.

**Exceptions:**

- a. Undercut anchors that allow visual confirmation of full set need not be tested.
- b. Where the design tension on anchors is less than 75 lbs. and those anchors are clearly noted on the approved construction documents, only 10 percent of those anchors need be tested.
- c. Where adhesive anchor systems are used to install reinforcing dowel bars in hardened concrete, only 25% of the dowels need be tested if all the following conditions are met:
  1. The dowels are used exclusively to transmit shear forces across joints between existing and new concrete.
  2. The number of dowels in any one member equals or exceeds twelve (12).
  3. The dowels are uniformly distributed across seismic force resisting members (such as shear walls, collectors and diaphragms).

Anchors to be tested shall be selected at random by the special inspector/ Inspector Of Record (IOR).

- d. Testing of shear dowels across cold joints in slabs on grade where the slab is not part of the lateral force-resisting system is not required.
- e. Testing is not required of power actuated fasteners used to attach tracks of interior non-shear wall partitions for shear only, where there are at least three fasteners per segment of track.

If any anchor fails testing, test all anchors of the same type installed by the same trade and not previously tested until twenty (20) consecutive anchors pass, then resume the initial test frequency.

For the purposes of field testing, screw anchors and torque controlled chemical/adhesive anchors shall be considered as a mechanical anchor.

**1.1 Testing Criteria**

The following criteria shall apply for the acceptance of installed anchors:

**1.1.1 Mechanical Anchors**

The test load may be applied by any method that will effectively transmit a measured tension load to the anchor. Acceptable methods include:

1. Hydraulic jack, either unconfined or confined testing.

2. Calibrated spring loaded devices.
3. Calibrated torque wrench for torque-controlled expansion anchors.

Internally threaded shell-type anchors and displacement-controlled anchors (e.g., drop-in anchors), screw anchors, and adhesive anchors shall not be tested using a torque wrench.

Screw anchors may be loosened a maximum of one full turn to facilitate the positioning of a tension test collar. Following the tension test, the anchor shall be re-torqued in accordance with the manufacturer's installation instructions.

Required test loads shall be determined by one of the following methods:

1. One and one-half (1-1/2) times the calculated design strength for static tension load or two times design strength for seismic tension loads as determined in accordance with Appendix D of ACI 318 (not applicable to screw anchors) using coefficient of basic concrete breakout strength in tension ( $K_c = 17$ ).
2. Twice the maximum allowable tension load or one and a quarter (1-1/4) times the maximum design strength of anchors as provided in ICC-ESR.
3. The manufacturer's recommended installation torque or recommended torque in ICC-ESR (not applicable to displacement-controlled anchors and screw anchors).

Tension test load need not exceed 80% of the nominal yield strength of the anchor element ( $= 0.8 A_{se} f_{ya}$ ).

Acceptance Criteria:

A. Hydraulic Ram Method:

Anchors tested with a hydraulic jack or spring loaded devices shall maintain the test load for a minimum of 15 seconds and shall exhibit no discernable movement during the tension test, e.g., as evidenced by loosening of the washer under the nut.

B. Torque Wrench Method:

Anchors tested with a calibrated torque wrench must attain the specified torque within 1/2 turn of the nut.

**Exceptions:**

1. Wedge or Sleeve type:

One-quarter (1/4) turn of the nut for a 3/8 in. sleeve anchor only.

2. Threaded type:

One-quarter (1/4) turn of the screw after initial seating of the screw head.

### 1.1.2 Chemical/Adhesive Anchors

A hydraulic cylinder shall be used to apply the tension test load to the anchor with the cylinder supported on a loading plate having a hole diameter equal to 1.5 to 2.0 times the anchor hole diameter (confined configuration) unless otherwise approved by OSHPD.

Exception: Anchors that are de-bonded over their upper length may be tested with wide supports (unconfined testing).

Required test loads shall be the greater of twice the maximum allowable tension load or one and a half times the maximum design strength of anchors as provided in ICC-ESR. Tension test load need not exceed 80% of the nominal yield strength of the anchor element ( $= 0.8 A_{se} f_{ya}$ ).

**Exception:** Where it is intended that the embedment develop the yield strength of the anchor bolt or reinforcing bar, the test load shall not be less than  $0.8A_{se}F_{ya}$ .

Acceptance Criteria:

Anchors shall maintain the test load for a minimum of 15 seconds and shall exhibit no discernable movement during the tension test, e.g., as evidenced by loosening of the washer under the nut or by continuous loss of jacking pressure. Where other than bond is being tested, the testing device shall not restrict the concrete shear cone type failure mechanism from occurring.

### 1.1.3 Power Actuated Fasteners

The test load may be applied by any method that will effectively measure the tension in the fastener, such as direct pull with a hydraulic jack, calibrated spring loaded devices, etc.

Power actuated fasteners shall be tension tested to twice the allowable tension load as listed in ICC-ESR.

Acceptance Criteria:

The anchor should have no observable movement at the applicable test load.

## 2.0 Testing Procedure

1. Apply proof test loads to mechanical anchors without removing the nut, if possible. If not, remove nut and install a threaded coupler to the same tightness as the original nut using a torque wrench and apply load.



**CODE APPLICATION NOTICE**

FILE NO.: 2-3403A

Subject: Remodel

EFFECTIVE: 06/19/08

**CODE SECTIONS:**

- a. Section 3403A - ADDITIONS, ALTERATIONS OR REPAIRS, 2007 California Building Code (CBC).
- b. Section 3406A CHANGE OF OCCUPANCY, 2007 CBC
- c. Section 104.0, Application to Existing Mechanical Systems, APPENDIX CHAPTER 1, ADMINISTRATION, 2007 California Mechanical Code (CMC).
- d. Section 101.5, Application to Existing Plumbing Systems, APPENDIX CHAPTER 1, ADMINISTRATION, 2007 California Plumbing Code (CPC).

**SECTION 3403A - ADDITIONS, ALTERATIONS OR REPAIRS (CBC)**

**3403A.1 Existing buildings or structures.** Additions or alterations to any building or structure shall comply with the requirements of the code for new construction. Additions for alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any provisions of this code. An existing building plus additions shall comply with the height and area provisions of Chapter 5. Portions of the structure not altered and not affected by the alteration are not required to comply with the code requirements for a new structure.

...

**SECTION 3406A – CHANGE OF OCCUPANCY (CBC)**

**3406A.1 Conformance.** No change shall be made in the use or occupancy of any building that would place the building in a different division of the same group of occupancy or in a different group of occupancies, unless such building is made to comply with the requirements of this code for such division or group of occupancy. Subject to the approval of the building official, the use or occupancy of existing buildings shall be permitted to be changed and the building is allowed to be occupied for purposes in other groups without conforming to all the requirements of this code for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

**Section 104.0 - Application to Existing Mechanical Systems (CMC)**

**Section 104.1 Additions, Alterations or Repairs.** Additions, alterations or repairs may be made to any mechanical system without requiring the existing mechanical system to comply with all the requirements of this code, provided the addition, alteration or repair conforms to that required for a new mechanical system. Additions, alterations or repairs shall not cause an existing system to become unsafe or create unhealthy or overloaded conditions.

Minor additions, alterations and repairs to existing mechanical systems may be installed in accordance with the law in effect at the time the original installation was made, when approved by the Authority Having Jurisdiction.

...

**Section 104.3 Changes in Building Occupancy.** Mechanical systems which are part of any building or structure undergoing a change in use or occupancy, as defined in the Building Code, shall comply with all requirements of this code which may be applicable to the new use or occupancy.

**Section 101.5 - Application to Existing Plumbing Systems (CPC)**

**Section 101.5.1 Additions, Alterations or Repairs.** Additions, alterations or repairs may be made to any plumbing system without requiring the existing plumbing system to comply with all the requirements of this Code, provided the addition, alteration or repair conforms to that required for a new plumbing system. Additions, alterations or repairs shall not cause an existing system to become unsafe, insanitary or overloaded.

**Section 101.5.4 Changes in Building Occupancy.** Plumbing systems which are a part of any building or structure undergoing a change in use or occupancy, as defined in the Building Code, shall comply to all requirements of this Code which may be applicable to the new use or occupancy.

**INTERPRETATION:**

**1. General**

The purpose of this CAN is to provide owners, designers and authorized plan review and enforcement agencies with a consistent method for planning, reviewing and implementing projects on existing buildings and systems. Historically, these types of projects have proven difficult because of the structure of the code, nonspecific requirements for applicability to existing structures and Title 22 requirements to conform to the current code for any alteration affecting the function of a licensed health facility.

**2. Alternate Materials and Methods of Construction**

These guidelines are not intended to prevent the use of an alternate material or method of construction provided OSHPD approves the alternate. The requirements for alternate materials and methods of construction are shown in Section 104.11 – Appendix Chapter 1 of the 2007 CBC, Section 105.0 of Appendix Chapter 1 of the 2007 CMC, and Section 301.2 of the 2007 CPC.

**3. How to use the Guidelines:**

The guideline information is presented as a series of flowcharts which describe the process and a narrative which explains each block on the flowchart. For the purpose of implementing this CAN, the following guidelines (attached) shall be used:

- (1) Health Facility Remodel Flow Chart / Narrative
- (2) Electrical Remodel Flow Chart / Narrative
- (3) Fire and Life / Safety Remodel Flow Chart / Narrative
- (4) Mechanical, Plumbing, and Medical Gas and Vacuum Systems Remodel Flow Chart / Narrative

The main document is titled *Health Facility Remodel Flowchart*. It describes the entire process from project inception through construction. Please note that this flowchart addresses the two following common areas of concern regarding remodel projects:

1. The need for a pre-design consultation with the office.
2. How to handle conditions discovered during construction.

There are three supporting flowcharts: Electrical, Fire and Life Safety, and Mechanical, Plumbing, and Medical Gas and Vacuum Systems. These flowcharts are mutually supporting and are meant to be used concurrently to provide an accurate guide for project accomplishment.

#### **4. Structural Issues:**

Historically, OSHPD has not observed a problem with designers identifying the structural scope of remodels, which is why this document does not include structural considerations in the flow charts. However, this CAN may be helpful in determining the scope of work required for non-structural elements, components and systems affected by seismic repairs to existing buildings or structures. For OSHPD 1 and 4, the structural additions, alterations or repairs shall meet the requirements of Section 16A of the 2007 CBC. OSHPD 2 and 3 projects should be evaluated to insure that they meet the requirements of Chapter 16 of the 2007 CBC. If a designer has questions regarding the structural considerations on a project, they are encouraged to contact the appropriate OSHPD structural plan checking staff.

#### **5. Temporary Construction:**

OSHPD recognizes that temporary construction is sometimes required to accommodate phasing of construction or to provide a transitional solution to a problem. Because each temporary installation is unique, OSHPD will review each installation on an individual basis. At the discretion of OSHPD, the facility must submit a letter that describes the type of temporary installation, the reason for the installation, how much time the temporary installation will exist, and any additional information required by OSHPD. OSHPD will use the written information to decide the extent of the plan or field review and the allowance of time for the installation. When appropriate, clients shall notify the Department of Health Services, Licensing and Certification Division or the local fire department.

All required temporary construction must be shown on the plans or reviewed by OSHPD field staff. Temporary construction barriers must comply with Code Application Notice CAN 9-1401. Temporary services or equipment must be provided and shown on the plans for projects that involve the replacement of an air handling unit, a medical air compressor, a medical vacuum pump, or similar types of equipment unless it serves unoccupied space. The plans must show the precautions being taken to maintain code compliance in the areas affected by the temporary installation or condition. Temporary installations must not have a negative impact on existing systems nor cause unsafe conditions.

#### **6. Pre-Design Conference:**

The flow charts and corresponding narratives are intended as a guide in establishing the level of compliance that OSHPD will require for projects that involve existing buildings and their systems. We encourage our clients to call or meet with OSHPD staff when the flow

charts and narratives do not address a specific project or issue, or when it is unclear as to how to proceed with the proposed project.

**7. Handicap Accessibility:**

The issues relating to handicap accessibility requirements when applied to remodel, repair, or alteration projects is extensive and is therefore being addressed in a separate Code Application Notice (CAN 2-11B). Also, please refer to Section 1134B of the 2007 CBC.

**8. OSHPD 2 and 3 Requirements:**

This Code Application Notice has been developed to clarify the remodel requirements pursuant to Section 3403A of the 2007 CBC. The adoption matrix in the 2007 CBC shows that Chapter 34A has been adopted for OSHPD 1 and 4 only.

Chapter 34 of the 2007 CBC, as amended, has been adopted for OSHPD 2 and 3. Because there are no material differences between chapter 34 and 34A regarding the issues discussed in this CAN, the attached flow charts shall be used on OSHPD 2 and 3 projects as well as OSHPD 1 and 4 projects.

**9. Terms and Definitions:**

The following terms are utilized in this guideline. Definitions found in the California Building Standards Code apply.

**Change in Function.** A change in activity or service provided within the project limits that does not change the use, specific use, or occupancy.

**Change of Occupancy/Use.** Change of an occupancy or use defined in Chapter 3 of the CBC. Also see Section 3406A CBC.

**Change of Occupant Load.** Includes a change in the number of occupants and/or a change in the type of occupants including those identified or described as ambulatory, nonambulatory, bedridden, restrained, developmentally disabled, inpatient, outpatient, nonpatient, public, staff, adults, children and infants.

**Current Code.** California Building Standards Codes and referenced standards in effect at the time of application for plan review. (See CAN 1)

**Discovered Condition.** An unknown condition found during construction.

**Essential Electrical System (EES).** This is the system described in California Electrical Code 517-25 through 517-45.

**Health Facility.** Any health facility licensed pursuant to Section 1250 of the Health and Safety Code under the jurisdiction of the Office.

**Load Capacity.** This term refers to the rated ability of electrical equipment to carry loads calculated in accordance with the requirements of the California Electrical Code.

**Load Capacity Verification.** How one determines and documents load capacity. Refer to California Electrical Code and PIN 38.

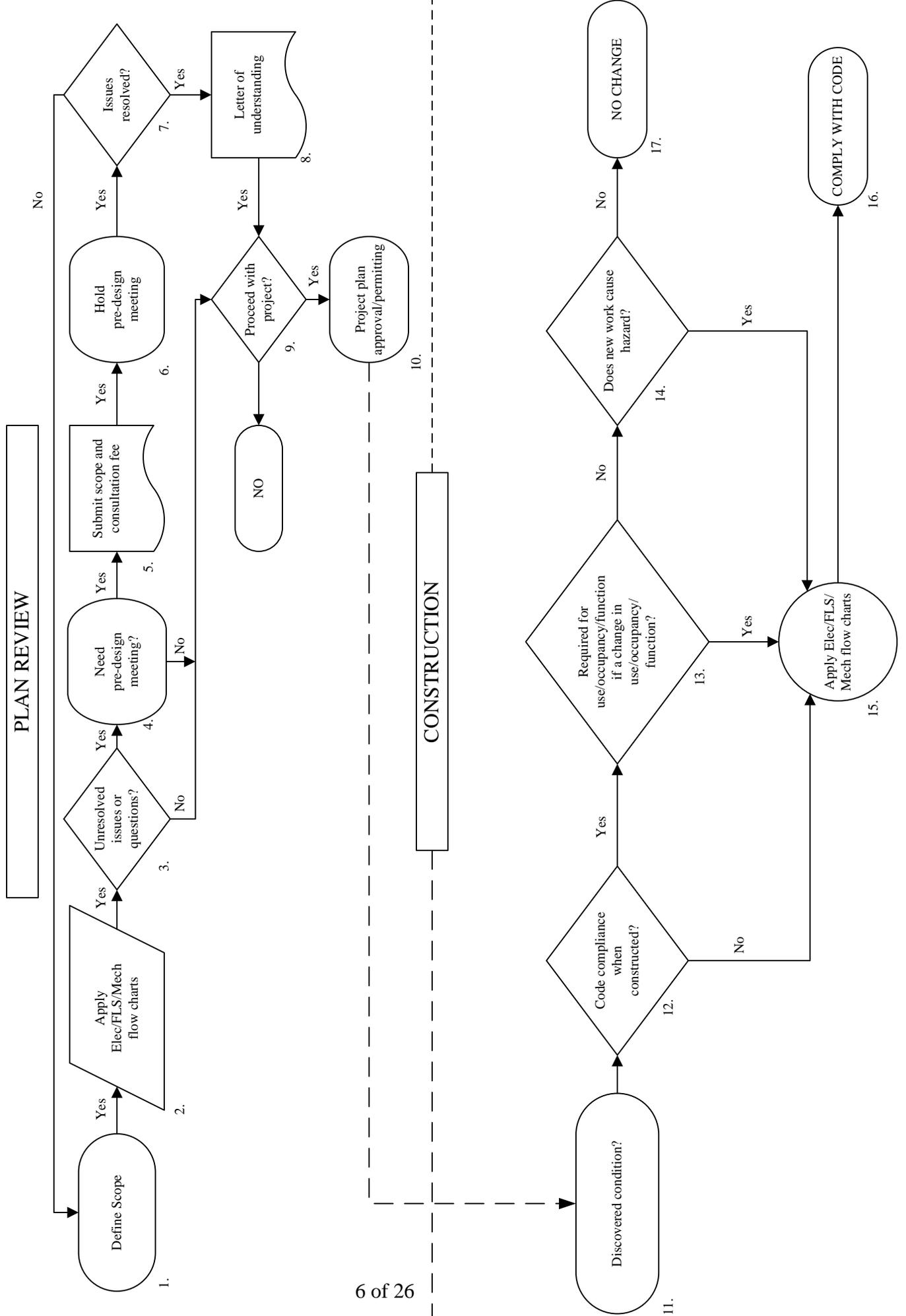
**Non-Essential Electrical System (Non-EES).** This is normal source system described in California Electrical Code 517-30, 35.

**Panel.** Any panelboard, switchboard, motor control center, distribution panelboard, etc. Transfer switches and transformers are not defined as panels. Refer to California Electrical Code Articles 100 and 384.

**Previous Code.** An applicable code under which an existing condition was constructed or installed. It may be a previous edition of the California Building Standards Codes, the Uniform Building Codes, the Life Safety Code or other nationally recognized standards.

<u>Original Signed</u>	<u>06/19/08</u>
John D. Gillengerten	Date

# HEALTH FACILITY REMODEL FLOW CHART



**NARRATIVE FOR HEALTH FACILITY REMODEL FLOW CHART**

The following comments apply to the Health Facility Remodel Flow Chart. The chart addresses the design and office plan review process on the upper portion and construction issues on the lower portion. The narrative comments are numbered and correspond with the numbered items on the flow chart.

**1. Define Scope.**

- a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
- b. In developing project scope consideration should be given to:
  1. The project objectives
  2. Analysis and assumptions of existing conditions
  3. Key code assumptions (Title 24 and Title 22)
  4. Applicable OSHPD CANs and PINs
  5. Identify change of function.

**2. Apply Mechanical / Plumbing, Electrical, Fire & Life Safety Remodel Flow Charts.**

Once the project scope is determined, apply Mechanical / Plumbing, Electrical, Fire & Life Safety remodel flow charts to the design alternatives to consider how applicable code requirements may impact the project.

**3. Unresolved Issues or Questions ?**

If the flow charts lead to a clear understanding of the level of compliance and resolutions of project concerns, the project may proceed.

**4. Need Pre-design Meeting?**

If the flow charts do not lead to resolutions of project concerns or if questions regarding particular project issues are not addressed it may be advisable to conduct a pre-design meeting with OSHPD.

**5. Submit Scope & Consultation Fee.**

- a. To take advantage of this service, it is necessary to request, in writing, a consultation pursuant to Section 129835, Health and Safety Code.
- b. Prior to scheduling a pre-design meeting, OSHPD will require the applicant to submit the following:
  1. Meeting Agenda (prepared by the project team) listing major points of discussion
  2. Existing floor plan with impacts on adjacent areas and services
  3. Description / Scope of the remodel (design)
    - (1) Define applicable code sections
    - (2) Define applicable PINs & CANs
    - (3) Possible Program Flexibility, alternate material and methods of construction, and alternate means of protection issues should be listed
  4. Type of construction
  5. Occupancy - existing and proposed with justification
  6. Accessibility considerations, including path of travel

7. Mechanical / Plumbing /Electrical / Fire and Life Safety considerations
  8. Preliminary exiting plan
  9. Local Zoning / Land use agreements
- c. Fees - OSHPD consultation associated with a pre-design conference shall be billed at an hourly rate to recover actual cost.

**6. Hold Pre-design Meeting.**

- a. After OSHPD has had the opportunity to review the submitted information the project team will be contacted to set up the pre-design meeting. It is incumbent on the project team to coordinate required meeting attendees and scheduling, i.e. Project Consultants, OSHPD (plan review and compliance, when necessary), Department of Health Services Licensing and Certification, when necessary, and Facility Representatives.
- b. It is envisioned that meetings will be held at OSHPD offices, but in special circumstances may be held at project team offices or project facilities.
- c. During the meeting the OSHPD staff will respond to the issues and concerns of the project team so they have a better understanding of how the project will proceed through the OSHPD process.

**7. Issues Resolved.**

- a. If the meeting results in resolution of the substantive issues regarding the project it will be recorded in a letter of understanding.
- b. If the meeting does not result in resolution of substantive issues or creates additional questions regarding the project, the project team should reassess the scope in response to the issues and, if necessary, reconvene another meeting with the OSHPD.
- c. Issues that are not satisfactorily resolved in this process may be addressed through the OSHPD appeals process. See Section 7-159 of the 2007 California Administrative Code for appeals to the Hospital Building Safety Board. Also see the OSHPD website for information regarding the Comment, Process Review (CPR) process to resolve issues directly with OSHPD staff and/ or supervisors.

**8. Letter of Understanding.**

- a. Resolutions will be recorded in a letter of understanding. The letter of understanding will be made available to the project team, the facility representative and will be maintained in the OSHPD project file. The intent of the letter is to document a common understanding for the Basis for Design, Basis for Plan Review and Basis for Field Compliance. The letter will be prepared by the design team and signed by the owner, design professional of record, OSHPD Regional Supervisor, and OSHPD Regional Compliance Officer.
- b. It should be noted that the letter of understanding is only as good as the assumptions presented at the pre-design meeting. Changes in design, program requirements, project delivery or other unforeseen issues may necessitate modifications to the letter of understanding.

**9. Proceed with Project.**

The letter of understanding will be utilized by the Office in its application of this CAN to your project.

**10. Project Plan Approval and Permitting Process.**

- a. The project should be submitted to the OSHPD for review identifying any of the special conditions (program flexibilities, alternate designs, etc.) as resolved and recorded in letter of understanding.
- b. At completion of plan review / approval process any conditions recorded in letter of understanding should be brought to the attention of the OSHPD Regional Compliance Officer at time of permitting.

**11. Discovered Conditions.**

Existing non-complying conditions are encountered frequently during construction. It must be determined whether non-complying conditions may be allowed to continue or must be corrected in accordance with current building code.

**12. Code Complying when Constructed?**

It must be determined if the discovered condition was in accordance with applicable codes when it was constructed or installed. Section 3401A, CBC.

**13. Required for Use/Occupancy/Function if a change in Use/Occupancy/Function?**

When a change of occupancy, use, or function occurs, it must be determined if the discovered condition is required for the new occupancy, use, or function. Section 3403A.1, 2007 CBC.

**14. Does new work cause Hazard?**

When new construction, elements or systems are provided, it must be determined if they cause an unsafe, unsanitary or hazardous condition or a life safety or fire risk. Section 3403A.1, 2007 CBC.

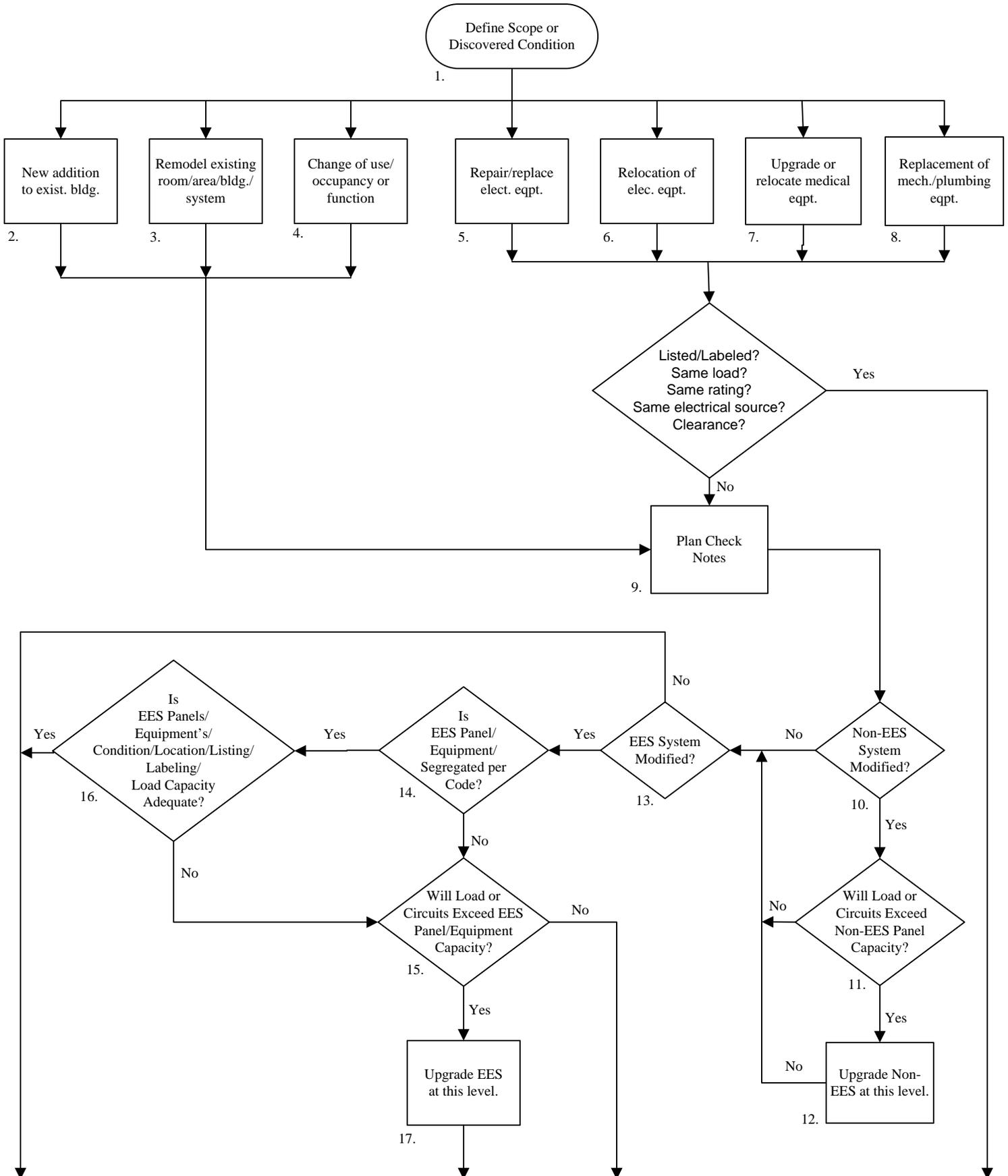
**15. Apply Electrical, Fire & Life Safety, Mechanical / Plumbing Remodel Flow Charts.****16. Comply with Code.**

Submit a post-approval document in accordance with Section 7-153, California Administrative Code (CAC).

**17. No Change.**

When it is determined that the discovered condition was code complying when constructed or installed, correction is not required as a result of a change in occupancy, use, license, function or an increase in occupant load and new construction, elements or systems do not cause an unsafe, unsanitary or hazardous condition or a life safety or fire risk, no change or correction is required.

# ELECTRICAL REMODEL FLOW CHART



**ALL NEW ELEMENTS OF CONSTRUCTION MUST COMPLY WITH CURRENT CODE**

**NARRATIVE FOR THE ELECTRICAL REMODEL FLOW CHART**

This narrative must be used with the Health Facility Remodel Flow Chart for Electrical Systems. The numbers shown on the Flow Chart correspond to the numbers shown below. The purpose of this narrative is to elaborate on the terminology used in the Flow Chart and to show the code requirements that OSHPD will enforce.

**1. Define Scope or Discovered Condition.**

- a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
- b. In developing project scope consideration should be given to:
  1. The project objectives
  2. Analysis and assumptions of existing conditions
  3. Key code assumptions (Title 24 and Title 22)
  4. Applicable OSHPD CANs and PINs
  5. Identify change of function.

**2. New Addition To Existing Building.**

As the title states, this type of project adds floor space to an existing building. The systems affected by the scope of the project must meet current minimum code requirements. Existing electrical systems, not part of the remodel project scope, but utilized for connection to the systems of the remodel project scope, must be upgraded only if load capacity limits are exceeded as shown in the lower portion of the electrical flow chart.

**3. Remodel of Existing Room/Area/Building/System.**

The electrical systems directly involved in the scope of the project must meet current minimum code requirements. Existing electrical systems, not part of the remodel project scope, but utilized for connection to the systems of the remodel project scope, must be upgraded only if load capacity limits are exceeded as shown in the lower portion of the electrical flow chart.

**4. Change of Use/Occupancy or Function.**

An example of this type of situation would be a change of use from a general acute patient care area to skilled nursing beds or an administration area. Another example would be a change of use from a general acute patient care area to a critical care area or an administration area to a patient care area. As indicated in the lower portion of the electrical flow chart; systems, wiring, panels, devices, etc., within the scope of construction would be required to comply with current code requirements. Existing electrical systems not within the scope of construction, but connected to/supplying systems, wiring, panels, devices, etc., within the scope of construction, would only need to be upgraded if load capacity limits are exceeded.

**5. Repair/Replace Electrical Equipment.**

This type of project involves repair of existing electrical equipment or replacement of electrical equipment. The repair or replacement of electrical equipment must be accomplished in compliance with the 2007 California Electrical Code (CEC). That is, equipment must be listed, labeled, or certified by a Nationally Recognized Testing Laboratory (NRTL). The replacement of a specific piece of electrical equipment must be replaced with equipment of the same type, electrical rating and physical size.

Also, the installation of the equipment must comply with current code requirements.

**6. Relocation of Electrical Equipment.**

This type of project involves the simple relocation of electrical equipment. In this type of project, there is no change in the electrical source or load. The reinstalled equipment must meet current code requirements for the installation. The electrical system upstream and/or downstream would not need to be upgraded unless the existing load capacity limits have been exceeded.

**7. Upgrade/Relocate Medical Equipment.**

When medical equipment is upgraded or relocated, the equipment, when finally installed, would be required to meet current code requirements for the actual installation. Equipment, when finally installed, must be listed, labeled or certified by a Nationally Recognized Testing Laboratory (NRTL). As indicated in the lower portion of the electrical flow chart, existing electrical systems not within the scope of construction, but connected to/supplying the medical equipment, would only need to be upgraded if load capacity limits are exceeded.

**8. Replacement of Mechanical/Plumbing Equipment.**

Existing electrical systems serving or monitoring the mechanical equipment must be reinstalled to meet the requirements of current code. Existing electrical systems to be reconnected must be code complying in terms of the type of source and branch. That is, the source must be normal, life safety branch, critical branch, or equipment system, as required by current code. If the EES is a non-segregated EES, the existing electrical system to be reconnected must meet current code requirements for either normal source or emergency source connection. Existing electrical systems serving the replaced mechanical equipment do not require upgrade/segregation unless load capacity limits are exceeded as shown in the lower portion of the electrical flow chart.

**9. Plan Check Notes.**

Load capacity verification shall be provided for panels, panel feeders, and panel feeder overcurrent protective devices at points in the electrical distribution system where modifications occur. A load summary shall be provided per the requirements of OSHPD Policy Intent Notice (PIN) 38. For a net load reduction on an affected panel where load is to be added, the requirement for load capacity verification is satisfied. For a net load addition on an affected panel, follow OSHPD PIN 38 for the acceptable means of providing load capacity verification. Also, as used herein, the word "panel" is defined as any panelboard, switchboard, motor control center, distribution panelboard, etc. Refer to the "Terms" section of this CAN and to PIN 38.

Submission of verification of compliance with OSHPD PIN 38 for affected electrical panels does not relieve the Electrical Engineer from fully complying with Article 220 of the current edition of the CEC relating to load capacity verification for the electrical system.

All electrical systems, wiring, panels, devices, etc. within the scope of construction shall be code conforming.

#### **10. Non-EES System Modified?**

This system is typically the normal source system described in Article 517.35 of the 2007 CEC. The non-EES/branch circuit will not be considered as modified if the scope of construction involves only a simple removal of a load or device. Relocation of an existing load or device, or the addition of a load or device, constitutes a modification of the non-EES/branch circuit.

A “yes” answer leads to block #11: “Will loads or circuits exceed non-EES equipment capacity?”. A “no” answer leads to block #13, “EES system modified?”.

#### **11. Will Load or Circuits Exceed Non-EES Panel Capacity?**

This is the non-EES panel to which load is being added. If load capacity verification per OSHPD PIN 38 indicates that this panel will be overloaded by the load addition, the panel, its feeder and feeder overcurrent protective device must be brought into conformance with current code requirements. The next panel electrically upstream towards the source must also undergo load capacity verification per the requirements of OSHPD PIN 38. If it is also overloaded, it must also be brought into conformance with current code requirements along with its feeder and feeder overcurrent protective device. It is not the intent of this paragraph to relieve the Electrical Engineer from the responsibility of performing load capacity verification calculations on affected feeders all the way back to the main service entrance or to the terminals of a separately derived system as required by Article 220 of the 2007 CEC.

A “yes” answer directs one to block #12. A “no” answer directs one to block #13.

#### **12. Upgrade Non-EES At This Level.**

Replace panel, panel feeder, and panel feeder overcurrent protective device per current code requirements. Transformers, transfer switches and other electrical devices which are not panels but which occur at a level in the distribution system where upgrade is required, shall also be upgraded accordingly to meet current code requirements.

#### **13. EES System Modified?**

This system is the Essential Electrical System described in Articles 517.25, through CEC 517.45 of the 2007 CEC. The EES/branch circuit will not be considered as modified if the scope of construction involves only a simple removal of a load or device. Relocation of an existing load or device, or the addition of a load or device, constitutes a modification of the EES/branch circuit.

A “no” answer leads to the box at the lower portion of the flow chart which delivers the reminder that all new elements of construction must comply with the current code.

A “yes” answer leads one to block #14.

**14. Is EES Panel/Equipment Segregated per Code?**

Is the panel to which load is being added segregated per the requirements of Articles 517.25 through CEC 517.45 of the 2007 CEC ?

A “yes” answer leads to block #16. A “no” answer leads to block #15.

**15. Will Load or Circuits Exceed EES Panel/Equipment Capacity?**

This is the EES panel to which load is being added. If load capacity verification per OSHPD PIN 38 indicates that this panel will be overloaded by the load addition, the panel, its feeder and feeder overcurrent protective device must be brought into conformance with current code requirements. The next panel electrically upstream towards the source must also undergo load capacity verification per the requirements of OSHPD PIN 38. If it is also overloaded, it must also be brought into conformance with current code requirements along with its feeder and feeder overcurrent protective device. It is not the intent of this paragraph to relieve the Electrical Engineer from the responsibility of performing load capacity verification calculations on affected feeders all the way back to the main service entrance or to the terminals of a separately derived system as required by Article 220 of the 2007 California Electrical Code.

Non-segregated EES panels which are not overloaded do not need to be upgraded. However, new loads added to the panel must be segregated at the branch circuit level. That is, new loads must be connected to an existing or new branch circuit so that all loads on that circuit are either life safety branch loads, critical branch loads, or equipment system loads.

**16. Is EES Panel’s/Equipment’s Condition/Location/Listing/Labeling/Load Capacity Adequate?**

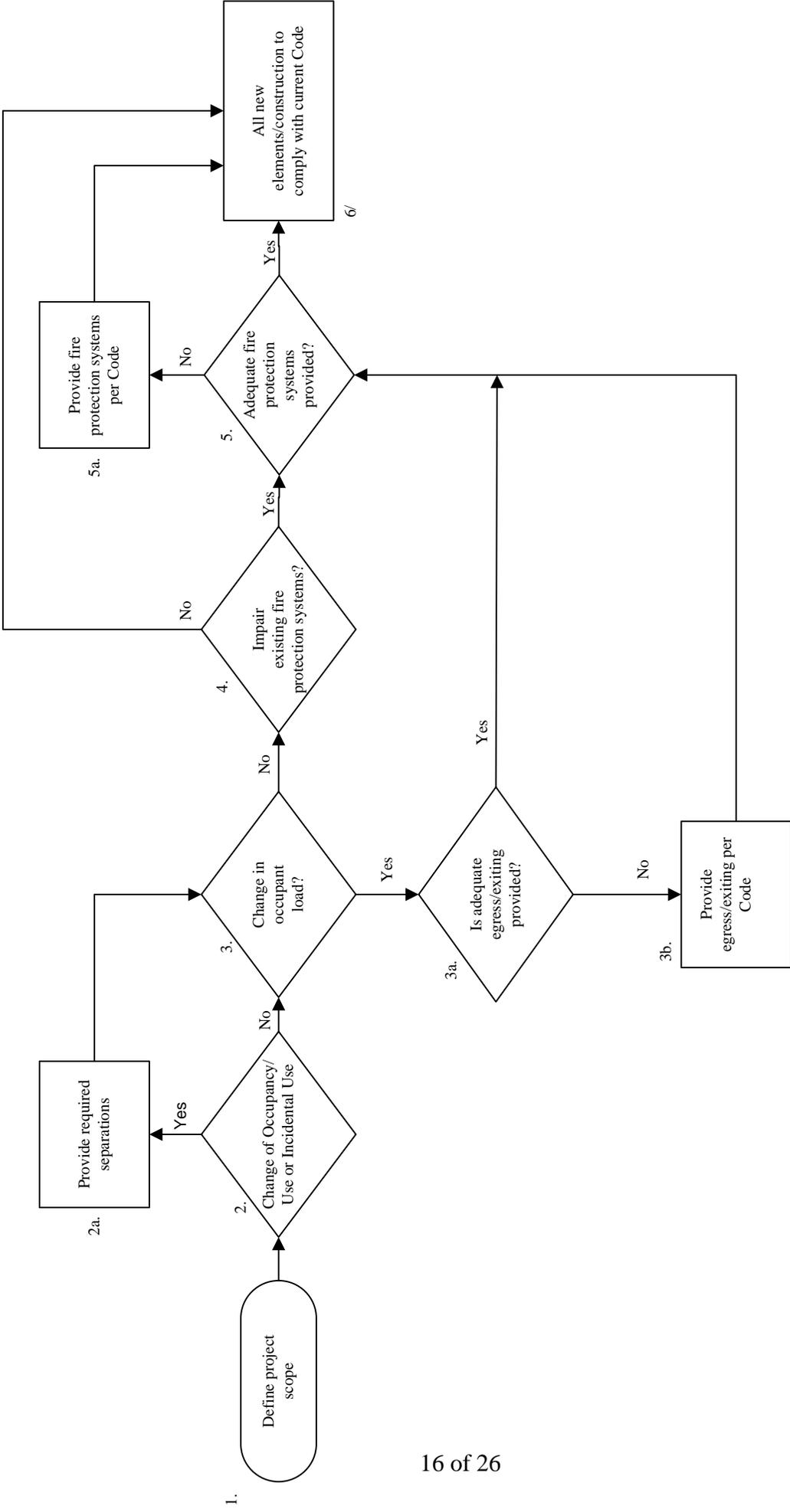
One arrives at this block with a “yes” answer to the question, “Is existing EES panel/equipment segregated per code?” If the EES panel/equipment which is proposed to be connected to electrical systems within the remodel project’s scope of construction is not in proper working condition, is not located properly per current code requirements, is not adequately listed, labeled or certified per the requirements of Article 110.2 of the 2007 CEC, or does not have adequate load capacity per PIN 38, one is directed to block #17 which requires upgrade of the EES at this level.

**17. Upgrade EES At This Level.**

Where an existing segregated or non-segregated EES panel becomes overloaded based on the requirements of OSHPD PIN 38, the panel must be replaced with code conforming, segregated panels and panel feeders. If there are life safety branch loads, a life safety branch panel shall be provided with a separate feeder back to the serving panel electrically upstream towards the source. If there are critical branch loads, a critical branch panel shall be provided with a separate feeder back to the serving panel electrically upstream towards the source. If there are equipment system loads, an equipment system panel shall be provided with a separate feeder back to the serving panel electrically upstream towards the source. Existing non-segregated branch circuits not modified within the scope of construction per narrative note #13, will not be required to be segregated. However, non-segregated branch circuits shall not be fed from the life safety branch panel per Article CEC 517.32 of the 2007 CEC. Transformers, transfer switches and other electrical devices which are not panels but which occur at a level in the distribution system where upgrade is required shall also be upgraded to comply with current code requirements.

Where an existing segregated EES panel has adequate load capacity for the proposed new load, but is not in proper working condition, is not located properly per current code requirements, or is not listed, labeled, or certified, it shall be brought into conformance with current code requirements.

# FIRE & LIFE SAFETY REMODEL FLOW CHART



**NARRATIVE FOR FIRE AND LIFE SAFETY REMODEL FLOW CHART**

This narrative must be used with the Health Facility Remodel Flow Chart for Fire and Life Safety Systems. The numbers shown on the Flow Chart correspond to the numbers shown below. The purpose of this narrative is to elaborate on the terminology used in the Flow Chart and to show the code requirements that OSHPD will enforce.

**1. Define Scope**

- a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
- b. In developing project scope consideration should be given to:
  1. The project objectives
  2. Analysis and assumptions of existing conditions
  3. Key code assumptions (Title 24 and Title 22)
  4. Applicable OSHPD CANs and PINs
  5. Identify change of function.

**2. Change of occupancy or incidental use?**

Based upon the scope, it must be determined if a change of occupancy or a change of an incidental use will occur as a result of the project. A change of occupancy or a change of incidental use is a change to the occupancies and incidental uses identified in Chapter 3 or table 508.2 of the 2007 California Building Code. Section 3406A, California Building Code.

**2a. Provide required separations.**

Section 3406A requires that all projects which change occupancy or incidental use shall be required to comply with all required occupancy separations as shown in Table 508.2 and Table 508.3.3.

**3. Change in occupant load?**

Each project must be evaluated for a change in occupant load. A change in occupant load may occur when there is a change of occupancy, use, or an increase in area. Section 1004, 2007 California Building Code (CBC).

**3a. Is adequate egress/exiting provided?**

When changes of occupancy, incidental use, or change in area occur which create a change in occupant load, it must be determined if adequate egress is provided. Adequate egress is provided when maximum travel distance is not exceeded and the minimum width, number of exits, distance between exits and fire rated separations are provided in accordance with Chapter 10 of the California Building Code or an approved alternate means of protection is provided. Section 3406A, 2007 CBC.

Egress cannot be considered as adequate if not in compliance with provisions of current or previous code.

**3b. Provide egress/exiting per Code.**

If determined that adequate egress is not provided, egress must be provided in accordance with Chapter 10 of the CBC.

**4. Impair existing fire protection systems**

It must be determined if the project causes or creates a deficiency in the existing fire protection systems including fire dampers, fire/smoke dampers, smoke control, fire sprinkler and fire alarm systems.

**5. Adequate fire protection systems provided?**

Projects must be evaluated for adequate fire dampers, smoke/fire dampers, and fire protection systems including smoke control, fire sprinkler and fire alarm systems.

See Chapters 3, 7, and 9 of the CBC or an approved alternate means of protection.

Fire protection systems are considered to be adequate when they are in compliance with the current California Building Standards Code or are in compliance with the applicable code when they were installed.

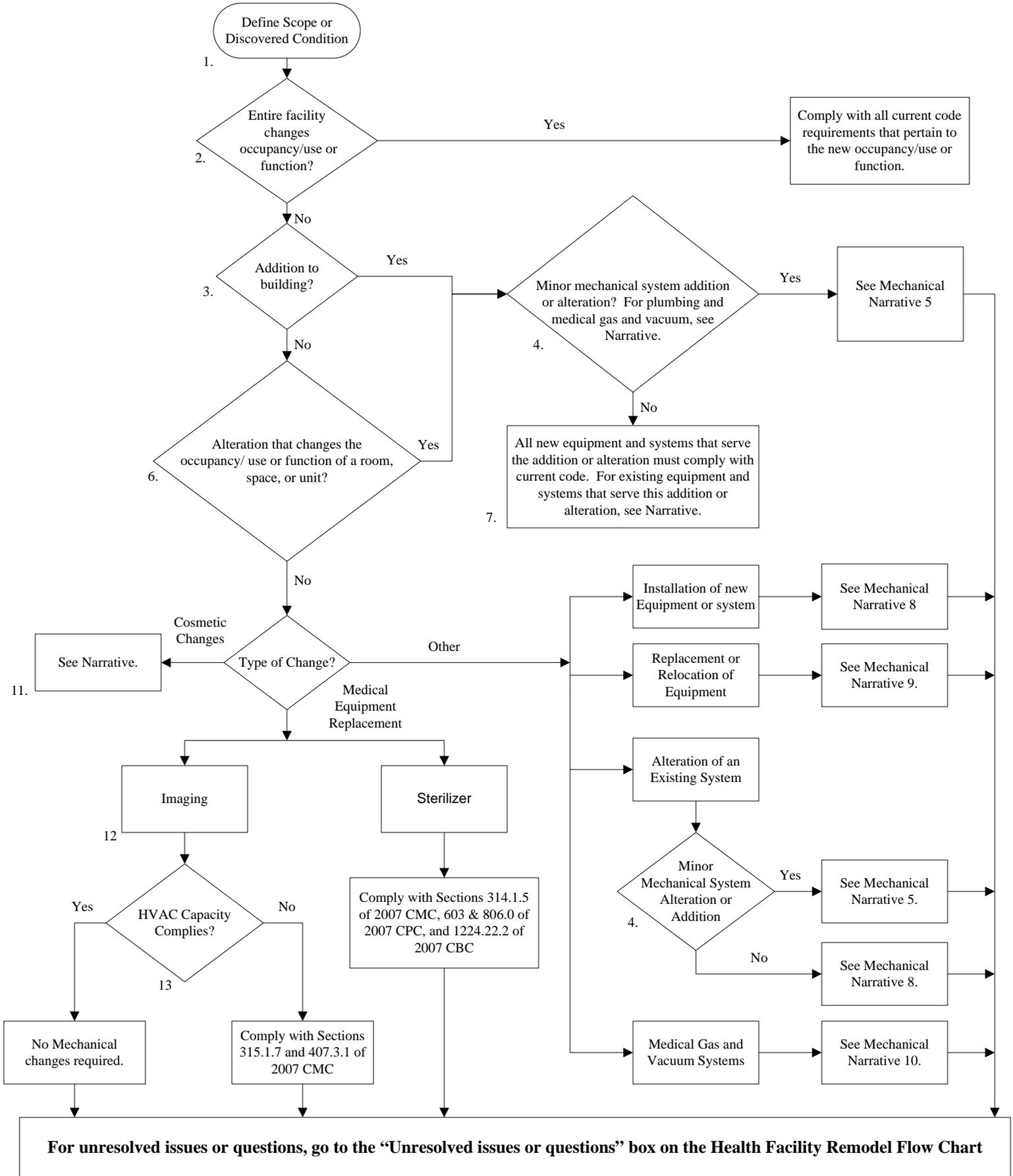
**5a. Provide fire protection systems per Code.**

If determined that adequate fire protection systems are not provided, systems must be provided in accordance with the California Building Standards Code or an approved alternate means of protection.

**6. All new elements/construction to comply with current Code.**

All new construction, elements and systems associated with remodel projects must comply with the California Building Standards Code. Such compliance may include an approved alternate means of protection.

# MECHANICAL, PLUMBING, AND MEDICAL GAS AND VACUUM SYSTEMS REMODEL FLOW CHART



**NARRATIVE FOR MECHANICAL, PLUMBING, AND MEDICAL GAS  
AND VACUUM SYSTEMS REMODEL FLOW CHART**

This narrative must be used with the Health Facility Remodel Flow Chart for Mechanical, Plumbing, and Medical Gas and Vacuum Systems. The numbers shown on the Flow Chart correspond to the numbers shown below. The purpose of this narrative is to elaborate on the terminology used in the Flow Chart and to show the code requirements that OSHPD will enforce. The “project boundaries” for each project or phase is defined by the physical barrier separating area(s) vacated for work from those remaining occupied. The definition does not preclude work outside the boundaries, as permitted by facility operations. Locations of temporary construction barriers must be identified on all plans. Work to create temporary barriers will generally appear on architectural plans.

At the discretion of OSHPD, the design professional may be requested to submit design calculations or measurements to verify that the existing systems and equipment can achieve code compliance.

Note: See the Fire and Life Safety Flow Chart and Narrative for fire damper, smoke damper and fire sprinkler system requirements.

**1. Define Scope.**

- a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
- b. In developing project scope consideration should be given to:
  1. The project objectives
  2. Verification and analysis of existing conditions
  3. Key code assumptions (Title 24 and Title 22)
  4. Applicable OSHPD CANs and PINs
  5. Identify change of function. Specific functions are identified in Section 1224, 2007 California Building Code (CBC). Identify rooms with the 2007 California Mechanical Code (CMC) Table 4-A nomenclature.

**2. The following are examples of an entire facility changing function:**

- a. Acute care hospital changes to a skilled nursing facility.
- b. Skilled nursing facility changes to an acute care hospital.
- c. Skilled nursing facility changes to an intermediate care facility.

**3. For definition of building “addition” see definition in Section 202 CBC.**

**4. OSHPD will use the following criteria as guidelines for deciding if an addition or alteration to an existing mechanical system will be considered as minor:**

- a. The project does not involve a room or area shown in Table 315, California Mechanical Code (CMC).

- b. The project does not involve a Cardiac Catheterization Lab, Cystoscopy, Angiography, emergency operating room, Positive Pressure Isolation Room, or a Negative Pressure Isolation Room.
- c. The building addition or altered space does not contain more than 2000 cfm of supply, return, or exhaust air.
- d. The project does not use more than 10% of the connected existing mechanical system capacity. Mechanical systems include air handling and distribution systems, hot water systems, chilled water systems, steam, etc. If existing mechanical systems are used to serve the building addition, the addition must not cause the capacity of the existing systems to be exceeded.
- e. The project involves only balancing of air or water systems.

The design professional should communicate with OSHPD for determining if an addition or alteration to an existing mechanical system will be considered as minor in accordance with the above guidelines.

The 2007 California Plumbing Code (CPC) does not have a section for **minor** additions or alterations to plumbing systems. Additions or alterations may be made to any plumbing system without requiring the existing plumbing system to comply with all the requirements of the California Plumbing Code, provided the addition or alteration conforms to that required for a new plumbing system. Additions or alterations must not cause an existing system to become unsafe, insanitary or overloaded. See Appendix Chapter 1 - Section 101.5.1, 2007 CPC.

The 2005 edition of NFPA 99 does not have a section for **minor** additions or alterations to medical gas and vacuum systems. See item 10 of this narrative.

5. **Minor additions or alterations** to existing **mechanical** systems may be installed in accordance with the code in effect at the time the original installation was made. The design professional is responsible for giving OSHPD sufficient information to decide if the original installation complies with the code in effect at the time of the installation. If existing mechanical systems are used to serve the building addition, the addition must not cause the capacity of the existing systems to be exceeded. Measures must be taken to assure that the modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, see Narrative 15 for additional information. Plans must contain specific information and procedures to define the measures required.
6. **For definition of “alteration”** see definition in Section 202, of the 2007 CBC. Specific functions are identified in Section 1224, 2007 CBC. Identify rooms with CMC Table 4-A nomenclature.
7. **All existing mechanical and plumbing equipment and systems** located within the scope of the project must comply with all current code requirements. For existing equipment or systems that serve the addition or alteration and are not located within the project boundaries, OSHPD will enforce the following code requirements:
  - a. Air-Handling Units, Fan Coil Units, Forced-Air-Type Central Furnaces and exhaust fans.

1. Filter efficiency, filter location, and filter gages. Section 408, CMC.
  2. Pressure relationship and ventilation requirements for areas within the project boundaries. Section 407.3.1, CMC. Measures must be taken to assure that the modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, see Narrative 15 for additional information. Plans must contain specific information and procedures to define the measures required.
  3. Emergency electrical power for equipment serving areas or rooms in Table 315, CMC when required by Section 316, CMC.
  4. Indoor temperature and humidity requirements, Section 315, CMC.
  5. Automatic shutoff for smoke control. Section 609, CMC.
  6. Use of corridor or space above ceiling as a plenum. Sections 407.4.1.3 and 407.4.1.4, CMC.
  - b. All other types of existing mechanical, plumbing, and medical gas and vacuum equipment and systems.
    1. If the existing equipment or system has sufficient capacity to serve the addition or alteration, OSHPD will allow the equipment or system to remain as installed. Equipment or systems that do not have sufficient capacity must be replaced or supplemented.
  - c. See item 10 for additional medical gas and vacuum system requirements.
  - d. All services/systems and utilities serving building additions shall comply with CBC 1224.4.
- 8. For alterations to existing mechanical or plumbing equipment or systems, or the installation of new equipment, fixtures, or systems, OSHPD will require the alterations or installation to comply with current code within the project boundary. Mechanical alterations must not cause an existing system to become unsafe or create unhealthy or overloaded conditions. Measures must be taken to assure that the modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, see Narrative 15 for additional information. Plans must contain specific information and procedures to define the measures required. Plumbing alterations must not cause an existing system to become unsafe, insanitary or overloaded.**
- 9. For the replacement or relocation of mechanical or plumbing systems or equipment, OSHPD will enforce the following code requirements:**
- a. Air-Handling Units, Fan Coil Units, and Forced-Air-Type Central Furnaces.
    - 1a. Filter efficiency, filter location, and filter gages. Section 408.0, 2007 CMC. (OSHPD 1, 3 and 4)
    - 1b. Filter efficiency, filter location, and filter gages. Section 408.0, 2007 CMC, except where two filter banks are required in Table 4-C, filter bank No. 1 (30% filter) shall be optional. (OSHPD 2)
    2. Condensate drain. Section 310, 2007 CMC; and Chapter 8, 2007 CPC.
    3. Clearances and access. Sections 304 and 305, 2007 CMC.
    4. Emergency electrical power. Section 316, 2007 CMC (OSHPD 1 and 4 only).
    5. Outdoor air intake location. Sections 407.2, 414, and 906.6, 2007 CMC; and Section 906.2, 2007 CPC.
    6. Indoor temperature and humidity requirements. Section 315, 2007 CMC.

7. Automatic shutoff for smoke control. Section 609, 2007 CMC.
  8. Air Balance. Comply with Narrative 14.
  9. Outdoor air changes and total air changes. Table 4-A, 2007 CMC. (OSHPD 1,3, and 4)
  10. Fan operation. Section 407.1.1, 2007 CMC.
  11. Use of corridor or space above ceiling as a plenum. Sections 407.4.1.3 and 407.4.1.4, 2007 CMC.
  - b. Steam and Hot Water Boilers.
    1. All requirements in Chapter 10, 2007 CMC.
    2. Room size. Section 304, 2007 CMC.
    3. Number of boilers. Section 314, 2007 CMC.
    4. Emergency electrical power. Section 316, 2007 CMC.
    5. Exit access doorways, Section 1015.3, 2007 CBC.
    6. Temperature requirements. Section 314, 2007 CMC.
    7. Combustion air requirements. Chapter 7, 2007 CMC.
  - c. Refrigeration Systems.
    1. All requirements in Chapter 11, 2007 CMC.
  - d. Exhaust Fans.
    1. Exhaust fan location. Section 407.1.2, 2007 CMC.
    2. Exhaust fan operation. Section 407.1.1, 2007 CMC.
    3. All requirements in Chapter 5, 2007 CMC.
    4. Emergency electrical power. Section 316, 2007 CMC.
    5. Exhaust discharge. Minimum 25' clearance from outside air intakes. Section 407.2.1 2007 CMC.
    6. Air balance. Comply with Narrative 14.
  - e. Evaporative Coolers.
    1. All requirements in Section 403-405, 2007 CMC.
  - f. Plumbing Fixture.
    1. All requirements in Table 4-2, 2007 CPC.
    2. Shower and bathtub valves. Section 418.0, 2007 CPC.
    3. All requirements in Chapter 4, 2007 CPC.
    4. Sections 311, and 316.2, 2007 CPC.
    5. Sterilization. Section 609.9 2007 CPC.
  - g. Water Heater.
    1. All requirements in Chapter 5, 2007 CPC.
    2. All requirements in Sections 612.1, 612.2, 612.4, and 612.5, 2007 CPC.
  - h. Fuel Storage Tanks.
    1. Comply with Policy Intent Notice (PIN) 2.
- 10. For the replacement, relocation or alteration to medical gas or vacuum systems or equipment, OSHPD will enforce the code requirements shown below. The cited code sections are from the 2005 edition of NFPA 99.**
- a. For alterations of existing systems, OSHPD will require all new work within the project boundaries to comply with NFPA 99. The existing systems may have their use continued, if the systems do not present a distinct hazard to life. See Sections 1.2, 1.3, and 5.1, NFPA 99 and the corresponding Sections in the "Health Facilities Handbook," Fourth Edition, published by the NFPA. Testing of systems, including existing systems breached by project work, must comply with Section 4.3.4, 2005 NFPA 99.

- b. **Medical Air Compressor Replacement.** Comply with NFPA 99, Figure A.5.1.3.5 and applicable code sections.
- c. **Medical Vacuum Pump Replacement.** Comply with NFPA 99, Figure A.5.1.3.6 and applicable code sections.
- d. **Medical Gas Cylinder Manifold/Controls Replacement.** Comply with NFPA 99, Figure A.5.1.3.4.14 and applicable code sections.
- e. **Bulk Medical Gas System Alteration or Replacement.** Comply with NFPA 99, Figure A.5.1.3.4.13 and applicable code sections; and 2005 edition of NFPA 55.
- f. **Medical Gas Cylinder Storage Alteration.** Comply with Section 306, 2007 California Fire Code.

11. **Cosmetic Change.** A cosmetic change is a superficial or decorative change to a room. A cosmetic change must not change the function, area, or volume of the room. Examples of cosmetic changes are: replacement and/or relocation of diffusers, registers, or grilles; painting; new wall coverings; new floor finishes; and similar work.

**The FREER Manual contains requirements** for most projects considered cosmetic changes. For cosmetic changes that are not in the FREER Manual contact OSHPD mechanical staff. For cosmetic changes that involve the replacement of diffusers, or grilles, the room must comply with Section 407.3.1, 2007 CMC.

12. **Examples of imaging equipment are:** X-ray equipment, Gamma Camera, CT Scanner, and MRI.
13. **The design professional must provide** sufficient information to OSHPD to show the existing HVAC system can maintain the proper room temperature required by Section 315.1.7, CMC. OSHPD recommends the design architect or engineer determine that the HVAC system is capable of maintaining the room environmental conditions within the parameters recommended by the imaging equipment manufacturer. The final air balance in the space must comply with Section 407.3.1 2007 CMC. Where changes in airflow are necessary, measures must be taken to assure that the modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, see Narrative 15 for additional information. Plans must contain specific information and procedures to define the measures required.
14. **Air Balance.** For projects involving the replacement of a supply, return or exhaust fan unit, the air distribution system shall be rebalanced in accordance with the following requirements:
- a. For acute care hospitals (OSHPD 1). The supply, return and exhaust airflows in the entire area served by the replaced unit shall be rebalanced to comply with CMC Table 4-A. For projects replacing a single component of a fan or air handler unit (ie, fan scroll, cooling coil, heating coil, etc.) with a replacement component of the same capacity, the rebalance may consist of measuring the system airflow prior to replacing the component and then re-establishing the same system airflow after the component has been replaced. Replacement of multiple components will require the entire air distribution system to be

rebalanced. Rebalancing shall not be required for fans serving entirely non-patient care areas.

- b. For skilled nursing facilities, licensed clinics and correctional treatment centers (OSHPD 2, 3 and 4). Rebalancing the air distribution systems is not required if:
  1. There is no change to the system design airflow.
  2. There is no change to the air distribution system.
  3. The replaced fan system does not serve an operating room, cardiac cath lab, intensive care area, recovery room, nursery, negative pressure isolation room or a positive pressure isolation room.

If any of these conditions are not met, then the entire air distribution system shall be rebalanced as described in Item 14a above.

- c. General requirements: When rebalancing is required, the entire area served by the supply, return or exhaust fan(s) being replaced shall be rebalanced. Mechanical plans shall contain all necessary information to demonstrate design airflows in areas served by the equipment will comply with the ventilation and air balance requirements in Table 4-A, 2007 CMC. Plans shall include room name and number, and room volume of each room served by the unit. If the actual room name does not match an area designation in Table 4-A, 2007 CMC then an equivalent Table 4-A room designation based upon the functional use of the space shall be provided on the plans. Adjacent rooms or spaces not served from the replaced unit that have their airflow or air balance impacted must also comply with Table 4-A for both ventilation and air balance.

#### **15. Airflow Measurements. General Guidance and Best Practices.**

When measures must be taken to assure that modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, several methods are commonly available to achieve compliance. The following methods are identified as common practices to achieve compliance. It is up to the design professional to evaluate which method or combination of methods are most appropriate for their design, however, OSHPD plan review comments may arise if the plans do not specifically address all measures necessary to demonstrate compliance.

- a. Measure Outlets. The most common method is to measure and document the airflow of all outlets on the duct system to be modified prior to demolition work. At the completion of the project (and each separate phase) re-measure all outlets again and re-balance the duct system as necessary to re-establish documented measured airflows.
- b. Duct Traverses. Branch ducts that are outside the project boundaries but served by the same HVAC system that serves the remodel project, duct (pitot) traverses may be taken prior to demolition work. At the completion of the project (or phase of work) re-measure these same duct traverses and re-balance duct system as necessary to re-establish the original measured airflows. Plans must show specific locations duct traverses are to be taken. New branch duct balancing dampers may have to be installed to achieve pre-demolition airflows if they do not exist at the time of the pre-demo airflow measurements.
- c. Unchanged Airflow. If the remodel project re-distributes the existing airflow within the project boundaries such that ducts beyond the project boundaries do not experience a change in airflow, then measures beyond the project boundaries are not necessary. Use of this method requires recent documented

airflow measurements be taken within the project boundaries prior to the design submission to OSHPD to establish the existing quantity of airflow that will be re-established.

- d. Bypass Method. The bypass method is normally used only during construction to allow the contractor to construct the remodel without requiring elaborate or costly re-balancing effort outside the construction boundary during construction. Capping off ducts inherently causes airflow changes throughout the rest of the duct system unless the system has very specific volume controls built into the existing design. In lieu of capping off ducts, airflow to a remodel space can be measured and a bypass duct with a balancing damper can be installed such that the net supply and exhaust (or return) airflow remains constant throughout the rest of the system. The bypass duct shall comply with CMC Chapter 6.
- e. Pressure Independent Systems. This method can be used on newer HVAC systems that have pressure independent supply air terminal units with variable frequency drive (VFD) volume control of the main supply fan. Such systems normally do not require measurements be taken on the supply system, however, the plans must describe the existing system in sufficient detail that the use of this method can be allowed. Dual-duct systems will also tend to be self balancing and do not generally require balancing precautions. These simplifications do not generally apply to return or exhaust systems since they are not normally designed as pressure independent systems.
- f. Comply with Current Code. Another method is to make affected areas outside the project boundaries to comply with current code requirements, namely Table 4-A, 2007 CMC. In this case, pre-demolition airflow measurements are not required.

When fan speed changes are made to systems that are not pressure independent, the entire system must be rebalanced to maintain existing airflows to areas outside the project boundaries. For phased projects, re-balancing shall be completed at each phase to maintain existing airflows to areas outside the project boundaries. Corridors or areas that interface with the project boundaries may require rebalancing to ensure their original air balance is maintained.

A common question is: "Do I have to take measurements of the entire duct system?" Not necessarily, especially for relatively small projects. As you travel upstream in the duct system towards the fan, the percentage of project air to total air quantity decreases. When the percentage of project air is reduced to the point that air balancing tolerances exceed the quantity of project air, further upstream duct measurements are not necessary. Also, regardless of the type of method used, the relative air balance of a room (equal, negative or positive) must be maintained. Thus, even if the project only involves supply air modifications, the return and/or exhaust outlets to a room or space may need to be measured to ensure relative air balance of the room or space remains unchanged. Finally, regarding air balancing tolerances, the standard tolerances specified by the AABC and NEBB Standards are acceptable.

**CODE APPLICATION NOTICE**

**Subject:** Seismic Rehabilitation of  
Existing Buildings

**FILE NO.:** 2-3403A.2.3.3  
(formerly 2-1648A)  
**EFFECTIVE:** 06/19/08

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**CODE SECTION:** Section 3403A.2.3.3, 2007 California Building Code (CBC)  
Section 1.1 ASCE 41-06 (American Society of Civil Engineers)

**2007 CALIFORNIA BUILDING CODE**

**3403A.2.3.3 Adoption:** *Except for the modifications as set forth in Sections 3411A through 3413A, all additions, alterations, repairs and seismic retrofit to existing structures or portions thereof may be designed and constructed in accordance with the provisions of ASCE 41.*

**ASCE 41-06 Seismic Rehabilitation of Existing Buildings****1.1 Scope**

This standard for the Seismic Rehabilitation of Existing Buildings, referred to herein as "this standard," specifies nationally applicable provisions for the rehabilitation of buildings. Seismic rehabilitation is defined as improving the seismic performance of structural and/or nonstructural components of a building by correcting deficiencies identified in a seismic evaluation.

...

This standard does not preclude a building from being rehabilitated by other procedures approved by the authority having jurisdiction.

...

**PURPOSE:**

The purpose of this CAN is to provide an acceptable approach to seismically retrofit single story hospital buildings utilizing wood frame or light steel frame construction to convert them from level SPC-1 to level SPC-2. These buildings are typically classified as "Building Type 1- Wood, Light Frame" or "Building Type 2- Wood, Commercial and Industrial" as specified in Section 2.2.3, Chapter 6 of the 2007 California Administrative Code (CAC). This methodology does not apply to single story hospital buildings utilizing wood frame or light steel frame construction with roofing membrane (shingles, tile, etc.) weighing more than 10 psf.

Note: This CAN is applicable to projects that are subject to the 2007 CBC, and addresses issues that were previously addressed in Section 1648A of the 2001 CBC and the corresponding CAN 2-1648A. Projects that are subject to the 2001 CBC, shall continue to be subject to Section 1648A of the 2001 CBC and CAN 2-1648A.

**INTERPRETATION:**

The relative safety of single story light wood and light steel frame buildings has long been recognized. These types of buildings were specifically excluded from the definition of “Hospital building” when used as a skilled nursing or intermediate care facility (Health and Safety Code Section 129725(b)(2)). Even though by calculation these buildings may evaluate as an SPC-1, we know from past experience that these building types survive earthquakes without collapse, provided that the building has certain attributes. These attributes include braced cripple walls, adequate connection to the foundation, and, in the case of larger light frame structures, regularly and closely spaced sheathed walls that extend from the foundation to the roof. The SPC-2 criteria is that “These buildings may not be repairable or functional but will not significantly jeopardize life” following strong ground motion. Although these buildings do not normally collapse, there are factors that may jeopardize life as they respond to an earthquake.

Therefore, single-story Building Type 1- Wood, Light Frame structures, and single-story “Building Type 2- Wood, Commercial and Industrial” structures, evaluated per Chapter 6 of the 2007 CAC, as an SPC-1 may be placed in category SPC-2 provided the following items have been mitigated:

1. Cripple Walls per Section 5.6.4, Chapter 6 of the 2007 CAC: This deficiency is considered mitigated with the addition of structural panel sheathing to the inside face of stud of the cripple wall. In addition, single-story hospital buildings utilizing wood frame or light steel frame construction with a floor area greater than 5,000 square feet, this deficiency is considered mitigated provided that the interior shear and or bearing walls are supported below the floor by cripple wall studs with structural panel sheathing and sill plates bolted to the foundation. An acceptable methodology for performing this work is the prescriptive procedure for the repair and / or retrofit of existing buildings specified by the 2006 International Existing Building Code, Appendix Chapter A3.
2. Foundation Bolting per Sections 8.4.7, Chapter 6, 2007 CAC: This deficiency is considered mitigated with the addition of drilled-in anchors to provide the minimum bolt spacing per the structural evaluation procedure.
3. Vertical lateral-force resisting elements must be provided parallel to the length of the building so that, in each resisting direction, there is at least one vertical lateral-force-resisting element within 35 feet of any portion of the building length. Existing sheathed stud walls that extend from the foundation to the roof diaphragm shall be considered to meet this requirement. In buildings made up of multiple diaphragm segments, the vertical lateral-force resisting elements shall be directly attached to the diaphragm segment.
4. Where existing sheathed stud walls do not extend from the ceiling to the roof at a maximum spacing of 35 feet in each direction, existing walls shall be extended to the roof to obtain the maximum spacing of 35 feet. The 35 foot spacing is based

on capacities of typical light frame wood building shear walls subject to the estimated earthquake demands calculated from Article 2, Chapter 6, 2007 CAC. When substantiated by structural calculations, the 35 feet may be increased when the shear capacity and overturning stability of the shear walls is adequate. The extended wall portion in the ceiling space shall be anchored to the wall below at each end to resist uplift forces from the design seismic lateral load. The new studs shall be spaced at a maximum of 24 inches on center.

5. Bearing and non-bearing stud walls within the ceiling to roof space designated to resist in-plane seismic lateral forces shall be covered with sheathing on at least one side with nailing sufficient to resist the in-plane design seismic lateral force and to transfer that shear force from the roof diaphragm to the sheathed wall portion below. Where the existing sheathing of the wall below the ceiling is gypsum board or plaster, the new structural sheathing in the ceiling to roof space shall consist of gypsum board. The maximum shear capacity of the new gypsum board sheathing shall not be taken to be greater than 100 pounds-per-linear foot (5d nails at 7 inches on center). The maximum shear capacity of walls with gypsum board sheathing on two sides shall not be taken to be greater than 200 pounds-per-linear foot (5d nails at 7 inches on center).

The maximum height (from roof to floor)-to-width ratio of the stud wall shall not exceed 1:1 in order to be considered as resisting the in-plane seismic lateral force. This limitation is based on the stability of the shear wall considering that there are no designed holdown anchors at the ends of the wall at the floor level.

**REASON:**

This Code Application Notice is provided to address the recognized performance of building types 1 and 2. It is the Office's interpretation of ASCE 41-06, Section 1.1, which is adopted in Section 3403A.2.3.3 which states "...This code does not preclude a building from being rehabilitated by other procedures approved by authority having jurisdiction."

Original Signed                      06/19/08  
John D. Gillengerten                      Date

**CODE APPLICATION NOTICE****FILE NO.:** 2-3406A

(Previously 2-3405)

**Subject:** Removal of Acute Care Services**EFFECTIVE:** 06/19/08**CODE SECTION:** Section 3406A, 2007 California Building Code (CBC)**SECTION 3406A CHANGE OF OCCUPANCY**

**3406A.1 Conformance.** No change shall be made in the use or occupancy of any building that would place the building in a different division of the same group of occupancy or in a different group of occupancies, unless such building is made to comply with the requirements of this code for such division or group of occupancy. Subject to the approval of the building official, the use or occupancy of existing buildings shall be permitted to be changed and the building is allowed to be occupied for purposes in other groups without conforming to all the requirements of this code for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

**3406A.2 Certificate of occupancy.** A certificate of occupancy shall be issued where it has been determined that the requirements for the new occupancy classification have been met.

**PURPOSE:**

This Code Application Notice is intended to clarify the requirements related to the conversion of buildings from acute care purposes to other uses.

**INTERPRETATION:**

In an effort to achieve compliance with the requirements of SB 1953, hospital facilities may consider removal of acute care services from nonconforming hospital buildings. The removal of acute care services may result in a **change of the use** or **change of occupancy** of all or a part of the building, a **change in the license**, a **change of the authority having jurisdiction**, or a combination thereof.

When the removal of services also results in a change of occupancy group or division, compliance with current code requirements for the new occupancy or use may be required, pursuant to Section 3406A of the 2007 CBC.

A change in the licensed services provided in the building, or a change of licensure of the facility, may also require compliance with current code requirements, pursuant to Section 1224.2 of the 2007 CBC; such a change may include, but is not limited to, conversion of beds on the existing acute care license from general acute to skilled nursing or acute psychiatric beds, or conversion of the facility from a general acute care hospital to a skilled nursing facility, acute psychiatric hospital, or outpatient clinical services building.

Change of licensure of a building may require the building to change jurisdiction from OSHPD to the local building department. Because OSHPD only has statutory authority for the review of general acute care hospitals, skilled nursing or acute psychiatric

services under the acute care hospital license, a separately licensed skilled nursing facility or acute psychiatric hospital, or buildings housing outpatient clinical services, as defined in Health and Safety Code Section 129725, a building must remain or be converted to one of these licensed services in order to remain under the jurisdiction of the Office (OSHPD). If a building is converted to uses other than those listed, it may not remain under the jurisdiction of the Office. A project must be submitted to OSHPD to remove the building from the jurisdiction of the Office and transfer jurisdiction to the local building department.

The following guidelines are intended to provide direction for determining when a change of use or a change of licensure will require compliance with current code and to what extent compliance will be required.

1. Acute Care Services changing to SNF or Acute Psychiatric, under Same License:

When acute care services are removed from a building which is intended to be used for skilled nursing or acute psychiatric services, and the new services will be licensed under the existing license of the general acute care hospital, the building need not be upgraded to comply with current code requirements, unless a specific fire risk or health and safety hazard exists. However, since the physical plant requirements for acute care hospital services differ from the physical plant requirements for acute psychiatric or skilled nursing services, the facility may need to be modified to comply with the applicable requirements for the new service. Any modifications will be required to comply with the current provisions of the California Building Standards Code, including Sections 1224 and 1225, and Chapter 11B of the 2007 CBC. An OSHPD permit will be required for any work performed.

The building will remain a Group I-2 occupancy classification, so the requirements for change of use per Section 3406A are not a consideration, unless the Office determines there is an increased life or fire risk. Also, the facility remains licensed and in operation in accordance with Section 1224.2, exception 1 of the 2007 CBC, so there is no need to make any modifications other than to comply with the physical plant requirements of the new service, unless the Office determines that a definite hazard to health and safety exists.

2. Acute Care Services changing to SNF or Acute Psychiatric, under New License:

When acute care services are removed from a building, and the new services provided in the building are issued a new license as a skilled nursing facility or acute psychiatric hospital, the building must be upgraded to comply with all current code requirements, including, but not limited to, the structural requirements of current code and physical plant requirements for the new service.

Although the building will remain a Group I-2 occupancy, the new facility was not licensed and in operation as stipulated in Section 1224.2 of the 2007 CBC. The facility therefore must comply with all current code requirements. An OSHPD permit will be required.





**CODE APPLICATION NOTICE****Subject:** Receptacles with Insulated Grounding  
Terminals**FILE NO.:** 3-517.16  
**EFFECTIVE:** 06/19/08**CODE SECTION:** Article 517.16, 2007 California Electrical Code (CEC)**517.16. Receptacles with Insulated Grounding Terminals.** Receptacles with insulated grounding terminals as permitted in Section 250.146(D), shall be identified; such identification shall be visible after installation.**PURPOSE:**

This interpretation coordinates and clarifies the requirements of Articles 517.13, 517.16, 250.146(D), and 406.2(D) of the 2007 CEC as they apply to insulated ground receptacles in patient care areas.

Isolated ground receptacles do not satisfy the implied requirement of Article 517.13 of the 2007 CEC for parallel ground paths. A sign is provided to alert staff to the increased risk of connecting patient care equipment to the receptacle.

**INTERPRETATION:**

Isolated ground receptacles, where required for the reduction of electrical noise (electromagnetic interference) on the grounding circuit, are permitted in patient care areas of hospitals. Two insulated equipment grounding conductors shall be run with the branch circuit conductors supplying the receptacle; one shall be the isolated ground conductor and the other shall be the equipment grounding conductor required by Article 517.13(B) of the 2007 CEC. The insulated grounding conductor shall terminate on the grounding terminal of the receptacle; the equipment grounding conductor required by Article 517.13(B) of the 2007 CEC shall ground the outlet box on which the receptacle is installed.

Isolated ground receptacles shall be identified by an orange color or an orange triangle located on the face of the receptacle as required by Article 410.56(D) of the 2007 CEC. Additionally, isolated ground receptacles in patient care areas shall be identified with a permanent sign that reads "Caution - Not for Patient Equipment Use".

Original Signed \_\_\_\_\_ 06/19/08  
John D. Gillengerten \_\_\_\_\_ Date



**CODE APPLICATION NOTICE**

FILE NO.: 4-316.0

Subject: Emergency Electrical Power for Heating

EFFECTIVE: 06/19/08

**CODE SECTION:** Section 316.0, 2007 California Mechanical Code

**Section 316.0** During periods of power outages emergency electrical power shall be provided for the following equipment:

- 316.1 (Does not apply to OSHPD 3 surgical clinics) All heating equipment necessary to maintain a minimum temperature of 60°F. (15.6°C.) in patient areas which are not specified in Table 315.
- 316.2 All heating equipment necessary to maintain the minimum temperatures for sensitive areas as specified in Table 315.
- 316.3 Equipment necessary for humidification of the areas listed in Table 315.
- 316.4 All supply, return and exhaust fans required to maintain the positive and negative air balances as required in Table 4-A.
- 316.5 All control components and control systems necessary for the normal operation of the equipment required to have emergency electrical power.

**INTERPRETATION:**

The purpose of Section 316, 2007 CMC is to ensure **emergency electrical power** to the equipment noted. Section 316 is not to be construed as requiring:

1. Dual fuel heating equipment (i.e., secondary fuel for gas fired boilers).
2. Electrical heating equipment in addition to gas fired heating equipment (i.e., electric duct heaters in addition to gas fired rooftop units).

**REASON:**

It is not the policy of FDD plan review to dictate design but rather to obtain compliance with code. Until the code is amended to require alternative fuel sources when utilizing natural gas, no such requirement shall be imposed on designs submitted to the Office. Facilities under program flexibility to provide an alternative fuel source for gas fired heating equipment shall be notified that it is not a code requirement under Section 316.0.

Original Signed06/19/08

John D. Gillengerten

Date

**CODE APPLICATION NOTICE**

FILE NO.: 4-408.1.5

Subject: Humidifiers

EFFECTIVE: 06/19/08

**CODE SECTION:** Section 408.1.5, Exception, 2007 California Mechanical Code (CMC)

*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.*

**PURPOSE:**

The intent of the requirement for dry steam type humidifiers is to prevent direct contact of conditioned air with water or wetted surfaces which could foster the growth of bacteria (including Legionella) in the HVAC system.

Clean, uncontaminated ductwork is a joint responsibility of the design professional, installing contractor, and the hospital maintenance staff. This Code Application Notice addresses the design and installation considerations necessary to prevent direct contact of conditioned air with wetted surfaces which could become sites for bacterial growth. Proper maintenance of the system is the responsibility of the health care facility and is regulated by other Titles of the California Code of Regulations.

**INTERPRETATION:****A. Humidifiers upstream of final filters:**

There is no code restriction on installation of humidifiers upstream of the final filter. However, care should be taken to provide sufficient distance between the humidifier and filter and/or coils to allow for proper absorption of vapor by the airstream to prevent wetting of filters and coils.

**B. Humidifiers located downstream of final filters:**

OSHPD interprets "dry steam" to be dry saturated steam as defined by the 2004 ASHRAE Handbook (HVAC Systems and Equipment), Chapter 10, which defines "dry saturated steam" as "pure vapor without entrained water droplets."

Plans and/or specifications shall explain and detail how the proposed humidification device will provide dry steam as defined by ASHRAE.

1. One accepted means of providing dry steam is by means of a jacketed (double wall distribution tube) steam injector type humidifier with accessories for conditioning superheated steam to remove particulate matter and condensate before dispersing dry steam to the airstream. Such devices, when properly installed, will disperse dry steam without entrained water droplets and thus will prevent wetted duct surfaces downstream of the humidifier. If steam from a central boiler plant will be injected directly into the airstream, it is recommended but not required that the design professional verify that the boiler water will not be treated with chemicals or contain minerals which are known to be hazardous to health or which might contribute to an indoor air quality problem.

2. Another acceptable means of providing dry steam will be a properly designed and installed, boiling water vapor injection type humidifier with the steam generation chamber in an accessible location outside the conditioned airstream. Vapor shall be injected into the conditioned airstream by means of a properly designed and installed distribution tube or tubes. The steam distribution tube(s) shall have provisions for condensate drainage and shall be designed and installed to prevent condensate in the distribution tube(s) from being ejected into the conditioned airstream. The distance between the steam generator and the duct distribution tube(s) shall not exceed manufacturer's recommendations.

Due to potential for bacterial growth in the reservoirs of boiling water vapor injection type humidifiers, the water reservoir shall be equipped for timed flushing cycles. Other acceptable means of preventing bacterial multiplication in the reservoir will be considered. If a timed flush cycle is employed, the frequency shall be sufficient to prevent bacterial populations from multiplying to levels which could be hazardous to patients or hospital staff.

3. Humidifiers that discharge dry steam directly into the room air are not acceptable.

Other means of providing humidification downstream of the final filter bank will be considered on a case-by-case basis.

**C. All humidifiers:**

Regardless of humidifier type, all humidifiers shall be specified and installed with proper downstream distances to obstructions and/or restrictions which could be sites for condensation. Factors such as air velocity, airstream temperature, humidification load and relative humidity of the airstream shall be taken into consideration. Air flow proving devices and downstream humidity high limit controls shall be provided.

Construction documents shall detail how the distribution tubes are to be installed, indicating minimum distances from changes in direction and other potential points of condensation. Appurtenant piping and accessories shall also be detailed. Psychometric analysis or other acceptable means, shall be provided to verify that dry steam will be supplied.

Mechanical means of humidification, such as atomizers, and humidifiers requiring direct contact of conditioned air with water or wetted surfaces are not permitted.

<u>Original Signed</u>	<u>06/19/08</u>
John D. Gillengerten	Date

**CODE APPLICATION NOTICE**

FILE NO.: 5-311.9

Subject: Overhead Piping

EFFECTIVE: 06/19/08

**CODE SECTION:** Section 311.9, 2007 California Plumbing Code (CPC)

*Drainage piping over operating and delivery rooms, nurseries, food preparation centers, food-serving facilities, food storage areas, and other sensitive areas shall be kept to a minimum and shall not be exposed. Special precautions shall be taken to protect these areas from possible leakage from necessary overhead drainage piping systems. Piping over switchboards, panel boards, and motor control centers are subject to restrictions of the California Electrical Code where applicable.*

**PURPOSE:**

The code does not define what constitutes a "special precaution". Factory Mutual Research Corporation is a Nationally Recognized Testing Laboratory. Approval Standard Class Number 1680 is used to evaluate couplings used in drain, waste, vent, storm and sanitary systems for "their intended application of long term connection of hubless cast iron soil pipe both above and below ground". The types of tests performed are: hydrostatic strength, blockage, bending moment, deflection angle, sealing sleeve, clamp strength, thrust test, and salt spray.

Clamps with tie rods are a means of preventing movement in the longitudinal direction. Preventing longitudinal separation of the joint maintains maximum surface contact of the sealing sleeve which affords a factor of safety deemed an acceptable "special precaution."

For copper tubing, brazed joints provide greater strength than soldered (sweated) joints due to better bonding with the base metal and due to strength of the filler material. The greater joint strength provided by brazing is an acceptable special precaution.

The use of drain troughs under overhead piping in critical areas has been used as a "special precaution" on a case-by-case basis for many years with satisfactory results.

The interpretation provides staff and industry with "special precautions" which meet the intent of the code.

**INTERPRETATION:**

Sanitary and storm drainage piping over operating rooms, delivery rooms, cesarean rooms, recovery rooms, nurseries, intensive care units, food preparation centers, food serving facilities, food storage areas, shall be kept to a minimum and shall not be exposed. When it becomes necessary to route this piping above the ceiling of these rooms, special precautions shall be taken to protect these areas from possible leakage. This Code Application Notice is not intended to address piping over electrical rooms, which is regulated by Article 110.26(F), 2007 California Electrical Code.

1. Acceptable "special precautions" for hubless cast iron pipe include; but are not limited to, the following:



**CODE APPLICATION NOTICE**

**FILE NO.:** 9-907  
(Previously part of 9-1001)  
**EFFECTIVE:** 06/19/08

**Subject:** Voltage Drop and Testing

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**CODE SECTION:** Sections 907.1.1, 907.1.2, 907.17, 2007 California Fire Code (CFC)

**907.1.1 Construction documents.** Construction documents for fire alarm systems shall be submitted for review and approval prior to system installation. Construction documents shall include, but not be limited to, all of the following:

1. A floor plan which indicates the use of all rooms.
2. Locations of alarm-initiating and notification appliances.
3. Alarm control and trouble signaling equipment.
4. Annunciation.
5. Power connection.
6. Battery calculations.
7. Conductor type and sizes.
8. Voltage drop calculations.
9. Manufacturers, model numbers and listing information for equipment, devices and materials.
10. Details of ceiling height and construction.
11. The interface of fire safety.

**907.1.2 Equipment.** Systems and their components shall be *California State Fire Marshal* listed and approved for the purpose for which they are installed.

**907.17 Acceptance Tests.** Upon completion of the installation of the fire alarm system, alarm notification appliances and circuits, alarm-initiating devices and circuits, supervisory-signal initiating devices and circuits, signaling line circuits, primary and secondary power supplies *fire safety function control devices and interfaces, and off site monitoring equipment* shall be tested in accordance to NFPA 72-02.

**PURPOSE:**

Individual notification appliances are approved and listed by the California State Fire Marshal for a range of operating voltages. However, excessive voltage drops in the notification appliance circuits may cause both audible and visible devices to function outside the required performance parameters of the 2007 CFC.

Low voltage to audible notification devices will cause the device to operate below the minimum decibel levels outlined in Section 907.10.2, 2007 CFC. Low voltage to visible notification devices will cause the device to operate below the minimum flash rate parameters.

**INTERPRETATION:**

All fire alarm drawings submitted for approval shall include calculations demonstrating that the voltage drop due to line loss of each notification appliance circuit(s) does not exceed the following level:

1. Ten percent (10%) of the nominal Fire Alarm Control Unit operating voltage as shown on the manufacturer's catalog cut sheets and/or listed installation instructions.
- OR
2. The lowest level of notification appliance manufacturer's listed nameplate voltage range, as calculated from the nominal Fire Alarm Control Unit operating voltage.

In addition to the above calculations, as a portion of the field inspection of the fire alarm system installation, the contractor shall demonstrate to the inspector that any or all affected notification appliance circuits as installed meet the above criteria. The test method for such demonstration shall include the following steps:

1. Using a volt-ohm meter set to read the voltage being applied, measure the output voltage of the notification appliance circuit to be tested at the notification circuit power source.
2. Remove from its mounting the end of line notification appliance. All appliance wiring and the end of line devices are to remain intact throughout the test procedure.
3. Activate the fire alarm system to cause the notification appliance circuit to operate.
4. Using a volt-ohm meter, measure the actual voltage being applied to the end of line device during operation of the circuit.
5. Compare the measured voltage to the manufacturer's nameplate voltage. The measured voltage shall not be below the lowest voltage range as printed on the device nameplate. If the output voltage, as measured at the circuit's power source is greater than 24 volts, that difference shall be added to the lowest nameplate voltage of the device and the actual voltage measured at the device shall not be lower than that voltage. Any circuit(s) failing such field tests shall be reevaluated, repaired, and retested prior to acceptance of the system.

Original Signed                      06/19/08  
John D. Gillengerten                      date

**CODE APPLICATION NOTICE****FILE NO.:** 9-907.10.1.1

(Previously 2-3505.1)

**Subject:** Visual Fire Alarms**EFFECTIVE:** 06/19/08**CODE SECTION:** Section 907.10.1.1, 2007 California Fire Code (CFC)

Section 907.10.1.1 Public and common use areas. Visible alarm notification appliances shall be provided in public use areas and common use areas *including but not limited to:*

1. *Sanitary facilities including restrooms, bathrooms and shower rooms*
2. *Corridors*
3. *Music practice rooms*
4. *Band rooms*
5. *Gymnasiums*
6. *Multipurpose rooms*
7. *Occupational shops*
8. *Occupied rooms where ambient noise impairs hearing of the fire alarm*
9. *Lobbies*
10. *Meeting rooms*

**PURPOSE:**

Clarification is needed to specify locations where visual devices are required in health care occupancies.

**INTERPRETATION:**

When fire-protective signaling systems are provided, they shall include visual alarms in the following areas:

1. **RESTROOMS (TOILET ROOMS) AND SIMILAR USES**, to include:

- Public restrooms
- Staff restrooms
- Patient restrooms, serving other than individual patient rooms
- Locker rooms
- Dressing rooms

Visual devices are not required in patient room restrooms provided exclusively for use by inpatients in I-2 and I-2.1 Occupancies (Section 907.2.6.2 2007 CFC)

2. **CORRIDOR SYSTEM AND SIMILAR USES**, to include:

- Public corridors
- Staff corridors
- Service corridors
- Vestibules
- Passageways

3. **GYMNASIUMS AND SIMILAR USES**, to include:

Physical therapy  
Rehabilitation therapy  
Occupational therapy

4. **MULTIPURPOSE ROOMS AND SIMILAR USES**, to include:

Auditoriums  
Dining rooms  
Cafeterias  
Outdoor patios & courts that require exiting through the building and are an occupiable portion of the building.

5. **OCCUPIED ROOMS WHERE AMBIENT NOISE IMPAIRS HEARING OF THE FIRE ALARM AND SIMILAR USES**, to include:

Kitchens  
Laundry areas  
Central sterilization  
Mechanical equipment rooms  
Generator rooms  
Boiler rooms  
Power plants

6. **LOBBIES AND SIMILAR USES**, including elevator lobbies:

No further specifications.

7. **MEETING ROOMS AND SIMILAR USES**, to include:

Conference rooms  
Waiting rooms  
Reception rooms/areas  
Lounges  
Chapels

8. **ANY OTHER AREA FOR COMMON USE WITH AN OCCUPANT LOAD OF AT LEAST SEVEN (7) AND SIMILAR USES**, to include:

Pharmacies  
Laboratories  
Office rooms/areas



**CODE APPLICATION NOTICE****Subject:** Fire-resistive Assemblies  
and Construction**FILE NO.:** 9-1401  
(Previously 9-8705.4)  
**EFFECTIVE:** 06/19/08**CODE SECTION:** Section 1401, 2007 California Fire Code (CFC)

**1401.1 Scope.** This chapter shall apply to structures in the course of construction, alteration, or demolition, including those in underground locations. Compliance with NFPA 241 is required for items not specifically addressed herein.

**1401.2 Purpose.** This chapter prescribes minimum safeguards for construction, alteration, and demolition operations to provide reasonable safety to life and property from fire during such operations.

**PURPOSE:**

While recognizing the need for construction barriers, the first objective is to ensure the safety of the patients. Dust membranes do not afford any level of fire protection or fire-rated separation to areas remaining occupied during construction. Exit corridors, exit stairs, area separation walls, smoke barriers, etc. are all primary building features designed and installed to produce a "defend in place" and an "area of refuge" as required by the California Building Code for "I" Occupancies. Thus, it is essential that separation be maintained between construction areas and occupied portions of the building.

**INTERPRETATION:**

In occupied buildings, where temporary construction barriers are required to be installed during the construction or reconstruction of fire-resistive assemblies, temporary construction shall meet the same fire rating as would the permanent partition. Use of plastic or vinyl dust barriers in lieu of fire rated separations is prohibited. Temporary construction barriers are not required where adequate fire-resistive separation can be demonstrated to exist between occupied areas and construction areas.

Where construction barriers affect any exit component, pre-approval shall be obtained from the local fire jurisdiction and OSHPD prior to any demolition or reconstruction.

Original Signed                      06/19/08  
John D. Gillengerten                      Date

**CODE APPLICATION NOTICE****FILE NO.:** 9-1404.5  
(Previously PIN 14)  
**EFFECTIVE:** 06/19/08**Subject:** Fire Watch**CODE SECTION:** Section 1404.5, 2007 California Fire Code (CFC)

*When required by the fire code official for building demolition that is hazardous in nature, qualified personnel shall be provided to serve as an on-site fire watch. Fire watch personnel shall be provided with at least one approved means for notification of the fire department and their sole duty shall be to perform constant patrols and watch for the occurrence of fire.*

**PURPOSE:**

Approval of the safety precautions required for buildings being constructed, altered or demolished may be required by the chief in addition to other approvals required for specific operations or processes associated with construction, alteration or demolition.

OSHPD enforces Chapter 14 of the California Fire Code for **fire watch** conditions when a building/premises presents a hazard to life or property as the result of construction, alteration, demolition, fire or other emergency, or when any fire protection equipment/system has been rendered inoperable. The fire watch is used to mitigate a hazardous condition which if not corrected, would normally require the evacuation of the structure or a portion thereof.

**Fire Watch:** The assignment of a qualified person or persons having the sole responsibility for the continuous patrol of a building or premises for the purpose of detecting fires and transmitting an immediate alarm to the building occupants and Fire Department.

**INTERPRETATION:**

When conditions occur which necessitate the activation of a fire watch, the attached guideline shall be utilized.

Original Signed \_\_\_\_\_ 06/19/08  
John D. Gillengerten Date

**FIRE WATCH GUIDELINE****RESPONSIBILITY FOR INSTRUCTION:**

The owner, manager, or person in charge or control of the building/premises shall assign to the fire watch as many personnel as are required, and shall instruct fire watch personnel as to:

1. The procedure for notifying the Fire Department.
2. The areas to be patrolled.
3. A method of alerting building occupants and an evacuation procedure.
4. Training necessary to insure Fire Watch personnel are capable of reactivating disabled systems, when required.
5. Any special instructions required by either the OSHPD or local Fire Marshal.

**LOG BOOK:**

1. The owner, manager, or person in charge or control of the premises shall provide a log book which contains a directory of names, telephone numbers, and other information to assist in making emergency calls. The logbook shall be the official document used to record a history of patrol rounds.
2. The log book shall be maintained on the premises and be available for inspection by the authority having jurisdiction (OSHPD, local Fire Department, or State Fire Marshal).

**FIRE WATCH GUIDELINE**  
(Complete and return to OSHPD)

Assigned fire watch personnel shall:

1. Be thoroughly familiar with the area they are patrolling.
2. Perform patrol operations according to instructions from OSHPD and local Fire Department.
3. Patrol their designated area at least once each hour.
4. Make reports as instructed. A written record of patrol rounds and any significant information shall be recorded in a log book provided by management.
5. Relay any special orders or pertinent information to relief personnel and management.
6. Remain on duty until properly relieved.
7. The entire building, all rooms (offices, spaces, areas) including basements, penthouses, shall be checked per Item "3" above unless otherwise specified by OSHPD.

NOTE: The fire watch conditions shall not be terminated without a written authorization from OSHPD.

<b>FACILITY</b>	<b>FIRE WATCH FOR ENTIRE BUILDING</b>
_____	<input type="checkbox"/> YES
_____	<input type="checkbox"/> NO
_____	SPECIFIC AREA _____
_____	

**RESPONSIBILITY TO OVERSEE WATCH:**

TIME \_\_\_\_\_  
DATE \_\_\_\_\_