

**2022 CALIFORNIA BUILDING CODE  
INCLUDING 2023 CITY OF LOS ANGELES AMENDMENTS  
VOLUME 1**

Effective Date January 1, 2023

By starting with a loose-leaf copy of the 2022 *California Building Code*, Volume 1, and substituting the City of Los Angeles pages (yellow), the user will have a complete 2022 *California Building Code including 2023 City of Los Angeles Amendments*, Volume 1, in correct numerical sequence. It is suggested that the original 2022 *California Building Code*, Volume 1, pages that have been removed and replaced by City of Los Angeles pages be retained in a separate file for possible future reference.

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A large, light gray outline map of the state of California serves as a background for the top half of the cover. The map shows the state's irregular coastline and major inland features.

# 2022 CALIFORNIA BUILDING CODE

**VOLUME 1 OF 2**

INCLUDING 2023 CITY OF LOS ANGELES AMENDMENTS



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(Based on the 2021 IBC®)

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# **CITY OF LOS ANGELES DEPARTMENT OF BUILDING AND SAFETY**

## **Published Codes:**

2022 California Building Code including 2023 City of Los Angeles Amendments, Volumes 1 and 2  
2022 California Residential Code including 2023 City of Los Angeles Amendments  
2022 California Electrical Code including 2023 City of Los Angeles Amendments  
2022 California Plumbing Code including 2023 City of Los Angeles Amendments  
2022 California Mechanical Code including 2023 City of Los Angeles Amendments  
2022 California Green Building Standards Code including 2023 City of Los Angeles Amendments  
2022 California Existing Building Code including 2023 City of Los Angeles Amendments

## **Related Codes and Standards:**

City of Los Angeles Municipal Code  
City of Los Angeles Planning and Zoning Code  
California Building Standards Code, Parts 2–5, 7, 8, 10, and 11



## CITY OF LOS ANGELES DEPARTMENT OF BUILDING AND SAFETY

The mission of the Department of Building and Safety is to protect the lives and safety of the residents and visitors of the City of Los Angeles and enhance the quality of life, housing, economic prosperity, and job creation. Through a timely, cooperative, and transparent process, the Department advises, guides, and assists customers to achieve compliance with the Building, Zoning, Plumbing, Mechanical, Electrical, Disabled Access, Energy, and Green Codes and local State laws to build safe, well, and fast.

The Department of Building and Safety is the largest organization of its kind in the United States with a dedicated staff of more than 1,000 employees. The Department provides service to a population of more than 4 million people in a metropolitan area of more than 470 square miles with its 12 offices located throughout the City.

### **The Responsibilities of the Department of Building and Safety Are Assigned to Five Bureaus:**

**The Permit and Engineering Bureau** is primarily responsible for the plan checking, report approval, and permit issuance related to building projects within privately owned property in the City of Los Angeles. In the course of carrying out these responsibilities, the Engineering Bureau enforces the structural, building, plumbing, mechanical, electrical, disabled access, green, grading and zoning regulations of the City. In addition, the Permit and Engineering Bureau is responsible for reviewing applications for building, plumbing, mechanical and electrical product approvals through its Building Research Section, and Electrical and Mechanical Test Laboratories.

**The Inspection Bureau** is responsible for inspection of all construction activities for new and existing buildings, plumbing, mechanical, electrical, elevator and pressure vessel systems, the enforcement of applicable State and local laws relating to existing buildings and property, and the administration of various special programs mandated by the City Council.

**The Code Enforcement Bureau** was created as a part of a reorganization of code enforcement functions in 1999. This Bureau is responsible for the enforcement of Municipal Code requirements for all existing buildings in the City of Los Angeles, except rental multifamily dwellings. The Bureau handles complaints, citations, processing of vacant and nuisance buildings for repair or demolition, signs, the Vehicle Establishment Inspection Program and the Proactive Code Enforcement Program among others.

**The Resource Management Bureau** is responsible for the direction and coordination of administrative and financial projects, systems development, training, and acts as the emergency disaster coordinator for all Department operations.

**The Technology Service Bureau** is responsible to provide oversight over the Build LA Project, and annually provides IT services for more than 3,000 City Staff (Building and Safety and other departments) and over 30,000 public customers; and manages more than 250 servers and 3,000 computer devices.

### **The Board of Building and Safety Commissioners:**

The Board of Building and Safety Commissioners is a five-member board of citizens residing in the City and appointed by the Mayor and confirmed by the City Council. The Commission has the authority to hear and act upon appeals from determinations, orders, or actions of the Department or the Superintendent of Building, pertaining to enforcement of the codes under the jurisdiction of the Department. In addition, the Commission conducts public hearings, as needed, regarding procedures, new codes and various functions of the Department. Finally, the Commission acts in an advisory capacity to the Department and the Superintendent of Building.

### **The Board of Disabled Access Appeals Commissioners:**

The Board of Disabled Access Appeals Commissioners comprises of five qualified persons appointed by the Mayor and confirmed by the City Council. Two members of the commission shall be physically disabled persons, and two members shall be persons experienced in construction. The fifth member may be any resident of the City of Los Angeles. The Commission has the authority to hear and act upon appeals from determinations, orders, or actions of the Department or the Superintendent of Building, pertaining to enforcement of the disabled access codes under the jurisdiction of the Disabled Access Division of the Department.



## EFFECTIVE USE OF THE CITY OF LOS ANGELES BUILDING CODE

The *City of Los Angeles Building Code* was established in 1889 with the appointment of the first superintendent of building. In 1923, the first of 18 volumes of the *Los Angeles Annual Builder's Guide* was published. This guide is a handbook for architects and builders and contains a complete cross index of the Los Angeles building ordinances, electrical ordinances and supplementary rulings and the California State Housing Act.

After 1936, the building regulations of Chapter IX of the *Los Angeles Municipal Code* (LAMC) were established by the passage of Ordinance No. 77,000. But it was 1943 when Ordinance No. 87,000 amended in its entirety Article 1 of Chapter IX of the *Los Angeles Municipal Code* and a new *Los Angeles City Building Code* was published. This edition of the LAMC established the format of the different divisions and sections relevant to the building regulations in the city.

Through the intervening years, the code has been amended and revised regularly to keep pace with the ever-changing technology of the construction industry and new and proven concepts of structural design.

The State of California has mandated the City of Los Angeles to enforce the *California Building Code* (CBC). The City Council for the City of Los Angeles has passed Ordinance Number 187,719 (operative January 1, 2023) to amend Article 1 of Chapter IX of the *Los Angeles Municipal Code* and to adopt by reference the 2022 edition of the CBC and hereinafter shall be called the 2023 edition of the *City of Los Angeles Building Code*.

Chapter 1 is the general administrative provisions of the City of Los Angeles and replaces Chapter 1 of the CBC.

Chapters 2 through 35 are the general provisions of the CBC.

Chapters 61 through 72 have been added to the code to provide special requirements of the City of Los Angeles.

Chapters 81 through 91 are the city code requirements of existing buildings and structures.

Chapters 92 through 96 are the city standard for voluntary and mandatory earthquake hazard reduction standards for existing buildings.

Chapter 97 is the city standard for energy and water efficiency for existing buildings.

At the end of Volume 2 of the Building Code, "Excerpts" has been added for additional reference to the industry. Excerpts are the accumulation of related Los Angeles City codes and municipal and administrative code sections pertaining to the Department of Building and Safety.

### Marginal Markings

L  
A  
L  
A

These symbols indicate that a City of Los Angeles amendment has been added to the 2022 CBC.

➔ This symbol indicates a deletion of IBC or CBC or City of Los Angeles language by the City of Los Angeles.

# How to Distinguish Between Model Code Language and California Amendments

To distinguish between model code language and the incorporated California amendments, including exclusive California standards, California amendments will appear in *italics*.

**[BSC]** This is an example of a state agency acronym used to identify an adoption or amendment by the agency. The acronyms will appear at California Amendments and in the Matrix Adoption Tables. Sections 1.2 through 1.14 in Chapter 1, Division 1 of this code, explain the used acronyms, the application of state agency adoptions to building occupancies or building features, the enforcement agency as designated by state law (may be the state adopting agency or local building or fire official), the authority in state law for the state agency to make the adoption and the specific state law being implemented by the agency's adoption. The following acronyms are used in Title 24 to identify the state adopting agency making an adoption.

## **Legend of Acronyms of Adopting State Agencies**

BSC	California Building Standards Commission (see Section 1.2)
BSC-CG	California Building Standards Commission-CALGreen (see Section 1.2.2)
BSCC	Board of State and Community Corrections (see Section 1.3)
SFM	Office of the State Fire Marshal (see Section 1.11)
HCD 1	Department of Housing and Community Development (see Section 1.8.2.1.1)
HCD 2	Department of Housing and Community Development (see Section 1.8.2.1.3)
HCD 1/AC	Department of Housing and Community Development (see Section 1.8.2.1.2)
DSA-AC	Division of the State Architect-Access Compliance (see Section 1.9.1)
DSA-SS	Division of the State Architect-Structural Safety (see Section 1.9.2)
DSA-SS/CC	Division of the State Architect-Structural Safety/Community Colleges (see Section 1.9.2.2)
OSHPD 1	Office of Statewide Health Planning and Development (see Section 1.10.1)
OSHPD 1R	Office of Statewide Health Planning and Development (see Section 1.10.1)
OSHPD 2	Office of Statewide Health Planning and Development (see Section 1.10.2)
OSHPD 3	Office of Statewide Health Planning and Development (see Section 1.10.3)
OSHPD 4	Office of Statewide Health Planning and Development (see Section 1.10.4)
OSHPD 5	Office of Statewide Health Planning and Development (see Section 1.10.5)
DPH	Department of Public Health (see Section 1.7)
AGR	Department of Food and Agriculture (see Section 1.6)
CEC	California Energy Commission (see Section 100 in Part 6, the California Energy Code)
CA	Department of Consumer Affairs (see Section 1.4): Board of Barbering and Cosmetology Board of Examiners in Veterinary Medicine Board of Pharmacy Acupuncture Board Bureau of Household Goods & Services Structural Pest Control Board (SPCB)
SL	State Library (see Section 1.12)
SLC	State Lands Commission (see Section 1.14)
DWR	Department of Water Resources (see Section 1.13 of Chapter 1 of the California Plumbing Code in Part 2 of Title 24)

The state agencies are available to answer questions about their adoptions. Contact information is provided on page iv of this code.

To learn more about the use of this code refer to pages vii and viii. Training materials on the application and use of this code are available at the website of the California Building Standards Commission [www.dgs.ca.gov/bsc](http://www.dgs.ca.gov/bsc).

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## DIVISION II

# SCOPE AND ADMINISTRATION

### User notes:

**About this chapter:** Chapter 1 establishes the limits of applicability of the code and describes how the code is to be applied and enforced. Chapter 1 is in two parts: Part 1—Scope and Application (Sections 101–102) and Part 2—Administration and Enforcement (Sections 103–116). Section 101 identifies which buildings and structures come under its purview and references other I-Codes as applicable. Standards and codes are scoped to the extent referenced (see Section 102.4).

This code is intended to be adopted as a legally enforceable document and it cannot be effective without adequate provisions for its administration and enforcement. The provisions of Chapter 1 establish the authority and duties of the code official appointed by the authority having jurisdiction and also establish the rights and privileges of the design professional, contractor and property owner. Chapter 1 is largely concerned with maintaining “due process of law” in enforcing the building performance criteria contained in the body of the code.

**Code development reminder:** Code change proposals to this chapter will be considered by the Administrative Code Development Committee during the 2019 (Group B) Code Development Cycle. See explanation on page ix.

**Note:** Sections adopted or amended by state agencies are specifically indicated by an agency banner.

### SECTION 101 TITLE, PURPOSE AND SCOPE

**101.1 Title.** This article shall be known as the *Los Angeles Building Code* or *Building Code* or LABC, a portion of the *Los Angeles Municipal Code* (LAMC), and wherever the word Code is used in this article, it shall mean the *Los Angeles Building Code*. Sections of Article 1.5 of Chapter 9 of the LAMC shall collectively be known as the *Los Angeles Residential Code* or LARC. The provisions of the LARC for one- and two-family dwellings shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures. In addition to the LARC, appropriate Sections of Chapters 1, 11A, 11B, 17, 31, 31B, 33, 63, 67, 70, 71, 72, 81, 89, 92, 93 and 96 of the LABC shall also be applicable to one- and two-family dwellings and townhouses unless stated otherwise.

The *Los Angeles Building Code* and the *Los Angeles Residential Code* adopt by indicated reference portions of the 2022 *California Building Code* (CBC) or the 2022 *California Residential Code* (CRC), respectively. The CBC and the CRC are Parts 2 and 2.5, respectively, of Title 24 of the *California Code of Regulations* (CCR).

**Exception:** Live/work units complying with the requirements of CBC Section 419 shall be permitted to be built as one- and two-family dwellings or townhouses. Fire suppression required by CBC Section 419.5 when constructed under the CRC for one- and two-family dwellings shall conform to CBC Section 903.3.1.3.

**101.2 Purpose.** The purpose of this article is to safeguard life, limb, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings

and structures erected or to be erected within the city, and by regulating certain grading operations within the city.

**101.3 Application.** Chapters 1 through 97 of the LABC as published by the International Code Council (hereinafter referred to as the published code), are Chapters 1 through 96, respectively, of Article 1, Chapter IX of the LAMC. Only the division and section numbers are stated in the published code, for uniformity with the CBC. For the complete LAMC section number, each code section number specified in Chapters 1 through 97 of the published code shall be presumed to be preceded by two digits and a decimal point (specifically “91.”). For example, this section is Section 91.101.3 of the LAMC.

**101.4 Scope.** The provisions of this Code shall apply to the construction, alteration, moving, demolition, repair, maintenance and use of any building or structure within this jurisdiction, except work located primarily in a public way, public utility towers and poles, mechanical equipment not specifically regulated in this Code, and hydraulic flood control structures.

For additions, alterations, moving and maintenance of buildings and structures, see Article 1.2, Chapter IX of the *Los Angeles Municipal Code*. For temporary buildings and structures, see CBC Section 3103.

Where, in any specific case, different sections of this Code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

The codes and standards referenced in this Code shall be considered part of the requirements of this Code to the prescribed extent of each reference. Where differences occur between provisions of this Code and referenced codes and standards, the provisions of this Code shall apply.

Wherever in this Code reference is made to an appendix, the provisions in the appendix shall not apply unless specifically adopted.

The metric conversions are provided in parenthesis following the English units. Where industry has made metric conversions available, the conversions conform to current industry standards. Formulas are also provided with metric equivalents. Metric equivalent formulas immediately follow the English formula and are denoted by "For SI" preceding the metric equivalent. Some formulas do not use dimensions and, thus, are not provided with a metric equivalent. Multiplying conversion factors have been provided for formulas where metric forms were unavailable. Tables are provided with multiplying conversion factors in subheadings for each tabulated units measurement.

**101.5 Work not in scope.** The provisions of this Code shall not apply to any of the following:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area is not greater than 120 square feet (11.148 m<sup>2</sup>), not located in Fire District No. 1 and does not contain any heating, plumbing or electrical installation, and is located as permitted by the *Los Angeles Zoning Code*.
2. Oil derricks.
3. Towers or poles supporting public utility communication lines, antennas, or power transmission lines.
4. Retaining walls which are not over 4 feet (1219 mm) in height, measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or sloping earth, or impounding flammable liquids. This exemption shall not apply to retaining walls of any height built on slopes steeper than 1 vertical to 5 horizontal (20-percent slope).
5. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18 927 L) and the ratio of the height to diameter or width does not exceed 2 to 1.
6. Motion picture sets when not supported by any portion of any building.
7. Pergolas and lath houses, both of which shall be outside of any fire district, not over 400 square feet in area, and not supported by or attached to any portion of any building.
8. Work in a public way, dams and drainage structures constructed by or under contract with the Board of Public Works, the Department of Water and Power and the County Flood Control District, unless the structure forms a portion of the support for a building or a structure coming within the jurisdiction of the Department of Building and Safety.
9. Portable amusement devices and structures, including merry-go-rounds, Ferris wheels, rotating conveyances, slides, similar devices, and portable accessory structures whose use is necessary for the operation of such amusement devices and structures; any portable acces-

sory structure included in the provisions of this subdivision shall be limited to a cover or roof over each device, but shall not include any storage building or detached structure which is not an integral part of the device.

10. Isolated buildings not larger in area than 16 square feet (1.9 m<sup>2</sup>), including roof projections, and not more than 8 feet (2438 mm) in height, if separated by a distance of 20 feet (6096 mm) or more.
11. Nothing in this Code shall apply to any excavation, removal, fill or deposit of any earth or other materials from individual interment sites, underground crypts or burial vaults within a property which is dedicated or used for cemetery purposes, provided that such work does not affect the lateral support or increase the stresses in or pressure upon any adjacent or contiguous property not owned by the cemetery authority.
12. The surface mining of minerals in a "G" Surface Mining District as established and provided for in Section 13.03 of the LAMC, or where permitted by order of a court of competent jurisdiction.
13. The depositing of rubbish or other material at any dump operated by the City of Los Angeles, or by any person pursuant to the provisions of Section 66.25 of the Municipal Code.
14. Nothing in this Code shall apply to grading in an isolated, self-contained area if the department finds that by reason of such isolation and self-containment no danger to private or public property can now or thereafter result from grading operations.
15. Any portable metal hangar less than 2,000 square feet (186 m<sup>2</sup>) in size, located on a city-owned airport, used for the parking of aircraft only, and bearing evidence of approval by the Department of Motor Vehicles of the State of California for movement on any highway. The structure shall, as an integral part of its basic construction, be equipped with a hitch or coupling device for towing. It shall accommodate, without further major structural change, wheel and axle assemblies which will provide the structure with a safe means of portability. No water or sanitary facilities shall be permitted in this structure and it shall be equipped with permanent ventilation as required for Group S-1 Occupancy.
16. Tents and trailers used for office or shelter purposes accessory to a Christmas tree sales lot during the month of December only, provided the aggregate area of all tents and trailers does not exceed 600 square feet (56 m<sup>2</sup>) for each sales lot. (Such tents are regulated by the Fire Department under Article 7, Chapter V of the LAMC.)
17. Tents accessory to a dwelling and not exceeding 450 square feet (41.8 m<sup>2</sup>) in area.
18. Signs not exceeding 20 square feet (1.9 m<sup>2</sup>) in area, placed upon the surface of the ground, no part of which extends more than 6 feet 6 inches (1981 mm) above the underlying ground, which have no mechanical or moving parts or to which no electricity or other source of

illumination or power are attached or made a part thereof. Such signs shall be separated from each other a minimum distance of 15 feet (4572 mm).

19. Boards and signs used exclusively to display official notices issued by any court or public officer in the performance of a public duty or by a private person in giving legal notice.

## SECTION 102 UNSAFE BUILDINGS OR STRUCTURES

The regulations for the abatement of unsafe buildings or structures are enumerated in Chapter 89 of this Code.

## SECTION 103 VIOLATIONS

**103.1 General.** No person shall construct, alter, repair, demolish, remove, move, use, occupy or maintain, within the city, any building or structure or any portion thereof, except as provided by this Code.

No person shall grade, excavate or fill any land except as provided by this Code.

The permissive provisions of this Code shall not be presumed to waive any limitations imposed by other statutes or ordinances of the state or city.

All of the provisions of this Code shall be limitations for safeguarding life, limb, health, property and public welfare. If two or more pertinent limitations are not identical, those limitations shall prevail which provide the greater safety to life or limb, health, property or public welfare.

**103.2 Violation of a building or grading permit.** Every person who knowingly and willfully procures a building and/or grading permit without the consent of the owner of record of the property for which the permit is issued, or such person's agent, is guilty of a misdemeanor.

**Exception:** This subsection shall not apply to building and/or grading permits obtained pursuant to and in compliance with an order of a court of law or a governmental agency.

**103.3 Violation of an order.** No person shall fail to comply with any valid order issued pursuant to any provision or requirement of this Code.

**103.4 Making false statements to the department.** It shall be unlawful for any person, authorized by the department to perform inspections, to make a false or misleading statement, or misrepresentation in any writing submitted to the department.

For purposes of this section, the "person authorized by the department to perform inspections" is any person who is a registered deputy inspector, a structural inspector, a certified welder or a certified licensed contractor. The term "writing" shall include, but is not limited to, forms, applications, approvals, reports or certifications required by the department.

Every violation of this section is punishable as a misdemeanor.

## SECTION 104 ORGANIZATION AND ENFORCEMENT

### 104.1 Creation of the department.

### 104.2 Powers of the department and duties of the Superintendent of Building.

**104.2.1 General.** The powers of the department are enumerated in LAMC Section 98.0403.1.

The Superintendent of Building shall have the duty to render interpretations of this Code and to adopt and enforce rules and supplemental regulations to clarify the application of its provisions. These interpretations, rules and regulations shall be in conformance with the intent and purpose of this Code.

The Superintendent of Building shall classify every building into one of the occupancies set forth in Chapter 3 according to its use or the character of its occupancy. The Superintendent of Building shall also classify every building into one of the types of construction set forth in Chapter 6.

**104.2.2 Authority to require exposure of work.** Whenever any work on which called inspections are required, as specified in Section 108, is covered or concealed by additional work without first having been inspected, the work shall be exposed for examination upon written notice by the department. The work of exposing and recovering shall not entail expense to the city.

**104.2.3 Right of entry.** The authority for right of entry is enumerated in Section 98.0105 of the LAMC.

**104.2.4 Authority to stop work.** Whenever any construction work is being done contrary to the provisions of any law or ordinance enforced by the department, the department shall have the authority to issue a written notice to the responsible party to stop work on that portion of the work on which the violation has occurred. The notice shall state the nature of the violation and no work shall be done on that portion until the violation has been rectified and approval obtained from the department.

**104.2.5 Authority to stop use or occupancy.** Whenever any portion of a building is loaded in excess of the loading for which it was constructed, or whenever it houses an occupancy other than that for which it was constructed, or whenever there is an encroachment upon any required court or yard, the department shall have the authority to order by written notice that such violation be discontinued.

The written notice shall state the nature of the violations and shall fix a time for the abatement thereof. If the violations have not been abated by the expiration of the fixed time, the Certificate of Occupancy shall thereupon be canceled.

**104.2.6 Alternate materials, alternate design and methods of construction.** New or alternate materials and methods of construction may be approved by the department in accordance with the provisions of Article 8, Chapter IX of the LAMC.

### 104.2.7 Building materials inspection required.

**104.2.7.1** No person shall use or cause to be used, in the construction of any building or structure for the erection

tion of which a permit is required by this chapter, any materials which are not specifically permitted by this Code, without having first secured the approval of said materials by the department.

**104.2.7.2** The department may require that all materials to be used in the construction of any building or structure, or materials already used or fabricated into a building or structure, be submitted for test to a testing agency approved by the department.

**104.2.7.3** It is unlawful for any person to fail to submit to an approved testing agency within five days after having received a written notice from the department a sample, sufficient for analysis, of any material to be used in the erection or construction of a building or structure, or which has been used or fabricated into a building or structure.

**104.2.7.4** No material required by the department to be submitted to a testing agency for analysis shall be approved by the department unless the person requesting said approval submits a written report of the analysis by such testing agency.

## SECTION 105 APPEALS

**105.1 General.** Appeals or requests for slight modifications in individual cases from the requirements of this Code shall be made in accordance with the procedure established in Section 98.0403.2 of the LAMC.

**105.2 Building Advisory Appeal Board.** The Building Advisory Appeal Board is hereby abolished. Any duties assigned to the Building Advisory Appeal Board by any provision of law shall be performed as determined by the Superintendent of Building.

### 105.3 Engineering Geology Advisory Committee.

**105.3.1 Function of the committee.** It shall be the function of the Engineering Geology Advisory Committee to advise and counsel the board on appeals involving technical questions of soils engineering, geology, geology/seismology and related matters.

**105.3.2 Establishment of the committee member list.** The Board of Building and Safety Commissioners shall establish an Engineering Geology Advisory Committee member list (hereinafter in this section referred to as the "committee member list") which shall consist of not less than 10 soils engineers and engineering geologists who are available to serve as members of the Engineering Geology Advisory Committee. At least two of the engineering geologist members and two of the soils engineer members shall have experience in the field of seismic design and safety. Members of said committee shall be exempt from all Civil Service provisions.

**105.3.3 Procedure.** When an appeal is made to the board, and the board determines that the subject of the appeal involves a problem of soils engineering, geology, geology/seismology or a related matter on which it desires further technical advice before it renders a decision thereon, the board may select three or more persons from the Engineer-

ing Geology Advisory Committee member list to serve on a committee for the purpose of assisting the board in seeking a solution to said problem, and may refer the matter to such committee members for report and recommendation. At least one member of the committee so designated shall be a soils engineer and one shall be an engineering geologist. The members of the committee so meeting shall review the matter and shall then submit to the board a recommendation. When a matter is referred to the committee as in this section provided, the board shall consider, but is not bound to accept, the recommendation of the committee.

**105.3.4 Compensation of members.** Each member of the committee who is in actual attendance at a meeting requested by the board shall be compensated at the rate of \$50.00 for each four hours or fraction thereof of service. However, in no case shall the compensation of the committee members exceed the fee paid by the appellant under Section 105.3.6.

**105.3.5 Self-insurance by the city for committee members.** The provisions of Sections 11.36 through 11.44, inclusive, *Los Angeles Administrative Code*, entitled "Self-insurance by the city for officers and employees of said city," shall apply to each Engineering Geology Advisory Committee member while the member is acting as such, and committee members shall be deemed to be fully covered by the provisions of said sections even though each committee member is retained as an independent person and not as an officer or employee of the city.

**105.3.6 Fees.** When a matter is referred to the committee as provided in this section, the appellant in said matter shall pay a referral fee of \$50.00 and shall also pay a fee as follows:

1. Where no more than two lots are involved in the appeal, \$150.00;
2. Where not less than three or more than 10 lots are involved in the appeal, \$300.00;
3. Where more than 10 lots are involved in the appeal, \$600.00.

### 105.4 Sign Advisory Committee.

**105.4.1 Function of the committee.** It shall be the function of a Sign Advisory Committee to advise, counsel and provide recommendations to the Board of Building and Safety Commissioners on matters involving sign regulations.

**105.4.2 Establishment of the committee member list.** The Board of Building and Safety Commissioners shall establish a Sign Advisory Committee member list representing the various required fields of interest of persons who are available to serve as members of a Sign Advisory Committee. Persons selected for the Sign Advisory Committee list shall possess experience in the design, fabrication, the use or application of signs, or shall have demonstrated a background in the social and environment impacts of signs or the development of sign regulations. Members of said committee shall be exempt from all civil service requirements.

**105.4.3 Procedure.** When the board determines that a matter is significant in nature, the board may refer the matter to a Sign Advisory Committee for evaluation and recommendation before it renders a decision thereon. When the matter is referred to a Sign Advisory Committee, the board shall consider, but is not bound to accept, the recommendation of the committee.

**105.4.4 Composition of the committee.** The board shall select five persons from the Sign Advisory Committee member list to serve on a committee. The committee shall be composed of one member from each of the following interests:

1. One member of, or designated by, the Board of Building and Safety Commissioners;
2. One member of, or designated by, the City Planning Commission; and
3. Three public members, one each from the following interests: architecture, sign industry and community groups.

**105.4.5 Compensation of members.** Each member of the committee who is in actual attendance at a meeting requested by the board shall be compensated at the rate of \$50.00 for each four hours or fraction thereof of service. However, in no case shall the compensation of the committee members exceed the fee paid by the applicant under Section 105.4.7.

**105.4.6 Self-insurance by the city for committee members.** The provisions of Sections 11.36 through 11.44, inclusive, of the *Los Angeles Administrative Code* shall apply to each Sign Advisory Committee member while the member is acting as such, and committee members shall be deemed to be fully covered by the provisions of said sections even though each committee member is retained as an independent person and not as an officer or employee of the city.

**105.4.7 Fees.** When a matter is referred to the committee as provided in this section, the applicant in said matter shall pay a referral fee of \$300.00.

## **105.5 Disabled Access Appeals Commission.**

**105.5.1 Creation of the commission.** There is hereby established a commission known as the Disabled Access Appeals Commission.

**105.5.2 Membership of the commission.** The Disabled Access Appeals Commission shall be composed of five qualified persons. Two members of the commission shall be physically disabled persons, and two members shall be persons experienced in construction. The fifth member may be any resident of the City of Los Angeles. Commission members shall be appointed by the mayor, subject to Council approval, and may be removed by the mayor. In the case of a vacancy during the term of office of any member, the same shall be filled by appointment by the mayor for the period of the unexpired term subject to the approval of the council by a majority vote. The members of the commission shall be exempt from all civil service provisions.

**105.5.3 Compensation and term of office.** Each member of the commission shall be paid \$50.00 per meeting

attended, but not to exceed \$250.00 in any one calendar month.

The term of office of the members of the commission shall be five years beginning with the first day of July of the respective years, except that the terms of office of the original five members of the commission appointed pursuant to this subsection shall be such that one term shall expire on the first June 30, one term shall expire on the second June 30, one term shall expire on the third June 30, one term shall expire on the fourth June 30, and one term shall expire on the fifth June 30 next following the effective date of the appointment of the original five members. Thereafter, the terms of the succeeding members shall be so designated that the term of office of one member shall expire each year. The period of term of each member shall be designated in the appointment.

Each member of the commission shall have the power to administer oaths.

**105.5.4 Authority of the commission.** The commission shall have and exercise the following powers:

1. To hear and determine written appeals brought by any person from actions taken by the Department of Building and Safety (department) in the enforcement of the requirements of Section 19955, et seq., of the *California Health and Safety Code*, the provisions of state law dealing with access to public accommodations by physically disabled persons.
2. To hear and determine written appeals brought by any person from the rulings, decisions and determinations of the department granting or denying applications for exceptions pursuant to *California Health and Safety Code* Section 19957.
3. To hear and determine written appeals brought by any persons where it is alleged that there is error or abuse of discretion in any order, requirement, decision, interpretation or other determination made by the department in the enforcement or administration of Section 1.8 et seq., Chapter 1, Division I of the CBC and any other federal, state or municipal handicapped access and adaptability requirements.

All appeals shall be reviewed by the department. The department may reverse or modify the action appealed from at any time prior to final action by the commission. Any such new action may then be appealed to the commission.

4. To respond to the department's request for advice on any matter within the department's jurisdiction relating to access to public accommodations and housing by the physically disabled.
5. To exercise the authority granted in Section 105.6.

## **105.5.5 Appeals.**

**105.5.5.1 Procedures.** An appeal to the commission may be filed by any person aggrieved, or by an officer, board, department or bureau of the city. An appeal shall be in writing and shall be filed in the Office of the Board of Building and Safety Commissioners upon appropriate forms provided by the department. An

appeal shall set forth specifically the points at issue, the reasons for the appeal, and wherein the appellant believes there was an error or an abuse of discretion by the department.

When considering an appeal from an action by the department, the commission shall make its determination within 30 days from the filing of the appeal. This time limit may be extended by mutual written consent of the applicant and the commission. Upon receipt of the appeal, the commission shall set the matter for hearing and give notice by mail of the time, place and purpose thereof to the appellant, to the applicant, to the owner or owners of the property involved, and to any interested party who has requested in writing to be so notified. Such notice shall be in writing and mailed at least 10 days prior to said hearing. No other notice thereof need be given except in those cases hereinafter mentioned.

The commission may grant, conditionally grant, or deny any appeal. All actions of the commission shall be final. Any action within the jurisdiction of the commission shall be final and conclusive as to the department in the absence of fraud or abuse of discretion.

A separate appeal shall be filed for each single building as described in Section 98.0403.2 of the LAMC. Appeals to the Appeals Commission shall be accompanied by a filing fee as set forth in Table 4-A of Division 4 of Article 8, Chapter IX, of the LAMC.

If the commission fails to act on any appeal within the time limit specified in this section, then the action of the department on the matter shall be final.

**105.5.5.2 Decision.** The decision upon an appeal shall be concurred in by at least three members of the commission. The commission may modify or reverse a ruling, decision or determination appealed from only upon making written findings setting forth specifically wherein the action of the department was in error or constituted an abuse of discretion. The commission shall make specific written findings supporting any modification or reversal.

Upon making a decision, a copy of the findings and determination shall be furnished the applicant, the appellant and the Department of Building and Safety.

**105.5.5.3 Special findings.** Before granting or affirming the grant of an exception pursuant to *California Health and Safety Code* Section 19957, the commission must find that the application involves a case of practical difficulty, unnecessary hardship, or extreme differences, and that it is clearly evident that equivalent facilitation and protection will be secured.

**105.5.5.4 Revocation of approvals.** The commission shall revoke or rescind any determination, including the grant of an appeal or exception, if made in error in violation of any provision of law, or in reliance on any false statement or misrepresentation as to a material fact.

**105.5.5.5 Time limits.** The rights and privileges granted by the commission pursuant to any decision, determination, approval, appeal or exception shall be

void if all required building permits are not secured within one year of the effective date of such action, or if the permit expires under any of the conditions specified in Section 98.0602 of the LAMC.

However, the commission, and the superintendent acting on behalf of the commission, may grant extensions of time if the applicant submits in writing substantial evidence that unusual conditions or circumstances either precluded the securing of all required permits within the allocated time or caused the permit to expire as specified in Section 98.0602 of the LAMC.

Requests for extensions of time shall be made not later than 30 days after the expiration times specified in this section.

**105.5.5.6 Additional authority.** In considering appeals, the commission may exercise the following powers:

1. To appoint one or more hearing officers to conduct hearings and make recommendations to the same extent and in the same manner as the Superintendent of Building acting pursuant to LAMC Section 98.0601(a).
2. To request the attendance of witnesses and the production of evidence before it.
3. To request the city attorney, or an assistant or deputy designated by the city attorney to appear at any hearing before the commission.
4. To adopt rules regarding the filing of appeals, the conduct of its hearings and any other procedural rules in keeping with the provisions of this chapter.

**105.5.5.7 Limitations on jurisdiction.** Notwithstanding any other provision of this Code, the commission's jurisdiction shall not include the right to hear and determine an appeal from a department determination, order or action if such appeal is filed:

1. On or after the date a criminal citation is issued, charging the appellant with a violation of law based on the facts underlying such determination, order or action; or
2. On or after the date a criminal complaint is filed, charging the appellant with a violation of state laws based on such determination, order or action.

Further, the commission's jurisdiction shall not include the right to hear appeals from or otherwise review any action, order or determination of the Board of Building and Safety Commissioners.

## **105.6 Administrative penalties for disabled access violations.**

**105.6.1 Order of abatement and notice of proposed penalty.** If the superintendent determines that a person has violated or failed to comply with any requirement of the law relating to access to public accommodations and housing by the physically disabled, then the superintendent may issue an order of abatement and notice of proposed penalty to that person.



The order and notice shall be in writing and shall describe with particularity the nature of the violation, including a reference to the provision of law that has been violated. The order shall fix a reasonable time for correction of the violation, and the notice of proposed penalty shall set forth the amount of the penalty.

The order of abatement and notice of proposed penalty shall be served upon the person either personally, or by deposit in the United States mail in a sealed envelope, postage prepaid to the person's last known address.

The order and notice shall also set forth the person's right to a hearing as described in Section 105.6.2.

**105.6.2 Right to hearing.** Any person served with an order of abatement or notice of proposed penalty, may apply in writing to the Disabled Access Appeals Commission for a hearing with respect to the violation alleged, the abatement period, and the amount of the penalty. This request shall be filed within 15 days after the date of service.

If the person does not request a hearing within the prescribed time, then the notice of proposed penalty shall be final, and the amount of any penalty included in the notice shall immediately be due and owing to the City of Los Angeles. The city then shall have the right to bring an action in any court of competent jurisdiction to enforce the order and collect the amount of the penalty.

If the department determines that there has been compliance with the order of abatement within the time for correction, then the department may rescind the notice of penalty.

**105.6.3 Time of hearing; notice.** If the person requests a hearing, the superintendent shall cause the matter to be set for hearing before the Disabled Access Appeals Commission. The hearing shall be scheduled not later than 30 days after the date of the application for hearing. This time limit may be extended with the mutual consent of the person and the commission. It shall be a defense to the affirmation of any penalty that the person complied with the order of abatement within the time for correction.

The decision of the commission on the order of abatement and notice of proposed penalty shall be final, and the amount of any penalty affirmed by the commission shall immediately be due and owing to the City of Los Angeles. The city then shall have the right to bring an action in any court of competent jurisdiction to enforce the order and collect the amount of penalty.

**105.6.4 Civil penalties.** Any penalty required to be paid under the provisions of this section is a debt owed to the City of Los Angeles. Any person owing a penalty due under the provisions of this section shall be liable in an action brought in the name of the City of Los Angeles in any court of competent jurisdiction for recovery of any such amount.

The conviction of any person for violating any law shall not relieve the person from the obligation to pay any penalty that the person may owe the city, nor shall such payment prevent a prosecution under appropriate provisions of law for any violation of the law. The remedies

provided in this section are cumulative. The use of one or more of the remedies prescribed in this section shall not bar the use of any other remedy provided for the enforcement of law.

**105.6.5 Fee schedules.** The superintendent shall submit a schedule for the assessment of civil penalties under this section to council for the approval by ordinance.

This schedule shall give due consideration to the appropriateness of the penalty with respect to the following factors:

1. The gravity of the violation;
2. The good faith of the violator being charged; and
3. The history of previous violations.

## SECTION 106 PERMITS

### 106.1 Permits required.

**106.1.1 Building permits.** No person shall erect, construct, alter, repair, demolish, remove or move any building or structure, nor shall any person commence any liquid washing, compressed air cleaning or steam cleaning of exterior surfaces of any building unless said person has obtained a permit from the department. A separate permit shall be obtained for each separate building or structure except that a group of temporary structures erected on one site for a limited period of time may be included on one permit.

Where the installation, alteration or repair of ventilation equipment or ductwork is not included within the scope of a valid building permit, a separate building permit shall be obtained for the work. Sandblasting, liquid washing, compressed air cleaning, steam cleaning of exterior surfaces of buildings adjacent to and within 20 feet (6096 mm) of pedestrian walkways in dedicated streets in the limits of Fire District No. 1 shall be done only between the hours of 11:00 p.m. and 7:00 a.m., or on Sundays.

Where complete plans for a proposed building are filed with the department and where a foundation only permit is issued with respect thereto in accordance with rules established by the Superintendent of Building, a building permit may be issued for the remainder of the building within one year after the issuance of the foundation only permit, provided the plans and specifications comply with all applicable *Los Angeles Building Code* provisions in effect at the time of issuance of the foundation only permit.

**106.1.2 Grading permits.** No person shall commence or perform any grading, and no person shall import or export any earth materials to or from any grading site, without first having obtained a permit from the department. No person shall perform any grading within areas designated "hillside" unless a copy of the permit is in the possession of a responsible person and available at the site for display upon request.

Any grading project involving more than 100 cubic yards (76.5 m<sup>3</sup>) of excavation and involving an excavation in excess of 5 feet (1524 mm) in vertical depth at its deepest point measured from the original ground surface shall

be done by a State of California licensed contractor who is licensed to perform the work described herein.

A separate permit shall be required for each grading site. One permit may include the entire grading operation at that site, however.

**Exception:** All other provisions of the code shall apply, but a permit will not be required if the work complies with any one of the following conditions:

1. An excavation which (a) is less than 2 feet (610 mm) in depth, or (b) which does not create a cut slope greater than 5 feet (1524 mm) in height and steeper than one unit vertical in two units horizontal (50-percent slope). This exception shall not apply to a cut which exceeds 50 cubic yards (38.3 m<sup>3</sup>) or which changes the existing drainage pattern.
2. A fill less than one foot (305 mm) in depth and placed on natural terrain with a slope flatter than one unit vertical in 10 units horizontal (10-percent slope). This exception shall not apply when the fill exceeds 50 cubic yards (38.3 m<sup>3</sup>) or when the fill changes the existing drainage pattern.
3. Excavations, located in hillside areas, for caissons or piles under buildings or structures authorized by valid building permits.
4. Excavations, not located in hillside areas, for basements, footings, caissons, piles, swimming pools or underground structures which are authorized by valid building permits.
5. Excavations for wells or tunnels or utilities, which do not provide vertical or lateral support for buildings, or adversely impact the safety or stability of private or public properties.

Grading permits may be waived by the department for excavations under buildings or structures in hillside areas, if the applicant can demonstrate that the site is relatively level, or the excavation is entirely for footings and/or grade beams not exceeding 5 feet (1524 mm) deep.

**106.1.3 Temporary permits.** Before commencing the construction of any work for temporary use, a building permit authorizing such work shall be obtained from the Department. Such construction shall be occupied or used only for the period set forth on the permit application, but shall not exceed 180 days.

All temporary construction or installations shall be demolished or removed within five days after the expiration of the Certificate of Occupancy. Requests for inspection must be received by the department at least two days prior to public use or occupancy.

#### 106.2 Exceptions. Permit not required for:

1. Flag poles and towers not erected upon a building and not more than 15 feet (4572 mm) high. Radio and television antennae towers which do not exceed 45 feet (13 716 mm) in height or light standards which do not exceed 30 feet (9144 mm) in height.

2. Construction sheds, state approved construction trailers without toilet facilities and sidewalk protection barriers and canopies built pursuant to Chapter 33.
3. Sandblasting, liquid washing, compressed air cleaning, steam cleaning of buildings outside of Fire District No. 1 and also those exterior surfaces of buildings which are located more than 20 feet (6096 mm) from pedestrian walkways in dedicated streets. Painting, papering and similar work, provided, however, that the values thereof shall be included as part of the value of any new construction for which a permit is required by this Code, for the purpose of determining the amount of the fee to be paid for the permit; and provided further that this exception does not include operations such as liquid washing, compressed air cleaning and steam cleaning on the exterior surfaces of buildings adjacent and within 20 feet (6096 mm) of pedestrian walkways in dedicated streets where these operations extend above the first story.
4. Platforms, walks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below.
5. Exhibits, booths, partitions and display counters for temporary use not exceeding 30 days in conjunction with an exhibit or show and not exceeding 12 feet (3658 mm) in height above the floor.
6. Outdoor tents or cloth structures for temporary use not exceeding 30 days and not exceeding 12 feet (3658 mm) in any dimension, provided such tents are accessory to an indoor or outdoor assembly use on the site.
7. Swimming, bathing and wading pools not exceeding 24 inches in depth and having a surface area not exceeding 250 square feet (23 m<sup>2</sup>).
8. Canopies or awnings located outside of Fire District No.1 extending not more than 4 feet (1219 mm) from the exterior wall of the building and attached to Group R Occupancies.
9. Impact hazard glazing pursuant to Section 6101.
10. Work performed by certified licensed contractors in accordance with Section 108.12.1.
11. Any work accomplished under the auspices of and owned and controlled by the United States of America, by the State of California or the Los Angeles County.
12. Masonry or concrete fences not over 3½ feet (1067 mm) high, and other fences not over 10 feet (3048 mm) high.
13. Tanks for the storage of combustible liquids, if resting upon the surface of the ground and surrounded by an impounding basin conforming to the requirements of Article 7 of Chapter V of the LAMC (Fire Code).
14. Cases, counters and partitions, not over 5 feet 9 inches (1753 mm) high.
15. Waterproof pointing of joints in masonry or veneer, also cleaning with detergents which are not injurious to clothing or skin of persons and are not removed by liquid washing, provided work is done from safely

enclosed scaffolding which will collect any dust, debris or dropped tools and materials in use.

### 106.3 Permit applications.

**106.3.1 Application.** To obtain a permit, the applicant shall file an application on a form furnished by the department.

One complete application for each permit shall be filed. Every such application shall:

1. Identify and describe the work to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by legal description, street address or similar description that will readily identify and definitely locate the proposed building or work.
3. Indicate the use or occupancy for which the proposed work is intended.
4. Be accompanied by plans, diagrams, computations and specifications and other data as required in Section 106.3.2.
5. State the valuation of any new building or structure or any addition, remodeling or alteration to an existing building.
6. Be signed by the permittee, or an authorized agent.
7. Give such other data and information as may be required by the Superintendent of Building.

### 106.3.2 Plans and specifications.

**106.3.2.1 Site plan.** A plot of the site shall be filed with each application for a permit.

**Exception:** The Superintendent of Building may grant the omission of a site plat when the proposed work is of such a nature that no information is needed to determine compliance with all laws relating to the location of buildings or occupancies.

With respect to the site, the plat shall show the boundaries, lot lines, existing and proposed buildings and structures, neighboring public ways, and sufficient dimensions and other data to enable the department to determine compliance with all laws relating to the location of buildings or occupancies.

**106.3.2.2 Number of sets of plans.** Each application for a permit shall be accompanied by two sets of plans and specifications for plan checking.

The number of sets of plans and specifications submitted with each application for a building permit shall comply with the regulations of Section 107.3.1 of this Code.

**Exception:** The Superintendent of Building may waive the requirement for plans and specifications as required in this article if the superintendent finds that the information on the application is sufficient to show that the work will conform to the provisions of this Code and other relevant laws.

**106.3.2.3 Official stamp.** When the plans and specifications fully comply with the provisions of Section 106.3.3, the department shall place an official stamp of

approval or an approval perforation on each sheet of each set and, upon payment of the permit fee, shall issue one set to the applicant.

**106.3.2.4 Validity of approval.** The stamping or approval of any plans or specifications shall not be held to permit, or to be an approval of, the violation of any provision of this Code.

**106.3.2.5 Alterations to stamped plans.** No stamped or approved plans or specifications shall be altered in any manner, except when and as approved by the department.

**106.3.2.6 Stamped plans on job.** The stamped set of plans and specifications issued to the applicant shall be kept at the site of the construction or work and shall be available to the authorized representative of the department. There shall be no deviation from the stamped or approved application, plans or specifications without department approval.

### 106.3.3 Information and certification required on plans and specifications.

**106.3.3.1 General.** All plans and specifications submitted to the department for checking shall be drawn with ink or indelible pencil, or shall be made by a reproduction process approved by the department. The first sheet of each set of plans and specifications shall give the street address of the work and the name and address of the owner of the building.

The plans and specifications shall be of sufficient clarity to indicate the nature and extent of the proposed work and to show in detail that it will conform to the provisions of this Code and of relevant laws, ordinances, rules, regulations and orders.

Plans for buildings more than two stories in height of other than Group R, Division 3 and Group U Occupancies shall indicate how required structural and fire resistive integrity will be maintained where a penetration will be made for electrical, mechanical, plumbing and communication conduits, pipes and similar systems.

In lieu of detailed specifications, the department may approve reference on the plans to a specific section, subsection or paragraph of this Code or other ordinance or law.

Distances and dimensions on the plans, when required to show conformity with the provisions of this Code, shall be done in figures.

When required by Section 1704.3, a statement of special inspection prepared by the registered engineer or licensed architect responsible for the design of the project shall be included with the set of plans.

**106.3.3.2 Written records of computations required.** When a structural design is required for the purpose of obtaining a permit, it shall be justified by a written record of computations filed with the department and each sheet of the drawings and written record of computations shall be signed by or bear the approved stamp of an engineer or architect licensed by the State of Cali-

fornia for the type of service performed. On structures which do not require an engineer's or architect's signature according to Article 3, Chapter 7, Division 3, of the *California Business and Professions Code*, but do require some structural design, the person responsible for the design shall sign the calculations and the sheets of the plans with the engineering details.

#### **106.3.3.3 Design professional in responsible charge.**

Where it is required that documents be prepared by a registered design professional, the Superintendent of Building shall have authority to require the owner or owner's authorized agent to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible charge. If the circumstances require, the owner or the owner's authorized agent shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original registered design professional in responsible charge. The Superintendent of Building shall be notified in writing by the owner or owner's authorized agent if the registered design professional in responsible charge is changed or is unable to continue to perform the duties.

The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, included phased and deferred submittal items for compatibility with the design of the building.

**106.3.3.3.1 Deferred submittals.** Deferral of any submittal items shall have the prior approval of the Superintendent of Building. The registered design professional in responsible charge shall list the deferred submittals on the construction documents for review by the Superintendent of Building.

Documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the Superintendent of Building with a notation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until the deferred submittal documents have been approved by the Superintendent of Building.

**106.3.3.4 Yard restriction.** The increase in area permitted by C.B.C. Section 506.2 and Section 507 shall not be allowed unless, or until, the owner of the required yard and open space files with the department an agreement binding the owner, heirs and assignees, to set aside the required yard as an unobstructed space having no improvements. This agreement shall be recorded in the Los Angeles County Recorder's Office.

**106.3.3.5 Exterior balconies and elevated walking surfaces.** Where balconies or other elevated walking surfaces are exposed to water from direct or blowing rain, snow, or irrigation, and the structural framing is protected by an impervious moisture barrier, the construction documents shall include details for all ele-

ments of the impervious moisture barrier system. The construction documents shall include manufacturer's installation instructions.

### **106.4 Permits issuance.**

**106.4.1 Issuance.** When the department determines that the information on the application and plans is in conformance with this Code and other relevant codes and ordinances, and upon payment of all required fees, the Department shall issue a permit.

#### **Exceptions:**

1. The department shall have the authority to withhold a permit for any building if public sewers are not available and the provisions of Article 4, Chapter IX of the LAMC (Plumbing Code) prohibit the use of a private sewage disposal system on the lot or premises. Notwithstanding the provisions of Chapter 7 of the *California Plumbing Code* as adopted in LAMC Section 94.700.0 to the contrary, and for any lot or premises located in whole or in part in the San Fernando Valley and certain adjacent areas as described in LAMC Section 64.26 A.2:

If public sewers are not available and Article 4 of Chapter IX of the LAMC does not prohibit the use of a private sewage disposal system, a building permit may be issued, provided that:

- A. The owner or owners shall install a holding tank pursuant to permits from the Department and the Los Angeles Fire Department; and
  - B. The owner or owners shall submit a covenant and agreement that runs with the land to provide a connection to the public sewer when it becomes available, or to vacate the building if no connection is made. This covenant and agreement shall be signed by the owner or owners and filed with the County Recorder; or
  - C. The permit is for four or fewer dwelling units in a residential zone, or for a structure that will not result in the discharge of wastewater.
2. The department shall have the authority to withhold permits where the proposed development is located in an area subject to slides or unstable soil which may have an adverse effect on the proposed development or access thereto, as determined by the department. If the apparent safety of the proposed development can be verified pursuant to the provisions of Sections 7016.4.2 and 7016.4.3 of this Code, the department shall issue a permit upon receipt of a sworn affidavit which has been recorded by the County Recorder, stating that the applicant is fully aware that the proposed development is located in an area subject to slides or unstable soil which may have an adverse effect on the proposed development or access thereto.

3. The department shall have the authority to withhold a building permit where the proposed building site is an area subject to inundation, as determined by the department. If it can be shown by authentic past records that any possible inundation is not likely to be of such extent as to be an immediate hazard to occupancy of the proposed building, the department shall issue a building permit upon receipt of a sworn affidavit which has been recorded by the county recorder stating that said applicant is fully aware of the department's finding that the structure is an area subject to inundation.
4. The department shall have the authority to withhold permits on projects located within a Special (Fault) Studies Zone established under Chapter 7.5, Division 2, of the *California Public Resources Code*. Permits may be issued if it can be demonstrated through accepted geologic seismic studies that the proposed structure will be located in a safe manner and not over or astraddle the trace of an active fault. Acceptable geologic seismic studies shall meet the criteria as set forth in rules and regulations established by the Superintendent of Building to assure that such studies are based on sufficient geologic data to determine the location or nonexistence of the active fault trace on a site. Prior to approval of a project, a geologic report defining and delineating any hazard of surface fault rupture shall be required. If the city finds that no undue hazard of this kind exists, the geologic report on such hazard may be waived, with approval of the State Geologist.
5. The Department shall have the authority to withhold a demolition or relocation permit for a residential building composed of two or more residential rental units, under the following circumstances:
  - A. When the applicant states that the purpose for demolition or relocation is to construct a condominium, stock cooperative or community apartment project, permits shall be withheld until all necessary tentative tract or preliminary parcel maps for such new subdivision have been approved by the city.
  - B. This (Exception 5) shall not apply if the building is to be demolished and one of the following:
    - (i) Constructed of unreinforced masonry construction and built pursuant to a building permit issued prior to October 1, 1933.
    - (ii) To be demolished pursuant to a demolition order issued by the department under authority set forth in Chapter 89 of this Code.
  - C. This (Exception 5) shall not apply if the applicant demonstrates to the satisfaction of the department that the site will be developed with housing for low to moderate income households, which housing is to be developed, constructed or acquired with federal, state or local government financial assistance.
  - D. This (Exception 5) shall not apply to two family dwellings or to apartment houses and apartment hotels containing three dwelling units, provided that at least one dwelling unit in each such building is occupied by a record owner of the property.
6. The department shall have the authority to withhold permits on projects located within a Methane Zone or Methane Buffer Zone established under Sections 7101, et seq., of this Code. Permits may be issued upon submittal of detailed plans that show adequate protection against flammable gas incursion by providing the installation of suitable methane mitigation systems.
7. The department shall have the authority to withhold permits for public works capital improvement projects until receipt of written certification from the Cultural Affairs Department that the board, bureau or department of the city authorized by law to construct the project has fully complied with the requirements of the city's Public Works Improvements Arts Program. For purposes of this section, "public works capital improvement project" includes any capital project paid for wholly or in part by the City of Los Angeles or by any board, bureau or department of the city authorized by the City Charter or other law to construct or remodel any building, structure, park, utility, street, sidewalk or parking facility, or any other type of capital project or any portion thereof, within the geographical limits of the City.
8. The department shall have the authority to withhold the building permit where, in the opinion of the Superintendent of Building, the design of a structure, due to the unusual configuration of the structure or parts of the structure or assembly of structural materials therein, does not provide at least the same safeguard against earthquake as provided by the applicable portions of this Code when applied in the design of a similar structure of customary configuration.
9. Reserved.
10. The Department shall have the authority to withhold a building permit or relocation permit for a site if the department determines that demolition or relocation work has been done on the site without the benefit of required demolition or relocation permits. If the department, after notice and hearing, makes this determination, the department shall also have the authority to record an affidavit with the County Recorder stating that no permits for any new development shall be issued on the property for a period of five years.

11. The department shall have the authority to withhold a building permit for a residential building composed of two or more residential rental units, under the following circumstance:

- A. When the applicant states that the purpose for a building permit is to construct a condominium, stock cooperative or community apartment project, permits shall be withheld until all necessary tentative tract or preliminary parcel maps for the new subdivision have been approved by the City.

12. The Department shall have the authority to withhold building permits for the construction of hotels until a conditional use permit allowing the sale of liquor has been granted by the Department of City Planning or until the Department of Building and Safety receives from the property owner a sworn affidavit, signed by the owner and recorded by the Los Angeles County Recorder, declaring that the hotel shall not sell or serve liquor on the premises for a period of not less than five years.

13. The Department shall have the authority to withhold grading permits for developments with disturbed areas of one acre or more unless the applicant is able to show that a Notice of Intent to comply with the State Construction Activity Storm Water Permit has been filed with the State Water Resources Control Board and a Storm Water Pollution Prevention Plan has been prepared. For the purpose of this section, “disturbed area” shall mean an area altered as a result of cleaning, grading and/or excavation of earth.

14. The Department of Building and Safety shall require applicants, as a condition for issuing a grading or building permit, to incorporate into the plan documents best management practices necessary to control stormwater pollution from sediments, erosion, and construction materials leaving the construction site. Such requirements shall be in accordance with the provisions contained in the “Development Best Management Practices Handbook, Part A Construction Activities” adopted by the Board of Public Works as authorized by Section 64.72 of the LAMC.

15. The Department of Building and Safety shall have the authority to withhold grading and/or building permits for developments until:

- A. The applicant incorporates into the development, to the satisfaction of the Bureau of Sanitation of the Department of Public Works, best management practices necessary to control storm water pollution in accordance with the “Low Impact Development Ordinance” (Ord. No. 181,899) and the “Planning and Land Development Best Management Practices Handbook, Low Impact Development Manual, Part B Plan-

ning Activities” adopted by the Board of Public Works as authorized by LAMC Section 64.72; and

- B. The Bureau of Sanitation of the Department of Public Works receives a Covenant and Agreement, signed by the owner and recorded with the Los Angeles County Recorder, declaring that the best management practices necessary to control stormwater pollution shall be installed and/or constructed and maintained in proper working condition at all times; and

- C. The applicant submits to the Bureau of Sanitation of the Department of Public Works, a set of plans and specifications showing compliance with the Standard Urban Stormwater Mitigation Plan or Site Specific Mitigation Plan.

16. The Department of Building and Safety shall have the authority to withhold building permits for new development on the site of a destroyed or demolished Residential Hotel and for the conversion or demolition of Residential Units on any property identified as a Residential Hotel by the Los Angeles Housing Department pursuant to Article 7.1 of Chapter IV of the LAMC until the Los Angeles Housing Department has verified compliance with the provisions of Article 7.1 of Chapter IV of the LAMC in order to preserve Residential Units in the Residential Hotels of the City.

#### 106.4.2 Retention and maintenance of approved plans.

**106.4.2.1 Retention of plans.** The duplicate plans and specifications of every building or structure shall be stamped and retained by the department during the life of such building.

**Exception:** Plans for the following need not be maintained, except where required by the department:

1. Single or multiple dwellings in non-hillside areas which are not part of a common interest development (as defined in Section 1351(c) of the *Civil Code of California*), and not more than two stories and basement in height.
2. Garages and other structures appurtenant to buildings described in Item 1 of this exception.
3. Farm or ranch buildings.
4. Any one-story building where the span between bearing walls does not exceed 25 feet (7620 mm). This exception does not, however, apply to a steel-frame or concrete building.
5. Alterations to commercial buildings, apartments and hotels which do not require the signature of a licensed civil or structural engineer or architect.

### 106.4.2.2 Inspection and reproduction of retained plans.

**106.4.2.2.1 Inspection of plans.** The copy of the approved building plans maintained by the department as provided by Section 106.4.2.1 shall be available for inspection only on the premises of the department.

**Exception:** Plans or portion of plans for banks, other financial institutions or public utilities which are maintained by the department may not be inspected without written permission from the owner of the building.

**106.4.2.2.2 Reproduction of plans.** Plans maintained by the department under Subdivision 1 of this subsection may not be duplicated in whole or in part except with the written permission of the certified, licensed or registered professional or his or her successor, if any, who signed the original documents, and the written permission of the original or current owner of the building, or, if the building is part of a common interest development, with the written permission of the board of directors or governing body of the association established to manage the common interest development; or by order of a proper court. In implementing this provision, the department shall comply with the requirements of *California Health and Safety Code* Section 19851.

The department shall also furnish the form of an affidavit to be completed and signed by the person requesting to duplicate the official copy of the plans, which contains provisions stating all of the following:

1. That the copy of the plans shall only be used for the maintenance, operation, and use of the building.
2. That drawings are instruments of professional service and are incomplete without the interpretation of the certified, licensed, or registered professional of record.
3. That Subdivision (a) of Section 5536.25 of the *Business and Professions Code* states that a licensed architect who signs plans, specifications, reports, or documents shall not be responsible for damage caused by subsequent changes to, or use of, those plans, specifications, reports, or documents where the subsequent changes or uses, including changes or uses made by state or local governmental agencies, are not authorized or approved by the licensed architect who originally signed the plans, specifications, reports, or documents, provided that the architectural service rendered by the architect who signed the plans, specifications, reports, or documents was not also a proximate cause of the damage.

Grading plans which are on file with the department are public records and may be duplicated.

The fees specified in the following provisions 1 or 2 shall be paid by the person requesting duplication of plans:

1. Building plans that have not been microfilmed and are authorized for reproduction, and grading plans that are to be duplicated by other than city services will be released only to a bonded duplicating service which has posted a bond for the benefit of the City of Los Angeles in an amount at least equal to the value of the plans.

The cost of duplicating the plans shall be paid directly to the duplicating service by the persons requesting duplication. That person shall pay a service fee of \$15.00 for each set of plans released to a bonded duplicating service as herein provided.

2. Building plans that have been microfilmed and are authorized for reproduction shall be duplicated by city services. The department shall collect an initial service fee of \$8.00 for each request for reproduction of plans plus a fee of \$1.00 for each sheet requested to be photocopied.

**106.4.2.3 Compliance.** A certified copy of the microfilmed plans shall constitute compliance with the requirement of this section.

### 106.4.3 Validity of permit.

**106.4.3.1 Limit of authorization.** The issuance of a permit is not an approval or an authorization of the work specified therein. A permit is merely an application for inspection, the issuance of which entitles the permittee to inspection of the work which is described therein.

Permits issued under the requirements of this Code shall not relieve the owner of responsibility for securing required permits for work to be done which is regulated by any other code, department or division of the City of Los Angeles.

All permits are issued subject to the following conditions:

If the work described by a valid permit is prohibited by a change in the LAMC, then such work may be completed only if the department determines that both substantial liabilities have been incurred, and substantial work has been performed on site, in accordance with the terms of that permit. Work performed and liabilities incurred pursuant to a demolition or relocation permit shall not be considered in determining whether an owner may complete a building or structure for which a building permit has been issued.

**106.4.3.2 Validity of other laws.** Neither the issuance of a permit nor the approval by the department of any document shall constitute an approval of any violation of any provision of this Code or of any other law or ordinance, and a permit or other document purporting

to give authority to violate any law shall not be valid with respect thereto.

**106.4.3.3 Official grades.** The applicant shall satisfy himself as to the correctness of proposed structure elevations and locations with respect to the official grades of public streets and to the policy of the Board of Public Works relative to the location and length of curb depressions for driveways.

**106.4.3.4 Easements.** Before issuing any permit, the department shall require a declaration, under penalty of perjury, from the owner or agent having the property owner's consent stating that:

"The proposed work will not destroy or unreasonably interfere with any access or utility easement belonging to others and located on my property, but in the event such work does destroy or unreasonably interfere with such easement, a substitute easement(s) satisfactory to the holder(s) of the easement will be provided."

#### **106.4.4 Expiration, suspension or revocation.**

**106.4.4.1 General.** The regulations concerning the expiration, suspension and revocation of permits are enumerated in Section 98.0602.

**106.4.4.2 Making false statements to the department.** Any person who willfully or knowingly, with the intent to deceive, makes a false statement or representation, or knowingly fails to disclose a material fact in any documentation required by the Department shall be guilty of a misdemeanor.

**106.4.4.3 Unfinished buildings or structures.** Whenever the Department determines by inspection that work on any building or structure for which a permit has been issued and the work started thereon has been suspended for a period of 180 days or more, the owner of the property upon which such structure is located, or other person or agent in control of said property, upon receipt of notice in writing from the department to do so, shall, within 90 days from the date of such written notice, obtain a new permit to complete the required work and diligently pursue the work to completion, or shall remove or demolish the building or structure within 180 days from the date of the written notice.

#### **106.4.5 Permits for historical and cultural buildings.**

The department shall not issue a permit to demolish, alter or remove a building or structure of historical, archaeological or architectural consequence if such building or structure has been officially designated, or has been determined by state or federal action to be eligible for designation, on the National Register of Historic Places, or has been included on the City of Los Angeles list of historic cultural monuments, without the department having first determined whether the demolition, alteration or removal may result in the loss of or serious damage to a significant historical or cultural asset. If the department determines that such loss or damage may occur, the applicant shall file an application and pay all fees for the California Environmental Quality Act Initial Study and Check List, as specified in Section 19.05 of the LAMC. If the Initial Study and

Check List identifies the historical or cultural asset as significant, the permit shall not be issued without the department first finding that specific economic, social or other considerations make infeasible the preservation of the building or structure.

**106.4.5.1 Notification of demolition.** The Department shall not issue a building permit for demolition of a building or structure for which the original building permit was issued more than 45 years prior to the date of submittal of the application for demolition preinspection, or where information submitted with the application indicates that the building or structure is more than 45 years old based on the date the application is submitted, without having first provided the following required notice and taken the following required actions at least 30 days prior to issuance of the demolition of building or structure permit:

1. The Department shall send written notice of the demolition preinspection application via US mail or email to the abutting property owners and occupants, as well as the City Council District Office and Certified Neighborhood Council Office representing the site, for which a demolition preinspection has been proposed for a building or structure as defined by the *Los Angeles Municipal Code*.
2. The applicant shall post a placard on the property where the demolition will occur, in a conspicuous, visible place, within 5 feet (1524 mm) of the front property line, describing the date of the application for demolition preinspection with the following standards:
  - a. The placard shall be a minimum 11 inches by 17 inches (279 mm by 431 mm) in size and mounted at a minimum of 4 feet (1219 mm) above the ground.
  - b. The placard shall have black letters on contrasting background white or color paper.
  - c. The placard shall have major block-style letters a minimum of 2½ inches (63.5 mm) in height and shall state: "NOTICE OF DEMOLITION." Minor letters 1½ inches (38 mm) in height shall specify the permit number and the phone number to be called for information.
  - d. The placard material shall be made of durable, laminated or other weather-resistant material.
3. The Department shall verify the placement of the placard prior to commencement of the demolition work.
4. All applicable protection devices (e.g., fences and/or pedestrian protection canopies) shall be installed and approved by the Department prior to demolition work and maintained during demolition, in accordance with LABC Sections 3306 and 3307. The Department shall verify the place-



ment of these devices prior to the commencement of demolition work.

**106.4.5.2.** The applicant seeking the permit shall provide the Department with the names and addresses of all persons entitled to receive notice pursuant to Section 106.4.5.1.

**106.4.5.3.** The Department shall collect a fee in the amount of \$60.00 when an application for the demolition of a building or structure described in Section 106.4.5.1 is filed with the Department. This fee shall be charged in addition to applicable preinspection fees set forth at Section 107.3.2.

**106.4.5.4.** Sections 106.4.5.1, 106.4.5.2 and 106.4.5.3 shall not apply to a building or structure as described in Section 106.4.5.1 that is the subject of a pending zoning application for a specific plan filed prior to January 12, 2015. In the event a specific plan for such property is not approved within 3 years from January 12, 2015, such property shall be required to comply with the provisions of Sections 106.4.5.1, 106.4.5.2 and 106.4.5.3. Insofar as the provisions of Sections 106.4.5.1, 106.4.5.2, and 106.4.5.3 are different than or in conflict with the provisions of a specific plan, the provisions of the specific plan shall govern.

**106.4.5.5.** Sections 106.4.5.1, 106.4.5.2 and 106.4.5.3 shall not apply to a building or structure as described in Section 106.4.5.1 that will be demolished as part of a project that was subject to California Environmental Quality Act review and for which the corresponding discretionary project approval was issued prior to submittal of the application for demolition preinspection.

#### **106.4.6 Notification and posting in a hillside grading area.**

**106.4.6.1** In any area designated as a hillside grading area, the department shall not issue (1) a building permit for construction of a building with over 500 square feet of floor area, or (2) a building permit for any addition to an existing building which adds over 500 square feet of floor area, or (3) a grading permit for the grading of more than 1,000 cubic yards (765 m<sup>3</sup>) of earth materials without having first done the following at least 10 days prior to issuance of the building or grading permit:

1. The department shall send written notices of the permit application, by mail, to the owners of all property abutting the property at which the construction or grading will occur. Notices shall also be sent to the owners of all property across the street or alley when such property is intersected by a projection of the lot lines of the property at which the construction or grading will occur; and
2. The department shall post a notice of the permit application on the property at which the construction or grading will occur.

**106.4.6.2** The applicant seeking the permit shall provide the department with the names and addresses of all persons entitled to receive notice pursuant to Section 106.4.6.1.

**106.4.6.3** The department shall collect a fee in the amount of \$60.00 when an application for a building or grading permit described in Section 106.4.6.1 above is filed with the Department.

#### **106.4.7 Curb ramps.**

**106.4.7.1 Condition of permits.** Subject to the provisions of Section 106.4.7.2, no building or structure shall be erected or enlarged, and no building permit issued therefor, on any lot, any part of which is within 100 feet (30 480 mm) of the straight projection of the intersection of the building lines of a corner lot of the block within which subject lot fronts, unless the applicant agrees in writing, and submits the necessary surety in the form of a bond or cash deposit, to construct a corner curb ramp at such corner and in addition, if such lot is within 100 feet (30 480 mm) of two such intersections to construct corner curb ramps at each of the two adjacent corners at both intersections, for a total of two ramps. The curb ramp shall comply with the standards contained in Part 2 of Title 24 of the *California Code of Regulations*. Such improvements procedure shall, in all respects, be in compliance with Section 12.37D.

**Exceptions:** This section does not apply to the following:

1. One- or two-family dwelling or addition thereto located in a tract, parcel map or subdivision recorded prior to the effective date of this section.
2. A building or structure or addition thereto of less than 500 square feet (46.5 m<sup>2</sup>) in gross floor area or when such building, structure or addition thereto contains a restaurant or fast food restaurant of less than 200 square feet (18.6 m<sup>2</sup>) in gross floor area.
3. Where sidewalks are neither currently installed nor required by the city as a condition of development, at either the location of the proposed development or the location of the otherwise proposed curb ramp.

**106.4.7.2** It is hereby determined that the requirements of Section 106.4.7.1 hereof shall be imposed as a condition to the erection of any structure or addition thereto wherein handicapped access is otherwise required.

#### **106.4.8 Construction site notice.**

**106.4.8.1 Contents.** Any person who obtains the following types of permits shall post a notice, as described below, at the construction site:

1. Permit for new structures, except signs.
2. Permit for additions to existing buildings.
3. Change of use or occupancy permit.
4. Demolition permit.
5. Relocation permit.
6. Swimming pool permit.
7. Grading permit.

The notice shall be on a form entitled "Construction Site Notice" provided by the department and shall

include the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and city telephone numbers where violations can be reported.

**106.4.8.2 Location.** The notice shall be posted and maintained at the construction site and displayed in a location that is readily visible to the public and approved by the department.

**106.4.8.3 Maintenance of notice.** The notice shall be displayed after issuance of the permit and prior to the start of construction. The notice shall be displayed continuously during the process of construction until all the work authorized by the permit is inspected and approved by the department. All contact information on the notice, including telephone numbers, shall be correct and maintained current. Failure to display this notice may result in withholding of inspections by the Department.

## 106.5 Solar permitting.

**106.5.1 Streamlined permitting process for small residential rooftop solar energy systems.** A solar energy system, as defined in *California Civil Code* Section 801.5(a), that satisfies all of the following requirements shall be eligible for streamlined permitting process:

1. It is no larger than 10 kilowatts alternating current nameplate rating or 30 kilowatts thermal.
2. It conforms to all applicable state and local fire, structural, electrical and other building codes.
3. It meets all applicable safety and performance standards established by the *California Electrical Code*, the Institute of Electrical and Electronics Engineers and accredited testing laboratories such as Underwriters Laboratories and, where applicable, rules of the Public Utilities Commission regarding safety and reliability.
4. It is installed on a single or duplex family dwelling.
5. Its solar panels or module arrays do not exceed the maximum legal building height, which includes the height allowances provided by Section 12.21.1 B.3.(c) of the *Los Angeles Municipal Code*.

The Department shall publish on a publicly accessible internet site all required permitting documentation and a checklist of all requirements with which such solar energy systems must comply to be eligible for streamlined review. The Department shall use the checklist and standard plans contained in the most current version of the California Solar Permitting Guidebook and adopted by the Governor's Office of Planning and Research. The Department shall allow online submittal of permit applications and associated documentation, and shall authorize the electronic signature of all forms, applications and other documentation in lieu of a wet signature.

A permit application that the Department determines satisfies the information requirements in the checklist shall be deemed complete. Upon confirmation that an applica-

tion is complete and that the proposed solar energy system complies with all requirements of the *Los Angeles Municipal Code*, the Department shall approve the application and issue all required permits in a timely manner in substantial conformance with the recommendations of the California Solar Permitting Guidebook. Upon receipt of an incomplete application, the Department shall issue a written correction notice detailing all deficiencies in the application and any additional information required to be eligible for streamlined permit issuance.

Except as provided herein, a solar energy system eligible for streamlined review shall be subject to no more than one inspection, which shall be done in a timely manner in substantial conformance with the recommendations of the California Solar Permitting Guidebook and may involve multiple agencies. If the eligible solar energy system fails the inspection, a subsequent inspection may be required. This section does not preclude the Los Angeles Department of Water and Power from conducting separate inspections for the interconnection of a solar energy system to the electricity grid.

The Department need not approve an application or issue permits under this section if the Department makes a finding, based on substantial evidence, that the solar energy system could have a specific, adverse impact upon the public health or safety. "Specific, adverse impact" means a significant, quantifiable, direct and unavoidable impact, based on objective, identified and written public health or safety standards, policies or conditions as they existed on the date the application was deemed complete.

## SECTION 107 FEES

**107.1 General.** Fees shall be assessed in accordance with the provisions of this section.

**107.1.1 Annual review of fees.** The fees in this Code shall be reviewed annually by the Superintendent of Building. Beginning on July 1, 2010, and thereafter on July 1, of every year, the amount of each fee in this Code shall be adjusted as follows: Calculate the percentage movement between July of the previous year and July of the current year in the Consumer Price Index - All Urban Consumers in the Los Angeles area, as published by the United States Government Bureau of Labor Statistics. Adjust each fee by said percentage amount and round off to the nearest ten cents, provided, however, no fee shall exceed the reasonable cost of providing services. When it is determined that the amount reasonably necessary to recover the cost of providing services is in excess of this adjustment, the Superintendent of Building may present fee proposals to the City Council for approval.

**107.2 Permit fees.** Before issuing any permit required by this Code, the department shall collect a fee.

**107.2.1 Building permit.** Unless otherwise required below, the amount of the permit fee shall be as shown in Table No. 1-A of this Code for the total value of all construction work for which the building permit is issued, including all painting, papering, roofing, electrical work,

plumbing, permanent or fixed heating equipment, elevator equipment, fire sprinkler equipment and any other permanent portions or permanent equipment except as provided in Section 106.

No portion of any building, including mechanical, electrical and plumbing work shall be excluded from the valuation for a building permit because of any other permits required by any governing agency.

**107.2.2 Combined building-mechanical permit.** A combined building-mechanical permit shall be issued, provided a fee is paid. The permit fee shall be as determined by using Table No. 1-A.1 of this Code. A combined building-mechanical permit shall entitle the permittee to the inspection of all building, electrical, plumbing, heating, ventilating and air conditioning work in the following systems:

1. A new one- or two-family dwelling.
2. Any work necessary and in conjunction with alterations, additions or demolitions to a one- or two-family dwelling. In the event that work in one or more of the mechanical trades is not required, the applicable fee(s) shall not be collected.
3. A pool accessory to a one- or two-family dwelling, except that for pools which are exempt from a building permit but may require a permit for electrical, plumbing and heating work, a combined building-mechanical permit shall be issued, provided a fee is paid. The fee shall be 75 percent of the fee determined from Table No. 1-A of this chapter.
4. A complete solar heating and/or cooling system installation appurtenant to and used exclusively by a one- or two-family dwelling; or an individual dwelling unit or an efficiency dwelling unit in an apartment house, apartment-hotel or hotel; or a pool accessory to a one-family dwelling.

**107.2.3 Sign building permit.** Before issuing a building permit for any sign, the department shall collect a permit fee. The amount of the permit fee shall be equal to 3.50 percent of the total value of all construction or work, as determined by the department, for which the building permit is issued, but in no event shall the permit fee be less than the minimum inspection fee as specified in Section 98.0412(a) of the LAMC and Footnote No. 4 of Table No. 1-A of this chapter. The sign building permit shall be subject to the surcharge specified in Footnote No. 1 of Table No. 1-A of this chapter.

**107.2.4 Grading permit.** Before issuing any grading permit, the department shall collect a permit fee, the amount of which shall be as shown in Table No. 1-D of this Code.

**107.2.5 Earthquake hazard reduction in existing tilt-up concrete wall buildings permit.** The permit fee for construction work which the department determines is necessary to satisfy the requirements contained in Section 9108 of this Code, shall be based on the entire floor area of the building requiring any strengthening work. The fee shall be equal to \$0.0347 per square foot or fraction thereof of the subject building.

**107.2.6 Permit issuing fee when plan check is not required.** See Section 98.0415 of the LAMC.

**107.2.7 Certificate of occupancy for use of land permit.** A fee of \$150.00 shall be charged for each Certificate of Occupancy for use of land; however, no fee shall be charged when a Certificate of Occupancy is being issued pursuant to Section 109 or when any work which requires a building permit is done.

**107.2.8 Awning installation permit.** Every awning erected and arranged so that temporary shelter may be provided over any portion of a public way shall be subject to an installation fee of \$10.00 per awning, but in no event shall the installation fee per building be less than the minimum inspection fee specified in Section 98.0412 (a) of the LAMC.

### 107.3 Plan check and preinspection fees.

**107.3.1 Plan check fees.** Before formally accepting a set of plans and specifications for checking, the Department shall collect a plan check fee. Plan checking shall expire if permit is not secured within the time limits specified in Section 98.0603 of the LAMC.

**107.3.1.1 Buildings and structures.** Unless otherwise required below, the plan check fee for buildings, structures or portions thereof shall be equal to 90 percent of the building permit fee as shown in Table No. 1-A of this chapter.

**Exception:** Where the occupancy of a residential building or portion thereof is changed, the plan checking fee shall be based on a valuation equal to 85 percent of the replacement value of the building or portion changed.

**107.3.1.2 Signs and sign support structures.** The plan check fee for signs and/or sign support structures shall be equal to 50 percent of the building permit fee as indicated in Section 107.2.3.

**107.3.1.3 Grading work.** The plan check fee for grading plans shall be 90 percent of the grading permit fee as indicated by Section 107.2.4. The fee for grading work on two or more contiguous sites may be the amount indicated for the sum of the total cubic yards in all the separate sites.

**Exception:** A grading plan check fee will not be required for jobs of 50 cubic yards (38.3 m<sup>3</sup>) or less.

**107.3.1.4 Hourly plan check fee.** The Department may collect a plan check fee as specified in Section 98.0415(e) of the LAMC for anytime not included by the original plan check fee and shall be in addition to other fees specified in this Code.

**107.3.1.5 Tilt-up concrete wall buildings.** The plan check fee for construction pursuant to the requirements of the Earthquake Hazard Reduction in Existing Tilt-up Concrete Wall Buildings contained in Chapter 91 of this Code shall be equal to the building permit fee as specified in Section 107.2.5.

**107.3.1.6 Plan check fees for more than one building.** When two or more buildings are to be erected on the same site and the following regulations are com-

plied with, the plan checking fee, if of a lesser amount, may be the fee indicated for the sum of the values of all the separate buildings.

**107.3.1.6.1** All of the buildings shall be shown on the one set of plans and specifications.

**107.3.1.6.2** Applications for separate permits for each building shall be filed prior to the checking of the plans.

**107.3.1.6.3** Two sets of plans and specifications shall be submitted to the Department.

**107.3.1.7 Plan check fees for duplicate buildings.** When two or more buildings are to be erected from identical plans and specifications and the following regulations are complied with, the plan checking fee, if of a lesser amount, may be the fee indicated for the sum of the values of all the separate buildings.

**107.3.1.7.1** Applications for separate permits for each building shall be filed prior to the checking of the plans.

**107.3.1.7.2** A site plat shall accompany each application for a permit.

**107.3.1.7.3** The number of sets of plans and specifications submitted to the department shall be one more than the number of applications for permits.

**107.3.1.7.4** Footings for one or more of the buildings may deviate from the plans and specifications provided that, in each instance, separate footing plans are submitted to the Department.

**107.3.1.8 Fees for rechecking plans.** No additional fee shall be charged for verification of the corrections required by the Department or other departments. However, when plans are revised by the applicant for reasons other than plan check correction and require additional plan check time to review the plan revisions, the department shall collect a supplemental plan check fee as specified in Section 107.3.1.4.

When plans are resubmitted for review of changes made to previously approved plans, an application for a permit shall be filed.

The plan checking fee in the case of a building permit shall be based on an hourly rate as specified in Section 107.3.1.4 and the plan check fee for a grading permit shall be as specified in Section 107.3.1.3 for the number of cubic yards replaced, removed or omitted that were not previously approved.

When a permit expires by limitation and the work is not completed, the plans shall be resubmitted for checking before the issuance of a new permit. The plan checking fee shall be based on the same valuation as specified for the permit in Section 106.4.4.

**107.3.2 Preinspection fees.** The Department shall collect a fee of \$121.00 for each of the following:

1. **Grading preinspection.** A grading preinspection fee shall be collected for any building permit application

involving work in the hillside grading area and for all grading plans submitted to the Department.

**Exception:** The grading preinspection fee may be waived when the Department determines that the nature of the work does not require preinspection of the work site.

2. **Sign preinspection.** A sign preinspection fee shall be collected when a permit application is filed for construction, replacement, alteration or repair of a sign.

**Exception:** The sign preinspection fee may be waived when the Department determines that the nature of the sign does not require preinspection of the proposed location to determine compliance with applicable requirements.

3. **Demolition preinspection.** A demolition preinspection fee shall be collected for all proposed demolition of buildings (including accessory buildings) or structures on a site and shall be conducted before the issuance of a demolition permit.

**Exception:** The demolition preinspection and demolition preinspection fee may be waived when the Department determines that previous inspections associated with the Department's abatement programs have been made.

4. **Preinspection.** Preinspection fee shall be collected whenever the Department determines that due to the nature of the work involved, an inspection is necessary.

**107.3.3 Fees for off-hour plan check.** Upon request by an applicant and accepted by the department, an off-hour plan check fee per Section 98.0422 of the LAMC may be collected.

**107.4 Permit-related fees.** When applicable, the following supplemental fees shall be required prior to issuance of a permit.

**107.4.1 Supplemental building permit fees.** A fee for a supplementary building permit to cover any additional valuation to work included in the original permit shall be the difference between the fee paid for the original permit and the fee which would have been required had the original permit included the entire evaluation. A fee for a building permit authorizing changes from approved plans or specifications shall be based on a valuation equal to the increase in valuation caused by the change, but no refund shall be made if the change causes a reduction of valuation.

**107.4.2 Supplemental grading permit fees.** The fee for a supplementary grading permit authorizing additional work to that under a valid permit shall be the difference between the fee paid for the original permit and the fee shown for the entire project.

**107.4.3 Plan maintenance fees.** Before issuing a building permit, the Department shall collect a fee for maintaining building plans which are required to be retained by Section 106.4.2.

The amount of the plan maintenance fee shall be 2 percent of the building permit fee, but not less than \$10.00

and not more than \$300.00, and shall be collected for each separate plan to be retained by the Department.

**107.4.4 Fire hydrant fee notice.** Before issuing any building permit required by this Code, if the total value of all new construction or work for which the permit is issued is \$50,000 or greater, as determined by the Department, the Department shall collect a fire hydrant fee. The amount of this fee shall be equal to  $\frac{22}{100}$  of 1 percent of the total value of all construction or work for which the permit is issued. If the applicant for a building permit subject to the fire hydrant fee pays such fee under protest or refuses to pay such fee, the Department may issue the permit, but shall affix to the permit a Fire Hydrant Fee Notice to read as follows:

**FIRE HYDRANT FEE NOTICE:**

The City of Los Angeles may amend the Fire Hydrant Fee Ordinance.

The owner of the project designated in this permit shall be obligated to pay to the department a fire hydrant fee in the amount to be calculated pursuant to any amendment to the fire hydrant fee ordinance. This fee will be used to provide adequate fire-safety facilities and services for new development.

**Exception:** A fire hydrant fee shall not apply to any permit for demolition of a building or structure.

The Department of Building and Safety shall cause all money collected pursuant to this section to be deposited into the Fire Hydrant Installation and Main Replacement Fund described in Section 5.114 of the *Los Angeles Administrative Code* for purposes of disbursement as permitted therein; except that \$5.00 from each fire hydrant fee shall be deposited in the Department of Building and Safety Building Permit Enterprise Fund pursuant to Section 5.114 of the *Los Angeles Administrative Code*.

**107.4.5 Metal bars, grilles, grates, security roll-down shutters and similar devices.** The permit fee for the installation of devices for which a permit is required by Section 6304.3 shall be \$25.00 for each affected dwelling unit, efficiency dwelling unit, light housekeeping room or guest room in a residential building.

**Exceptions:**

1. The Department shall issue a permit without collection of a fee if it determines that the following conditions are met:
  - A. The metal bars, grilles, grates, security roll down shutters and similar devices were installed prior to June 3, 1986.
  - B. The dwelling unit is in full compliance with Section 310.4 when the first inspection is conducted pursuant to Section 310.4.
2. The Department shall issue a permit without the collection of a fee for all eligible lower income households, as defined by *California Health and Safety Code* Section 50079.5. The department shall determine whether the applicant meets the applicable criteria for eligibility.

**107.4.6 Arts development fee.**

**107.4.6.1 Arts fee.** The owner of a development project for a commercial or industrial building shall be required to pay an arts fee in accordance with the requirements of this section.

**107.4.6.2 Fee amount.** The Department of Building and Safety shall collect an arts fee in the following amount:

1. **Office or research and development.** For an office or research and development building, the arts fee shall be \$1.57 per square foot.
2. **Retail.** All retail establishments shall pay an arts fee of \$1.31 per square foot.
3. **Manufacturing.** For a manufacturing building, the arts fee shall be \$0.51 per square foot.
4. **Warehouse.** For a warehouse building, the arts fee shall be \$0.39 per square foot.
5. **Hotel.** For a hotel building, the arts fee shall be \$0.52 per square foot.

In no event shall the required arts fee exceed either \$1.57 per gross square foot of any structure authorized by the permit or one percent of the valuation of the project designated on the permit, whichever is lower, as determined by the Department. Where there are combined uses within a development project or portion thereof, the arts fee shall be the sum of the fee requirements of the various uses listed above. The Cultural Affairs Department shall revise the arts fee annually by an amount equal to the Consumer Price Index for Los Angeles as published by the United States Department of Labor. The revised amount shall be submitted to council for adoption by ordinance.

**107.4.6.3 Time of collection.** Except as provided in Section 107.4.6, the Department of Building and Safety shall collect an arts fee before issuance of a building permit for commercial and industrial buildings required by this Code.

**107.4.6.4 Exceptions:** The arts fee required by Section 107.4.6 shall not be assessed for the following projects or portions thereof:

1. Any project for which the total value of all construction or work for which the permit is issued is \$500,000 or less.
2. The repair, renovation or rehabilitation of a building or structure that does not alter the size or occupancy load of the building.
3. The repair, renovation or rehabilitation of a building or structure for the installation of fire sprinklers pursuant to Division 9, Article 1, Chapter IX of the LAMC.
4. The repair, renovation or rehabilitation of a building or structure that has been made to comply with Chapter 88 (Earthquake Hazard Reduction in Existing Buildings) subsequent to a citation of noncompliance with Chapter 88.

5. The repair, renovation or rehabilitation of a building or structure for any handicapped facilities pursuant to this Code.
6. All residential buildings or portion thereof. This exception does not include hotels.

**107.4.6.5 Use of arts fees acquired pursuant to Section 107.4.6.** Any arts fee collected by the Department shall be deposited in the Arts Development Fee Trust Fund. Any fee paid into this fund may be used only for the purpose of providing cultural and artistic facilities, services and community amenities which will be available to the development project and its future employees. Any cultural and artistic facilities, services and community amenities provided shall comply with the principles and standards set forth in the Cultural Master Plan when adopted.

At or about the time of collection of any fee imposed by this section, the Cultural Affairs Department shall identify the use to which the arts fee is to be put, and if the use is financing public facilities, the facilities shall be identified.

**107.4.6.6 Projects covered by Ordinance 164,243.** In 1988, the City enacted Ordinance 164,243 which states in part:

“This ordinance is an interim measure while the City of Los Angeles is giving consideration to the enactment of an Arts Development Fee Ordinance. The owners of a development project shall be obligated to pay an Arts Development Fee if such fee is adopted in the future by the city. The fee will not exceed one percent (1%) of the total value of work and construction authorized by the building permit issued to a development project. This fee would be used to provide adequate cultural and artistic facilities, services and community amenities for the project.”

By enacting Section 91.107.4.6 [previously Section 91.0304(b)(11)], the City has adopted the Arts Development Fee referred to by Ordinance 164,243. Accordingly, an arts fee shall be paid to the City of Los Angeles by owners of development projects which received building permits between and including January 15, 1989, and the effective date of this section. This arts fee described in this section shall be paid within 60 days of receipt of a request for payment of an arts fee. All exceptions listed in Section 91.107.4.6.4 shall apply to owners of development projects subject to Ordinance 164,243.

The Office of Finance shall bill and collect the Arts Development Fee owed by those persons to whom notice was given pursuant to this paragraph for the period January 15, 1989, through May 7, 1991. The amount due shall be paid in full within 60 days of the billing date unless an agreement to pay in installments pursuant to this paragraph is approved by the Office of Finance. Persons indebted to the City for Arts Development Fees may, upon approval by the Office of Finance, enter into an agreement with the City of Los Angeles to pay such fees in installments over a period not to exceed one year.

The Office of Finance shall collect a service fee of \$10.00 on each monthly installment to recover the cost to the city of processing installment payments. The Cultural Affairs Department is hereby authorized to negotiate and accept payment in kind for the Arts Development Fee owed by those persons to whom notice was given pursuant to this paragraph for the period January 15, 1989 through May 7, 1991. The Cultural Affairs Department shall provide notice to the Office of Finance of the name of the person on whose account such in kind payment was accepted, and whether the in kind payment constitutes payment in full or only a specified portion of the Arts Development Fee owed.

The Office of Finance is authorized to record payment in full, without further notification to the person billed, for cash or in kind Arts Development Fee payments received that are within \$3.00 of the amount owed.

**107.4.7 Affordable Housing Linkage Fee.** Before issuance of a building permit for any development project, the Department of Building and Safety shall affix to the permit an Affordable Housing Linkage Fee per Section 19.18, Article 9, Chapter I of the *Los Angeles Municipal Code*.

The Department of Building and Safety shall determine which exceptions apply to any project based on documentation submitted by the applicant prior to the issuance of the building permit per Section 19.18.B.2 of Article 9, Chapter I of the *Los Angeles Municipal Code*.

## **107.5 Additional fees.**

**107.5.1 Investigation fees.** In addition, the Department shall have the authority to collect investigation fees. For investigation fees of work done without a valid building permit, see LAMC Section 98.0402.

**107.5.2 Other fees.** The Department shall have the authority to collect a fee to cover any additional costs incurred by the Department in obtaining code compliance or issuing a permit for work that was done prior to obtaining the required permit. This fee shall be in addition to any other fees required by the LAMC. The Superintendent shall prepare a fee schedule for this purpose for adoption by ordinance. The fee schedule for inspections shall be those fees referenced in LAMC Section 98.0412.

**107.6 Refund of fees.** See Section 98.0420.

**107.7 Processing fees for security bar certificates of compliance.** The Department shall charge a \$20.00 fee for the processing of each Security Bar Certificate of Compliance. The department shall maintain on file Security Bar Certificates of Compliance.

Certified security bar installers shall file Security Bar Certificates of Compliance in accordance with provisions of Section 108.12.1 of this Code.

**107.8 Processing fees for soils engineering, foundation investigation, geology and seismology report and for review of division of land requests.**

**107.8.1 Soils engineering, foundation investigation, geology and seismology report.** A fee shall be charged for the processing of each soil, foundation investigation, geology, or seismology report and the amount of the fee shall be determined from Table No. 1-C of this chapter.

**107.8.2 Division of land.** Where the department is required to review a division of land request as part of the City Planning Division of Land procedures, a fee of \$453.00 shall be paid prior to the initiation of such review.

## SECTION 108 INSPECTION

**108.1 General.** All construction or work for which a permit is required shall be subject to inspection by authorized employees of the Department, and certain types of construction shall have continuous inspection by Registered Deputy Inspectors as specified in Section 1704 of this Code. Prior to the issuance of a Certificate of Occupancy as specified in Section 109, a final inspection shall be made by the department of all construction or work for which a permit has been issued.

### Exceptions:

1. When a permit is obtained for reroofing in compliance with LAMC Section 1511, the Department may waive inspections provided one of the following persons certify that the materials used comply with LAMC Section 1511 and work is performed by:
  - A. A licensed contractor.
  - B. The owner of the property who either did the work or used employees of the owner to do the work pursuant to *California Business and Professions Code* Section 7044.
2. When a permit is obtained for any work performed by certified licensed contractors complying with the requirements of Section 108.12.

**108.2 Inspection record card.** With each permit issued, the Department shall furnish a card to the applicant showing the location and nature of the work to be done and the number of the permit.

The permit card shall be posted in a place designated by the Superintendent of Building.

**108.3 Inspection requests.** It shall be the duty of the person doing the work authorized by a permit to notify the Superintendent of Building that such work is ready for inspection. The Superintendent of Building may require that every request for inspection be filed at least one working day before such inspection is desired. Such request may be in writing or by telephone at the option of the Superintendent of Building. It shall be the duty of the person requesting any inspections required by this Code to provide access to and means for inspection of such work.

**108.4 Approval required.** Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the Superintendent of Building. The superintendent, upon notification, shall make the requested inspections and shall either indicate the inspected portion of the construction is satisfactory as completed or shall notify

the permit holder or an agent of the permit holder wherein the same fails to comply with this Code. Any portions which do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the Superintendent of the Building.

There shall be a final inspection and approval of all buildings and structures when completed and ready for occupancy and use.

**108.5 Required inspections.** The permittee or his agent shall notify the department when the building or portion thereof is ready for each of the following inspections:

1. **Foundations.** When the excavation for footings is complete and footing forms and required reinforcing steel are in place, but before any concrete is placed.
2. **Wood framing, ventilation equipment installation.** When all roof, walls and floor framing, fire stopping and bracing are complete and all pipes, chimneys, vents and ductwork are in place, but before any of this work is covered.
3. **Wall covering.** When the backing and lath or drywall are in place ready for plaster, stucco or taping.
4. **Reinforced concrete.** When forms and reinforcing steel are in place ready for concrete.
5. **Reinforced masonry.** In grouted masonry when vertical reinforcing steel is in place and other reinforcing steel distributed and ready for placing, but before any units are laid up.
6. **Structural steel.** When structural steel members are in place and required connections are complete, but before concealing any members or connection.
7. **Final.** When the construction or work is completed and the structure ready for occupancy, but before being occupied.

The permittee or the permittee's agent shall notify the Department on the day prior to the day on which inspection is desired.

The department shall approve that portion of the work inspected or notify the responsible person if the work fails to comply with the law. Any portions which do not comply with the law shall be corrected and no portion shall be covered or concealed with additional work until approved. When any of the above required inspections have been made and that portion of the work approved, the inspector shall so record on the permit card posted on the job.

**108.6 Other inspections.** In addition to the called inspections specified above, the Department may make any other inspections of any construction work to ascertain compliance with the provisions of this Code and other laws which the Department enforces.

**108.6.1 Weather-exposed balcony and walking surface waterproofing.** Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, snow, or irrigation, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious moisture barrier system shall not be concealed until inspected and approved.

**108.7 Reinspections.** Fees for additional inspections shall be assessed in accordance with LAMC Section 98.0412.

**108.8 Surveys.** In the absence of any designation of the proper location of the lot or the building to be erected on the lot, for which building a permit has been issued or for which an application for a building permit has been filed, or as requested in a written notice from the Department, the Department may require the owner to have the lot surveyed and staked by a registered civil engineer, licensed prior to January 1, 1982, or a registered land surveyor, so that the proper location of the lot or the building on the lot may be determined, or the location of the required features in the Department's written notice may be determined.

**108.9. Inspection of excavation and fills.** The permittee or the permittee's agent shall notify the Department when the grading operation is ready for each of the following inspections:

1. **Initial meeting/inspection.** When the permittee is ready to begin work, but before any grading operation or brushing is started, a meeting shall be held at the project site with the contractor and the inspectors to discuss the approved plans, soil reports and the sequence of the grading operations.
2. **Toe inspection.** After the natural ground is exposed and prepared to receive fill, but before any fill is placed.
3. **Excavation inspection.** After the excavation is started, but before the vertical depth of the excavation exceeds 10 feet (3048 mm).
4. **Fill inspection.** After the fill emplacement is started, but before the vertical height of the lifts exceeds 10 feet (3048 mm).
5. **Drainage device inspection.** After forms and pipe are in place, but before any concrete is placed.
6. **Rough grading.** When all rough grading has been completed. This inspection may be called for at the completion of the rough grading without the necessity of the Department having previously reviewed and approved the reports.
7. **Final.** When all work, including installation of all drainage structures and other protective devices, has been completed and the as-graded plan and required reports have been submitted.

The department shall approve the work inspected or notify the permittee or owner wherein the work fails to comply with the law. Any portion of the work which does not comply with the law shall be corrected.

**108.10 Revised grading plan.** If the inspector finds that the soil or other conditions are not as stated in the application for a grading permit, the inspector may refuse to approve further work until a revised grading plan is obtained which conforms to the existing conditions.

**108.11 Approved fabricators.** The inspections provided for in this section shall not be required for construction or installation work done on the premises of a Type II fabricator to whom an approval has been issued pursuant to the

provisions of Division C of Article 6 of Chapter IX of the LAMC.

## **108.12 Inspections by certified licensed contractors of work performed on detached single-family dwellings.**

**108.12.1** In lieu of the inspections made by employees of the Department, as specified in Section 108, a certified licensed contractor, employed by the owner, upon notification to the Department prior to the commencement of work, may install, inspect and certify the following work as being performed in compliance with the provisions of the LAMC for a detached single-family dwelling:

1. The replacement of defective water heaters with one of the equivalent gallonage, Btu rating and vent capacity when the vent does not require relocation or replacement.
2. The replacement of defective forced-air units with one of equivalent size, Btu rating and vent capacity when the vent does not require relocation or replacement.
3. The replacement of defective air-conditioning units with one of equivalent size and Btu rating;
4. The replacement of plumbing fixtures and solar panels with equal kind and quality;
5. The replacement of defective domestic water piping within a dwelling, with piping of equivalent size and quality when the installation does not exceed 50 feet (15 240 mm) in length.
6. The replacement of defective metallic water service piping with piping of equivalent size, quality and conductivity;
7. The removal of existing roofing and the replacement of roofing materials that are in compliance with Section 1510 and that do not require any alteration to the roof support system.
8. The replacement of defective smoke detectors.
9. The replacement of shower pans with the same size and capacity.
10. The installation or replacement of masonry and concrete fences not exceeding six (6) feet (1829 mm) in height.

**108.12.2** The employment of a certified licensed contractor by the owner on any work shall not prohibit the Department from performing inspections of any work described in Section 108.12.1. The Superintendent of Building may delegate the inspections required by Section 108.5 to a certified licensed contractor.

**108.12.3 Department inspection.** The department may allow the use of the certification by a certified licensed contractor in lieu of inspections made by employees of the department provided there is compliance with all of the following:

1. The certified licensed contractor has a valid Certificate of Registration obtained in accordance with Section 1704.1.1.



2. The certified licensed contractor has filed with the Department a Certificate of Compliance for each installation.

The Certificate of Compliance shall be on a form provided by the Department and shall be signed by the property owner and the certified licensed contractor. The Department may require that the certified licensed contractor affix a certification label obtained from the Department on certain types of installations to identify the work certified.

The Certificate of Compliance shall describe the work performed and state that the certified licensed contractor warrants, from personal knowledge, that the materials installed and the work performed are in compliance with approved manufacturer's instructions, specifications and applicable requirements of the LAMC.

For the work described in Items 1, 2 and 3 of Section 108.12.1, the phrase "personal knowledge," as used in the Certificate of Compliance, means that the certified licensed contractor has actual personal knowledge of the facts certified to, or knowledge acquired from an employee of the certified licensed contractor, which employee provided continuous observation of the work or installation at the site in all stages of its progress.

For work set forth in Items 4, 5 and 6 of Section 108.12.1, the phrase "personal knowledge" means the certified licensed contractor has actual personal knowledge or knowledge acquired from another certified licensed contractor or a qualified installer.

3. The Certificate of Compliance processing fee has been paid in accordance with LAMC Section 98.0417.
4. The certified licensed contractor has filed the application for a Certificate of Compliance with the Department within 15 days after completion of the installation.

The certified licensed contractor has submitted a report to the department describing the work the certified licensed contractor performed and declaring that the work complies with all applicable provisions of the LAMC. The report shall be made on forms supplied by the department and shall be filed in the records of the Department.

**108.12.4** The certified licensed contractor shall notify the Department of the certified licensed contractor's commencement of work for which the certified licensed contractor has been engaged. This notification shall be made no later than the last business day preceding the commencement of work.

The certified licensed contractor shall inspect all materials to be used or concealed within such work. While engaged in the work, the certified licensed contractor shall not undertake or engage in any other task or occupation which will interfere with the proper performance of the certified licensed contractor's duties of inspection. The certified licensed contractor shall report all violations of this Code which have occurred relating to the construction

work to the Superintendent of Building, and such other information relating to the installation work as requested by the Superintendent.

The Department may refuse to issue a Certificate of Compliance if it finds that the contractor has failed to comply with any of these requirements.

**108.13** Whenever the department determines by inspection that construction or grading activities create excessive dust emissions where the dust remains visible in the atmosphere beyond the property line of the emission source or constitutes a nuisance or other hazard, the Department may order that such activity cease or be controlled through watering practices using reclaimed water if available, or by other means, to the satisfaction of the Department. The Department may order the owner of the property to employ a person, subject to Department approval, to monitor the watering practices.

## SECTION 109 CERTIFICATE OF OCCUPANCY

**109.1 Certificate required.** In order to safeguard life and limb, health, property and public welfare, every building or structure and every trailer park shall conform to the construction requirements for the subgroup occupancy to be housed therein, or for the use to which the building or structure or trailer park is to be put, as set forth in this article.

No building or structure or portion thereof and no trailer park or portion thereof shall be used or occupied until a Certificate of Occupancy has been issued thereof.

### Exceptions:

1. Unless it is specifically required by other provisions of this article, no existing building or portion thereof shall require a Certificate of Occupancy, provided with both of the following:
  - A. The occupancy housed therein is the same for which the original building permit was issued.
  - B. The use of a building or portion thereof housing a Group A or E Occupancy and constructed prior to 1934 has not been discontinued for a period of more than 6 months.
2. No structure, the architecture of which inhibits occupancy, shall require a Certificate of Occupancy.

**109.2 Change of occupancy.** See Chapter 82.

**109.3 Issuance of certificates.** When required by Section 109.1, after the receipt and approval of the final inspection report from each of the divisions of the Department, and after the City Engineer has reported that all required public improvements have been completed, the Superintendent of Building shall issue a Certificate of Occupancy, without charge, to the owner of the building. Duplicates of the certificate may be secured upon the payment of the duplication fee required by ordinance.

When a Certificate of Occupancy is issued, it shall supersede every certificate previously issued for that portion of the building described thereon.

**109.4 Contents of certificate.** Each certificate shall contain the following:

1. The building permit numbers.
2. The address of the building.
3. The name and address of the owner.
4. A description of that portion of the building for which the certificate is issued.
5. For Groups A and E Occupancies, the maximum occupant load allowed.
6. A statement that the described portion of the building complies with the construction requirements of the LAMC for the group of occupancies in which the proposed occupancy is classified.
7. A statement that establishes relevant requirements of Chapter 1 of the LAMC.
8. The signature of the Superintendent of Building or an authorized representative of the Superintendent of Building.

**109.5 Temporary certificates.** Notwithstanding the provisions of Section 109.4, if the Superintendent of Building finds that no substantial hazard will result from the occupancy of any building, or portion thereof, before the same is completed, and satisfactory evidence is submitted that the work could not have been completed prior to the time such occupancy is desired because of its magnitude or because of unusual construction difficulties, and the City Engineer has reported that all required public improvements have been completed, the Superintendent of Building may issue a temporary Certificate of Occupancy for any building or portion thereof. The Superintendent of Building may issue a temporary Certificate of Occupancy notwithstanding the fact that all required public improvements have not been completed, if the superintendent finds that the failure to complete the public improvements was due to circumstances over which the person applying for the Certificate of Occupancy had no control.

In addition, the Superintendent of Building may issue a temporary Certificate of Occupancy for an existing building, or portion thereof, provided no substantial hazard will result and satisfactory evidence is submitted justifying the need for such temporary occupancy. The Department shall collect an issuance fee for each temporary Certificate of Occupancy. The amount of the fee shall be \$453.00 plus an additional fee as shown in Table No. 1-B of this chapter.

Such temporary Certificate of Occupancy shall be valid for a period not to exceed six months. The department may issue additional temporary Certificates of Occupancy. After the expiration of a temporary Certificate of Occupancy, the Department shall require a Certificate of Occupancy in accordance with other provisions of this section. Duplicates of the certificate or temporary certificate may be secured upon the payment of the duplication fee required by ordinance.

**109.6 Revocation.** The Superintendent of Building shall have the authority, in writing, to suspend or revoke a Certificate of Occupancy or temporary Certificate of Occupancy issued under the provisions of this Code whenever the certificate is issued in error, or on the basis of incorrect information supplied, or when it is determined that the building or structure

or portion of the building or structure is in violation of any ordinance or regulation or any of the provisions of this Code.

**109.7** Notwithstanding the provisions of Section 109.5, whenever public improvements are required in connection with the replacement or restoration of a building destroyed or damaged during the local emergency declared by the Mayor in April 1972, the completion of those public improvements may be deferred until June 1, 1995, and a temporary Certificate of Occupancy may be issued for the new or restored building, or a portion thereof, prior to the completion of the public improvements. The temporary Certificate of Occupancy shall issue only if the Superintendent of Building finds that no substantial hazard will result from the occupancy of the building or portion thereof prior to the completion of the public improvements. Section 109.7 does not affect any requirement of a bond or other security to warrant the proper completion of the required public improvements.

**109.8 Fire department notification.** For each Group A and E Occupancy, a copy of the certificate shall be forwarded to the Los Angeles Fire Department.

## SECTION 110 RESPONSIBILITY OF PERMITTEE

Building permits shall be presumed to incorporate the provision that the applicant, the applicant's agent, employees or contractors shall carry out the proposed work in accordance with the approved plans and with all requirements of this Code and any other laws or regulations applicable thereto, whether specified or not.

No approval shall relieve or exonerate any person from the responsibility of complying with the provisions and intent of this Code.

## SECTION 111 CODE REVISION

**111.1** The Superintendent of Building shall determine what changes in the code are necessary to more adequately protect the public health, safety and welfare, based on studies of the following:

1. Schedules of requests for deviation from the provisions of the code and for approval of materials and methods of construction;
2. Schedules of violations of the provisions of this Code;
3. Schedules of convictions and nonconvictions, and the reasons for nonconvictions, by the city attorney's office;
4. Changes and improvements in materials, methods of construction and design
5. Investigations of fire and structural damage to buildings.

**111.2** Upon request, the board shall consult with and provide advice to the Superintendent of Building on any matter relating to proposed changes of this Code.

## SECTION 112 RESERVED

## SECTION 113 PERMIT FEES

**TABLE 1-A**  
**PERMIT FEES** <sup>1,2,3,4</sup>

TOTAL VALUATION		FEE
From	To	
\$0.00	\$100 inclusive	None
\$100.01	\$2,000 inclusive	\$65.00
\$2,000.01	\$20,000 inclusive	\$40.00 plus \$1.25 per \$100 or fraction thereof of total valuation
\$20,000.01	\$50,000 inclusive	\$170.00 plus \$6.00 per \$1,000 or fraction thereof of total valuation
\$50,000.01	\$100,000 inclusive	\$195.00 plus \$5.50 per \$1,000 or fraction thereof of total valuation
\$100,000.01	\$500,000 inclusive	\$395.00 plus \$3.50 per \$1,000 or fraction thereof of total valuation
\$500,000.01	\$1,000,000 inclusive	\$520.00 plus \$3.25 per \$1,000 or fraction thereof of total valuation
Over \$1,000,000		\$920.00 plus \$2.85 per \$1,000 or fraction thereof of total valuation

1. The building permit fee specified in this table shall be increased by a surcharge pursuant to Section 2705, Chapter 8, Division 2 of the *Public Resources Code* of the State of California (State Strong Motion Instrumentation Program). This surcharge shall not be included in the building permit fee for the purpose of determining the plan check fee.
2. The permit fee specified in the table above shall be increased by 10 percent for all construction or work required to comply with the rules and regulations adopted by the General Resources Conservation and Development Commission of the State of California. This increase in fee shall be included in the building permit fee for the purpose of determining the plan checking fee.
3. The permit fee specified in this table shall be increased by 12.5 percent for all construction or work required to comply with Title 24, Part 2, *California Code of Regulations*, Section 101.17, et seq., the state's disabled access and adaptability requirements. The increase in fee shall be included in the building permit fee for the purpose of determining the plan check fee.
4. The minimum permit fee for projects that require more than one inspection shall be double the minimum inspection fee specified in Section 98.0412 (a) of the LAMC.

**TABLE 1-A.1**  
**COMBINED PERMIT FEES**

(R-3 OCCUPANCY)	BUILDING	ELECTRICAL	PLUMBING	MECHANICAL	COMBINED FEES
New Construction	See Table 1-A	26% of building permit fee	26% of building permit fee	13% of building permit fee	165% of building permit fee determined from Table 1-A
Alteration	See Table 1-A	26% of building permit fee	26% of building permit fee	13% of building permit fee	165% of building permit fee determined from Table 1-A
Swimming Pool	See Table 1-A	—	—	—	175% of building permit fee determined from Table 1-A
Solar Heating and Cooling System	See Table 1-A	—	—	—	—

**TABLE 1-B**  
**TEMPORARY CERTIFICATE OF OCCUPANCY ADDITIONAL FEES**

ITEMS	ADDITIONAL FEE
A Occupancy	\$98.00 each assembly room or area
E Occupancy	\$98.00 each classroom
I Occupancy	\$98.00 each floor or portion thereof
H Occupancy	\$98.00 each floor or portion thereof
B, F, M, or S Occupancy	\$98.00 each floor or portion thereof
R1 Occupancy	\$189.00 each floor or portion thereof
R3 Occupancy	\$302.00

## SCOPE AND ADMINISTRATION

**TABLE 1-C  
REPORT FEES<sup>a,b,c,d,e</sup>**

REPORT	FEES
Soils engineering or geology report For the first lot plus \$5.00 for each additional lot or for the first acre plus \$25.00 for each additional acre or fraction thereof, whichever is the greater fee.	\$363.00
Supplemental fee For each supplemental foundation investigation, soils engineering, geology or seismology report.	\$181.00

- a. Where the soil engineering/foundation and geology reports are submitted together or combined into one report, the fee shall be doubled.
- b. Report fees for minor work may be reduced to one half of the calculated fee, as determined by the department.
- c. Fees are based on single projects and contiguous properties.
- d. Additional fees for division of land review shall be collected as required by Section 107.8.2.
- e. The fees in this table shall be increased by 50 percent, when the reports are reviewed during off-hours at the request of the applicant and acceptance by the department.

**TABLE 1-D  
GRADING PERMIT FEES**

GRADING	FEE
100 cubic yards or less	\$160.00
101 – 1,000 cubic yards	\$160.00 for the first 100 cubic yards, plus \$135.00 for each additional 100 cubic yards or fraction thereof.
1,001 – 10,000 cubic yards	\$1,375.00 for the first 1,000 cubic yards, plus \$150.00 for each additional 1,000 cubic yards or fraction thereof.
10,001 – 100,000 cubic yards	\$2,725.00 for the first 10,000 cubic yards, plus \$500.00 for each additional 10,000 cubic yards or fraction thereof.
100,001 cubic yards or more	\$7,225.00 for the first 100,000 cubic yards, plus \$250.00 for each additional 10,000 cubic yards or fraction thereof.

airspace which serves for insulation, acoustic, aesthetic or similar purposes.

**Single skin.** Where there is only the single outer skin and the air pressure is directly against that skin.

**[BE] AISLE.** An unenclosed exit access component that defines and provides a path of egress travel. *[DSA-AC] A circulation path between objects such as seats, tables, merchandise, equipment, displays, shelves, desks, etc., that provides clearances in compliance with this code.*

**[BE] AISLE ACCESSWAY.** That portion of an exit access that leads to an aisle.

**[F] ALARM NOTIFICATION APPLIANCE.** A fire alarm system component such as a bell, horn, speaker, light or text display that provides audible, tactile or visible outputs, or any combination thereof.

**[F] ALARM SIGNAL.** A signal indicating an emergency requiring immediate action, such as a signal indicative of fire.

**[F] ALARM VERIFICATION FEATURE.** A feature of automatic fire detection and alarm systems to reduce unwanted alarms wherein smoke detectors report alarm conditions for a minimum period of time, or confirm alarm conditions within a given time period, after being automatically reset, in order to be accepted as a valid alarm-initiation signal.

**[BS] ALLOWABLE STRESS DESIGN.** A method of proportioning structural members, such that elastically computed stresses produced in the members by nominal loads do not exceed specified allowable stresses (also called “working stress design”).

**[A] ALTERATION.** Any construction or renovation to an existing structure other than repair or addition. *[DSA-AC] A change, addition or modification in construction, change in occupancy or use, or structural repair to an existing building or facility. Alterations include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, changes or rearrangement of the structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility.*

**[BE] ALTERNATING TREAD DEVICE.** A device that has a series of steps between 50 and 70 degrees (0.87 and 1.22 rad) from horizontal, usually attached to a center support rail in an alternating manner so that the user does not have both feet on the same level at the same time.

**ALTERNATIVE SYSTEM.** *[OSHPD 1, 1R, 2, 4 & 5] Alternative materials, design and methods of construction in accordance with Section 104.11, Section 11.1.4 of ASCE 7 or structural design criteria as approved by the enforcement agency.*

**[BG] AMBULATORY CARE FACILITY.** Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to persons

who are rendered incapable of self-preservation by the services provided or staff has accepted responsibility for care recipients already incapable.

**AMUSEMENT ATTRACTION.** *[DSA-AC] Any facility, or portion of a facility, located within an amusement park or theme park which provides amusement without the use of an amusement device. Amusement attractions include, but are not limited to, fun houses, barrels and other attractions without seats.*

**AMUSEMENT RIDE.** *[DSA-AC] A system that moves persons through a fixed course within a defined area for the purpose of amusement.*

**AMUSEMENT RIDE SEAT.** *[DSA-AC] A seat that is built-in or mechanically fastened to an amusement ride intended to be occupied by one or more passengers.*

**[BG] ANCHOR BUILDING.** An exterior perimeter building of a group other than H having direct access to a covered or open mall building but having required means of egress independent of the mall.

**[BS] ANCHORED MASONRY VENEER.** Veneer secured with approved mechanical fasteners to an approved backing.

**[BF] ANNULAR SPACE.** The opening around the penetrating item.

**[F] ANNUNCIATOR.** A unit containing one or more indicator lamps, alphanumeric displays or other equivalent means in which each indication provides status information about a circuit, condition or location.

**ANSI.** *[DSA-AC] The American National Standards Institute.*

**[A] APPROVED.** Acceptable to the building official or enforcing agency.

*[HCD 1, HCD 2 & DSA-AC] “Approved” means meeting the approval of the enforcing agency, except as otherwise provided by law, when used in connection with any system, material, type of construction, fixture or appliance as the result of investigations and tests conducted by the agency, or by reason of accepted principles or tests by national authorities or technical, health or scientific organizations or agencies.*

**Notes: [HCD 1 & HCD 2]**

1. See Health and Safety Code Section 17920 for “Approved” as applied to residential construction and buildings or structures accessory thereto, as referenced in Section 1.8.2.1.1.
2. See Health and Safety Code Section 17921.1 for “Approved” as applied to the use of hotplates in residential construction referenced in Section 1.8.2.1.1.
3. See Health and Safety Code Section 19966 for “Approved” as applied to factory-built housing as referenced in Section 1.8.3.2.5.
4. See Health and Safety Code Section 18201 for “Approved” as applied to mobilehome parks as referenced in Section 1.8.2.1.3.
5. See Health and Safety Code Section 18862.1 for “Approved” as applied to special occupancy parks as referenced in Section 1.8.2.1.3.

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**APPROVED AGENCY or APPROVED TESTING AGENCY.** An established and recognized agency regularly engaged in conducting tests or furnishing inspection services which has been approved by the Superintendent of Building.

**APPROVED FABRICATOR.** An established and qualified person, firm or corporation approved by the Superintendent of Building pursuant to Division 17 of this Code and LAMC Section 96.200.

**APPROVED LISTING AGENCY. [HCD 1 & HCD 2]** Any agency approved by the enforcing agency, unless otherwise provided by law, which is in the business of listing and labeling and which makes available at least an annual published report of such listings in which specific information is included that the product has been tested to recognized standards and found to comply.

**[A] APPROVED SOURCE.** An independent person, firm or corporation, approved by the building official, who is competent and experienced in the application of engineering principles to materials, methods or systems analyses.

**APPROVED TESTING AGENCY. [HCD 1, HCD 2, DSA-AC & OSHPD 1, 1R, 2, 4 & 5]** Any agency, which is determined by the enforcing agency, except as otherwise provided by law, to have adequate personnel and expertise to carry out the testing of systems, materials, types of construction, fixtures or appliances.

**[BS] AREA (for masonry).**

**Gross cross-sectional.** The area delineated by the out-to-out specified dimensions of masonry in the plane under consideration.

**Net cross-sectional.** The area of masonry units, grout and mortar crossed by the plane under consideration based on out-to-out specified dimensions.

**[BG] AREA, BUILDING.** The area included within surrounding exterior walls, or exterior walls and fire walls, exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

**[BE] AREA OF REFUGE.** An area where persons unable to use stairways can remain temporarily to await instructions or assistance during emergency evacuation.

**[BE] AREA OF SPORT ACTIVITY.** That portion of an indoor or outdoor space where the play or practice of a sport occurs.

**[BG] AREAWAY.** A subsurface space adjacent to a building open at the top or protected at the top by a grating or guard.

**ASSEMBLY AREA. [DSA-AC]** A building or facility, or portion thereof, used for the purpose of entertainment, educational or civic gatherings, or similar purposes. For the purposes of these requirements, assembly areas include, but are not limited to, classrooms, lecture halls, courtrooms, public meeting rooms, public hearing rooms, legislative chambers, motion picture houses, auditoria, theaters, playhouses, dinner theaters, concert halls, centers

for the performing arts, amphitheaters, arenas, stadiums, grandstands or convention centers.

**ASSEMBLY SEATING, MULTILEVEL.** See “Multilevel assembly seating.”

**ASSISTIVE DEVICE. [HCD 1-AC]** An aid, tool or instrument used by persons with disabilities to assist in activities of daily living.

**ASSISTIVE LISTENING SYSTEM (ALS). [DSA-AC]** An amplification system utilizing transmitters, receivers and coupling devices to bypass the acoustical space between a sound source and a listener by means of induction loop, radio frequency, infrared or direct-wired equipment.

**[BG] ATRIUM.** A vertical space that is closed at the top, connecting two or more stories in Group I-2 and I-3 occupancies or three or more stories in all other occupancies.

**[BG] ATTIC.** The space between the ceiling framing of the top story and the underside of the roof.

**[F] AUDIBLE ALARM NOTIFICATION APPLIANCE.** A notification appliance that alerts by the sense of hearing.

**[F] AUTOMATIC.** As applied to fire protection devices, a device or system providing an emergency function without the necessity for human intervention and activated as a result of a predetermined temperature rise, rate of temperature rise or combustion products.

**AUTOMATIC DOOR.** A door equipped with a power-operated mechanism and controls that open and close the door automatically upon receipt of a momentary actuating signal. The switch that begins the automatic cycle may be a photoelectric device, floor mat or manual switch.

**[F] AUTOMATIC FIRE-EXTINGUISHING SYSTEM.** An approved system of devices and equipment which automatically detects a fire and discharges an approved fire-extinguishing agent onto or in the area of a fire.

**[F] AUTOMATIC SMOKE DETECTION SYSTEM.** A fire alarm system that has initiation devices that utilize smoke detectors for protection of an area such as a room or space with detectors to provide early warning of fire.

**[F] AUTOMATIC SPRINKLER SYSTEM.** An automatic sprinkler system, for fire protection purposes, is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply. The portion of the system above the ground is a network of specially sized or hydraulically designed piping installed in a structure or area, generally overhead, and to which automatic sprinklers are connected in a systematic pattern. The system is usually activated by heat from a fire and discharges water over the fire area.

**AUTOMATIC TELLER MACHINE (ATM). [DSA-AC]** Any electronic information processing device that accepts or dispenses cash in connection with a credit, deposit or convenience account. The term does not include devices used solely to facilitate check guarantees or check authorizations, or which are used in connection with the acceptance or dispensing of cash on a person-to-person basis, such as by a store cashier.

**[F] AUTOMATIC WATER MIST SYSTEM.** *A system consisting of a water supply, a pressure source and a distribution piping system with attached nozzles, which, at or above a minimum operating pressure, defined by its listing, discharges water in fine droplets meeting the requirements of NFPA 750 for the purpose of the control, suppression or extinguishment of a fire. Such systems include wet-pipe, dry-pipe and pre-action types. The systems are designed as engineered, pre-engineered, local-application or total flooding systems.*

**[F] AUTOMATIC WATER MIST SYSTEM.** A system consisting of a water supply, a pressure source and a distribution piping system with attached nozzles, which, at or above a minimum operating pressure defined by its listing, discharges water in fine droplets meeting the requirements of NFPA 750 for the purpose of the control, suppression or extinguishment of a fire. Such systems include wet-pipe, dry-pipe and pre-action types. The systems are designed as engineered, preengineered, local-application or total-flooding systems.

**AUXILIARY AREA.** *A public dressing, locker, shower or toilet area or building space intended to be used by bathers.*

**[F] AVERAGE AMBIENT SOUND LEVEL.** The root mean square, A-weighted sound pressure level measured over a 24-hour period, or the time any person is present, whichever time period is less.

**[BG] AWNING.** An architectural projection that provides weather protection, identity or decoration and is partially or wholly supported by the building to which it is attached. An awning is composed of a lightweight frame structure over which a covering is attached.

**[BF] BACKING.** The wall or surface to which the veneer is secured.

**BACKWASH.** *Is the process of thoroughly cleansing the filter media and/or elements and the contents of the filter vessel.*

**[BE] BALANCED DOOR.** A door equipped with double-pivoted hardware so designed as to cause a semicounterbalanced swing action when opening.

**[F] BALED COTTON.** A natural seed fiber wrapped in and secured with industry accepted materials, usually consisting of burlap, woven polypropylene, polyethylene or cotton or sheet polyethylene, and secured with steel, synthetic or wire bands or wire; also includes lint (lint removed from the cottonseed) and motes (residual materials from the ginning process).

**[F] BALED COTTON, DENSELY PACKED.** Cotton made into banded bales with a packing density of not less than 22 pounds per cubic foot (360 kg/m<sup>3</sup>), and dimensions complying with the following: a length of 55 inches (1397 mm), a width of 21 inches (533.4 mm) and a height of 27.6 to 35.4 inches (701 to 899 mm).

**[BS] BALLAST.** In roofing, ballast comes in the form of large stones or paver systems or light-weight interlocking paver systems and is used to provide uplift resistance for roofing systems that are not adhered or mechanically attached to the roof deck.

**[F] BARRICADE.** A structure that consists of a combination of walls, floor and roof, which is designed to withstand the

rapid release of energy in an explosion and which is fully confined, partially vented or fully vented; or other effective method of shielding from explosive materials by a natural or artificial barrier.

**Artificial barricade.** An artificial mound or revetment a minimum thickness of 3 feet (914 mm).

**Natural barricade.** Natural features of the ground, such as hills, or timber of sufficient density that the surrounding exposures that require protection cannot be seen from the magazine or building containing explosives when the trees are bare of leaves.

**BASE.** *[DSA-SS, DSA-SS/CC, OSHPD 1 & 4] See ASCE 7.*

**[BS] BASE FLOOD.** The flood having a 1-percent chance of being equaled or exceeded in any given year.

**[BS] BASE FLOOD ELEVATION.** The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the *Flood Insurance Rate Map* (FIRM).

**[BG] BASEMENT.** A story that is not a story above grade plane (see “Story above grade plane”). This definition of “Basement” does not apply to the provisions of Section 1612 for flood loads.

**[BS] BASEMENT (for flood loads).** The portion of a building having its floor subgrade (below ground level) on all sides. This definition of “Basement” is limited in application to the provisions of Section 1612.

**BATHER.** *A person using a pool and adjoining deck areas for the purpose of water sports such as diving, swimming, wading or related activities.*

**BATHROOM.** *For the purposes of Chapters 11A and 11B, a room which includes a water closet (toilet), a lavatory and a bathtub and/or a shower. It does not include single-fixture facilities or those with only a water closet and lavatory. It does include a compartmented bathroom. A compartmented bathroom is one in which the fixtures are distributed among interconnected rooms. A compartmented bathroom is considered a single unit and is subject to the requirements of Chapters 11A and 11B.*

**[BS] BEARING WALL STRUCTURE.** A building or other structure in which vertical loads from floors and roofs are primarily supported by walls.

**[BS] BED JOINT.** The horizontal layer of mortar on which a masonry unit is laid.

**BEDRIDDEN PERSON.** *A person, requiring assistance in turning and repositioning in bed, or being unable to independently transfer to and from bed, except in facilities with appropriate and sufficient care staff, mechanical devices if necessary, and safety precautions as determined in Title 22 regulations, by the Director of Social Services or his or her designated representative. Persons who are unable to independently transfer to and from bed, but who do not need assistance to turn or reposition in bed, shall be considered nonambulatory.*

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*The Director of Social Services or his or her designated representative shall make the determination of the bedridden status of persons with developmental disabilities, in consultation with the Director of Developmental Services or his or her designated representative.*

*The Director of Social Services or his or her designated representative shall make the determination of the bedridden status of all other persons with disabilities who are not developmentally disabled.*

**[BE] BLEACHERS.** Tiered seating supported on a dedicated structural system and two or more rows high and is not a building element (see “Grandstand”).

**BLENDED TRANSITION.** *[DSA-AC] A raised pedestrian crossing, depressed corner or similar connection that has a grade of 5 percent or less between a circulation path at the level of the sidewalk or walk and the level of a vehicular way.*

**BOARD** is the Board of Building and Safety Commissioners of the City of Los Angeles.

**[BG] BOARDING HOUSE.** A building arranged or used for lodging for compensation, with or without meals, and not occupied as a single-family unit.

**BOARDING PIER.** *[DSA-AC] A portion of a pier where a boat is temporarily secured for the purpose of embarking or disembarking.*

**BOAT LAUNCH RAMP.** *[DSA-AC] A sloped surface designed for launching and retrieving trailered boats and other water craft to and from a body of water.*

**BOAT SLIP.** *[DSA-AC] That portion of a pier, main pier, finger pier or float where a boat is moored for the purpose of berthing, embarking or disembarking.*

**[F] BOILING POINT.** The temperature at which the vapor pressure of a liquid equals the atmospheric pressure of 14.7 pounds per square inch (psia) (101 kPa) or 760 mm of mercury. Where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, for the purposes of this classification, the 20-percent evaporated point of a distillation performed in accordance with ASTM D86 shall be used as the boiling point of the liquid.

**BOTTLE-FILLING STATION.** *A fixture that is designed and intended for filling personal use drinking water bottles or containers. Such fixtures can be separate from or integral to a drinking fountain.*

**[BS] BRACED WALL LINE.** A straight line through the building plan that represents the location of the lateral resistance provided by the wall bracing.

**[BS] BRACED WALL PANEL.** A full-height section of wall constructed to resist in-plane shear loads through interaction of framing members, sheathing material and anchors. The panel’s length meets the requirements of its particular bracing method and contributes toward the total amount of bracing required along its braced wall line.

**[BE] BREAKOUT.** For revolving doors, a process whereby wings or door panels can be pushed open manually for means of egress travel.

## **[BS] BRICK.**

**Calcium silicate (sand lime brick).** A pressed and subsequently autoclaved unit that consists of sand and lime, with or without the inclusion of other materials.

**Clay or shale.** A solid or hollow masonry unit of clay or shale, usually formed into a rectangular prism, then burned or fired in a kiln; brick is a ceramic product.

**Concrete.** A concrete masonry unit made from Portland cement, water, and suitable aggregates, with or without the inclusion of other materials.

**[A] BUILDING.** Any structure utilized or intended for supporting or sheltering any occupancy.

**Exception:** *[HCD 1, HCD 2 & HCD 1-AC] For applications listed in Section 1.8.2 regulated by the Department of Housing and Community Development, “Building” shall not include the following:*

1. Any mobilehome as defined in Health and Safety Code Section 18008.
2. Any manufactured home as defined in Health and Safety Code Section 18007.
3. Any commercial modular as defined in Health and Safety Code Section 18001.8 or any special purpose commercial modular as defined in Section 18012.5.
4. Any recreational vehicle as defined in Health and Safety Code Section 18010.
5. Any multifamily manufactured home as defined in Health and Safety Code Section 18008.7.

*For additional information, see Health and Safety Code Section 18908.*

**Note:** *Building shall have the same meaning as defined in Health and Safety Code Sections 17920 and 18908 for the applications specified in Section 1.11.*

**BUILDING AREA.** See “Area, building.”

**BUILDING CODE (CODE)** is the Los Angeles City Building Code, Article 1 of Chapter IX of the Los Angeles Municipal Code.

**[BG] BUILDING ELEMENT.** A fundamental component of building construction, specified in TABLE 601, which may or may not be of fire-resistance-rated construction and is constructed of materials based on the building type of construction.

**BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE.** *[HCD 1-AC] An accessible entrance to a building that is connected by an accessible route to public transportation stops, to parking or passenger loading zones, or to public streets or sidewalks, if available.*

**BUILDING, EXISTING.** *[HCD 1 & HCD 2] A building erected prior to the adoption of this code, or one for which a legal building permit has been issued.*

**BUILDING HEIGHT.** See “Height, building.”

**BUILDING LINE** is any private property line coterminous with a public way; or a building line established by City ordinance.



**BUILDING OFFICIAL** is the Superintendent of Building for the City of Los Angeles Department of Building and Safety.

**[BS] BUILDING-INTEGRATED PHOTOVOLTAIC (BIPV) PRODUCT.** A building product that incorporates photovoltaic modules and functions as a component of the building envelope.

**[BS] BUILDING-INTEGRATED PHOTOVOLTAIC ROOF PANEL (BIPV ROOF PANEL).** A photovoltaic panel that functions as a component of the building envelope.

**[BS] BUILT-UP ROOF COVERING.** Two or more layers of felt cemented together and surfaced with a cap sheet, mineral aggregate, smooth coating or similar surfacing material.

**CALIFORNIA BUILDING CODE (CBC)** is Part 2, Title 24 of the California Code of Regulations as adopted by the California Building Standards Commission. (Amended by Ord. No. 184,692, Eff. 12/30/16.)

**[BG] CANOPY.** A permanent structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration. A canopy is permitted to be structurally independent or supported by attachment to a building on one or more sides.

**[F] CAPACITOR ENERGY STORAGE SYSTEM.** A stationary, rechargeable energy storage system consisting of capacitors, chargers, controls and associated electrical equipment designed to provide electrical power to a building or facility. The system is typically used to provide standby or emergency power, an uninterruptable power supply, load shedding, load sharing or similar capabilities.

**[F] CARBON DIOXIDE EXTINGUISHING SYSTEMS.** A system supplying carbon dioxide (CO<sub>2</sub>) from a pressurized vessel through fixed pipes and nozzles. The system includes a manual- or automatic-actuating mechanism.

**[F] CARBON MONOXIDE ALARM.** A single- or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

**[F] CARBON MONOXIDE DETECTOR.** A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

**CARE AND SUPERVISION.** *Any one or more of the following activities provided by a person or facility to meet the needs of the clients:*

1. Assistance in dressing, grooming, bathing and other personal hygiene.
2. Assistance with taking medication.
3. Central storing and/or distribution of medications.
4. Arrangement of and assistance with medical and dental care.
5. Maintenance of house rules for the protection of clients.
6. Supervision of client schedules and activities.
7. Maintenance and/or supervision of client cash resources or property.

8. Monitoring food intake or special diets.

9. Providing basic services required by applicable law and regulation to be provided by the licensee in order to obtain and maintain a community-care facility license.

**[BG] CARE SUITE.** In Group I-2 or I-2.1 occupancies, a group of treatment rooms, care recipient sleeping rooms and the support rooms or spaces and circulation space within the suite where staff are in attendance for supervision of all care recipients within the suite, and the suite is in compliance with the requirements of Section 407.4.4.

**CARRIAGE UNIT. [HCD 1-AC]** *A dwelling unit with living space on one or more floors immediately above a Group U, private garage or garages. The footprint of the garage or garages is used as the footprint for the remaining floor or floors of the units above and the garage level contains no habitable space.*

**Note:** *Dwelling units located over a common garage shall not be considered carriage units.*

**[BS] CAST STONE.** A building stone manufactured from Portland cement concrete precast and used as a trim, veneer or facing on or in buildings or structures.

**CATASTROPHICALLY INJURED.** *As termed, means a person whose origin of disability was acquired through trauma or nondegenerative neurologic illness, for whom it has been determined by the Department of Health Services Certification and Licensing that active rehabilitation would be beneficial.*

**CATCH POOL. [DSA-AC]** *A pool or designated section of a pool used as a terminus for water slide flumes.*

**CCR. [DSA-AC]** *The California Code of Regulations.*

**CDCR.** *California Department of Corrections and Rehabilitation.*

**CDF DIRECTOR. [SFM]** *(See Chapter 7A, Section 702A for defined term.)*

**[F] CEILING LIMIT.** The maximum concentration of an airborne contaminant to which one may be exposed. The ceiling limits utilized are those published in DOL 29 CFR Part 1910.1000. The ceiling Recommended Exposure Limit (REL-C) concentrations published by the US National Institute for Occupational Safety and Health (NIOSH), Threshold Limit Value—Ceiling (TLV-C) concentrations published by the American Conference of Governmental Industrial Hygienists (ACGIH), Ceiling Workplace Environmental Exposure Level (WEEL-Ceiling) Guides published by the American Industrial Hygiene Association (AIHA), and other approved, consistent measures are allowed as surrogates for hazardous substances not listed in DOL 29 CFR Part 1910.1000.

**[BF] CEILING RADIATION DAMPER.** A listed device installed in a ceiling membrane of a fire-resistance-rated floor/ceiling or roof/ceiling assembly to limit automatically the radiative heat transfer through an air inlet/outlet opening. Ceiling radiation dampers include air terminal units, ceiling dampers and ceiling air diffusers. Ceiling radiation dampers are classified for use in either static systems that will automatically shut down in the event of a fire, or in dynamic systems

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that continue to operate during a fire. A dynamic ceiling radiation damper is tested and rated for closure under elevated temperature airflow.

**CELL (*Detention or correctional facility*).** *[SFM]* A sleeping or housing unit in a detention or correctional facility for the confinement of not more than two inmates or prisoners.

**[BG] CELL (Group I-3 occupancy).** A room within a housing unit in a detention or correctional facility used to confine inmates or prisoners.

**[BS] CELL (masonry).** A void space having a gross cross-sectional area greater than  $1\frac{1}{2}$  square inches (967 mm<sup>2</sup>).

**CELL COMPLEX.** A cluster or group of cells or dormitories in a jail, prison or other detention facility, together with rooms used for accessory purposes, all of which open into the cell complex, and are used for functions such as dining, counseling, exercise, classrooms, sick call, visiting, storage, staff offices, control rooms or similar functions, and interconnecting corridors all within the cell complex.

**[BG] CELL TIER.** Levels of cells vertically stacked above one another within a housing unit.

**CELL TIERS.** Cells, dormitories and accessory spaces. Cell tiers are located one level above the other and do not exceed two levels per floor. A cell tier shall not be considered a story or mezzanine. The aggregate area of a tier within a housing pod shall not be greater than one-third of the floor area of that pod when supported by non-rated construction, and shall be no greater than two-thirds of the floor area of the pod when the tier floor and supporting elements meet the fire rating requirements of a floor.

**CELLULAR CONCRETE.** *[HCD 1 & HCD 2]* A lightweight product consisting of Portland cement and selected gas-forming chemicals or foaming agents which create homogeneous voids in the hardened concrete.

**[BS] CEMENT PLASTER.** A mixture of Portland or blended cement, Portland cement or blended cement and hydrated lime, masonry cement or plastic cement and aggregate and other approved materials as specified in this code.

**CENTRAL CONTROL BUILDING.** A secure building within a prison where the fire and life safety systems, communication systems, security systems and exterior lighting systems are monitored and where security operations necessitate the remote locking of required means of egress or at the door with a key to maintain a high security area

**[BF] CERAMIC FIBER BLANKET.** A high-temperature mineral wool insulation material made of alumina-silica ceramic or calcium magnesium silicate soluble fibers and weighing 4 to 10 pounds per cubic foot (pcf) (64 to 160 kg/m<sup>3</sup>).

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

**[A] CHANGE OF OCCUPANCY.** Either of the following shall be considered as a change of occupancy where this code requires a greater degree of safety, accessibility, structural

strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure:

1. Any change in the occupancy classification of a building or structure.
2. Any change in the purpose of, or a change in the level of activity within, a building or structure.

**CHARACTERS.** Letters, numbers, punctuation marks and typographic symbols.

**CHARTER SCHOOL.** A public school providing instruction from kindergarten through 12th grade, established pursuant to Education Code, Title 2, Division 4, Part 26.8, Section 47600, et seq.

**CHIEF OF THE FIRE DEPARTMENT** is the Fire Chief of the Los Angeles Fire Department or a duly authorized representative.

**CHILD-CARE.** For the purposes of these regulations, means the care of children during any period of a 24-hour day where permanent sleeping accommodations are not provided. The time-period shall not be more than 24 hours.

**Note:** "Child care" shall not be construed to preclude the use of cots or mats for napping purposes, provided all employees, attendants and staff personnel are awake and on duty in the area where napping occurs.

**CHILD-CARE CENTER.** Any facility of any capacity other than a large or small family day-care home as defined in these regulations in which less than 24-hour-per-day nonmedical supervision is provided for children in a group setting.

**CHILD OR CHILDREN.** A person or persons under the age of 18 years.

**CHILDREN'S USE.** *[DSA-AC]* Describes spaces and elements specifically designed for use primarily by people 12 years old and younger.

**[M] CHIMNEY.** A primarily vertical structure containing one or more flues, for the purpose of carrying gaseous products of combustion and air from a fuel-burning appliance to the outdoor atmosphere.

**Factory-built chimney.** A listed and labeled chimney composed of factory-made components, assembled in the field in accordance with manufacturer's instructions and the conditions of the listing.

**Masonry chimney.** A field-constructed chimney composed of solid masonry units, bricks, stones, or concrete.

**Metal chimney.** A field-constructed chimney of metal.

**[M] CHIMNEY TYPES.**

**High-heat appliance type.** An approved chimney for removing the products of combustion from fuel-burning, high-heat appliances producing combustion gases in excess of 2,000°F (1093°C) measured at the appliance flue outlet (see Section 2113.11.3).

**Low-heat appliance type.** An approved chimney for removing the products of combustion from fuel-burning, low-heat appliances producing combustion gases not in excess of 1,000°F (538°C) under normal operating conditions, but capable of producing combustion gases of 1,400°F (760°C) during intermittent forces firing for peri-

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ods up to 1 hour. Temperatures shall be measured at the appliance flue outlet.

**Masonry type.** A field-constructed chimney of solid masonry units or stones.

**Medium-heat appliance type.** An approved chimney for removing the products of combustion from fuel-burning, medium-heat appliances producing combustion gases not exceeding 2,000°F (1093°C) measured at the appliance flue outlet (see Section 2113.11.2).

**CHRONICALLY ILL.** See “Terminally ill.”

**[BE] CIRCULATION PATH.** An exterior or interior way of passage from one place to another for pedestrians. *[DSA-AC] An exterior or interior way of passage provided for pedestrian travel, including but not limited to, walks, sidewalks, hallways, courtyards, elevators, platform lifts, ramps, stairways and landings.*

**CITY** is the City of Los Angeles, California.

**[F] CLEAN AGENT.** Electrically nonconducting, volatile or gaseous fire extinguishant that does not leave a residue upon vaporation.

**CLEAN POOL WATER.** *Is a pool water that is free of dirt, oils, scum, algae, floating materials or other visible organic and inorganic materials that would sully the water.*

**CLEAR.** *[DSA-AC] Unobstructed.*

**CLEAR FLOOR SPACE.** *[DSA-AC & HCD 1-AC] The minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair and occupant.*

**CLEAR POOL WATER.** *Pool water that is free from cloudiness and is transparent.*

**[BF] CLIMATE ZONE.** A geographical region that has been assigned climatic criteria as specified in Chapters 3 [CE] and 3 [RE] of the *International Energy Conservation Code (IECC)* or, for California Energy Code provisions, *Figure 100. 1-A of the California Energy Code.*

**[BG] CLINIC, OUTPATIENT.** Buildings or portions thereof used to provide medical care on less than a 24-hour basis to persons who are not *classified as nonambulatory or bedridden* or rendered incapable of self-preservation by the services provided.

**CLOSED-CIRCUIT TELEPHONE.** *[DSA-AC] A telephone with a dedicated line such as a house phone, courtesy phone or phone that must be used to gain entry to a facility.*

**[F] CLOSED SYSTEM.** The use of a solid or liquid hazardous material involving a closed vessel or system that remains closed during normal operations where vapors emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal operations; and all uses of compressed gases. Examples of closed systems for solids and liquids include product conveyed through a piping system into a closed vessel, system or piece of equipment.

**[BS] COASTAL A ZONE.** Area within a special flood hazard area, landward of a V zone or landward of an open coast without mapped coastal high-hazard areas. In a coastal A zone, the principal source of flooding must be astronomical

tides, storm surges, seiches or tsunamis, not riverine flooding. During the base flood conditions, the potential for breaking wave height shall be greater than or equal to 1½ feet (457 mm). The inland limit of the *coastal A zone* is (a) the *Limit of Moderate Wave Action* if delineated on a FIRM, or (b) designated by the authority having jurisdiction.

**[BS] COASTAL HIGH-HAZARD AREA.** Area within the special flood hazard area extending from offshore to the inland limit of a primary dune along an open coast and any other area that is subject to high-velocity wave action from storms or seismic sources, and shown on a *Flood Insurance Rate Map (FIRM)* or other flood hazard map as velocity Zone V, VO, VE or V1-30.

**[BS] COLLAR JOINT.** Vertical longitudinal space between wythes of masonry or between masonry wythe and backup construction that is permitted to be filled with mortar or grout.

**[BS] COLLECTOR.** A horizontal diaphragm element parallel and in line with the applied force that collects and transfers diaphragm shear forces to the vertical elements of the lateral force-resisting system or distributes forces within the diaphragm, or both.

**[BF] COMBINATION FIRE/SMOKE DAMPER.** A listed device installed in ducts and air transfer openings designed to close automatically upon the detection of heat and resist the passage of flame and smoke. The device is installed to operate automatically, controlled by a smoke detection system, and where required, is capable of being positioned from a fire command center.

**[BS] COMBINED PILE RAFT.** A geotechnical composite construction that combines the bearing effect of both foundation elements, raft and piles, by taking into account interactions between the foundation elements and the subsoil.

**[F] COMBUSTIBLE DUST.** Finely divided solid material that is 420 microns or less in diameter and which, when dispersed in air in the proper proportions, could be ignited by a flame, spark or other source of ignition. Combustible dust will pass through a US No. 40 standard sieve.

**[F] COMBUSTIBLE FIBERS.** Readily ignitable and free-burning materials in a fibrous or shredded form, such as cocoa fiber, cloth, cotton, excelsior, hay, hemp, henequen, istle, jute, kapok, oakum, rags, sisal, Spanish moss, straw, tow, wastepaper, certain synthetic fibers or other like materials. This definition does not include densely packed baled cotton.

**[F] COMBUSTIBLE LIQUID.** A liquid having a closed cup flash point at or above 100°F (38°C). Combustible liquids shall be subdivided as follows:

The category of combustible liquids does not include compressed gases or cryogenic fluids or liquids that do not have a fire point when tested in accordance with ASTM D92.

**Class II.** Liquids having a closed cup flash point at or above 100°F (38°C) and below 140°F (60°C).

**Class IIIA.** Liquids having a closed cup flash point at or above 140°F (60°C) and below 200°F (93°C).

**Class IIIB.** Liquids having a closed cup flash point at or above 200°F (93°C).

## DEFINITIONS

**COMMERCIAL FACILITIES [DSA-AC].** Facilities whose operations will affect commerce and are intended for non-residential use by a private entity. Commercial facilities shall not include (1) facilities that are covered or expressly exempted from coverage under the Fair Housing Act of 1968, as amended (42 U.S.C. 3601 - 3631); (2) aircraft; or (3) railroad locomotives, railroad freight cars, railroad cabooses, commuter or intercity passenger rail cars (including coaches, dining cars, sleeping cars, lounge cars and food service cars), any other railroad cars described in Section 242 of the Americans With Disabilities Act or covered under Title II of the Americans With Disabilities Act, or railroad rights-of-way. For purposes of this definition, "rail" and "railroad" have the meaning given the term "railroad" in Section 202(e) of the Federal Railroad Safety Act of 1970 (45 U.S.C. 431(e)).

**[F] COMMERCIAL MOTOR VEHICLE.** A motor vehicle used to transport passengers or property where the motor vehicle meets one of the following:

1. Has a gross vehicle weight rating of 10,000 pounds (4540 kg) or more.
2. Is designed to transport 16 or more passengers, including the driver.

**COMMERCIAL PLACE OF PUBLIC AMUSEMENT. [DSA-AC]** An auditorium, convention center, cultural complex, exhibition hall, permanent amusement park, sports arena, theater or movie house for which the maximum occupancy is 2,500 or more for the facility. Cultural complexes include but are not limited to art galleries, symphony, concert halls and museums. A commercial place of public amusement does not include any public or private higher education facility or district agricultural associations.

**[BE] COMMON PATH OF EGRESS TRAVEL.** That portion of exit access travel distance measured from the most remote point of each room, area or space to that point where the occupants have separate and distinct access to two exits or exit access doorways.

**COMMON USE.** Interior or exterior circulation paths, rooms, spaces or elements that are not for public use and are made available for the shared use of two or more people.

**COMMON USE AREAS. [HCD 1-AC]** Private use areas within multifamily residential facilities where the use of these areas is limited exclusively to owners, residents and their guests. The areas may be defined as rooms or spaces or elements inside or outside of a building.

**COMMUNITY CARE FACILITY.** Any facility, place or building that is maintained and operated to provide nonmedical residential care, day treatment, adult day care or agency services for children, adults, or children and adults, including, but not limited to, the physically handicapped, mentally impaired, incompetent persons, and abused or neglected children, and includes but is not limited to the following as defined in Health and Safety Code Section 1502:

1. Residential facility
2. Adult day program
3. Therapeutic day services facility
4. Social rehabilitation facility
5. Community treatment facility

6. Full-service adoption agency

7. Transitional shelter care facility

8. Transitional housing placement facility

**COMMUNITY CORRECTIONAL REENTRY CENTERS—CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION [CDCR].** Community-located facilities that provide housing and transitional rehabilitative or community-based programming services for ambulatory inmates. CDCR Program services assist with substance use disorder treatment, employment, education, family reunification and social support. Program participants remain under the jurisdiction of CDCR, are monitored by CDCR staff and supervised by CDCR approved/contracted program providers 24/7. The facilities include residential living, food services, administrative and program functional spaces in a non-licensed 24 hr. facility.

**COMPLY WITH. [DSA-AC]** Comply with means to meet one or more provisions of this code.

**[F] COMPRESSED GAS.** A material or mixture of materials that meets both of the following:

1. Is a gas at 68°F (20°C) or less at 14.7 pounds per square inch atmosphere (psia) (101 kPa) of pressure.
2. Has a boiling point of 68°F (20°C) or less at 14.7 psia (101 kPa) which is either liquefied, nonliquefied or in solution, except those gases which have no other health- or physical-hazard properties are not considered to be compressed until the pressure in the packaging exceeds 41 psia (282 kPa) at 68°F (20°C).

The states of a compressed gas are categorized as follows:

1. Nonliquefied compressed gases are gases, other than those in solution, which are in a packaging under the charged pressure and are entirely gaseous at a temperature of 68°F (20°C).
2. Liquefied compressed gases are gases that, in a packaging under the charged pressure, are partially liquid at a temperature of 68°F (20°C).
3. Compressed gases in solution are nonliquefied gases that are dissolved in a solvent.
4. Compressed gas mixtures consist of a mixture of two or more compressed gases contained in a packaging, the hazard properties of which are represented by the properties of the mixture as a whole.

**[BS] CONCRETE.**

**Carbonate aggregate.** Concrete made with aggregates consisting mainly of calcium or magnesium carbonate, such as limestone or dolomite, and containing 40 percent or less quartz, chert or flint.

**Cellular. [HCD 1 & HCD 2] See "Cellular Concrete."**

**Cellular.** A lightweight insulating concrete made by mixing a preformed foam with Portland cement slurry and having a dry unit weight of approximately 30 pcf (480 kg/m<sup>3</sup>).

**Lightweight aggregate.** Concrete made with aggregates of expanded clay, shale, slag or slate or sintered fly ash or any natural lightweight aggregate meeting ASTM C330 and possessing equivalent fire-resistance properties and weighing 85 to 115 pcf (1360 to 1840 kg/m<sup>3</sup>).

**Perlite.** A lightweight insulating concrete having a dry unit weight of approximately 30 pcf (480 kg/m<sup>3</sup>) made with perlite concrete aggregate. Perlite aggregate is produced from a volcanic rock which, when heated, expands to form a glass-like material of cellular structure.

**Sand-lightweight.** Concrete made with a combination of expanded clay, shale, slag, slate, sintered fly ash, or any natural lightweight aggregate meeting ASTM C330 and possessing equivalent fire-resistance properties and natural sand. Its unit weight is generally between 105 and 120 pcf (1680 and 1920 kg/m<sup>3</sup>).

**Siliceous aggregate.** Concrete made with normal-weight aggregates consisting mainly of silica or compounds other than calcium or magnesium carbonate, which contains more than 40-percent quartz, chert or flint.

**Vermiculite.** A light weight insulating concrete made with vermiculite concrete aggregate which is laminated micaceous material produced by expanding the ore at high temperatures. When added to a Portland cement slurry the resulting concrete has a dry unit weight of approximately 30 pcf (480 kg/m<sup>3</sup>).

**CONCRETE BUILDING** is a building having concrete floors and/or roofs, either with or without beams, supported by concrete walls and/or concrete columns, with or without masonry infills, and any combination thereof. (Added by Ord. No. 184,169, Eff. 5/11/16.)

**CONGREGATE LIVING HEALTH FACILITY (CLHF).**  
As defined in Health and Safety Code Section 1250.

- (1) *A residential home with a capacity, except as provided in paragraph (4), of no more than 18 beds, that provides inpatient care, including the following basic services: medical supervision, 24-hour skilled nursing and supportive care, pharmacy, dietary, social, recreational, and at least one type of service specified in paragraph (2). The primary need of congregate living health facility residents shall be for availability of skilled nursing care on a recurring, intermittent, extended, or continuous basis. This care is generally less intense than that provided in general acute care hospitals but more intense than that provided in skilled nursing facilities.*
- (2) *Congregate living health facilities shall provide one of the following services:*
  - (A) *Services for persons who are mentally alert, persons with physical disabilities, who may be ventilator dependent.*
  - (B) *Services for persons who have a diagnosis of terminal illness, a diagnosis of a life-threatening illness, or both. Terminal illness means the individual has a life expectancy of six months or less as stated in writing by his or her attending physician and surgeon. A "life-threatening illness" means the individual has an illness that can lead to a possibility of a termination of life within five years or less as stated in writing by his or her attending physician and surgeon.*

(C) *Services for persons who are catastrophically and severely disabled. A person who is catastrophically and severely disabled means a person whose origin of disability was acquired through trauma or nondegenerative neurologic illness, for whom it has been determined that active rehabilitation would be beneficial and to whom these services are being provided. Services offered by a congregate living health facility to a person who is catastrophically disabled shall include, but not be limited to, speech, physical, and occupational therapy.*

(3) *A congregate living health facility license shall specify which of the types of persons described in paragraph (2) to whom a facility is licensed to provide services.*

(4)

(A) *A facility operated by a city and county for the purposes of delivering services under this section may have a capacity of 59 beds.*

(B) *A congregate living health facility not operated by a city and county servicing persons who are terminally ill, persons who have been diagnosed with a life-threatening illness, or both, that is located in a county with a population of 500,000 or more persons, or located in a county of the 16th class pursuant to Section 28020 of the Government Code, may have not more than 25 beds for the purpose of serving persons who are terminally ill.*

(C) *A congregate living health facility not operated by a city and county serving persons who are catastrophically and severely disabled, as defined in subparagraph (C) of paragraph (1) that is located in a county of 500,000 or more persons may have not more than 12 beds for the purpose of serving persons who are catastrophically and severely disabled.*

(5) *A congregate living health facility shall have a noninstitutional, homelike environment.*

**CONGREGATE RESIDENCE.** Any building or portion thereof that contains facilities for living, sleeping and sanitation, as required by this code, and may include facilities for eating and cooking, for occupancy by other than a family. A congregate residence may be a shelter, convent, monastery, dormitory, fraternity or sorority house, but does not include jails, hospitals, nursing homes, hotels or lodging houses.

**[F] CONSTANTLY ATTENDED LOCATION.** A designated location at a facility staffed by trained personnel on a continuous basis where alarm or supervisory signals are monitored and facilities are provided for notification of the fire department or other emergency services.

**[A] CONSTRUCTION DOCUMENTS.** Written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of a project necessary for obtaining a building permit.

## DEFINITIONS

**[BG] CONSTRUCTION TYPES.** See Section 602.

**Type I.** See Section 602.2.

**Type II.** See Section 602.2.

**Type III.** See Section 602.3.

**Type IV.** See Section 602.4.

**Type V.** See Section 602.5.

**[BF] CONTINUOUS INSULATION (ci).** Insulating material that is continuous across all structural members without thermal bridges other than fasteners and service openings. It is installed on the interior or exterior, or is integral to any opaque surface of the building envelope.

**[F] CONTROL AREA.** Spaces within a building where quantities of hazardous materials not exceeding the maximum allowable quantities per control area are stored, dispensed, used or handled. See the definition of “Outdoor control area” in the *California Fire Code*.

**CONTROL ROOM.** A room that has staff that provides direct supervision of one or more cell tiers, pods, dormitories, housing units, sally ports, central holding areas, individual holding cells within central holding areas, as well as any number of courtroom holding cells and arraignment docks, and may have fire and personal alarm annunciation, ability to open and close doors, communicate with Central Control and monitor activities inside the area of control and the space immediately outside the Control Room’s zone of influence.

**[BS] CONTROLLED LOW-STRENGTH MATERIAL.** A self-compacted, cementitious material used primarily as a backfill in place of compacted fill.

**[BS] CONVENTIONAL LIGHT-FRAME CONSTRUCTION.** Construction whose primary structural elements are formed by a system of repetitive wood-framing members. See Section 2308 for conventional light-frame construction provisions.

**[BG] CORNICE.** A projecting horizontal molded element located at or near the top of an architectural feature.

**CORRECTIONAL HOSPITALS.** Facilities that provide care and treatment for medical, psychiatric, obstetrical or surgical treatment of care recipients that are incapable of self-preservation within a detention facility such as a prison or jail.

**CORRECTIONAL MEDICAL OR MENTAL HEALTH HOUSING SUITE.** Within a state prison, correctional treatment facility, local detention facility or juvenile facility, a correctional medical or mental health housing suite shall be a group of patient rooms or cells and support spaces, including nurse stations, located around shared circulation.

**CORRECTIONAL MENTAL HEALTH FACILITIES.** Facilities that provide care and treatment for psychiatric treatment of care recipients that are incapable of self-preservation within a detention facility such as a prison or jail.

**CORRECTIONAL NURSING FACILITIES.** Facilities that provide care, including both intermediate care facilities and skilled nursing facilities, where any of the persons are incapable of self-preservation or classified as non-ambulatory or bedridden within a detention facility such as a prison or jail.

**CORRECTIONAL TREATMENT CENTERS.** Facilities that provide emergency and acute care and treatment for medical, psychiatric, obstetrical or surgical treatment of care recipients that are incapable of self-preservation within a detention facility such as a prison or jail.

**[BE] CORRIDOR.** An enclosed exit access component that defines and provides a path of egress travel.

**CORRIDOR, OPEN-ENDED.** See “Open-ended corridor.”

**[BF] CORRIDOR DAMPER.** A listed device intended for use where air ducts penetrate or terminate at horizontal openings in the ceilings of fire-resistance-rated corridors, where the corridor ceiling is permitted to be constructed as required for the corridor walls.

**[BS] CORROSION RESISTANCE.** The ability of a material to withstand deterioration of its surface or its properties when exposed to its environment.

**CORROSION RESISTANT.** Capable of maintaining original surface characteristics under the prolonged influence of the use environment.

**[F] CORROSIVE.** A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the point of contact. A chemical shall be considered corrosive if, when tested on the intact skin of albino rabbits by the method described in DOTn 49 CFR, Part 173.137, such chemical destroys or changes irreversibly the structure of the tissue at the point of contact following an exposure period of 4 hours. This term does not refer to action on inanimate surfaces.

**[BG] COURT.** An open, uncovered space, unobstructed to the sky, bounded on three or more sides by exterior building walls or other enclosing devices.

**COURTHOUSE HOLDING FACILITY. [SFM]** A room, cell, cell complex or building for the confinement of persons for the purpose of a court appearance for a period not to exceed 12 hours.

**COURTROOM DOCK.** An area within a courtroom where persons may be restrained and are awaiting court proceedings.

**[BG] COVERED MALL BUILDING.** A single building enclosing a number of tenants and occupants, such as retail stores, drinking and dining establishments, entertainment and amusement facilities, passenger transportation terminals, offices and other similar uses wherein two or more tenants have a main entrance into one or more malls. Anchor buildings shall not be considered as a part of the covered mall building. The term “covered mall building” shall include open mall buildings as defined below.

**Mall.** A roofed or covered common pedestrian area within a covered mall building that serves as access for two or more tenants and not to exceed three levels that are open to each other. The term “mall” shall include open malls as defined below.

**Open mall.** An unroofed common pedestrian way serving a number of tenants not exceeding three levels. Circulation at levels above grade shall be permitted to include open exterior balconies leading to exits discharging at grade.

**Open mall building.** Several structures housing a number of tenants, such as retail stores, drinking and dining establishments, entertainment and amusement facilities, offices, and other similar uses, wherein two or more tenants have a main entrance into one or more open malls. Anchor buildings are not considered as a part of the open mall building.

**COVERED MULTIFAMILY DWELLINGS. [HCD 1-AC]** *“Covered multifamily dwellings” means either of the following:*

1. *Buildings that consist of at least four condominium dwelling units or at least three apartment dwelling units if the buildings have at least one elevator.*
2. *The ground floor dwelling units in buildings that consist of at least four condominium dwelling units or at least three apartment dwelling units if the building does not have an elevator.*

*Covered multifamily dwellings include dwellings listed in Section 1102A.1. For purposes of this definition, dwelling units within a single structure separated by firewalls do not constitute separate buildings.*

**[BS] CRIPPLE WALL.** A framed stud wall extending from the top of the foundation to the underside of floor framing for the lowest occupied floor level.

**[F] CRITICAL CIRCUIT.** A circuit that requires continuous operation to ensure safety of the structure and occupants.

**[BS] CROSS-LAMINATED TIMBER.** A prefabricated engineered wood product consisting of not less than three layers of solid-sawn lumber or structural composite lumber where the adjacent layers are cross oriented and bonded with structural adhesive to form a solid wood element.

**CROSS SLOPE.** *The slope that is perpendicular to the direction of travel.*

**[F] CRYOGENIC FLUID.** A liquid having a boiling point lower than -150°F (-101°C) at 14.7 pounds per square inch atmosphere (psia) (an absolute pressure of 101 kPa).

**CURB CUT.** *An interruption of a curb at a pedestrian way, which separates surfaces that are substantially at the same elevation.*

**CURB RAMP.** *A sloping prepared surface, intended for pedestrian traffic, which provides access between a walk or sidewalk and a surface located above or below an adjacent curb face.*

**[BG] CUSTODIAL CARE.** Assistance with day-to-day living tasks; such as assistance with cooking, taking medication, bathing, using toilet facilities and other tasks of daily living. Custodial care includes persons receiving care who have the ability to respond to emergency situations and evacuate at a slower rate and/or who have mental and psychiatric complications.

**CUSTODY STATION.** *A desk or platform staffed by one or more custody officers whose purpose is to supervise those in custody.*

**[BS] DALLE GLASS.** A decorative composite glazing material made of individual pieces of glass that are embedded in a cast matrix of concrete or epoxy.

**DAMPER.** See “Ceiling radiation damper,” “Combination fire/smoke damper,” “Corridor damper,” “Fire damper” and “Smoke damper.”

**[BS] DANGEROUS.** Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, has partially collapsed, has moved off its foundation or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under permanent, routine, or frequent loads; under actual loads already in effect; or under snow, wind, rain, flood, earthquake, or other environmental loads when such loads are imminent.

**[F] DAY BOX.** A portable magazine designed to hold explosive materials constructed in accordance with the requirements for a Type 3 magazine as defined and classified in Chapter 56 of the *California Fire Code*.

**DAY-CARE.** *For the purposes of these regulations, means the care of persons during any period of a 24-hour day where permanent sleeping accommodations are not provided. The time period shall not be more than 24 hours.*

**Note:** *“Day-care” shall not be construed to preclude the use of cots or mats for napping purposes, provided all employees, attendants and staff personnel are awake and on duty in the area where napping occurs.*

**DAY-CARE HOME, FAMILY.** *A home that regularly provides care, protection and supervision for 14 or fewer children, in the provider’s own home, for periods of less than 24 hours per day, while the parents or guardians are away, and is either a large family day-care home or a small family day-care home.*

**DAY-CARE HOME, LARGE FAMILY.** *A provider’s own home which is licensed to provide day care for periods less than 24 hours per day for nine to 14 persons, including children under the age of 10 years who reside at the home.*

**DAY-CARE HOME, SMALL FAMILY.** *A home which provides family day-care to eight or fewer children, including children under the age of 10 years who reside at the home, in the provider’s own home, for periods of less than 24 hours per day. Small family day-care homes are exempted from state fire and life safety regulations other than those state and local standards applicable to Group R-3 occupancies. (See Health and Safety Code, Section 13143 (b).)*

**DAY ROOM.** *A room which is adjacent to a cell, or cell tier, or dormitory and which is used as a dining, exercise or other activity room for inmates.*

**[BS] DEAD LOAD.** The weight of materials of construction incorporated into the building, including but not limited to walls, floors, roofs, ceilings, stairways, built-in partitions, finishes, cladding and other similarly incorporated architectural and structural items, and the weight of fixed service equipment, including cranes and material handling systems.

## DEFINITIONS

**DECK.** *Is an area surrounding a pool which is specifically constructed or installed for use by bathers.*

**[BS] DECORATIVE GLASS.** A carved, leaded or Dalle glass or glazing material whose purpose is decorative or artistic, not functional; whose coloring, texture or other design qualities or components cannot be removed without destroying the glazing material and whose surface, or assembly into which it is incorporated, is divided into segments.

**[F] DECORATIVE MATERIALS.** All materials applied over the building interior finish for decorative, acoustical or other effect including, but not limited to, curtains, draperies, fabrics and streamers; and all other materials utilized for decorative effect including, but not limited to, bulletin boards, artwork, posters, photographs, batting, cloth, cotton, hay, stalks, straw, vines, leaves, trees, moss and similar items, foam plastics and materials containing foam plastics. Decorative materials do not include wall coverings, ceiling coverings, floor coverings, ordinary window shades, interior finish and materials 0.025 inch (0.64 mm) or less in thickness applied directly to and adhering tightly to a substrate.

**[BS] DEEP FOUNDATION.** A deep foundation is a foundation element that does not satisfy the definition of a shallow foundation.

**[BE] DEFEND-IN-PLACE.** A method of emergency response that engages building components and trained staff to provide occupant safety during an emergency. Emergency response involves remaining in place, relocating within the building, or both, without evacuating the building.

**[A] DEFERRED SUBMITTAL.** Those portions of the design that are not submitted at the time of the application and that are to be submitted to the building official within a specified period.

**[F] DEFLAGRATION.** An exothermic reaction, such as the extremely rapid oxidation of a flammable dust or vapor in air, in which the reaction progresses through the unburned material at a rate less than the velocity of sound. A deflagration can have an explosive effect.

**[BF] DELAYED-ACTION CLOSER.** A self-closing device that incorporates a delay prior to the initiation of closing. Delayed-action closers are mechanical devices with an adjustable delay.

**[F] DELUGE SYSTEM.** A sprinkler system employing open sprinklers attached to a piping system connected to a water supply through a valve that is opened by the operation of a detection system installed in the same areas as the sprinklers. When this valve opens, water flows into the piping system and discharges from all sprinklers attached thereto.

**L A DEPARTMENT** is the Department of Building and Safety.

**[BS] DESIGN EARTHQUAKE GROUND MOTION.** The earthquake ground motion that buildings and structures are specifically proportioned to resist in Section 1613.

**[BS] DESIGN FLOOD.** The flood associated with the greater of the following two areas:

1. Area with a flood plain subject to a 1-percent or greater chance of flooding in any year.

2. Area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

**[BS] DESIGN FLOOD ELEVATION.** The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

**DESIGN PROFESSIONAL, REGISTERED.** See "Registered design professional."

**DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, REGISTERED.** See "Registered design professional in responsible charge."

**[BS] DESIGN STRENGTH.** The product of the nominal strength and a resistance factor (or strength reduction factor).

**DESIGNATED PUBLIC TRANSPORTATION. [DSA-AC]** *Transportation provided by a public entity (other than public school transportation) by bus, rail or other conveyance (other than transportation by aircraft or intercity or commuter rail transportation) that provides the general public with general or special service, including charter service, on a regular and continuing basis.*

**[BS] DESIGNATED SEISMIC SYSTEM.** Those nonstructural 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.

**DESTINATION-ORIENTED ELEVATOR. [DSA-AC]** *Destination-oriented elevators are operated by the user selecting a destination floor at a hall call console located at or near an elevator landing. The destination-oriented elevator system then assigns an elevator car which transports the user to the selected destination floor. Destination-oriented elevators do not provide floor selection within elevator cars.*

**[F] DETACHED BUILDING.** A separate single-story building, without a basement or crawl space, used for the storage or use of hazardous materials and located an approved distance from all structures.

**DETACHED SINGLE-FAMILY DWELLING. [HCD 1 & HCD 2]** *Any single-family dwelling which is separated (detached) from adjacent buildings.*

**[BS] DETAILED PLAIN CONCRETE STRUCTURAL WALL.** See Section 1905.1.1.

**DETECTABLE WARNING.** *A standardized surface feature built in or applied to walking surfaces or other elements to warn persons with visual impairments of hazards on a circulation path.*

**[F] DETECTOR, HEAT.** A fire detector that senses heat—either abnormally high temperature or rate of rise, or both.



**DETENTION ELEVATOR.** [SFM] Detention elevator shall mean an elevator which moves in-custody individuals within a secure and restrained environment.

**DETENTION PROGRAM SUITE.** Within a state prison, correctional treatment facility, local detention facility or juvenile facility, a detention program suite shall be a group of program related spaces, not classified as group F uses, located around shared circulation.

**DETENTION TREATMENT ROOM.** [SFM] Detention treatment room shall mean a lockable room or rooms within Group I-3 occupancies used for recreational therapy, group rooms, interdisciplinary treatment team rooms and interview rooms not classified solely as a Group I-2 occupancy.

**[F] DETONATION.** An exothermic reaction characterized by the presence of a shock wave in the material which establishes and maintains the reaction. The reaction zone progresses through the material at a rate greater than the velocity of sound. The principal heating mechanism is one of shock compression. Detonations have an explosive effect.

**[BG] DETOXIFICATION FACILITIES.** Facilities that provide treatment for substance abuse, serving care recipients who are incapable of self-preservation or classified as non-ambulatory or who are harmful to themselves or others.

**[BS] DIAPHRAGM.** A horizontal or sloped system acting to transmit lateral forces to vertical elements of the lateral force-resisting system. When the term “diaphragm” is used, it shall include horizontal bracing systems.

**Diaphragm, blocked.** In light-frame construction, a diaphragm in which all sheathing edges not occurring on a framing member are supported on and fastened to blocking.

**Diaphragm boundary.** In light-frame construction, a location where shear is transferred into or out of the diaphragm sheathing. Transfer is either to a boundary element or to another force-resisting element.

**Diaphragm chord.** A diaphragm boundary element perpendicular to the applied load that is assumed to take axial stresses due to the diaphragm moment.

**Diaphragm, unblocked.** A diaphragm that has edge nailing at supporting members only. Blocking between supporting structural members at panel edges is not included. Diaphragm panels are field nailed to supporting members.

**[BS] DIMENSIONS.** This definition applies only to Chapter 21.

**Nominal.** The specified dimension plus an allowance for the joints with which the units are to be laid. Nominal dimensions are usually stated in whole numbers. Thickness is given first, followed by height and then length.

**Specified.** Dimensions specified for the manufacture or construction of a unit, joint or element.

**[BE] DIRECT ACCESS.** A path of travel from a space to an immediately adjacent space through an opening in the common wall between the two spaces.

**DIRECTIONAL SIGN.** [DSA-AC, HCD 1 & HCD 2] A publicly displayed notice which indicates by use of words or symbols a recommended direction or route of travel.

**DISABILITY.** [DSA-AC] Disability is (1) a physical or mental impairment that limits one or more of the major life activities of an individual, (2) a record of such an impairment, or (3) being regarded as having such an impairment.

**[F] DISPENSING.** The pouring or transferring of any material from a container, tank or similar vessel, whereby vapors, dusts, fumes, mists or gases are liberated to the atmosphere.

**DISTANCE FROM AN ACTIVE EARTHQUAKE FAULT.** [DSA-SS, DSA-SS/CC, OSHPD 1 & 4] Distance measured from the nearest point of the building to the closest edge of an Alquist-Priolo Earthquake fault zone for an active fault, if such a map exists, or to the closest mapped splay of the fault.

**DISTRICT AGRICULTURAL ASSOCIATIONS.** Those associations regulated by the California Food and Agricultural Code, Division 3, Part 3.

**DOOR, BALANCED.** See “Balanced door.”

**DOOR, LOW-ENERGY POWER-OPERATED.** See “Low-energy power-operated door.”

**DOOR, POWER-ASSISTED.** See “Power-assisted door.”

**DOOR, POWER-OPERATED.** See “Power-operated door.”

**DOORWAY, EXIT ACCESS.** See “Exit access doorway.”

**[BG] DORMITORY.** A space in a building where group sleeping accommodations are provided in one room, or in a series of closely associated rooms, for persons not members of the same family group, under joint occupancy and single management, as in college dormitories or fraternity houses. [SFM] For Group I-3 occupancies “Dormitory” is an area occupied by no less than three inmates.

**[BF] DRAFTSTOP.** A material, device or construction installed to restrict the movement of air within open spaces of concealed areas of building components such as crawl spaces, floor/ceiling assemblies, roof/ceiling assemblies and attics.

**DRAG STRUT.** See “Collector.”

**DRAIN.** A fitting or fixture, usually at or near the bottom of a pool, through which water leaves the pool normally to the recirculation pump.

**[BS] DRILLED SHAFT.** A cast-in-place deep foundation element, also referred to as a caisson, drilled pier or bored pile, constructed by drilling a hole (with or without permanent casing or drilling fluid) into soil or rock and filling it with fluid concrete after the drilling equipment is removed.

**Socketed drilled shaft.** A drilled shaft with a permanent pipe or tube casing that extends down to bedrock and an uncased socket drilled into the bedrock.

**DRIVE AISLE.** A vehicular way provided within a parking facility that connects vehicular entrances, parking stalls, electric vehicle charging stations, passenger loading zones and vehicular exits.

**DRIVE-UP ELECTRIC VEHICLE CHARGING STATION.** An electric vehicle charging station in which use is limited to 30 minutes maximum and is provided at a location

## DEFINITIONS

where the electric vehicle approaches in the forward direction, stops in the vehicle space, charges the vehicle and proceeds forward to depart the vehicle space. The arrangement of a drive-up electric vehicle charger and its associated vehicle space is similar to a gasoline filling station island.

**DRIVEWAY.** A vehicular way providing access between a public way and a building, parking facility, or other off-street area. A driveway may provide access to drive aisles in a parking facility.

**[BS] DRY FLOODPROOFING.** A combination of design modifications that results in a building or structure, including the attendant utilities and equipment and sanitary facilities, being water tight with walls substantially impermeable to the passage of water and with structural components having the capacity to resist loads as identified in ASCE 7.

**[F] DRY-CHEMICAL EXTINGUISHING AGENT.** A powder composed of small particles, usually of sodium bicarbonate, potassium bicarbonate, urea-potassium-based bicarbonate, potassium chloride or monoammonium phosphate, with added particulate material supplemented by special treatment to provide resistance to packing, resistance to moisture absorption (caking) and the proper flow capabilities.

**[A] DWELLING.** A building that contains one or two dwelling units used, intended or designed to be used, rented, leased, let or hired out to be occupied for living purposes.

**[A] DWELLING UNIT.** A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation. **[HCD 1-AC]** For the purposes of Chapter 11A, a single unit of residence for a family of one or more persons. Examples of dwelling units covered by Chapter 11A include condominiums, an apartment unit within an apartment building, and other types of dwellings in which sleeping accommodations are provided but toileting or cooking facilities are shared by occupants of more than one room or portion of the dwelling. Examples of the latter include dormitory rooms and sleeping accommodations in shelters intended for occupancy as residences for homeless persons.

**[BG] DWELLING UNIT, EFFICIENCY.** A dwelling unit where all permanent provisions for living, sleeping, eating and cooking are contained in a single room.

**DWELLING UNIT OR SLEEPING UNIT, MULTI-STORY.** See “Multistory unit.”

**EFFECTIVE PARTICLE SIZE.** The theoretical size of a sieve in mm that will pass 10 percent by weight of sand.

**EFFICIENCY DWELLING UNIT. [HCD 1]** A dwelling unit constructed in accordance with Health and Safety Code Section 17958.1 or the California Building Code Section 1208.4.

**[BE] EGRESS COURT.** A court or yard which provides access to a public way for one or more exits.

**ELECTRIC VEHICLE (EV). [DSA-AC & SFM]** An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles and the like, primarily powered by an electric motor that draws current from a rechargeable storage

battery, fuel cell, photovoltaic array or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For the purpose of this code, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not included.

**ELECTRIC VEHICLE (EV) CHARGER.** Off-board charging equipment used to charge an electric vehicle.

**ELECTRIC VEHICLE CHARGING SPACE (EV Space).** A space intended for charging electric vehicles.

**ELECTRIC VEHICLE CHARGING STATION (EVCS).** One or more electric vehicle charging spaces served by an electric vehicle charger or other charging equipment. Where a multiport electric vehicle charger can simultaneously charge more than one vehicle, the number of electric vehicle charging stations shall be considered equivalent to the number of electric vehicles that can be simultaneously charged.

**ELECTRIC VEHICLE (EV) CONNECTOR.** A device that, when electrically coupled (conductive or inductive) to an electric vehicle inlet, establishes an electrical connection to the electric vehicle for the purpose of power transfer and information exchange. This device is part of the electric vehicle coupler.

**[BG] ELECTRIC VEHICLE CHARGING STATION.** One or more vehicle spaces served by an electric vehicle charging system.

**[BF] ELECTRICAL CIRCUIT PROTECTIVE SYSTEM.** A specific construction of devices, materials, or coatings installed as a fire-resistive barrier system applied to electrical system components, such as cable trays, conduits and other raceways, open run cables and conductors, cables, and conductors.

**ELECTRICAL CODE** is the Los Angeles City Electrical Code, Article 3 of Chapter IX of the Los Angeles Municipal Code. L  
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**ELEMENT. [DSA-AC]** An architectural or mechanical component of a building, facility, space or site.

**ELEVATED PLAY COMPONENT. [DSA-AC]** A play component that is approached above or below grade and that is part of a composite play structure consisting of two or more play components attached or functionally linked to create an integrated unit providing more than one play activity.

**ELEVATOR CODE** is the Los Angeles City Elevator Code, Article 2 of Chapter IX of the Los Angeles Municipal Code. L  
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**[F] ELEVATOR GROUP.** A grouping of elevators in a building located adjacent or directly across from one another that responds to common hall call buttons.

**ELEVATOR, PASSENGER. [HCD 1 & HCD 2]** See “PASSENGER ELEVATOR.” **[DSA-AC]** An elevator used primarily to carry passengers.

**[F] EMERGENCY ALARM SYSTEM.** A system to provide indication and warning of emergency situations involving hazardous materials.

**[F] EMERGENCY CONTROL STATION.** An approved location on the premises where signals from emergency equipment are received and which is staffed by trained personnel.

discharge of energy from without. Materials that react in this manner represent a mass explosion hazard. Such an explosive will normally cause severe structural damage to adjacent objects. Explosive propagation could occur immediately to other items of ammunition and explosives stored sufficiently close to and not adequately protected from the initially exploding pile with a time interval short enough so that two or more quantities must be considered as one for quantity-distance purposes.

**UN/DOTh Class 1 explosives.** The former classification system used by DOTh included the terms “high” and “low” explosives as defined herein. The following terms further define explosives under the current system applied by DOTh for all explosive materials defined as hazard Class 1 materials. Compatibility group letters are used in concert with the division to specify further limitations on each division noted (i.e., the letter G identifies the material as a pyrotechnic substance or article containing a pyrotechnic substance and similar materials).

**Division 1.1.** Explosives that have a mass explosion hazard. A mass explosion is one which affects almost the entire *load* instantaneously.

**Division 1.2.** Explosives that have a projection hazard but not a mass explosion hazard.

**Division 1.3.** Explosives that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard.

**Division 1.4.** Explosives that pose a minor explosion hazard. The explosive effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package.

**Division 1.5.** Very insensitive explosives. This division is comprised of substances that have a mass explosion hazard, but that are so insensitive there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport.

**Division 1.6.** Extremely insensitive articles which do not have a mass explosion hazard. This division is comprised of articles that contain only extremely insensitive detonating substances and which demonstrate a negligible probability of accidental initiation or propagation.

**EXTERIOR COVERING. [SFM]** (See Chapter 7A, Section 702A for defined term.)

**[BE] EXTERIOR EXIT RAMP.** An exit component that serves to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance, and is open to yards, courts or public ways.

**[BE] EXTERIOR EXIT STAIRWAY.** An exit component that serves to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance, and is open to yards, courts or public ways.

**[BF] EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS).** EIFS are nonstructural, nonload-bearing, exterior wall cladding systems that consist of an insulation

board attached either adhesively or mechanically, or both, to the substrate; an integrally reinforced base coat and a textured protective finish coat.

**[BF] EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS) WITH DRAINAGE.** An EIFS that incorporates a means of drainage applied over a water-resistive barrier.

**[BF] EXTERIOR SURFACES.** Weather-exposed surfaces.

**[BF] EXTERIOR WALL.** A wall, bearing or nonbearing, that is used as an enclosing wall for a building, other than a fire wall, and that has a slope of 60 degrees (1.05 rad) or greater with the horizontal plane.

**[BF] EXTERIOR WALL COVERING.** A material or assembly of materials applied on the exterior side of exterior walls for the purpose of providing a weather-resisting barrier, insulation or for aesthetics, including but not limited to, veneers, siding, exterior insulation and finish systems, architectural trim and embellishments such as cornices, soffits, fascias, gutters and leaders.

**[BF] EXTERIOR WALL ENVELOPE.** A system or assembly of exterior wall components, including exterior wall covering materials, that provides protection of the building structural members, including framing and sheathing materials, and conditioned interior space, from the detrimental effects of the exterior environment.

**[BF] F RATING.** The time period that the through-penetration firestop system or perimeter fire containment system limits the spread of fire through the penetration or void.

**[BF] FABRIC PARTITION.** A partition consisting of a finished surface made of fabric, without a continuous rigid backing, that is directly attached to a framing system in which the vertical framing members are spaced greater than 4 feet (1219 mm) on center.

**[BS] FABRICATED ITEM.** Structural, load-bearing or lateral load-resisting members or assemblies consisting of materials assembled prior to installation in a building or structure, or subjected to operations such as heat treatment, thermal cutting, cold working or reforming after manufacture and prior to installation in a building or structure. Materials produced in accordance with standards referenced by this code, such as rolled structural steel shapes, steel reinforcing bars, masonry units and wood structural panels, or in accordance with a referenced standard that provides requirements for quality control done under the supervision of a third-party quality control agency, are not “fabricated items.”

**[F] FABRICATION AREA.** An area within a semiconductor fabrication facility and related research and development areas in which there are processes using hazardous production materials. Such areas are allowed to include ancillary rooms or areas such as dressing rooms and offices that are directly related to the fabrication area processes.

**[A] FACILITY.** All or any portion of buildings, structures, site improvements, elements and pedestrian or vehicular routes located on a site. *[DSA-AC] All or any portion of buildings, structures, site improvements, elements, and pedestrian routes or vehicular ways located on a site.*

**[BS] FACTORED LOAD.** The product of a nominal load and a load factor.

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**FAMILY. [HCD 1]** *An individual or two or more persons who are related by blood or marriage; or otherwise live together in a dwelling unit.*

**[BS] FENESTRATION.** Products classified as either vertical fenestration or skylights and sloped glazing, installed in such a manner as to preserve the weather-resistant barrier of the wall or roof in which they are installed. Fenestration includes products with glass or other transparent or translucent materials.

**[BS] FENESTRATION, VERTICAL.** Windows that are fixed or movable, opaque doors, glazed doors, glazed block and combination opaque and glazed doors installed in a wall at less than 15 degrees from the vertical.

**[BS] FIBERBOARD.** A fibrous, homogeneous panel made from lignocellulosic fibers (usually wood or cane) and having a density of less than 31 pounds per cubic foot (pcf) (497 kg/m<sup>3</sup>) but more than 10 pcf (160 kg/m<sup>3</sup>).

**[BS] FIBER-CEMENT (BACKER BOARD, SIDING, SOFFIT, TRIM AND UNDERLAYMENT) PRODUCTS.** Manufactured thin section composites of hydraulic cementitious matrices and discrete nonasbestos fibers.

**[BF] FIBER-REINFORCED POLYMER.** A polymeric composite material consisting of reinforcement fibers, such as glass, impregnated with a fiber-binding polymer which is then molded and hardened. Fiber-reinforced polymers are permitted to contain cores laminated between fiber-reinforced polymer facings.

**FIELD NAILING.** See “Nailing, field.”

**FIRE ALARM BOX, MANUAL.** See “Manual fire alarm box.”

**[F] FIRE ALARM CONTROL UNIT.** A system component that receives inputs from automatic and manual fire alarm devices and may be capable of supplying power to detection devices and transponders or off-premises transmitters. The control unit may be capable of providing a transfer of power to the notification appliances and transfer of condition to relays or devices.

**[F] FIRE ALARM SIGNAL.** A signal initiated by a fire alarm-initiating device such as a manual fire alarm box, automatic fire detector, waterflow switch or other device whose activation is indicative of the presence of a fire or fire signature.

**[F] FIRE ALARM SYSTEM.** A system or portion of a combination system consisting of components and circuits arranged to monitor and annunciate the status of fire alarm or supervisory signal-initiating devices and to initiate the appropriate response to those signals.

**FIRE APPLIANCE. [SFM]** *The apparatus or equipment provided or installed for use in the event of an emergency.*

**[BF] FIRE AREA.** The aggregate floor area enclosed and bounded by fire walls, fire barriers, exterior walls or horizontal assemblies of a building. Areas of the building not provided with surrounding walls shall be included in the fire area if such areas are included within the horizontal projection of the roof or floor next above.

**[BF] FIRE BARRIER.** A fire-resistance-rated wall assembly of materials designed to restrict the spread of fire in which continuity is maintained.

**FIRE CODE** is the Los Angeles City Fire Code, Article 7 of Chapter V of the Los Angeles Municipal Code.

**[F] FIRE COMMAND CENTER.** The principal attended or unattended location where the status of detection, alarm communications and control systems is displayed, and from which the systems can be manually controlled.

**[BF] FIRE DAMPER.** A listed device installed in ducts and air transfer openings designed to close automatically upon detection of heat and resist the passage of flame. Fire dampers are classified for use in either static systems that will automatically shut down in the event of a fire, or in dynamic systems that continue to operate during a fire. A dynamic fire damper is tested and rated for closure under elevated temperature airflow.

**[F] FIRE DETECTOR, AUTOMATIC.** A device designed to detect the presence of a fire signature and to initiate action.

**FIRE DISTRICT** is any portion of the City of Los Angeles as described in Division 72 of this Code.

**[BF] FIRE DOOR.** The door component of a fire door assembly.

**[BF] FIRE DOOR ASSEMBLY.** Any combination of a fire door, frame, hardware and other accessories that together provide a specific degree of fire protection to the opening.

**FIRE DOOR ASSEMBLY, FLOOR.** See “Floor fire door assembly.”

**[BF] FIRE EXIT HARDWARE.** Panic hardware that is listed for use on fire door assemblies.

**FIRE HAZARD SEVERITY ZONES. [SFM]** *(See Chapter 7A, Section 702A for defined term.)*

**[F] FIRE LANE.** A road or other passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus.

**[BF] FIRE PARTITION.** A vertical assembly of materials designed to restrict the spread of fire in which openings are protected.

**FIRE PROTECTION PLAN. [SFM]** *(See Chapter 7A, Section 702A for defined term.)*

**[BF] FIRE PROTECTION RATING.** The period of time that an opening protective will maintain the ability to confine a fire as determined by tests specified in Section 716. Ratings are stated in hours or minutes.

**[F] FIRE PROTECTION SYSTEM.** Approved devices, equipment and systems or combinations of systems used to detect a fire, activate an alarm, extinguish or control a fire, control or manage smoke and products of a fire or any combination thereof.

**[BF] FIRE PROTECTIVE CURTAIN ASSEMBLY.** An assembly consisting of a fabric curtain, a bottom bar, guides, a coil, and an operating and closing system.

**[BF] FIRE RESISTANCE.** That property of materials or their assemblies that prevents or retards the passage of excessive heat, hot gases or flames under conditions of use.

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**[BF] FLOOR FIRE DOOR ASSEMBLY.** A combination of a fire door, a frame, hardware and other accessories installed in a horizontal plane, which together provide a specific degree of fire protection to a through-opening in a fire-resistance-rated floor (see Section 712.1.13.1).

**[BF] FOAM PLASTIC INSULATION.** A plastic that is intentionally expanded by the use of a foaming agent to produce a reduced-density plastic containing voids consisting of open or closed cells distributed throughout the plastic for thermal insulating or acoustical purposes and that has a density less than 20 pounds per cubic foot (pcf) (320 kg/m<sup>3</sup>).

**[F] FOAM-EXTINGUISHING SYSTEM.** A special system discharging a foam made from concentrates, either mechanically or chemically, over the area to be protected.

**[BE] FOLDING AND TELESCOPIC SEATING.** Tiered seating having an overall shape and size that is capable of being reduced for purposes of moving or storing and is not a building element.

**[BG] FOOD COURT.** A public seating area located in the mall that serves adjacent food preparation tenant spaces.

**[BG] FOSTER CARE FACILITIES.** Facilities that provide care to more than five children, 2<sup>1</sup>/<sub>2</sub> years of age or less.

**[BS] FOUNDATION PIER.** This definition applies only to Chapter 21.

An isolated vertical foundation member whose horizontal dimension measured at right angles to its thickness does not exceed three times its thickness and whose height is equal to or less than four times its thickness.

**FOUNDATION-ONLY PERMIT** is a building permit issued for that portion of a building, which constitutes the footings for the building and which, subject to the approval of the Department, may include those portions of the building below the grade level.

**[BS] FRAME STRUCTURE.** A building or other structure in which vertical loads from floors and roofs are primarily supported by columns.

**FREESTANDING ACUTE PSYCHIATRIC BUILDING (APB).** *[OSHPD 5] A freestanding building, as defined in the California Administrative Code Section 7-111, that provides 24-hour inpatient Acute Psychiatric Services as defined in the Health and Safety Code (H&SC) Section 1250(b) or as special services in accordance with H&SC Section 1255(a)(5) of a general acute care hospital defined in H&SC Section 1250(a) and all structures, equipment and services required for their operation or access/egress.*

**FREESTANDING SKILLED NURSING BUILDING (SNB).** *[OSHPD 2] A freestanding building, as defined in the California Administrative Code Section 7-111, that provides skilled nursing and/or intermediate care as defined in the Health and Safety Code Section 1250(c) or (d), and all structures, equipment and services required for their operation or access/egress.*

**[F] FUEL CELL POWER SYSTEM, STATIONARY.** A stationary energy-generation system that converts the chemical energy of a fuel and oxidant to electric energy (DC or AC electricity) by an electrochemical process.

**Field-fabricated fuel cell power system.** A stationary fuel cell power system that is assembled at the job site and is not

a preengineered or prepackaged factory-assembled fuel cell power system.

**Preengineered fuel cell power system.** A stationary fuel cell power system consisting of components and modules that are produced in a factory and shipped to the job site for assembly.

**Prepackaged fuel cell power system.** A stationary fuel cell power system that is factory assembled as a single, complete unit and shipped as a complete unit for installation at the job site.

**FULL-TIME CARE.** *Shall mean the establishment and routine care of persons on an hourly, daily, weekly, monthly, yearly or permanent basis, whether for 24-hours per day or less, and where sleeping accommodations are provided.*

**FUNCTIONAL AREA.** *[DSA-AC] A room, space or area intended or designated for a group of related activities or processes.*

**[BS] GABLE.** The triangular portion of a wall beneath the end of a dual-slope, pitched, or mono-slope roof or portion thereof and above the top plates of the story or level of the ceiling below.

**[BE] GAMING.** To deal, operate, carry on, conduct, maintain or expose for play any game played with cards, dice, equipment or any mechanical, electromechanical or electronic device or machine for money, property, checks, credit or any representative of value except where occurring at private home or operated by a charitable or educational organization.

**[BE] GAMING AREA.** Single or multiple areas of a building or facility where gaming machines or tables are present and gaming occurs, including but not limited to, primary casino gaming areas, VIP gaming areas, high-roller gaming areas, bar tops, lobbies, dedicated rooms or spaces such as in retail or restaurant establishments, sports books and tournament areas.

**[BE] GAMING MACHINE TYPE.** Categorization of gaming machines per type of game played on them, including, but not limited to, slot machines, video poker and video keno.

**[BE] GAMING TABLE TYPE.** Categorization of gaming tables per the type of game played on them, including, but not limited to, baccarat, bingo, blackjack/21, craps, pai gow, poker, roulette.

**GANGWAY.** *[DSA-AC] A variable-sloped pedestrian walkway that links a fixed structure or land with a floating structure. Gangways that connect to vessels are not addressed by this code.*

**[F] GAS CABINET.** A fully enclosed, ventilated noncombustible enclosure used to provide an isolated environment for compressed gas cylinders in storage or use. Doors and access ports for exchanging cylinders and accessing pressure-regulating controls are allowed to be included.

**[F] GAS DETECTION SYSTEM.** A system or portion of a combination system that utilizes one or more stationary sensors to detect the presence of a specified gas at a specified concentration and initiate one or more responses required by this code, such as notifying a responsible person, activating an alarm signal, or activating or deactivating equipment. A self-contained gas detection and alarm device is not classified as a gas detection system.

## DEFINITIONS

**[F] GAS ROOM.** A separately ventilated, fully enclosed room in which only compressed gases and associated equipment and supplies are stored or used.

**[F] GASEOUS HYDROGEN SYSTEM.** An assembly of piping, devices and apparatus designed to generate, store, contain, distribute or transport a nontoxic, gaseous hydrogen-containing mixture having not less than 95-percent hydrogen gas by volume and not more than 1-percent oxygen by volume. Gaseous hydrogen systems consist of items such as compressed gas containers, reactors and appurtenances, including pressure regulators, pressure relief devices, manifolds, pumps, compressors and interconnecting piping and tubing and controls.

**GENERAL ACUTE CARE BUILDING (GAC Building).** *[OSHPD 1] Hospital buildings as defined in the California Administrative Code Section 7-111 and all structures, equipment and services required for their continuous operation or access/egress.*

**[BF] GLASS FIBERBOARD.** Fibrous glass roof insulation consisting of inorganic glass fibers formed into rigid boards using a binder. The board has a top surface faced with asphalt and kraft reinforced with glass fiber.

**[BS] GLASS MAT GYPSUM PANEL.** A gypsum panel consisting of a noncombustible core primarily of gypsum, surfaced with glass mat partially or completely embedded in the core.

**GOLF CAR PASSAGE.** *[DSA-AC] A continuous passage on which a motorized golf car can operate.*

**GRAB BAR.** *[DSA-AC & HCD 1-AC] A bar for the purpose of being grasped by the hand for support.*

**GRADE (Adjacent Ground Elevation).** *[DSA-AC & HCD 1-AC] The lowest point of elevation of the finished surface of the ground, paving or sidewalk within the area between the building and the property line or, when the property line is more than 5 feet (1524 mm) from the building, between the building and a line 5 feet (1524 mm) from the building. See Health and Safety Code Section 19955.3(d).*

**GRADE BREAK.** *[DSA-AC] The line where two surface planes with different slopes meet.*

**[BS] GRADE (LUMBER).** The classification of lumber in regard to strength and utility in accordance with American Softwood Lumber Standard DOC PS 20 and the grading rules of an approved lumber rules-writing agency.

**[BE] GRADE FLOOR EMERGENCY ESCAPE AND RESCUE OPENING.** An emergency escape and rescue opening located such that the bottom of the clear opening is not more than 44 inches (1118 mm) above or below the finished ground level adjacent to the opening.

**[BG] GRADE PLANE.** A reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet (1829 mm) from the building, between the building and a point 6 feet (1829 mm) from the building.

**GRADE PLANE, STORY ABOVE.** See “Story above grade plane.”

**GRADING** shall mean soil excavation or fill or any combination of soil excavation or fill and shall include the conditions resulting from any soil excavation or fill.

**GRAFFITI** shall mean any form of unauthorized inscription, word, figure or design which is marked, etched, scratched, drawn, sprayed, painted or otherwise affixed to or on any surface of public or private property, including, but not limited to buildings, walls, signs, structures or places, or other surfaces, regardless of the nature of the material of that structural component. (Amended by Ord. No. 180,708, Eff. 7/6/09.)

**[BE] GRANDSTAND.** Tiered seating supported on a dedicated structural system and two or more rows high and is not a building element (see “Bleachers”).

**[BG] GREENHOUSE.** A structure or thermally isolated area of a building that maintains a specialized sunlit environment used for and essential to the cultivation, protection or maintenance of plants.

**[BG] GROSS LEASABLE AREA.** The total floor area designed for tenant occupancy and exclusive use. The area of tenant occupancy is measured from the centerlines of joint partitions to the outside of the tenant walls. All tenant areas, including areas used for storage, shall be included in calculating gross leasable area.

**GROUND FLOOR.** *The floor of a building with a building entrance on an accessible route. A building may have one or more ground floors.*

**GROUND LEVEL PLAY COMPONENT.** *[DSA-AC] A play component that is approached and exited at the ground level.*

**[BG] GROUP HOME.** *Group Home means a facility which provides 24-hour care and supervision to children, provides services specified in this chapter to a specific client group, and maintains a structured environment, with such services provided at least in part by staff employed by the licensee. The care and supervision provided by a group home shall be nonmedical except as permitted by Welfare and Institutions Code Section 17736(b). Since small family and foster family homes, by definition, care for six or fewer children only, any facility providing 24-hour care for seven or more children must be licensed as a group home.*

**[BE] GUARD [DSA-AC, HCD 1, HCD 2 & HCD 1-AC] OR GUARDRAIL.** A building component or a system of building components located at or near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to a lower level.

**[BG] GUESTROOM.** A room used or intended to be used by one or more guests for living or sleeping purposes.

**[BS] GYPSUM BOARD.** The generic name for a family of sheet products consisting of a noncombustible core primarily of gypsum with paper surfacing.

**[BS] GYPSUM PANEL PRODUCT.** The general name for a family of sheet products consisting essentially of gypsum complying with the standards specified in Table 2506.2 and Table 2507.2, and Chapter 35. Gypsum board and glass mat gypsum panels are examples of gypsum panel products.

**[BS] GYPSUM PLASTER.** A mixture of calcined gypsum or calcined gypsum and lime and aggregate and other approved materials as specified in this code.

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**[BS] GYPSUM SHEATHING.** Gypsum panel products specifically manufactured with enhanced water resistance for use as a substrate for exterior surface materials.

**[BS] GYPSUM VENEER PLASTER.** Gypsum plaster applied to an approved base in one or more coats normally not exceeding  $\frac{1}{4}$  inch (6.4 mm) in total thickness.

**[BS] GYPSUM WALLBOARD.** A gypsum board used primarily as an interior surfacing for building structures.

**[BG] HABITABLE SPACE.** A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

**HALL CALL CONSOLE.** *[DSA-AC] An elevator call user interface exclusive to a destination-oriented elevator system that requires the user to select a destination floor prior to entering the elevator car.*

**[F] HALOGENATED EXTINGUISHING SYSTEM.** A fire-extinguishing system using one or more atoms of an element from the halogen chemical series: fluorine, chlorine, bromine and iodine.

**[F] HANDLING.** The deliberate transport by any means to a point of storage or use.

**[BE] HANDRAIL.** A horizontal or sloping rail intended for grasping by the hand for guidance or support.

**HANDWASHING FIXTURE.** *Refer to the California Plumbing Code, Section 210.0.*

**HANDWASHING FIXTURE.** *[OSHPD 1, 2, 3, 4 & 5] A lavatory provided in patient rooms, nurse stations and other patient care areas intended for staff hygiene and infection control. These special-use lavatories are an element of a handwashing station as defined in Section 1224.3. Refer to the California Plumbing Code Section 210.0 definition for additional requirements associated with handwashing fixtures.*

**[BS] HARDBOARD.** A fibrous-felted, homogeneous panel made from lignocellulosic fibers consolidated under heat and pressure in a hot press to a density not less than 31 pcf (497 kg/m<sup>3</sup>).

**HARDWARE.** See “Fire exit hardware” and “Panic hardware.”

**[F] HAZARDOUS MATERIALS.** Those chemicals or substances that are physical hazards or health hazards as classified in Section 307 and the *California Fire Code*, whether the materials are in usable or waste condition.

**[F] HAZARDOUS PRODUCTION MATERIAL (HPM).** A solid, liquid or gas associated with semiconductor manufacturing that has a degree-of-hazard rating in health, flammability or instability of Class 3 or 4 as ranked by the *California Electrical Code* and which is used directly in research, laboratory or production processes which have as their end product materials that are not hazardous.

**HAZARDOUS SUBSTANCE.** *[SFM] Hazardous Substance is a substance which, by reason of being explosive, flammable, toxic, poisonous, corrosive, oxidizing, irritant or otherwise harmful, is likely to cause injury.*

**[BS] HEAD JOINT.** Vertical mortar joint placed between masonry units within the wythe at the time the masonry units are laid.

**HEALTH CARE PROVIDER.** *[DSA-AC] See “Professional Office of a Health Care Provider”*

**[F] HEALTH HAZARD.** A classification of a chemical for which there is statistically significant evidence that acute or chronic health effects are capable of occurring in exposed persons. The term “health hazard” includes chemicals that are toxic or highly toxic, and corrosive.

**HEAT DETECTOR.** See “Detector, heat.”

**[BG] HEIGHT, BUILDING.** The vertical distance from grade plane to the average height of the highest roof surface.

**[BS] HELICAL PILE.** Manufactured steel deep foundation element consisting of a central shaft and one or more helical bearing plates. A helical pile is installed by rotating it into the ground. Each helical bearing plate is formed into a screw thread with a uniform defined pitch.

**[F] HELIPAD.** A structural surface that is used for the landing, taking off, taxiing and parking of helicopters.

**[F] HELIPORT.** An area of land or water or a structural surface that is used, or intended for use, for the landing and taking off of helicopters, and any appurtenant areas that are used, or intended for use, for heliport buildings or other heliport facilities.

**[F] HELISTOP.** The same as “heliport,” except that no fueling, defueling, maintenance, repairs or storage of helicopters is permitted.

**[F] HIGHLY TOXIC.** A material which produces a lethal dose or lethal concentration that falls within any of the following categories:

1. A chemical that has a median lethal dose (LD<sub>50</sub>) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
2. A chemical that has a median lethal dose (LD<sub>50</sub>) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
3. A chemical that has a median lethal concentration (LC<sub>50</sub>) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 and 300 grams each.

Mixtures of these materials with ordinary materials, such as water, might not warrant classification as highly toxic. While this system is basically simple in application, any hazard evaluation that is required for the precise categorization of this type of material shall be performed by experienced, technically competent persons.

**[BF] HIGH-PRESSURE DECORATIVE EXTERIOR-GRADE COMPACT LAMINATE (HPL).** Panels consisting of layers of cellulose fibrous material impregnated with thermosetting resins and bonded together by a high-pressure process to form a homogeneous nonporous core suitable for exterior use.

## DEFINITIONS

**[BF] HIGH-PRESSURE DECORATIVE EXTERIOR-GRADE COMPACT LAMINATE (HPL) SYSTEM.** An exterior wall covering fabricated using HPL in a specific assembly including joints, seams, attachments, substrate, framing and other details as appropriate to a particular design.

**[BG] HIGH-RISE BUILDING.** *In other than Group I-2 occupancies “high-rise buildings” as used in this code:*

**Existing high-rise structure.** *A high-rise structure, the construction of which is commenced or completed prior to July 1, 1974.*

**High-rise structure.** *Every building of any type of construction or occupancy having floors used for human occupancy located more than 75 feet above the lowest floor level having building access (see Section 403.1.2), except buildings used as hospitals as defined in Health and Safety Code Section 1250.*

**New high-rise building.** *A high-rise structure, the construction of which is commenced on or after July 1, 1974. For the purpose of this section, construction shall be deemed to have commenced when plans and specifications are more than 50 percent complete and have been presented to the local jurisdiction prior to July 1, 1974. Unless all provisions of this section have been met, the construction of such buildings shall commence on or before January 1, 1976.*

**New high-rise structure.** *A high-rise structure, the construction of which is commenced on or after July 1, 1974.*

**HIGH-RISE BUILDING ACCESS.** *An exterior door opening conforming to all of the following:*

1. *Suitable and available for fire department use.*
2. *Located not more than 2 feet (610 mm) above the adjacent ground level.*
3. *Leading to a space, room or area having foot traffic communication capabilities with the remainder of the building.*
4. *Designed to permit penetration through the use of fire department forcible-entry tools and equipment unless other approved arrangements have been made with the fire authority having jurisdiction.*

**[A] HISTORIC BUILDINGS.** Any building or structure that is one or more of the following:

1. *Listed or certified as eligible for listing by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, in the National Register of Historic Places.*
2. *Designated as historic under an applicable state or local law.*
3. *Certified as a contributing resource within a National Register, state designated or locally designated historic district.*

**[DSA-AC]** See “Qualified historical building or property,” C.C.R., Title 24, Part 8.

**HOLDING FACILITY.** *A detention or correctional facility or area where inmates, staff and public are not housed but are restrained.*

**[BF] HORIZONTAL ASSEMBLY.** A fire-resistance-rated floor or roof assembly of materials designed to restrict the spread of fire in which continuity is maintained.

**[BE] HORIZONTAL EXIT.** An exit component consisting of fire-resistance-rated construction and opening protectives intended to compartmentalize portions of a building thereby creating refuge areas that afford safety from the fire and smoke from the area of fire origin.

**[BG] HOSPITALS AND PSYCHIATRIC HOSPITALS.** Facilities that provide care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of care recipients who are incapable of self-preservation or classified as nonambulatory or bedridden.

**HOTEL OR MOTEL.** **[HCD 1 & HCD 2]** *Any building containing six or more guest rooms intended or designed to be used, or which are used, rented or hired out to be occupied, or which are occupied for sleeping purposes by guests.*

**HOUSING AT A PLACE OF EDUCATION.** *Housing operated by or on behalf of an elementary, secondary, undergraduate or postgraduate school, or other place of education, including dormitories, suites, apartments or other places of residence.*

**HOUSING POD.** *A section of a housing unit designed to segregate different populations. Housing Pods contain sleeping areas, dayroom space, showers, toilet facilities and support space.*

**HOUSING UNIT.** A building or portion of a building intended to lodge inmates on a 24-hour basis where accommodations are provided for sleeping and other inmate support areas. A Housing Unit may contain one or more housing pods.

**HPM.** See “Hazardous Production Material.”

**[F] HPM ROOM.** A room used in conjunction with or serving a Group H-5 occupancy, where HPM is stored or used and which is classified as a Group H-2, H-3 or H-4 occupancy.

**[BS] HURRICANE-PRONE REGIONS.** Areas vulnerable to hurricanes defined as:

1. *The US Atlantic Ocean and Gulf of Mexico coasts where the basic design wind speed,  $V$ , for Risk Category II buildings is greater than 115 mph (51.4 m/s);*
2. *Hawaii, Puerto Rico, Guam, Virgin Islands and American Samoa.*

**[F] HYDROGEN FUEL GAS ROOM.** A room or space that is intended exclusively to house a gaseous hydrogen system.

**[BS] ICE-SENSITIVE STRUCTURE.** A structure for which the effect of an atmospheric ice load governs the design of a structure or portion thereof. This includes, but is not limited to, lattice structures, guyed masts, overhead lines, light suspension and cable-stayed bridges, aerial cable systems (e.g., for ski lifts or logging operations), amusement rides, open catwalks and platforms, flagpoles and signs.

**IF, IF . . . THEN.** **[DSA-AC]** *The terms “if” and “if . . . then” denote a specification that applies only when the conditions described are present.*

**IGNITION-RESISTANT MATERIAL.** **[SFM]** *(See Chapter 7A, Section 702A for defined term.)*



**[F] IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH).** The concentration of airborne contaminants which poses a threat of death, immediate or delayed permanent adverse health effects, or effects that could prevent escape from such an environment. This contaminant concentration level is established by the National Institute of Occupational Safety and Health (NIOSH) based on both toxicity and flammability. It generally is expressed in parts per million by volume (ppmv/v) or milligrams per cubic meter (mg/m<sup>3</sup>). If adequate data do not exist for precise establishment of IDLH concentrations, an independent certified industrial hygienist, industrial toxicologist, appropriate regulatory agency or other source approved by the building official shall make such determination.

**[BS] IMPACT LOAD.** The load resulting from moving machinery, elevators, craneways, vehicles and other similar forces and kinetic loads, pressure and possible surcharge from fixed or moving loads.

**[BS] IMPACT PROTECTIVE SYSTEM.** Construction that has been shown by testing to withstand the impact of test missiles and that is applied, attached or locked over exterior glazing.

**[BG] INCAPABLE OF SELF-PRESERVATION.** Persons who, because of age, physical limitations, mental limitations, chemical dependency or medical treatment, cannot respond as an individual to an emergency situation.

**[F] INCOMPATIBLE MATERIALS.** Materials that, when mixed, have the potential to react in a manner that generates heat, fumes, gases or byproducts which are hazardous to life or property.

**[BS] INDIVIDUAL TRUSS MEMBER.** A truss chord or truss web.

**[F] INDUSTRIAL CATERING TRUCK.** A motor vehicle used for the purpose of dispensing and selling liquids from sanitary dispensers and/or ready-to-eat food and beverages that have been prepared and sealed or packaged on premises so long as the owner and operator have a valid health permit authorizing the preparation of food. The above items may be prepared on any industrial catering truck so long as the owner and operator have a valid health permit for that preparation.

**[F] INERT GAS.** A gas that is capable of reacting with other materials only under abnormal conditions such as high temperatures, pressures and similar extrinsic physical forces. Within the context of the code, inert gases do not exhibit either physical or health hazard properties as defined (other than acting as a simple asphyxiant) or hazard properties other than those of a compressed gas. Some of the more common inert gases include argon, helium, krypton, neon, nitrogen and xenon.

**INFANT.** Any child who because of age only, is unable to walk and requires the aid of another person to evacuate the building. In no case shall the term "infant" mean a child 2 years of age or older.

**INFLATABLE AMUSEMENT DEVICE.** A device made of flexible fabric or other combustible materials that is inflated by one or more air-blowers providing internal air pressure to maintain its shape. Such a device is designed for recreational

activities that allow occupants to bounce, climb, slide, negotiate an obstacle course or participate in interactive play.

**[F] INITIATING DEVICE.** A system component that originates transmission of a change-of-state condition, such as in a smoke detector, manual fire alarm box or supervisory switch.

**INLET.** A fitting or fixture through which circulation water enters the pool.

**[BF] INSULATING SHEATHING.** A rigid panel or board insulation material having a thermal resistance of not less than R-2 of the core material with properties suitable for use on walls, floors, roofs or foundations.

**INTAKE AND RELEASE AREAS.** A temporary holding suite where detained and/or incarcerated individuals are received and processed into a facility or are released from the facility. The suite may contain holding cells, sobering and safety cells, medical examination space, interview rooms, property storage and staff work areas.

**[BE] INTENDED TO BE OCCUPIED AS A RESIDENCE.** This refers to a dwelling unit or sleeping unit that can or will be used all or part of the time as the occupant's place of abode.

**[BE] INTERIOR EXIT RAMP.** An exit component that serves to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance, and provides for a protected path of egress travel to the exit discharge or public way.

**[BE] INTERIOR EXIT STAIRWAY.** An exit component that serves to meet one or more means of egress design requirements, such as required number of exits or exit access travel distance, and provides for a protected path of egress travel to the exit discharge or public way.

**[BF] INTERIOR FINISH.** Interior finish includes interior wall and ceiling finish and interior floor finish.

**[BF] INTERIOR FLOOR FINISH.** The exposed floor surfaces of buildings including coverings applied over a finished floor or stair, including risers.

**[BF] INTERIOR FLOOR-WALL BASE.** Interior floor finish trim used to provide a functional or decorative border at the intersection of walls and floors.

**[BF] INTERIOR SURFACES.** Surfaces other than weather exposed surfaces.

**[BF] INTERIOR WALL AND CEILING FINISH.** The exposed interior surfaces of buildings, including but not limited to: fixed or movable walls and partitions; toilet room privacy partitions; columns; ceilings; and interior wainscoting, paneling or other finish applied structurally or for decoration, acoustical correction, surface insulation, structural fire resistance or similar purposes, but not including trim.

**[BS] INTERLAYMENT.** A layer of felt or nonbituminous saturated felt not less than 18 inches (457 mm) wide, shingled between each course of a wood-shake roof covering.

**INTERNATIONAL SYMBOL OF ACCESSIBILITY.** The symbol adopted by Rehabilitation International's 11th World Congress for the purpose of indicating that buildings and facilities are accessible to persons with disabilities.

## DEFINITIONS

**[BS] INTERMODAL SHIPPING CONTAINER.** A six-sided steel unit originally constructed as a general cargo container used for the transport of goods and materials.

**[BF] INTUMESCENT FIRE-RESISTANT COATINGS.** Thin film liquid mixture applied to substrates by brush, roller, spray or trowel which expands into a protective foamed layer to provide fire-resistant protection of the substrates when exposed to flame or intense heat.

**IRREGULAR STRUCTURE. [DSA-SS, DSA-SS/CC, OSHPD 1 & 4]** A structure designed as having one or more plan or vertical irregularities per ASCE 7 Section 12.3.

**[BS] JOINT.** The opening in or between adjacent assemblies that is created due to building tolerances, or is designed to allow independent movement of the building in any plane caused by thermal, seismic, wind or any other loading.

**[A] JURISDICTION.** The governmental unit that has adopted this code.

**KEY STATION. [DSA-AC]** Certain rapid and light rail stations, and commuter rail stations, as defined under criteria established by the Department of Transportation in 49 CFR 37.47 and 49 CFR 37.51, respectively.

**KICK PLATE.** An abrasion-resistant plate affixed to the bottom portion of a door to prevent a trap condition and protect its surface.

**KITCHEN OR KITCHENETTE. [DSA-AC]** A room, space or area with equipment for the preparation and cooking of food.

**[BF] L RATING.** The air leakage rating of a through penetration firestop system or a fire-resistant joint system when tested in accordance with UL 1479 or UL 2079, respectively.

**[A] 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 1703.5, "Manufacturer's designation" and "Mark").

**[A] LABELED.** Equipment, materials or products to which has been affixed a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory, approved agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the above-labeled items and whose labeling indicates either that the equipment, material or product meets identified standards or has been tested and found suitable for a specified purpose. **[HCD 1 & HCD 2]** "Labeled" means equipment or materials to which has been attached a label, symbol or other identifying mark of an organization, approved by the Department, that maintains a periodic inspection program of production of labeled products, installations, equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

**LABORATORY. [SFM]** A room, building or area where the use and storage of hazardous materials are utilized for testing, analysis, instruction, research or developmental activities.

**LABORATORY SUITE. [SFM]** A laboratory suite is a Group L Occupancy space within a building or structure, which may include multiple laboratories, offices, storage, equipment rooms or similar support functions, where the aggregate quantities of hazardous materials stored and used do not exceed the quantities set forth in Table 453.7.2.1 (see Section 453).

**LADDER.** A series of vertically separate treads or rungs either connected by vertical rail members or independently fastened to an adjacent vertical pool wall.

**LAVATORY.** A fixed bowl or basin with running water and drainpipe, as in a toilet or bathing facility, for washing or bathing purposes. (As differentiated from the definition of "Sink".)

**LEVEL AREA. [HCD 1-AC]** A specified surface that does not have a slope in any direction exceeding  $\frac{1}{4}$  inch (6.4 mm) in 1 foot (305 mm) from the horizontal (2.083-percent gradient).

**LEVEL OF EXIT DISCHARGE.** See "Exit discharge, level of."

**LICENSING AGENCY. [OSHPD 1, 1R, 2, 3, 4 & 5]** (See Chapter 12, Section 1224.3 for defined term.)

**[F] LIFE SAFETY SYSTEMS.** Systems, devices and equipment that enhance or facilitate evacuation, smoke control, compartmentation and isolation.

**LIFT, PLATFORM (WHEELCHAIR). [HCD 1-AC]** See "Platform (Wheelchair) Lift".

**[BF] LIGHT-DIFFUSING SYSTEM.** Construction consisting in whole or in part of lenses, panels, grids or baffles made with light-transmitting plastics positioned below independently mounted electrical light sources, skylights or light-transmitting plastic roof panels. Lenses, panels, grids and baffles that are part of an electrical fixture shall not be considered as a light-diffusing system.

**[BS] LIGHT-FRAME CONSTRUCTION.** Construction whose vertical and horizontal structural elements are primarily formed by a system of repetitive wood or cold-formed steel framing members.

**[BF] LIGHT-TRANSMITTING PLASTIC ROOF PANELS.** Structural plastic panels other than skylights that are fastened to structural members, or panels or sheathing and that are used as light-transmitting media in the plane of the roof.

**[BF] LIGHT-TRANSMITTING PLASTIC WALL PANELS.** Plastic materials that are fastened to structural members, or to structural panels or sheathing, and that are used as light-transmitting media in exterior walls.

**[BS] LIMIT OF MODERATE WAVE ACTION.** Line shown on FIRMs to indicate the inland limit of the  $1\frac{1}{2}$ -foot (457 mm) breaking wave height during the base flood.

**[BS] LIMIT STATE.** A condition beyond which a structure or member becomes unfit for service and is judged to be no longer useful for its intended function (serviceability limit state) or to be unsafe (strength limit state).

**[F] LIQUID.** A material that has a melting point that is equal to or less than 68°F (20°C) and a boiling point that is greater than 68°F (20°C) at 14.7 pounds per square inch absolute (psia) (101 kPa). When not otherwise identified, the term “liquid” includes both flammable and combustible liquids.

**[F] LIQUID STORAGE ROOM.** A room classified as a Group H-3 occupancy used for the storage of flammable or combustible liquids in a closed condition.

**LIQUIDTIGHT FLOOR. [SFM]** *A nonpermeable barrier capable of containing hazardous material liquids without degradation.*

**[F] LIQUID USE, DISPENSING AND MIXING ROOM.** A room in which Class I, II and IIIA flammable or combustible liquids are used, dispensed or mixed in open containers.

**[A] LISTED.** Equipment, materials, products or services included in a list published by an organization acceptable to the building official and concerned with evaluation of products or services that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose.

**[HCD 1 & HCD 2]** *“Listed” means all products that appear in a list published by an approved testing or listing agency. For additional information, see Health and Safety Code Section 17920(h).*

**[SFM]** *For applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, “listed” shall also mean equipment or materials accepted by the state fire marshal as conforming to the provisions of the State Fire Marshal’s regulations and which are included in a list published by the State Fire Marshal.*

**LISTING AGENCY. [HCD 1 & HCD 2]** *An agency approved by the department that is in the business of listing and labeling products, materials, equipment and installations tested by an approved testing agency, and that maintains a periodic inspection program on current production of listed products, equipment and installations, and that, at least annually, makes available a published report of these listings. For additional information, see Health and Safety Code Section 17920(i).*

**[BS] LIVE LOAD.** A load produced by the use and occupancy of the building or other structure that does not include construction or environmental loads such as wind load, snow load, rain load, earthquake load, flood load or dead load.

**[BS] LIVE LOAD, ROOF.** A load on a roof produced:

1. During maintenance by workers, equipment and materials; or
2. During the life of the structure by movable objects such as planters or other similar small decorative appurtenances that are not occupancy related.

**[BG] LIVE/WORK UNIT.** A dwelling unit or sleeping unit in which a significant portion of the space includes a nonresidential use that is operated by the tenant or building owner.

**[BS] LOAD AND RESISTANCE FACTOR DESIGN (LRFD).** A method of proportioning structural members and their connections using load and resistance factors such that no applicable limit state is reached when the structure is subjected to appropriate load combinations. The term “LRFD” is used in the design of steel and wood structures.

**[BS] LOAD EFFECTS.** Forces and deformations produced in structural members by the applied loads.

**[BS] LOAD FACTOR.** A factor that accounts for deviations of the actual load from the nominal load, for uncertainties in the analysis that transforms the load into a load effect, and for the probability that more than one extreme load will occur simultaneously.

**[BS] LOADS.** Forces or other actions that result from the weight of building materials, occupants and their possessions, environmental effects, differential movement and restrained dimensional changes. Permanent loads are those loads in which variations over time are rare or of small magnitude, such as dead loads. All other loads are variable loads (see “Nominal loads”).

**LOBBY. [SFM, HCD 1 & HCD 2]** *An area not defined as a waiting room at the entrance of a building through which persons must pass.*

**LOCAL AGENCY VERY HIGH FIRE HAZARD SEVERITY ZONE. [SFM]** *(See Chapter 7A, Section 702A for defined term.)*

**LODGING HOUSE. [HCD 1 & HCD 1-AC]** *Any building or portion thereof containing not more than five guest rooms where rent is paid in money, goods, labor or otherwise, and that is occupied by the proprietor as the residence of such proprietor.*

**LOG WALL CONSTRUCTION. [SFM]** *(See Chapter 7A, Section 702A for defined term.)*

**[A] LOT.** A portion or parcel of land considered as a unit.

**[A] LOT LINE.** A line dividing one lot from another, or from a street or any public place.

**[BE] LOW-ENERGY POWER-OPERATED DOOR.** A swinging, sliding or folding door that opens automatically upon an action by a pedestrian such as pressing a push plate or waving a hand in front of a sensor. The door closes automatically, and operates with decreased forces and decreased speeds (see “Power-assisted door” and “Power-operated door”).

**[F] LOWER FLAMMABLE LIMIT (LFL).** The minimum concentration of vapor in air at which propagation of flame will occur in the presence of an ignition source. The LFL is sometimes referred to as “LEL” or “lower explosive limit.”

**[BS] LOWEST FLOOR.** The lowest floor of the lowest enclosed area, including basement, but excluding any unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of Section 1612.

**MAIL BOXES. [DSA-AC]** *Receptacles for the receipt of documents, packages or other deliverable matter. Mail boxes include, but are not limited to, post office boxes and recepta-*

## DEFINITIONS

*cles provided by commercial mail-receiving agencies, apartment facilities or schools.*

**[BS] MAIN WINDFORCE-RESISTING SYSTEM.** An assemblage of structural elements assigned to provide support and stability for the overall structure. The system generally receives wind loading from more than one surface.

**MAJOR STRUCTURAL ALTERATIONS, ADDITIONS OR REPAIRS. [OSHPD 1 & 4]** Refer to Chapter 2 of the California Existing Building Code.

**MALL BUILDING, COVERED and MALL BUILDING, OPEN.** See “Covered mall building.”

**[F] MANUAL FIRE ALARM BOX.** A manually operated device used to initiate an alarm signal.

**[A] 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 “Label” and “Mark”).

**[A] 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 “Label” and “Manufacturer’s designation”).

**MARKED CROSSING.** *A crosswalk or other identified path intended for pedestrian use in crossing a vehicular way.*

**[BG] MARQUEE.** A canopy that has a top surface which is sloped less than 25 degrees from the horizontal and is located less than 10 feet (3048 mm) from operable openings above or adjacent to the level of the marquee.

**[BS] MASONRY.** A built-up construction or combination of building units or materials of clay, shale, concrete, glass, gypsum, stone or other approved units bonded together with or without mortar or grout or other accepted methods of joining.

**Glass unit masonry.** Masonry composed of glass units bonded by mortar.

**Plain masonry.** Masonry in which the tensile resistance of the masonry is taken into consideration and the effects of stresses in reinforcement are neglected.

**Reinforced masonry.** Masonry construction in which reinforcement acting in conjunction with the masonry is used to resist forces.

**Solid masonry.** Masonry consisting of solid masonry units laid contiguously with the joints between the units filled with mortar.

**Unreinforced (plain) masonry.** Masonry in which the tensile resistance of masonry is taken into consideration and the resistance of the reinforcing steel, if present, is neglected.

**[BS] MASONRY UNIT.** Brick, tile, stone, glass block or concrete block conforming to the requirements specified in Section 2103.

**Hollow.** A masonry unit whose net cross-sectional area in any plane parallel to the load-bearing surface is less than 75 percent of its gross cross-sectional area measured in the same plane.

**Solid.** A masonry unit whose net cross-sectional area in every plane parallel to the load-bearing surface is 75 percent or more of its gross cross-sectional area measured in the same plane.

**[BG] MASS TIMBER.** Structural elements of Type IV construction primarily of solid, built-up, panelized or engineered wood products that meet minimum cross-section dimensions of Type IV construction.

**[BF] MASTIC FIRE-RESISTANT COATINGS.** Liquid mixture applied to a substrate by brush, roller, spray or trowel that provides fire-resistant protection of a substrate when exposed to flame or intense heat.

**MAY. [DSA-AC]** *May denotes an option or alternative.*

**[BE] MEANS OF EGRESS.** A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge.

**MECHANICAL CODE** is the Los Angeles City Mechanical Code, Article 5 of Chapter IX of the Los Angeles Municipal Code.

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**[BF] MECHANICAL EQUIPMENT SCREEN.** A roof-top structure, not covered by a roof, used to aesthetically conceal plumbing, electrical or mechanical equipment from view.

**[BG] MECHANICAL-ACCESS OPEN PARKING GARAGES.** Open parking garages employing parking machines, lifts, elevators or other mechanical devices for vehicles moving from and to street level and in which public occupancy is prohibited above the street level.

**[BG] MEDICAL CARE.** Care involving medical or surgical procedures, nursing or for psychiatric purposes.

**MEDICAL POOL.** *A special-purpose pool used by a state-recognized medical institution engaged in the healing arts under the direct supervision of licensed medical personnel for treatment of the infirm.*

**[BF] MEMBRANE PENETRATION.** A breach in one side of a floor-ceiling, roof-ceiling or wall assembly to accommodate an item installed into or passing through the breach.

**[BG] MEMBRANE-COVERED CABLE STRUCTURE.** A nonpressurized structure in which a mast and cable system provides support and tension to the membrane weather barrier and the membrane imparts stability to the structure.

**[BG] MEMBRANE-COVERED FRAME STRUCTURE.** A nonpressurized building wherein the structure is composed of a rigid framework to support a tensioned membrane which provides the weather barrier.

**[BF] MEMBRANE-PENETRATION FIRESTOP.** A material, device or construction installed to resist for a prescribed time period the passage of flame and heat through openings in a protective membrane in order to accommodate cables, cable trays, conduit, tubing, pipes or similar items.

**[BF] MEMBRANE-PENETRATION FIRESTOP SYSTEM.** An assemblage consisting of a fire-resistance-rated floor-ceiling, roof-ceiling or wall assembly, one or more penetrating items installed into or passing through the breach in one side of the assembly and the materials or devices, or both, installed to resist the spread of fire into the assembly for a prescribed period of time.

**[BE] MERCHANDISE PAD.** A merchandise pad is an area for display of merchandise surrounded by aisles, permanent fixtures or walls. Merchandise pads contain elements such as nonfixed and movable fixtures, cases, racks, counters and partitions as indicated in Section 105.2 from which customers browse or shop.

**[BF] METAL COMPOSITE MATERIAL (MCM).** A factory-manufactured panel consisting of metal skins bonded to both faces of a solid plastic core.

**[BF] METAL COMPOSITE MATERIAL (MCM) SYSTEM.** An exterior wall covering fabricated using MCM in a specific assembly including joints, seams, attachments, substrate, framing and other details as appropriate to a particular design.

**[BS] METAL ROOF PANEL.** An interlocking metal sheet having a minimum installed weather exposure of 3 square feet (0.279 m<sup>2</sup>) per sheet.

**[BS] METAL ROOF SHINGLE.** An interlocking metal sheet having an installed weather exposure less than 3 square feet (0.279 m<sup>2</sup>) per sheet.

**[BG] MEZZANINE.** An intermediate level or levels between the floor and ceiling of any story and in accordance with Section 505. *[DSA-AC] An intermediate level or levels between the floor and ceiling of any story with an aggregate floor area of not more than one-third of the area of the room or space in which the level or levels are located. Mezzanines have sufficient elevation that space for human occupancy can be provided on the floor below.*

**[BS] MICROPILE.** A micropile is a bored, grouted-in-place deep foundation element that develops its load-carrying capacity by means of a bond zone in soil, bedrock or a combination of soil and bedrock.

**[BF] MINERAL BOARD.** A rigid felted thermal insulation board consisting of either felted mineral fiber or cellular beads of expanded aggregate formed into flat rectangular units.

**[BF] MINERAL FIBER.** Insulation composed principally of fibers manufactured from rock, slag or glass, with or without binders.

**[BF] MINERAL WOOL.** Synthetic vitreous fiber insulation made by melting predominately igneous rock or furnace slag, and other inorganic materials, and then physically forming the melt into fibers.

**MINOR STRUCTURAL ALTERATIONS, ADDITIONS OR REPAIRS.** *[OSHDP 1 & 4] Refer to Chapter 2 of the California Existing Building Code.*

**[BS] MODIFIED BITUMEN ROOF COVERING.** One or more layers of polymer-modified asphalt sheets. The sheet materials shall be fully adhered or mechanically attached to the substrate or held in place with an approved ballast layer.

**MONOLITHIC.** *[OSHDP 1, 1R, 2, 3, 4 & 5] (See Chapter 12, Section 1224.3 for defined term.)*

**MONOLITHIC CEILING.** *[OSHDP 1, 1R, 2, 3, 4 & 5] (See Chapter 12, Section 1224.3 for defined term.)*

**[BS] MORTAR.** A mixture consisting of cementitious materials, fine aggregates, water, with or without admixtures, that is used to construct unit masonry assemblies.

**[BS] MORTAR, SURFACE-BONDING.** A mixture to bond concrete masonry units that contains hydraulic cement, glass fiber reinforcement with or without inorganic fillers or organic modifiers and water.

**MOTEL.** *[HCD 1 & HCD 2] See “Hotel” or “Motel.”*

**MOTION PICTURE AND TELEVISION PRODUCTION STUDIO SOUND STAGES, APPROVED PRODUCTION FACILITIES AND PRODUCTION LOCATIONS.** *See Chapter 48, California Fire Code.*

**MULTI-BEDROOM HOUSING UNIT.** *[DSA-AC] A housing unit, intended for use by students at a place of education, with a kitchen and/or toilet and bathing rooms within the unit, such as an apartment or dormitory. Multi-bedroom housing units are separate from one another and from common use spaces within a building.*

**[BE] MULTILEVEL ASSEMBLY SEATING.** Seating that is arranged in distinct levels where each level is composed of either multiple rows, or a single row of box seats accessed from a separate level.

**[F] MULTIPLE-STATION ALARM DEVICE.** Two or more single-station alarm devices that can be interconnected such that actuation of one causes all integral or separate audible alarms to operate. A multiple-station alarm device can consist of one single-station alarm device having connections to other detectors or to a manual fire alarm box.

**[F] MULTIPLE-STATION SMOKE ALARM.** Two or more single-station alarm devices that are capable of interconnection such that actuation of one causes the appropriate alarm signal to operate in all interconnected alarms.

**MULTISTORY DWELLING UNIT.** *[HCD 1-AC] A dwelling unit with finished living space located on one floor and the floor or floors immediately above or below it.*

**[BE] MULTISTORY UNIT.** A dwelling unit or sleeping unit with habitable space located on more than one story.

**[BF] NAILABLE SUBSTRATE.** A product or material such as framing, sheathing or furring, composed of wood, wood-based materials or other materials providing equivalent fastener withdrawal resistance.

**[BS] NAILING, BOUNDARY.** A special nailing pattern required by design at the boundaries of diaphragms.

**[BS] NAILING, EDGE.** A special nailing pattern required by design at the edges of each panel within the assembly of a diaphragm or shear wall.

**[BS] NAILING, FIELD.** Nailing required between the sheathing panels and framing members at locations other than boundary nailing and edge nailing.

## DEFINITIONS

**[BS] NATURALLY DURABLE WOOD.** The heartwood of the following species except for the occasional piece with corner sapwood, provided 90 percent or more of the width of each side on which it occurs is heartwood.

**Decay resistant.** Redwood, cedar, black locust and black walnut.

**Termite resistant.** Redwood, Alaska yellow cedar, Eastern red cedar and Western red cedar.

**NEWLY CONSTRUCTED. [HCD 1-AC]** A building that has never before been used or occupied for any purpose.

**NEXT GENERATION ATTENUATION WEST 2 (NGA WEST 2). [DSA-SS, DSA-SS/CC & OSHPD 1 & 4]** Attenuation relations used for the 2014 United States Geological Survey (USGS) seismic hazards maps (for the Western United States) or their equivalent as determined by the enforcement agency.

**NFPA. [DSA-AC]** The National Fire Protection Association.

**[BS] NOMINAL LOADS.** The magnitudes of the loads specified in Chapter 16 (dead, live, soil, wind, snow, rain, flood and earthquake).

**[BS] NOMINAL SIZE (LUMBER).** The commercial size designation of width and depth, in standard sawn lumber and glued-laminated lumber grades; somewhat larger than the standard net size of dressed lumber, in accordance with DOCPS 20 for sawn lumber and with the ANSI/AWC NDS for glued-laminated lumber.

**NON-DUCTILE CONCRETE BUILDING.** A concrete building that was built pursuant to a permit application for a new building submitted before January 13, 1976, or, if no permit can be located, is determined by the Department to have been built under building code standards enacted before January 13, 1976.

**Exception:** “Non-Ductile Concrete Building” shall not include detached single-family dwellings or duplexes.

**NON-GENERAL ACUTE CARE BUILDING (Non-GAC Building). [OSHPD 1R]** A non-freestanding SPC building, which is removed from general acute care services in accordance with the Section 309A of the California Existing Building Code that remains under OSHPD jurisdiction as part of an OSHPD 1 Hospital building.

**NONAMBULATORY PERSONS.** Persons unable to leave a building unassisted under emergency conditions. It includes, but is not limited to, persons who depend on mechanical aids such as crutches, walkers and wheelchairs and any person who is unable to physically and mentally respond to a sensory signal approved by the state fire marshal or an oral instruction relating to fire danger.

The determination of ambulatory or nonambulatory status of persons with developmental disabilities shall be made by the Director of Social Services or his or her designated representative, in consultation with the director of Developmental Services or his or her designated representative. The determination of ambulatory or nonambulatory status of all other disabled persons placed after January 1, 1984, who are not developmentally disabled shall be made by the Director of Social Services or his or her designated representative.

**NONCOMBUSTIBLE. [SFM]** Noncombustible as applied to building construction material means a material which, in the form in which it is used, is either one of the following:

1. Material of which no part will ignite and burn when subjected to fire. Any material passing ASTM E136 shall be considered noncombustible.
2. Material having a structural base of noncombustible material as defined in Item 1 above, with a surfacing material not over  $\frac{1}{8}$  inch (3.2 mm) thick which has a flame-spread index of 50 or less.

“Noncombustible” does not apply to surface finish materials. Material required to be noncombustible for reduced clearances to flues, heating appliances or other sources of high temperature shall refer to material conforming to Item 1. No material shall be classed as noncombustible which is subject to increase in combustibility or flame-spread index, beyond the limits herein established, through the effects of age, moisture or other atmospheric condition.

**[BG] NONCOMBUSTIBLE MEMBRANE STRUCTURE.** A membrane structure in which the membrane and all component parts of the structure are noncombustible.

**NONPATIENT-CARE SUITE.** In Group I-2 or I-2.1 occupancies, a group of rooms or spaces within a suite for use as administrative, business and professional offices.

**[BS] NONSTRUCTURAL CONCRETE.** Any element made of plain or reinforced concrete that is not part of a structural system required to transfer either gravity or lateral loads to the ground.

**NORMAL. [HCD 1 & HCD 2]** Conforming to a pattern or standard regarded as usual or typical.

**[F] NORMAL TEMPERATURE AND PRESSURE (NTP).** A temperature of 70°F (21°C) and a pressure of 1 atmosphere [14.7 psia (101 kPa)].

**[BE] NOSING.** The leading edge of treads of stairs and of landings at the top of stairway flights.

**NOTIFICATION ZONE.** See “Zone, notification.”

**NPC 1, NPC 2, NPC 3/NPC 3R, NPC 4 and NPC 5. [OSHPD 1]** Building nonstructural performance categories for Hospital Buildings defined in Table 11.1 of California Administrative Code (Part 1, Title 24 CCR), Chapter 6.

**[F] NUISANCE ALARM.** An alarm caused by mechanical failure, malfunction, improper installation or lack of proper maintenance, or an alarm activated by a cause that cannot be determined.

**[BG] NURSING HOMES.** Facilities that provide care, including both intermediate care facilities and skilled nursing facilities where any of the persons are incapable of self-preservation or classified as nonambulatory or bedridden.

**[BE] OCCUPANT LOAD.** The number of persons for which the means of egress of a building or portion thereof is designed.

**[BG] OCCUPIABLE SPACE.** A room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes or in

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which occupants are engaged at labor, and which is equipped with means of egress and light and ventilation facilities meeting the requirements of this code.

**[BG] OPEN PARKING GARAGE.** A structure or portion of a structure with the openings as described in Section 406.5.2 on two or more sides that is used for the parking or storage of private motor vehicles as described in Section 406.5.3.

**OPEN RISER.** *The space between two adjacent stair treads not closed by a riser.*

**[F] OPEN SYSTEM.** The use of a solid or liquid hazardous material involving a vessel or system that is continuously open to the atmosphere during normal operations and where vapors are liberated, or the product is exposed to the atmosphere during normal operations. Examples of open systems for solids and liquids include dispensing from or into open beakers or containers, dip tank and plating tank operations.

**[BE] OPEN-AIR ASSEMBLY SEATING.** Seating served by means of egress that is not subject to smoke accumulation within or under a structure and is open to the atmosphere.

**[BE] OPEN-ENDED CORRIDOR.** An interior corridor that is open on each end and connects to an exterior stairway or ramp at each end with no intervening doors or separation from the corridor.

**[BF] OPENING PROTECTIVE.** A fire door assembly, fire shutter assembly, fire window assembly or glass-block assembly in a fire-resistance-rated wall or partition.

**OPERABLE PART.** *A component of an element used to insert or withdraw objects, or to activate, deactivate or adjust the element.*

**[F] OPERATING BUILDING.** A building occupied in conjunction with the manufacture, transportation or use of explosive materials. Operating buildings are separated from one another with the use of intraplant or intraline distances.

**[BS] ORDINARY PRECAST STRUCTURAL WALL.** See Section 1905.1.1.

**[BS] ORDINARY REINFORCED CONCRETE STRUCTURAL WALL.** See Section 1905.1.1.

**[BS] ORDINARY STRUCTURAL PLAIN CONCRETE WALL.** See Section 1905.1.1.

**[F] ORGANIC PEROXIDE.** An organic compound that contains the bivalent -O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms have been replaced by an organic radical. Organic peroxides can pose an explosion hazard (detonation or deflagration) or they can be shock sensitive. They can also decompose into various unstable compounds over an extended period of time.

**Class I.** Those formulations that are capable of deflagration but not detonation.

**Class II.** Those formulations that burn very rapidly and that pose a moderate reactivity hazard.

**Class III.** Those formulations that burn rapidly and that pose a moderate reactivity hazard.

**Class IV.** Those formulations that burn in the same manner as ordinary combustibles and that pose a minimal reactivity hazard.

**Class V.** Those formulations that burn with less intensity than ordinary combustibles or do not sustain combustion and that pose no reactivity hazard.

**Unclassified detonable.** Organic peroxides that are capable of detonation. These peroxides pose an extremely high explosion hazard through rapid explosive decomposition.

**ORGANIZED CAMPS.** See Section 450, *Group C Occupancy*.

**[BS] ORTHOGONAL.** To be in two horizontal directions, at 90 degrees (1.57 rad) to each other.

**[BS] OTHER STRUCTURES.** This definition applies only to Chapters 16 through 23.

Structures, other than buildings, for which loads are specified in Chapter 16.

**OUTPATIENT CLINIC.** See “Clinic, outpatient.”

**OVERFLOW SYSTEM.** *The system which includes perimeter-type overflow gutters, surface skimmers, surge or collector tanks, other surface water collective system components and their interconnecting piping.*

**[A] OWNER.** Any person, agent, operator, entity, firm or corporation having any legal or equitable interest in the property; or recorded in the official records of the state, county or municipality as holding an interest or title to the property; or otherwise having possession or control of the property, including the guardian of the estate of any such person, and the executor or administrator of the estate of such person if ordered to take possession of real property by a court.

**[F] OXIDIZER.** A material that readily yields oxygen or other oxidizing gas, or that readily reacts to promote or initiate combustion of combustible materials and, if heated or contaminated, can result in vigorous self-sustained decomposition.

**Class 4.** An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock and that causes a severe increase in the burning rate of combustible materials with which it comes into contact. Additionally, the oxidizer causes a severe increase in the burning rate and can cause spontaneous ignition of combustibles.

**Class 3.** An oxidizer that causes a severe increase in the burning rate of combustible materials with which it comes in contact.

**Class 2.** An oxidizer that will cause a moderate increase in the burning rate of combustible materials with which it comes in contact.

**Class 1.** An oxidizer that does not moderately increase the burning rate of combustible materials.

**[F] OXIDIZING GAS.** A gas that can support and accelerate combustion of other materials more than air does.

**[BS] PANEL (PART OF A STRUCTURE).** The section of a floor, wall or roof comprised between the supporting frame of two adjacent rows of columns and girders or column bands of floor or roof construction.

**[BE] PANIC HARDWARE.** A door-latching assembly incorporating a device that releases the latch upon the application of a force in the direction of egress travel. See “Fire exit hardware.”

## DEFINITIONS

**[BS] PARTICLEBOARD.** A generic term for a panel primarily composed of cellulosic materials (usually wood), generally in the form of discrete pieces or particles, as distinguished from fibers. The cellulosic material is combined with synthetic resin or other suitable bonding system by a process in which the interparticle bond is created by the bonding system under heat and pressure.

**PASSAGE DOOR. [HCD 1-AC]** A door other than an exit door through which persons may traverse.

**PASSENGER ELEVATOR. [DSA-AC]** See “Elevator, Passenger”

**PASSENGER ELEVATOR. [HCD 1 & HCD 2]** An elevator used primarily to carry passengers. For additional information, see California Code of Regulations, Title 8, Division 1, Chapter 4.

**PASSIVE SOLAR ENERGY COLLECTOR. [HCD 1 & HCD 2]** Uses architectural components, rather than mechanical components, to provide heating or cooling for a building interior.

**PATH OF TRAVEL. [DSA-AC]** An identifiable accessible route within an existing site, building or facility by means of which a particular area may be approached, entered and exited, and which connects a particular area with an exterior approach (including sidewalks, streets and parking areas), an entrance to the facility, and other parts of the facility. When alterations, structural repairs or additions are made to existing buildings or facilities, the term “path of travel” also includes the toilet and bathing facilities, telephones, drinking fountains and signs serving the area of work.

**PEDESTRIAN.** An individual who moves in walking areas with or without the use of walking assistive devices such as crutches, leg braces, wheelchairs, white cane, service animal, etc.

**PEDESTRIAN WAY.** A route by which a pedestrian may pass.

**PEER REVIEW. [OSHDP 1, 1R, 2, 4 & 5]** Peer review refers to the procedure contained in California Building Code Section 1617A.1.41.

**[BF] PENETRATION FIRESTOP.** A through-penetration firestop or a membrane-penetration firestop.

**[BG] PENTHOUSE.** An enclosed, unoccupied rooftop structure used for sheltering mechanical and electrical equipment, tanks, elevators and related machinery, stairways, and vertical shaft openings.

**[BS] PERFORMANCE CATEGORY.** A designation of wood structural panels as related to the panel performance used in Chapter 23.

**[BF] PERIMETER FIRE CONTAINMENT SYSTEM.** An assemblage of specific materials or products that is designed to resist for a prescribed period of time the passage of fire through voids created at the intersection of exterior curtain wall assemblies and fire-resistance-rated floor or floor/ceiling assemblies.

**PERIODIC SPECIAL INSPECTION. [DSA-SS, DSA-SS/CC]** Special inspection by the special inspector who is intermittently present where the work to be inspected has been or is being performed and at the completion of the work.

**PERMANENT. [DSA-AC]** Facilities which, are intended to be used for periods longer than those designated in this code under the definition of “Temporary.”

**[BS] PERMANENT INDIVIDUAL TRUSS MEMBER DIAGONAL BRACING (PITMDB).** Structural member or assembly intended to permanently stabilize the PITMRs.

**[BS] PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT (PITMR).** Restraint that is used to prevent local buckling of an individual truss chord or web member because of the axial forces in the individual truss member.

**PERMANENT PORTABLE BUILDING. [SFM]** A portable building that is used to serve or house students and is certified as a permanent building on a new public school campus by the public school administration shall comply with the requirements of new campus buildings.

**[A] PERMIT.** An official document or certificate issued by the building official that authorizes performance of a specified activity.

**[A] PERSON.** An individual, heirs, executors, administrators or assigns, and also includes a firm, partnership or corporation, its or their successors or assigns, or the agent of any of the aforesaid.

**[BG] PERSONAL CARE SERVICE.** The care of persons who do not require medical care. Personal care involves responsibility for the safety of the persons while inside the building

**PERSONS WITH DISABILITIES. [HCD 1-AC]** For purposes of Chapter 11A, “Persons with disabilities” includes, but is not limited to, any physical or mental disability as defined in Government Code Section 12926.

**PERSONS WITH INTELLECTUAL DISABILITIES, PROFOUNDLY OR SEVERELY.** Shall mean any persons with intellectual disabilities who is unable to evacuate a building unassisted during emergency conditions.

*Note:* The determination as to such incapacity shall be made by the Director of the State Department of Public Health or his or her designated representative pursuant to Health and Safety Code Section 13131.3.

**[BE] PHOTOLUMINESCENT.** Having the property of emitting light that continues for a length of time after excitation by visible or invisible light has been removed.

**[BS] PHOTOVOLTAIC MODULE.** A complete, environmentally protected unit consisting of solar cells, optics and other components, exclusive of tracker, designed to generate DC power when exposed to sunlight.

**[BS] PHOTOVOLTAIC PANEL.** A collection of modules mechanically fastened together, wired and designed to provide a field-installable unit.

**[BS] PHOTOVOLTAIC PANEL SYSTEM.** A system that incorporates discrete photovoltaic panels, that converts solar radiation into electricity, including rack support systems.

**PHOTOVOLTAIC (PV) PANEL SYSTEM, GROUND-MOUNTED.** An independent photovoltaic (PV) panel system without useable space underneath, installed directly on the ground.



**PHOTOVOLTAIC (PV) SUPPORT STRUCTURE, ELEVATED.** *An independent photovoltaic (PV) panel support structure designed with useable space underneath with minimum clear height of 7 feet 6 inches (2286 mm), intended for secondary use such as providing shade or parking of motor vehicles.*

**[BS] PHOTOVOLTAIC SHINGLES.** A roof covering resembling shingles that incorporates photovoltaic modules.

**[F] PHYSICAL HAZARD.** A chemical for which there is evidence that it is a combustible liquid, cryogenic fluid, explosive, flammable (solid, liquid or gas), organic peroxide (solid or liquid), oxidizer (solid or liquid), oxidizing gas, pyrophoric (solid, liquid or gas), unstable (reactive) material (solid, liquid or gas) or water-reactive material (solid or liquid).

**[F] PHYSIOLOGICAL WARNING THRESHOLD LEVEL.** A concentration of airborne contaminants, normally expressed in parts per million (ppm) or milligrams per cubic meter (mg/m<sup>3</sup>), that represents the concentration at which persons can sense the presence of the contaminant due to odor, irritation or other quick-acting physiological response. When used in conjunction with the permissible exposure limit (PEL) the physiological warning threshold levels are those consistent with the classification system used to establish the PEL. See the definition of “Permissible exposure limit (PEL)” in the California Fire Code.

**PICTOGRAM.** A pictorial symbol that represents activities, facilities or concepts.

**PLACE OF PUBLIC ACCOMMODATION.** *A facility operated by a private entity whose operations affect commerce and fall within at least one of the following categories:*

- (1) *Place of lodging, except for an establishment located within a facility that contains not more than five rooms for rent or hire and that actually is occupied by the proprietor of the establishment as the residence of the proprietor. For purposes of this code, a facility is a “place of lodging” if it is*

- (i) *An inn, hotel or motel; or*

- (ii) *A facility that*

- (A) *Provides guest rooms for sleeping for stays that primarily are short-term in nature (generally 30 days or less) where the occupant does not have the right to return to a specific room or unit after the conclusion of his or her stay; and*

- (B) *Provides guest rooms under conditions and with amenities similar to a hotel, motel or inn, including the following:*

- (1) *On- or off-site management and reservations service;*

- (2) *Rooms available on a walk-up or call-in basis;*

- (3) *Availability of housekeeping or linen service; and*

- (4) *Acceptance of reservations for a guest room type without guaranteeing a*

*particular unit or room until check-in, and without a prior lease or security deposit.*

- (2) *A restaurant, bar or other establishment serving food or drink;*

- (3) *A motion picture house, theater, concert hall, stadium or other place of exhibition or entertainment;*

- (4) *An auditorium, convention center, lecture hall or other place of public gathering;*

- (5) *A bakery, grocery store, clothing store, hardware store, shopping center or other sales or rental establishment;*

- (6) *A laundromat, dry-cleaner, bank, barber shop, beauty shop, travel service, shoe repair service, funeral parlor, gas station, office of an accountant or lawyer, pharmacy, insurance office, professional office of a health care provider, hospital or other service establishment;*

- (7) *A terminal, depot or other station used for specified public transportation;*

- (8) *A museum, library, gallery or other place of public display or collection;*

- (9) *A park, zoo, amusement park or other place of recreation;*

- (10) *A nursery, elementary, secondary, undergraduate or postgraduate private school, or other place of education;*

- (11) *A day-care center, senior citizen center, homeless shelter, food bank, adoption agency or other social service center establishment;*

- (12) *A gymnasium, health spa, bowling alley, golf course or other place of exercise or recreation;*

- (13) *A religious facility;*

- (14) *An office building; and*

- (15) *A public curb or sidewalk.*

**PLACE OF RELIGIOUS WORSHIP.** See “Religious worship, place of.”

**[BF] PLASTIC COMPOSITE.** A generic designation that refers to wood/plastic composites, plastic lumber and similar materials.

**[BF] PLASTIC GLAZING.** Plastic materials that are glazed or set in a frame or sash or are otherwise supported.

**[BF] PLASTIC LUMBER.** A manufactured product made primarily of plastic materials (filled or unfilled) which is generally rectangular in cross section.

**[BG] PLATFORM.** A raised area within a building used for worship, the presentation of music, plays or other entertainment; the head table for special guests; the raised area for lecturers and speakers; boxing and wrestling rings; theater-in-the-round stages; and similar purposes wherein, other than horizontal sliding curtains, there are no overhead hanging curtains, drops, scenery or stage effects other than lighting and sound. A temporary platform is one installed for not more than 30 days.

## DEFINITIONS

**PLATFORM (WHEELCHAIR) LIFT.** *A hoisting and lowering mechanism equipped with a car or platform or support that serves two landings of a building or structure and is designed to carry a passenger or passengers and/or luggage or other material a vertical distance as may be allowed.*

**PLAY AREA. [DSA-AC]** *A portion of a site containing play components designed and constructed for children.*

**PLAY COMPONENT. [DSA-AC]** *An element intended to generate specific opportunities for play, socialization or learning. Play components are manufactured or natural; and are stand-alone or part of a composite play structure.*

**[BG] PLAY STRUCTURE.** A structure composed of one or more components, where the user enters a play environment.

**PLUMBING CODE** is the Los Angeles City Plumbing Code, Article 4, Chapter IX of the Los Angeles Municipal Code.

**POINT-OF-SALE DEVICE. [DSA-AC]** *A device used for the purchase of a good or service where a personal identification number (PIN), zip code or signature is required.*

**[BF] POLYPROPYLENE SIDING.** A shaped material, made principally from polypropylene homopolymer, or copolymer, which in some cases contains fillers or reinforcements, that is used to clad exterior walls of buildings.

**POOL.** *A constructed or prefabricated artificial basin, chamber or tank intended to be used primarily by bathers, and not for cleaning of the body or for individual therapeutic use.*

**POOL USER.** *A person using a pool and ancillary facilities for the purpose of water activities such as diving, swimming or wading.*

**POOL VOLUME.** *The amount of water expressed in gallons (liters) that a pool holds when filled.*

**[BS] PORCELAIN TILE.** Ceramic tile having an absorption of 0.5 percent or less in accordance with Table 10 of ANSI A137.1, or Tables 4 or 5 of ANSI A137.3.

**[BS] POSITIVE ROOF DRAINAGE.** A design that accounts for deflections from all design loads and has sufficient additional slope to ensure that drainage of the roof occurs within 48 hours of precipitation.

**POWDER ROOM.** *A room containing a water closet (toilet) and a lavatory, and which is not defined as a bathroom.*

**POWER-ASSISTED DOOR. [DSA-AC]** *A door used for human passage with a mechanism that helps to open the door, or relieves the opening resistance of a door, upon the activation of a switch or a continued force applied to the door itself.*

**[BE] POWER-ASSISTED DOOR.** Swinging door which opens by reduced pushing or pulling force on the door-operating hardware. The door closes automatically after the pushing or pulling force is released and functions with decreased forces. See “Low-energy power-operated door” and “Power-operated door.”

**[BE] POWER-OPERATED DOOR.** Swinging, sliding, or folding door which opens automatically when approached by a pedestrian or opens automatically upon an action by a pedestrian. The door closes automatically and includes provisions such as presence sensors to prevent entrapment. See “Low energy power-operated door” and “Power-assisted door.”

**[BS] PREFABRICATED WOOD I-JOIST.** Structural member manufactured using sawn or structural composite lumber flanges and wood structural panel webs bonded together with exterior exposure adhesives, which forms an “I” cross-sectional shape.

**[BS] PRESERVATIVE-TREATED WOOD.** Wood products that, when impregnated with chemicals by a pressure process or other means during manufacture, exhibit reduced susceptibility to damage by fungi, insects or marine borers.

**[BS] PRESTRESSED MASONRY.** Masonry in which internal stresses have been introduced to counteract potential tensile stresses in masonry resulting from applied loads.

**PRIMARY ENTRY. [HCD 1-AC]** *The principal entrance through which most people enter the building, as designated by the building official.*

**PRIMARY ENTRY LEVEL. [HCD 1-AC]** *The floor or level of the building on which the primary entry is located.*

**[BG] PRIMARY STRUCTURAL FRAME.** The primary structural frame shall include all of the following structural members:

1. The columns.
2. Structural members having direct connections to the columns, including girders, beams, trusses and span-drels.
3. Members of the floor construction and roof construction having direct connections to the columns.
4. Members that are essential to the vertical stability of the primary structural frame under gravity loading.

**PRIVATE BUILDING OR FACILITY. [DSA-AC]** *A place of public accommodation or a commercial building or facility subject to Chapter 1, Section 1.9.1.2.*

**[BG] PRIVATE GARAGE.** A building or portion of a building in which motor vehicles used by the owner or tenants of the building or buildings on the premises are stored or kept, without provisions for repairing or servicing such vehicles for profit.

**PRIVATE POOL.** *Any constructed pool, permanent or portable, that is intended for noncommercial use as a swimming pool by not more than three owner families and their guests.*

**Note:** *A single-family residence is a Group R, Division 3 occupancy.*

**PROFESSIONAL OFFICE OF A HEALTH CARE PROVIDER. [DSA-AC]** *A location where a person or entity, regulated by the State to provide professional services related to the physical or mental health of an individual, makes such services available to the public. The facility housing the professional office of a health care provider only includes floor levels housing at least one health care provider, or any floor level designed or intended for use by at least one health care provider.*

**PROJECT INSPECTOR. [DSA-SS, DSA-SS/CC]** *The person approved to provide inspection in accordance with the California Administrative Code, Section 4-333(b). The term “project inspector” is synonymous with “inspector of record.”*

**[BG] PROSCENIUM WALL.** The wall that separates the stage from the auditorium or assembly seating area.

**PROTECTIVE SOCIAL CARE FACILITY. [SFM]** A facility housing persons, who are referred, placed or caused to be placed in the facility, by any governmental agency and for whom the services, or a portion thereof, are paid for by any governmental agency. These occupancies shall include, but are not limited to, those commonly referred to as “assisted living facilities,” “social rehabilitation facilities,” “certified family care homes,” “out-of-home placement facilities,” and “halfway houses.”

**PSYCHIATRIC HOSPITALS.** See “Hospitals and psychiatric hospitals.”

**PUBLIC BUILDING OR FACILITY. [DSA-AC]** A building or facility or portion of a building or facility designed, constructed, or altered by, on behalf of, or for the use of a public entity subject to Chapter 1, Section 1.9.1.1.

**PUBLIC ENTITY.** Any state or local government; any department, agency, special-purpose district, or other instrumentality of a state or local government.

**[BE] PUBLIC ENTRANCE.** An entrance that is not a service entrance or a restricted entrance.

**PUBLIC HOUSING. [DSA-AC & HCD 1-AC]** Housing facilities constructed or altered by, for, or on behalf of a public entity, or constructed or altered as part of a public entity’s program to provide housing pursuant to United States Code of Federal Regulations, 28 CFR Part 35, Section 35.102(a), including but not limited to the following:

1. One- or two-family dwelling units or congregate residences;
2. Buildings or complexes with three or more residential dwelling units;
3. Homeless shelters, group homes, halfway houses and similar social service establishments;
4. Transient lodging, such as hotels, motels, hostels and other facilities providing accommodations of a short-term nature of not more than 30 days duration;
5. Housing at a place of education, such as housing on or serving a public school, public college or public university.

**Note:** A public entity’s program to provide housing may include but is not limited to: the allocation of local, state or federal financial assistance, Community Development Block Grants, Low Income Housing Tax Credits, the California Multifamily Housing Program, loan agreements and housing bonds. Examples that are not considered a public entity’s program to provide housing may include but are not limited to: density bonuses, the receipt of public funds for the installation of energy efficiency features, seismic strengthening, water conservation and fire safety features. For additional information see “Guide to Public Housing Regulated in Chapter 11B of the California Building Code” and the “California Access Compliance Advisory Reference Manual” available on the Division of the State Architect’s website.

**PUBLIC POOL.** A pool other than a private pool.

**PUBLIC USE. [DSA-AC]** Interior or exterior rooms, spaces or elements that are made available to the public. Public use may be provided at a building or facility that is privately or publicly owned. Private interior or exterior rooms, spaces or elements associated with a residential dwelling unit provided by a public housing program or in a public housing facility are not public use areas and shall not be required to be made available to the public.

**[A] PUBLIC WAY.** A street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet (3048 mm).

**[BE] PUBLIC-USE AREAS.** Interior or exterior rooms or spaces of a building or facility that are made available to the general public and do not include common use areas. Public use areas may be provided at a building or facility that is privately or publicly owned.

**[F] PYROPHORIC.** A chemical with an auto-ignition temperature in air, at or below a temperature of 130°F (54.4°C).

**[F] PYROTECHNIC COMPOSITION.** A chemical mixture that produces visible light displays or sounds through a self-propagating, heat-releasing chemical reaction which is initiated by ignition.

**QUALIFIED HISTORIC BUILDING OR FACILITY. [DSA-AC]** A building or facility that is listed in or eligible for listing in the National Register of Historic Places, or designated as historic under an appropriate State or local law. See C.C.R. Title 24, Part 8.

**QUALITY ASSURANCE (QA). [DSA-SS, DSA-SS/CC, OSHPD 1R, 1, 2, 4 & 5]** Special inspections and testing provided by an approved agency employed by the Owner. Project specific testing required by approved construction documents shall be performed by the approved agency responsible for Quality Assurance (QA), unless approved otherwise by the building official.

**QUALITY CONTROL (QC). [DSA-SS, DSA-SS/CC, OSHPD 1R, 1, 2, 4 & 5]** Inspections and materials/functionality testing provided by the fabricator, erector, manufacturer or other responsible contractor as applicable.

**[BF] RADIANT BARRIER.** A material having a low-emittance surface of 0.1 or less installed in building assemblies.

**RAFTERTAIL. [SFM]** (See Chapter 7A, Section 702A for defined term.)

**[BE] RAMP.** A walking surface that has a running slope steeper than one unit vertical in 20 units horizontal (5-percent slope).

**RAMP, EXIT ACCESS.** See “Exit access ramp.”

**RAMP, EXTERIOR EXIT.** See “Exterior exit ramp.”

**RAMP, INTERIOR EXIT.** See “Interior exit ramp.”

**[BG] RAMP-ACCESS OPEN PARKING GARAGES.** Open parking garages employing a series of continuously rising floors or a series of interconnecting ramps between floors permitting the movement of vehicles under their own power from and to the street level.

## DEFINITIONS

**REASONABLE PORTION.** [DSA-AC] That segment of a building, facility, area, space or condition, which would normally be necessary if the activity therein is to be accessible by persons with disabilities.

**RECESSED STEPS.** A riser/tread or series of risers/treads extending down into the deck with the bottom riser or tread terminating at the pool wall (thus creating a “stairwell”).

**RECESSED TREADS.** A series of vertically spaced cavities in the pool wall creating tread areas for step holes.

**RECIRCULATION SYSTEM.** The interconnected system traversed by the recirculated water from the pool until it is returned to the pool, i.e., from the pool through the collector or surge tank, recirculation pump, filters, chemical treatment and heater (if provided), and returned to the pool.

**RECOMMEND.** [DSA-AC, HCD 1 & HCD 2] Does not require mandatory acceptance, but identifies a suggested action that shall be considered for the purpose of providing a greater degree of accessibility to persons with disabilities.

**[A] RECORD DRAWINGS.** Drawings (“as built”) that document the location of all devices, appliances, wiring sequences, wiring methods and connections of the components of a fire alarm system as installed.

**[BF] REFLECTIVE PLASTIC CORE INSULATION.** An insulation material packaged in rolls, that is less than 1/2 inch (12.7 mm) thick, with not less than one exterior low-emittance surface (0.1 or less) and a core material containing voids or cells.

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A** **REGISTERED DESIGN PROFESSIONAL.** A licensed architect or engineer registered with the appropriate California State licensing board. (Added by Ord. No. 185,587, Eff. 7/16/18.)

**[A] REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.** A registered design professional engaged by the owner or the owner’s authorized agent to review and coordinate certain aspects of the project, as determined by the building official, for compatibility with the design of the building or structure, including submittal documents prepared by others, deferred submittal documents and phased submittal documents.

**[BG] RELIGIOUS WORSHIP, PLACE OF.** A building or portion thereof intended for the performance of religious services.

**[A] RELOCATABLE BUILDING.** A partially or completely assembled building constructed and designed to be reused multiple times and transported to different building sites.

**RELOCATABLE BUILDING (PUBLIC SCHOOL).** Any building with an integral floor structure which is capable of being readily moved. (See Education Code Section 17350.) Relocatable buildings that are to be placed on substandard foundations not complying with the requirements of Part 2, Title 24, C.C.R., require a statement from the school district stating that the durability requirements for those foundations may be waived and acknowledging the temporary nature of the foundations.

**REMODELING.** [DSA-AC] See “Alteration.”

**REMOVED FROM ACUTE CARE SERVICE.** [OSHDP 1R] Buildings that previously provided basic and/or supplemental services, as defined in Section 1224.3 that have been removed from acute care service in compliance with Part 10 California Existing Building Code Chapter 3A through a project approved by OSHPD, and remain under the jurisdiction of OSHPD.

**[A] REPAIR.** The reconstruction, replacement or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.

**[BG] REPAIR GARAGE.** A building, structure or portion thereof used for servicing or repairing motor vehicles.

**[BS] REROOFING.** The process of recovering or replacing an existing roof covering. See “Roof recover” and “Roof replacement.”

**[BG] RESIDENTIAL AIRCRAFT HANGAR.** An accessory building less than 2,000 square feet (186 m<sup>2</sup>) and 20 feet (6096 mm) in building height constructed on a one- or two-family property where aircraft are stored. Such use will be considered as a residential accessory use incidental to the dwelling.

**RESIDENTIAL CARE FACILITY FOR THE CHRONICALLY ILL (RCF/CI).** As termed, means a housing arrangement with a maximum capacity of 25 residents that provides a range of services to residents who have chronic, life-threatening illnesses.

**RESIDENTIAL CARE FACILITY FOR THE ELDERLY (RCFE).** As defined in Health and Safety Code Section 1569.2, shall mean a facility with a housing arrangement chosen voluntarily by persons 60 years of age or over, or their authorized representative, where varying levels and intensities of care and supervision, protective supervision or personal care are provided, based on their varying needs, as determined in order to be admitted and to remain in the facility. Persons under 60 years of age with compatible needs, as determined by the Department of Social Services in regulations, may be allowed to be admitted or retained in a residential-care facility for the elderly.

Pursuant to Health and Safety Code Section 13133, regulations of the state fire marshal pertaining to Group R-2.1, Occupancies classified as residential facilities (RF) and residential-care facilities for the elderly (RCFE) shall apply uniformly throughout the state and no city, county, city and county, including a charter city or charter county, or fire protection district shall adopt or enforce any ordinance or local rule or regulation relating to fire and panic safety which is in consistent with these regulations. A city, county, city and county, including a charter city or charter county may pursuant to Health and Safety Code Section 13143.5, or a fire protection district may pursuant to Health and Safety Code Section 13869.7, adopt standards more stringent than those adopted by the state fire marshal that are reasonably necessary to accommodate local climate, geological or topographical conditions relating to roof coverings for residential-care facilities for the elderly.

wood strand elements is 0.25 inches (6.4 mm) or less and their average lengths not less than 300 times the least dimension of the wood strand elements.

**STRUCTURAL FRAME. [DSA-AC]** *The columns and the girders, beams and trusses having direct connections to the columns and all other members that are essential to the stability of the building or facility as a whole.*

**[BS] STRUCTURAL GLUED-LAMINATED TIMBER.** An engineered, stress-rated product of a timber laminating plant, composed of assemblies of specially selected and prepared wood laminations in which the grain of all laminations is approximately parallel longitudinally and the laminations are bonded with adhesives.

**[BS] STRUCTURAL OBSERVATION.** The visual observation of the structural system by a registered design professional for general conformance to the approved construction documents.

**[A] STRUCTURE.** That which is built or constructed.

**SUB-COMPONENT. [OSHPD 1, 1R, 2, 4 & 5]** *A portion of an equipment or component that is uniquely identified by a part number (also known as model number or identification number).*

**[BS] SUBSTANTIAL DAMAGE.** Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**[BS] SUBSTANTIAL IMPROVEMENT.** Any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.
2. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

**[BG] SUNROOM.** A one-story structure attached to a building with a glazing area in excess of 40 percent of the gross area of the structure's exterior walls and roof.

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SUPERINTENDENT OF BUILDING** is the General Manager of the Department of Building and Safety of the City of Los Angeles or a duly authorized representative.

**[F] SUPERVISING STATION.** A facility that receives signals and at which personnel are in attendance at all times to respond to these signals.

**[F] SUPERVISORY SERVICE.** The service required to monitor performance of guard tours and the operative condition of fixed suppression systems or other systems for the protection of life and property.

**[F] SUPERVISORY SIGNAL.** A signal indicating the need of action in connection with the supervision of guard tours, the

fire suppression systems or equipment or the maintenance features of related systems.

**[F] SUPERVISORY SIGNAL-INITIATING DEVICE.** An initiation device, such as a valve supervisory switch, water-level indicator or low-air pressure switch on a dry-pipe sprinkler system, whose change of state signals an off-normal condition and its restoration to normal of a fire protection or life safety system, or a need for action in connection with guard tours, fire suppression systems or equipment or maintenance features of related systems.

**SURFACE MOUNTED COMPONENT. [OSHPD 1, 1R, 2, 4 & 5]** *As referenced in CBC Section 1705A.13.3.1 Exceptions, a component directly attached to only one continuous flat surface of wall, floor or roof, without supports. Surface mounted components are directly attached to a surface by attachments (without any supports) and are not rigidly connected to anything else (e. g., distribution system, other components).*

**[BS] SUSCEPTIBLE BAY.** A roof or portion thereof with either of the following:

1. A slope less than  $\frac{1}{4}$ -inch per foot (0.0208 rad).
2. On which water is impounded, in whole or in part, and the secondary drainage system is functional but the primary drainage system is blocked.

A roof surface with a slope of  $\frac{1}{4}$ -inch per foot (0.0208 rad) or greater towards points of free drainage is not a susceptible bay.

**[BG] SWIMMING POOL.** Any structure intended for swimming, recreational bathing or wading that contains water over 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground pools; hot tubs; spas and fixed-in-place wading pools.

**[BF] T RATING.** The time period that the penetration firestop system, including the penetrating item, limits the maximum temperature rise to 325°F (163°C) above its initial temperature through the penetration on the nonfire side when tested in accordance with ASTM E814 or UL 1479.

**TACTILE.** *An object that can be perceived using the sense of touch.*

**TACTILE SIGN.** *A sign containing raised characters and/or symbols and accompanying Braille.*

**[BG] TECHNICAL PRODUCTION AREA.** Open elevated areas or spaces intended for entertainment technicians to walk on and occupy for servicing and operating entertainment technology systems and equipment. Galleries, including fly and lighting galleries, gridirons, catwalks, and similar areas are designed for these purposes.

**TECHNICALLY INFEASIBLE. [DSA-AC]** *An alteration of a building or a facility, that has little likelihood of being accomplished because the existing structural conditions require the removal or alteration of a load-bearing member that 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 that are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.*

## DEFINITIONS

**TEEING GROUND. [DSA-AC]** *In golf, the starting place for the hole to be played.*

**TEMPORARY.** Buildings and facilities intended for use at one location for not more than 180 days and seats intended for use at one location for not more than 90 days.

**TEMPORARY. [DSA-AC]** *Buildings and facilities intended for use at one location for not more than one year and seats intended for use at one location for not more than 90 days.*

**TEMPORARY HOLDING CELL, ROOM or AREA. [BSCC and SFM]** *Temporary Holding cell, room or area shall mean a room for temporary holding of inmates, detainees or in-custody individuals for less than 24 hours.*

**TEMPORARY HOLDING FACILITY. [SFM]** *A building or portion of a building, operated by law enforcement personnel, with one or more temporary holding cells or rooms.*

**TENABLE ENVIRONMENT. [SFM]** *Tenable environment shall mean an environment in which the products of combustion, toxic gases, smoke and heat are limited or otherwise restricted to maintain the impact on occupants to a level that is not life threatening.*

**[BG] TENSILE MEMBRANE STRUCTURE.** A membrane structure having a shape that is determined by tension in the membrane and the geometry of the support structure. Typically, the structure consists of both flexible elements (e.g., membrane and cables), nonflexible elements (e.g., struts, masts, beams and arches) and the anchorage (e.g., supports and foundations). This includes frame-supported tensile membrane structures.

**[F] TENT.** A structure, enclosure, umbrella structure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported in any manner except by air or the contents it protects (see “Umbrella structure”).

**TERMINALLY ILL.** *As termed for an individual, means the individual has a life expectancy of six months or less as stated in writing by his or her attending physician and surgeon.*

**[BF] TERMINATED STOPS.** Factory feature of a door frame where the stops of the door frame are terminated not more than 6 inches (152 mm) from the bottom of the door frame. Terminated stops are also known as “hospital stops” or “sanitary stops.”

**TESTING AGENCY. [HCD 1 & HCD 2]** *An agency approved by the department as qualified and equipped for testing of products, materials, equipment and installations in accordance with nationally recognized standards. For additional information, see Health and Safety Code Section 17920(n).*

**TEXT TELEPHONE.** *Machinery or equipment that employs interactive text-based communications through the transmission of coded signals across the standard telephone network. Text telephones can include, for example, devices known as TTYs (teletypewriters) or computers.*

**[BG] THERMAL ISOLATION.** A separation of conditioned spaces, between a sunroom and a dwelling unit, consisting of existing or new walls, doors or windows.

**[BF] THERMOPLASTIC MATERIAL.** A plastic material that is capable of being repeatedly softened by increase of temperature and hardened by decrease of temperature.

**[BF] THERMOSETTING MATERIAL.** A plastic material that is capable of being changed into a substantially nonreformable product when cured.

**[BF] THROUGH PENETRATION.** A breach in both sides of a floor, floor-ceiling or wall assembly to accommodate an item passing through the breaches.

**[BF] THROUGH-PENETRATION FIRESTOP SYSTEM.** An assemblage consisting of a fire-resistance-rated floor, floor-ceiling, or wall assembly, one or more penetrating items passing through the breaches in both sides of the assembly and the materials or devices, or both, installed to resist the spread of fire through the assembly for a prescribed period of time.

**[BS] TIE, WALL.** Metal connector that connects wythes of masonry walls together.

**[BS] TIE-DOWN (HOLD-DOWN).** A device used to resist uplift of the chords of shear walls.

**[BS] TILE, STRUCTURAL CLAY.** A hollow masonry unit composed of burned clay, shale, fire clay or mixture thereof, and having parallel cells.

**[F] TIRES, BULK STORAGE OF.** Storage of tires where the area available for storage exceeds 20,000 cubic feet (566 m<sup>3</sup>).

**TODDLER.** *Any child between 18 months and 36 months of age.*

**TORQUE-CONTROLLED POST-INSTALLED ANCHOR. [DSA-SS, DSA-SS/CC & OSHPD 1, 1R, 2, 4 & 5]** *A post-installed anchor that is set by the expansion of one or more sleeves or other elements against the sides of the drilled hole through the application of torque, which pulls the cone(s) into the expansion sleeve(s); after setting, tensile loading can cause additional expansion (follow-up expansion).*

**[A] TOWNHOUSE.** A single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from the foundation to roof and with open space on at least two sides.

**[F] TOXIC.** A chemical falling within any of the following categories:

1. A chemical that has a median lethal dose (LD<sub>50</sub>) of more than 50 milligrams per kilogram, but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
2. A chemical that has a median lethal dose (LD<sub>50</sub>) of more than 200 milligrams per kilogram, but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
3. A chemical that has a median lethal concentration (LC<sub>50</sub>) in air of more than 200 parts per million, but not more than 2,000 parts per million by volume of gas or vapor, or more than 2 milligrams per liter but not more than 20 milligrams per liter of mist, fume or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 and 300 grams each.

**TRANSFER DEVICE. [DSA-AC]** Equipment designed to facilitate the transfer of a person from a wheelchair or other mobility aid to and from an amusement ride seat.

**[BG] TRANSIENT.** Occupancy of a dwelling unit or sleeping unit for not more than 30 days.

**[BG] TRANSIENT AIRCRAFT.** Aircraft based at another location and that is at the transient location for not more than 90 days.

**TRANSIENT LODGING.** A building or facility containing one or more guest room(s) for sleeping that provides accommodations that are primarily short-term in nature (generally 30 days or less). Transient lodging does not include residential dwelling units intended to be used as a residence, inpatient medical care facilities, licensed long-term care facilities, detention or correctional facilities, or private buildings or facilities that contain no more than five rooms for rent or hire and that are actually occupied by the proprietor as the residence of such proprietor.

**[DSA-AC]** See also the definition of Place of Public Accommodation.

**TRANSIT BOARDING PLATFORM. [DSA-AC]** A horizontal, generally level surface, whether raised above, recessed below or level with a transit rail, from which persons embark/disembark a fixed rail vehicle.

**TRANSITION PLATE. [DSA-AC]** A sloping pedestrian walking surface located at the end(s) of a gangway.

**TREATED WOOD.** See “Fire-retardant-treated wood” and “Preservative-treated wood.”

**TREAD.** The horizontal part of a step.

**TREATMENT OF WATER.** The process of conditioning and disinfection of pool water by means of a combination of filtration and the addition of chemicals to the water.

**[BF] TRIM.** Picture molds, chair rails, baseboards, handrails, door and window frames and similar decorative or protective materials used in fixed applications.

**[F] TROUBLE SIGNAL.** A signal initiated by the fire alarm system or device indicative of a fault in a monitored circuit or component.

**TTY.** An abbreviation for teletypewriter. Machinery that employs interactive text-based communication through the transmission of coded signals across the telephone network. TTys may include, for example, devices known as TDDs (telecommunication display devices or telecommunication devices for deaf persons) or computers with special modems. TTys are also called text telephones.

**[BS] TSUNAMI DESIGN GEODATABASE.** The ASCE database (version 2016-1.0) of Tsunami Design Zone maps and associated design data for the states of Alaska, California, Hawaii, Oregon and Washington.

**[BS] TSUNAMI DESIGN ZONE.** An area identified on the Tsunami Design Zone map between the shoreline and the inundation limit, within which certain structures designated in Chapter 16 are designed for or protected from inundation.

**[BS] TUBULAR DAYLIGHTING DEVICE (TDD).** A non-operable fenestration unit primarily designed to transmit

daylight from a roof surface to an interior ceiling via a tubular conduit. The basic unit consists of an exterior glazed weathering surface, a light-transmitting tube with a reflective interior surface, and an interior-sealing device such as a translucent ceiling panel. The unit can be factory assembled, or field-assembled from a manufactured kit.

**TURNOVER TIME.** The period of time, in hours, required to circulate a volume of water equal to the pool capacity.

**[BE] TYPE A UNIT.** A dwelling unit or sleeping unit designed and constructed for accessibility in accordance with this code and the provisions for Type A units in ICC A117.1.

**[BE] TYPE B UNIT.** A dwelling unit or sleeping unit designed and constructed for accessibility in accordance with this code and the provisions for Type B units in ICC A117.1, consistent with the design and construction requirements of the federal Fair Housing Act.

**[F] UMBRELLA STRUCTURE.** A structure, enclosure or shelter with or without sidewalls or drops, constructed of fabric or pliable material supported by a central pole or poles (see “Tent”).

**[BS] UNDERLAYMENT.** One or more layers of a material that is applied to a steep-slope roof covering deck under the roof covering and resists liquid water that penetrates the roof covering.

**UNIFORMITY COEFFICIENT.** The ratio of theoretical size of a sieve that will pass 60 percent of the sand to the theoretical size of sieve that will pass 10 percent.

**[BS] UNDERPINNING.** The alteration of an existing foundation to transfer loads to a lower elevation using new piers, piles or other permanent structural support elements installed below the existing foundation.

**UNIT SKYLIGHT.** See “Skylight, unit.”

**UNREASONABLE HARDSHIP.** 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.

**UNREINFORCED MASONRY BEARING WALL BUILDING** is a building with at least one unreinforced masonry bearing wall as the term is defined in the California Existing Building Code, at Title 24 of the California Code of Regulations. (Amended by Ord. No. 184,692, Eff. 12/30/16.)

**[F] UNSTABLE (REACTIVE) MATERIAL.** A material, other than an explosive, which in the pure state or as commercially produced, will vigorously polymerize, decompose,

## DEFINITIONS

condense or become self-reactive and undergo other violent chemical changes, including explosion, when exposed to heat, friction or shock, or in the absence of an inhibitor, or in the presence of contaminants, or in contact with incompatible materials. Unstable (reactive) materials are subdivided as follows:

**Class 1.** Materials that in themselves are normally stable but which can become unstable at elevated temperatures and pressure.

**Class 2.** Materials that in themselves are normally unstable and readily undergo violent chemical change but do not detonate. This class includes materials that can undergo chemical change with rapid release of energy at normal temperatures and pressures, and that can undergo violent chemical change at elevated temperatures and pressures.

**Class 3.** Materials that in themselves are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. This class includes materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures.

**Class 4.** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. This class includes materials that are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.

**[F] USE (MATERIAL).** Placing a material into action, including solids, liquids and gases.

**USE ZONE. [DSA-AC]** *The ground level area beneath and immediately adjacent to a play structure or play equipment that is designated by ASTM F1487 for unrestricted circulation around the play equipment and where it is predicted that a user would land when falling from or exiting the play equipment.*

**VALUATION THRESHOLD. [DSA-AC]** *An annually adjusted, dollar-amount figure used in part to determine the extent of required path of travel upgrades. The baseline valuation threshold of \$50,000 is based on the January 1981, "ENR US20 Cities" Average Construction Cost Index (CCI) of 3372.02 as published in Engineering News Record, McGraw Hill Publishing Company. The current valuation threshold is determined by multiplying the baseline valuation threshold by a ratio of the current year's January CCI to the baseline January 1981 CCI.*

**[BG] VAPOR DIFFUSION PORT.** An assembly constructed or installed within a roof assembly at an opening in the roof deck to convey water vapor from an unvented attic to the outside atmosphere.

**[BF] VAPOR PERMEABLE.** The property of having a moisture vapor permeance rating of 5 perms ( $2.9 \times 10^{-10}$  kg/Pa  $\times$  s  $\times$  m<sup>2</sup>) or greater, when tested in accordance with Procedure A or Procedure B of ASTM E96. A vapor permeable material permits the passage of moisture vapor.

**[BF] VAPOR RETARDER CLASS.** A measure of a material or assembly's ability to limit the amount of moisture that passes through that material or assembly. Vapor retarder class

shall be defined using the desiccant method with Procedure A of ASTM E96 as follows:

**Class I:** 0.1 perm or less.

**Class II:**  $0.1 < \text{perm} \leq 1.0$  perm.

**Class III:**  $1.0 < \text{perm} \leq 10$  perm.

**VARIABLE MESSAGE SIGNS (VMS). [DSA-AC]** *Electronic signs that have a message with the capacity to change by means of scrolling, streaming or paging across a background.*

**VARIABLE MESSAGE SIGN (VMS) CHARACTERS. [DSA-AC]** *Characters of an electronic sign are composed of pixels in an array. High resolution VMS characters have vertical pixel counts of 16 rows or greater. Low resolution VMS characters have vertical pixel counts of 7 to 15 rows.*

**[BS] VEGETATIVE ROOF.** An assembly of interacting components designed to waterproof a building's top surface that includes, by design, vegetation and related landscape elements.

**[BS] VEHICLE BARRIER.** A component or a system of components, near open sides or walls of garage floors or ramps that act as a restraint for vehicles.

**[BG] VEHICULAR GATE.** A gate that is intended for use at a vehicular entrance or exit to a facility, building or portion thereof, and that is not intended for use by pedestrian traffic.

**VEHICULAR OR PEDESTRIAN ARRIVAL POINTS. [HCD 1-AC]** *Public or resident parking areas, public transportation stops, passenger loading zones, and public streets or sidewalks.*

**VEHICULAR WAY.** *A route provided for vehicular traffic, such as in a street, driveway or parking facility.*

**[BF] VENEER.** A facing attached to a wall for the purpose of providing ornamentation, protection or insulation, but not counted as adding strength to the wall.

**[M] VENTILATION.** The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, any space.

**VERY HIGH FIRE HAZARD SEVERITY ZONE (VHFHSZ)** is a Fire District in the City of Los Angeles established by the Board of Forestry and the Office of the State Fire Marshal and described in Division 72, Article 1 of Chapter IX of the Los Angeles Municipal Code.

**[BF] VINYL SIDING.** A shaped material, made principally from rigid polyvinyl chloride (PVC), that is used as an exterior wall covering.

**[F] VISIBLE ALARM NOTIFICATION APPLIANCE.** A notification appliance that alerts by the sense of sight.

**WAITING ROOM. [SFM]** *Waiting room is a room or area normally provided with seating and used for persons waiting.*

**WALK. [DSA-AC]** *An exterior prepared surface for pedestrian use, including pedestrian areas such as plazas and courts. (As differentiated from the definition of "Sidewalk.") [HCD 1-AC]* *A surfaced pedestrian way not located contiguous to a street used by the public. (See also "Sidewalk.")*

**[BG] WALKWAY, PEDESTRIAN.** A walkway used exclusively as a pedestrian trafficway.

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## CHAPTER 7

# FIRE AND SMOKE PROTECTION FEATURES

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### User note:

*About this chapter:* Chapter 7 provides detailed requirements for fire-resistance-rated construction, including structural members, walls, partitions and horizontal assemblies. Other portions of the code describe where certain fire-resistance-rated elements are required. This chapter specifies how these elements are constructed, how openings in walls and partitions are protected and how penetrations of such elements are protected.

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### SECTION 701 GENERAL

**701.1 Scope.** The provisions of this chapter shall govern the materials, systems and assemblies used for structural fire resistance and fire-resistance-rated construction separation of adjacent spaces to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings.

### SECTION 702 MULTIPLE-USE FIRE ASSEMBLIES

**702.1 Multiple-use fire assemblies.** Fire assemblies that serve multiple purposes in a building shall comply with all of the requirements that are applicable for each of the individual fire assemblies.

### SECTION 703 FIRE-RESISTANCE RATINGS AND FIRE TESTS

**703.1 Scope.** Materials prescribed herein for fire resistance shall conform to the requirements of this chapter.

**703.2 Fire resistance.** The fire-resistance rating of building elements, components or assemblies shall be determined in accordance with Section 703.2.1 or 703.2.2 without the use of automatic sprinklers or any other fire suppression system being incorporated, or in accordance with Section 703.2.3.

**703.2.1 Tested assemblies.** A fire-resistance rating of building elements, components or assemblies shall be determined by the test procedures set forth in ASTM E119 or UL 263. The fire-resistance rating of penetrations and fire-resistant joint systems shall be determined in accordance with Sections 714 and 715, respectively.

**703.2.1.1 Nonsymmetrical wall construction.** Interior walls and partitions of nonsymmetrical construction shall be tested with both faces exposed to the furnace, and the assigned fire-resistance rating shall be the shortest duration obtained from the two tests conducted in compliance with ASTM E119 or UL 263. Where evidence is furnished to show that the wall was tested with the least fire-resistant side exposed to the furnace, subject to acceptance of the building official, the wall need not be subjected to tests from the opposite side (see Section 705.5 for exterior walls).

**703.2.1.2 Combustible components.** Combustible aggregates are permitted in gypsum and Portland cement concrete mixtures for fire-resistance-rated construction. Any component material or admixture is permitted in assemblies if the resulting tested assembly meets the fire-resistance test requirements of this code.

**703.2.1.3 Restrained classification.** Fire-resistance-rated assemblies tested under ASTM E119 or UL 263 shall not be considered to be restrained unless evidence satisfactory to the building official is furnished by the registered design professional showing that the construction qualifies for a restrained classification in accordance with ASTM E119 or UL 263. Restrained construction shall be identified on the construction documents.

**703.2.1.4 Supplemental features.** Where materials, systems or devices that have not been tested as part of a fire-resistance-rated assembly are incorporated into the building element, component or assembly, sufficient data shall be made available to the building official to show that the required fire-resistance rating is not reduced.

**703.2.1.5 Exterior bearing walls.** In determining the fire-resistance rating of exterior bearing walls, compliance with the ASTM E119 or UL 263 criteria for unexposed surface temperature rise and ignition of cotton waste due to passage of flame or gases is required only for a period of time corresponding to the required fire-resistance rating of an exterior nonbearing wall with the same fire separation distance, and in a building of the same group. Where the fire-resistance rating determined in accordance with this exception exceeds the fire-resistance rating determined in accordance with ASTM E119 or UL 263, the fire exposure time period, water pressure and application duration criteria for the hose stream test of ASTM E119 or UL 263 shall be based on the fire-resistance rating determined in accordance with this section.

**703.2.2 Analytical methods.** The fire resistance of building elements, components or assemblies established by an analytical method shall be by any of the methods listed in this section, based on the fire exposure and acceptance criteria specified in ASTM E119 or UL 263.

1. Fire-resistance designs documented in approved sources.

2. Prescriptive designs of fire-resistance-rated building elements, components or assemblies as prescribed in Section 721.
3. Calculations in accordance with Section 722.
4. Engineering analysis based on a comparison of building element, component or assemblies designs having fire-resistance ratings as determined by the test procedures set forth in ASTM E119 or UL 263.
5. Fire-resistance designs certified by an approved agency.

**703.2.3 Approved alternate method.** The fire resistance of building elements, components or assemblies not complying with CBC Section 703.2.1 or 703.2.2 shall be permitted to be established by an alternative protection method in accordance with Section 104.2.6.

**703.3 Noncombustibility tests.** The tests indicated in Section 703.3.1 shall serve as criteria for acceptance of building materials as set forth in Sections 602.2, 602.3 and 602.4 in Types I, II, III and IV construction. The term “noncombustible” does not apply to the flame spread characteristics of interior finish or trim materials. A material shall not be classified as a noncombustible building construction material if it is subject to an increase in combustibility or flame spread beyond the limitations herein established through the effects of age, moisture or other atmospheric conditions.

**703.3.1 Noncombustible materials.** Materials required to be noncombustible shall be tested in accordance with ASTM E136. Alternately, materials required to be noncombustible shall be tested in accordance with ASTM E2652 using the acceptance criteria prescribed by ASTM E136.

**Exception:** Materials having a structural base of noncombustible material as determined in accordance with ASTM E136, or with ASTM E2652 using the acceptance criteria prescribed by ASTM E136, with a surfacing of not more than 0.125 inch (3.18 mm) in thickness having a flame spread index not greater than 50 when tested in accordance with ASTM E84 or UL 723 shall be acceptable as noncombustible.

**703.4 Fire-resistance-rated glazing.** Fire-resistance-rated glazing, when tested in accordance with ASTM E119 or UL 263 and complying with the requirements of Section 707, shall be permitted. Fire-resistance-rated glazing shall bear a label marked in accordance with Table 716.1(1) issued by an agency and shall be permanently identified on the glazing.

**703.5 Marking and identification.** Where there is an accessible concealed floor, floor-ceiling or attic space, fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling in the concealed space. Such identification shall:

1. Be located within 15 feet (4572 mm) of the end of each wall and at intervals not exceeding 30 feet (9144 mm) measured horizontally along the wall or partition.

2. Include lettering not less than 3 inches (76 mm) in height with a minimum  $\frac{3}{8}$ -inch (9.5 mm) stroke in a contrasting color incorporating the suggested wording, “FIRE AND/OR SMOKE BARRIER—PROTECT ALL OPENINGS,” or other wording.

**703.6 Determination of noncombustible protection time contribution.** The time, in minutes, contributed to the fire-resistance rating by the noncombustible protection of mass timber building elements, components, or assemblies, shall be established through a comparison of assemblies tested using procedures set forth in ASTM E119 or UL 263. The test assemblies shall be identical in construction, loading and materials, other than the noncombustible protection. The two test assemblies shall be tested to the same criteria of structural failure with the following conditions:

1. Test Assembly 1 shall be without protection.
2. Test Assembly 2 shall include the representative noncombustible protection. The protection shall be fully defined in terms of configuration details, attachment details, joint sealing details, accessories and all other relevant details.

The noncombustible protection time contribution shall be determined by subtracting the fire-resistance time, in minutes, of Test Assembly 1 from the fire-resistance time, in minutes, of Test Assembly 2.

**703.7 Sealing of adjacent mass timber elements.** In buildings of Types IV-A, IV-B and IV-C construction, sealant or adhesive shall be provided to resist the passage of air in the following locations:

1. At abutting edges and intersections of mass timber building elements required to be fire-resistance rated.
2. At abutting intersections of mass timber building elements and building elements of other materials where both are required to be fire-resistance rated.

Sealants shall meet the requirements of ASTM C920. Adhesives shall meet the requirements of ASTM D3498.

**Exception:** Sealants or adhesives need not be provided where they are not a required component of a tested fire-resistance-rated assembly.

## SECTION 704 FIRE-RESISTANCE RATING OF STRUCTURAL MEMBERS

**704.1 Requirements.** The fire-resistance ratings of structural members and assemblies shall comply with this section and the requirements for the type of construction as specified in Table 601. The fire-resistance ratings shall be not less than the ratings required for the fire-resistance-rated assemblies supported by the structural members.

**Exception:** Fire barriers, fire partitions, smoke barriers and horizontal assemblies as provided in Sections 707.5, 708.4, 709.4 and 711.2, respectively.

**704.2 Column protection.** Where columns are required to have protection to achieve a fire-resistance rating, the entire column shall be provided individual encasement protection

system, the signal produced at the fire alarm control unit shall be a supervisory signal.

## SECTION 909 SMOKE CONTROL SYSTEMS

**[F] 909.1 Scope and purpose.** This section applies to mechanical or passive smoke control systems where they are required by other provisions of this code. The purpose of this section is to establish minimum requirements for the design, installation and acceptance testing of smoke control systems that are intended to provide a tenable environment for the evacuation or relocation of occupants. These provisions are not intended for the preservation of contents, the timely restoration of operations or for assistance in fire suppression or overhaul activities. Smoke control systems regulated by this section serve a different purpose than the smoke- and heat-removal provisions found in Section 910. Mechanical smoke control systems shall not be considered exhaust systems under Chapter 5 of the *California Mechanical Code*.

**[F] 909.2 General design requirements.** Buildings, structures or parts thereof required by this code to have a smoke control system or systems shall have such systems designed in accordance with the applicable requirements of Section 909 and the generally accepted and well-established principles of engineering relevant to the design. The construction documents shall include sufficient information and detail to adequately describe the elements of the design necessary for the proper implementation of the smoke control systems. These documents shall be accompanied by sufficient information and analysis to demonstrate compliance with these provisions.

**909.3 Special inspection and test requirements.** In addition to the ordinary inspection and test requirements, which buildings, structures and parts of buildings and structures are required to undergo, smoke-control systems subject to the provisions of LAMC Section 91.909 shall undergo special inspections and tests sufficient to verify the proper commissioning of the smoke-control design in its final installed condition. The design submission accompanying the construction documents shall clearly detail procedures and methods to be used and the items subject to the inspections and tests. The commissioning shall be in accordance with generally accepted practice and, where possible, based on published standards for the particular testing involved. The special inspections and tests required by this section shall be in compliance with Section 1704.

A copy of the final report of the results of the special inspections and tests shall be filed with the Superintendent of Building and the Fire Department and an identical copy shall be maintained in an approved location at the building.

**909.3.1 System testing.** Prior to the issuance of a Certificate of Occupancy, all of the smoke-control systems shall be tested as required by the Department of Building and Safety and the Fire Department and shall show compliance with the minimum standards of both Departments. The tests shall be conducted in the presence of an authorized representative from both Departments. A report of the results shall be submitted to both Departments.

**909.3.2 Periodic retesting.** After occupancy of the building, all operating parts of the smoke-control systems shall

be retested every six months in accordance with the retest requirements established by the Department of Building and Safety and the Fire Department. The retest shall be conducted by an approved inspection agency or by the owner or the owner's representative when so approved by both Departments. Also, a report of the test results shall be submitted to both Departments.

**[F] 909.4 Analysis.** A rational analysis supporting the types of smoke control systems to be employed, their methods of operation, the systems supporting them and the methods of construction to be utilized shall accompany the submitted construction documents and shall include, but not be limited to, the items indicated in Sections 909.4.1 through 909.4.7.

**[F] 909.4.1 Stack effect.** The system shall be designed such that the maximum probable normal or reverse stack effect will not adversely interfere with the system's capabilities. In determining the maximum probable stack effect, altitude, elevation, weather history and interior temperatures shall be used.

**[F] 909.4.2 Temperature effect of fire.** Buoyancy and expansion caused by the design fire in accordance with Section 909.9 shall be analyzed. The system shall be designed such that these effects do not adversely interfere with the system's capabilities.

**[F] 909.4.3 Wind effect.** The design shall consider the adverse effects of wind. Such consideration shall be consistent with the wind-loading provisions of Chapter 16.

**[F] 909.4.4 HVAC systems.** The design shall consider the effects of the heating, ventilating and air-conditioning (HVAC) systems on both smoke and fire transport. The analysis shall include all permutations of systems status. The design shall consider the effects of the fire on the HVAC systems.

**[F] 909.4.5 Climate.** The design shall consider the effects of low temperatures on systems, property and occupants. Air inlets and exhausts shall be located so as to prevent snow or ice blockage.

**[F] 909.4.6 Duration of operation.** All portions of active or engineered smoke control systems shall be capable of continued operation after detection of the fire event for a period of not less than either 20 minutes or 1.5 times the calculated egress time, whichever is greater.

**909.4.7 Smoke control system interaction.** The design shall consider the interaction effects of the operation of multiple smoke control systems for all design scenarios.

**[F] 909.5 Smoke barrier construction.** Smoke barriers required for passive smoke control and a smoke control system using the pressurization method shall comply with Section 709. The maximum allowable leakage area shall be the aggregate area calculated using the following leakage area ratios:

1. Walls  $A/A_w = 0.00100$
2. Interior exit stairways and ramps and exit passageways:  $A/A_w = 0.00035$
3. Enclosed exit access stairways and ramps and all other shafts:  $A/A_w = 0.00150$

4. Floors and roofs:  $A/A_F = 0.00050$

where:

$A$  = Total leakage area, square feet ( $m^2$ ).

$A_F$  = Unit floor or roof area of barrier, square feet ( $m^2$ ).

$A_w$  = Unit wall area of barrier, square feet ( $m^2$ ).

The leakage area ratios shown do not include openings due to gaps around doors and operable windows. The total leakage area of the smoke barrier shall be determined in accordance with Section 909.5.1 and tested in accordance with Section 909.5.2.

**[F] 909.5.1 Total leakage area.** Total leakage area of the barrier is the product of the smoke barrier gross area multiplied by the allowable leakage area ratio, plus the area of other openings such as gaps around doors and operable windows.

**[F] 909.5.2 Testing of leakage area.** Compliance with the maximum total leakage area shall be determined by achieving the minimum air pressure difference across the barrier with the system in the smoke control mode for mechanical smoke control systems utilizing the pressurization method. Compliance with the maximum total leakage area of passive smoke control systems shall be verified through methods such as door fan testing or other methods, as approved by the fire code official.

**[F] 909.5.3 Opening protection.** Openings in smoke barriers shall be protected by automatic-closing devices actuated by the required controls for the mechanical smoke control system. Door openings shall be protected by fire door assemblies complying with Section 716.

**Exceptions:**

1. Passive smoke control systems with automatic-closing devices actuated by spot-type smoke detectors listed for releasing service installed in accordance with Section 907.3. *When used in Group I-2 or I-2.1, such detectors shall activate the fire alarm system and shall close all the smoke barrier doors within the effected zone.*
2. Fixed openings between smoke zones that are protected utilizing the airflow method *in other than Group I-2 or I-2.1.*
3. In Group I-2, *I-2.1, R-2.1*; and ambulatory care facilities, where a pair of opposite-swinging doors are installed across a corridor in accordance with Section 909.5.3.1, the doors shall be protected in accordance with Section 716. The doors shall not have a center mullion. *Positive-latching devices are required. Doors installed across corridors shall comply with Section 1010.1.1.*
4. In Group I-2, *I-2.1, R-2.1* and ambulatory care facilities, where such doors are special-purpose horizontal sliding, accordion or folding door assemblies installed in accordance with Section 1010.3.3 and are automatic closing by smoke detection in accordance with Section 716.2.6.6, *they shall be protected in accordance with Section 716. Doors installed across corridors shall comply with Section 1010.1.1.*

5. Group I-3.

6. Openings between smoke zones with clear ceiling heights of 14 feet (4267 mm) or greater and bank-down capacity of greater than 20 minutes as determined by the design fire size.

7. *In Group I-2 or I-2.1, smoke damper activation may be accomplished by a fire alarm control unit provided that an open area smoke detection system is provided within all areas served by an HVAC system.*

**909.5.3.1 Group I-2, I-2.1, R-2.1 and ambulatory care facilities.** In Group I-2, *I-2.1, R-2.1*; and ambulatory care facilities, where doors are installed across a corridor, the doors shall be automatic closing by smoke detection in accordance with Section 716.2.6.5 and shall have a vision panel with fire-protection-rated glazing materials in fire protection-rated frames, the area of which shall not exceed that tested. *Vision panels consisting of fire-rated glazing in approved frames shall be provided in each cross-corridor swinging door and at each cross-corridor horizontal-sliding door in a smoke barrier. In Group I-2, where swinging doors are installed across a corridor, such doors shall be opposite swinging pairs.*

**[F] 909.5.3.2 Ducts and air transfer openings.** Ducts and air transfer openings are required to be protected with a minimum Class II, 250°F (121°C) smoke damper complying with Section 717.

**[F] 909.6 Pressurization method.** The primary mechanical means of controlling smoke shall be by pressure differences across smoke barriers. Maintenance of a tenable environment is not required in the smoke control zone of fire origin.

**[F] 909.6.1 Minimum pressure difference.** The pressure difference across a smoke barrier used to separate smoke zones shall be not less than 0.05-inch water gage (0.0124 kPa) in fully sprinklered buildings.

In buildings permitted to be other than fully sprinklered, the smoke control system shall be designed to achieve pressure differences not less than two times the maximum calculated pressure difference produced by the design fire.

**[F] 909.6.2 Maximum pressure difference.** The maximum air pressure difference across a smoke barrier shall be determined by required door-opening or closing forces. The actual force required to open exit doors when the system is in the smoke control mode shall be in accordance with Section 1010.1.3. Opening and closing forces for other doors shall be determined by standard engineering methods for the resolution of forces and reactions. The calculated force to set a side-hinged, swinging door in motion shall be determined by:

$$F = F_{dc} + K(WA\Delta P)/2(W-d) \quad \text{(Equation 9-1)}$$

where:

$A$  = Door area, square feet ( $m^2$ ).

$d$  = Distance from door handle to latch edge of door, feet (m).

$F$  = Total door opening force, pounds (N).

$F_{dc}$  = Force required to overcome closing device, pounds (N).

$K$  = Coefficient 5.2 (1.0).

$W$  = Door width, feet (m).

$\Delta P$  = Design pressure difference, inches of water (Pa).

**[F] 909.6.3 Pressurized stairways and elevator hoistways.** Where stairways or elevator hoistways are pressurized, such pressurization systems shall comply with Section 909 as smoke control systems, in addition to the requirements of Sections 909.20 of this code and 909.21 of the *California Fire Code*.

**[F] 909.7 Airflow design method.** Where approved by the fire code official, smoke migration through openings fixed in a permanently open position, which are located between smoke control zones by the use of the airflow method, shall be permitted. The design airflow shall be in accordance with this section. Airflow shall be directed to limit smoke migration from the fire zone. The geometry of openings shall be considered to prevent flow reversal from turbulent effects. Smoke control systems using the airflow method shall be designed in accordance with NFPA 92.

**[F] 909.7.1 Prohibited conditions.** This method shall not be employed where either the quantity of air or the velocity of the airflow will adversely affect other portions of the smoke control system, unduly intensify the fire, disrupt plume dynamics or interfere with exiting. Airflow toward the fire shall not exceed 200 feet per minute (1.02 m/s). Where the calculated airflow exceeds this limit, the airflow method shall not be used.

**[F] 909.8 Exhaust method.** Where approved by the fire code official, mechanical smoke control for large enclosed volumes, such as in atriums or malls, shall be permitted to utilize the exhaust method. Smoke control systems using the exhaust method shall be designed in accordance with NFPA 92.

**[F] 909.8.1 Smoke layer.** The height of the lowest horizontal surface of the smoke layer interface shall be maintained not less than 6 feet (1829 mm) above a walking surface that forms a portion of a required egress system within the smoke zone.

**[F] 909.9 Design fire.** The design fire shall be based on a rational analysis performed by the registered design professional and approved by the fire code official. The design fire shall be based on the analysis in accordance with Section 909.4 and this section.

**[F] 909.9.1 Factors considered.** The engineering analysis shall include the characteristics of the fuel, fuel load, effects included by the fire and whether the fire is likely to be steady or unsteady.

**[F] 909.9.2 Design fire fuel.** Determination of the design fire shall include consideration of the type of fuel, fuel spacing and configuration.

**[F] 909.9.3 Heat-release assumptions.** The analysis shall make use of best available data from approved sources and shall not be based on excessively stringent limitations of combustible material.

**[F] 909.9.4 Sprinkler effectiveness assumptions.** A documented engineering analysis shall be provided for conditions that assume fire growth is halted at the time of sprinkler activation.

**[F] 909.10 Equipment.** Equipment including, but not limited to, fans, ducts, automatic dampers and balance dampers, shall be suitable for its intended use, suitable for the probable exposure temperatures that the rational analysis indicates and as approved by the fire code official.

**[F] 909.10.1 Exhaust fans.** Components of exhaust fans shall be rated and certified by the manufacturer for the probable temperature rise to which the components will be exposed. This temperature rise shall be computed by:

$$T_s = (Q_c/mc) + (T_a) \quad \text{(Equation 9-2)}$$

where:

$c$  = Specific heat of smoke at smoke layer temperature, Btu/lb°F (kJ/kg × K).

$m$  = Exhaust rate, pounds per second (kg/s).

$Q_c$  = Convective heat output of fire, Btu/s (kW).

$T_a$  = Ambient temperature, °F (K).

$T_s$  = Smoke temperature, °F (K).

**Exception:** Reduced  $T_s$  as calculated based on the assurance of adequate dilution air.

**[F] 909.10.2 Ducts.** Duct materials and joints shall be capable of withstanding the probable temperatures and pressures to which they are exposed as determined in accordance with Section 909.10.1. Ducts shall be constructed and supported in accordance with the *California Mechanical Code*. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance with nationally accepted practices. Measured leakage shall not exceed 5 percent of design flow. Results of such testing shall be a part of the documentation procedure. Ducts shall be supported directly from fire-resistance-rated structural elements of the building by substantial, noncombustible supports.

**Exception:** Flexible connections, for the purpose of vibration isolation, complying with the *California Mechanical Code* and that are constructed of approved fire-resistance-rated materials.

**[F] 909.10.3 Equipment, inlets and outlets.** Equipment shall be located so as to not expose uninvolved portions of the building to an additional fire hazard. Outside air inlets shall be located so as to minimize the potential for introducing smoke or flame into the building. Exhaust outlets shall be so located as to minimize reintroduction of smoke into the building and to limit exposure of the building or adjacent buildings to an additional fire hazard.

**[F] 909.10.4 Automatic dampers.** Automatic dampers, regardless of the purpose for which they are installed within the smoke control system, shall be listed and conform to the requirements of approved, recognized standards.

**[F] 909.10.5 Fans.** In addition to other requirements, belt-driven fans shall have 1.5 times the number of belts required for the design duty, with the minimum number of belts being two. Fans shall be selected for stable perfor-

mance based on normal temperature and, where applicable, elevated temperature. Calculations and manufacturer's fan curves shall be part of the documentation procedures. Fans shall be supported and restrained by noncombustible devices in accordance with the requirements of Chapter 16.

Motors driving fans shall not be operated beyond their nameplate horsepower (kilowatts), as determined from measurement of actual current draw, and shall have a minimum service factor of 1.15.

**[F] 909.11 Standby power.** Smoke control systems shall be provided with standby power in accordance with Section 2702.

**909.11.1 Equipment room.** The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gears and ventilated directly to and from the exterior. The room shall be enclosed with not less than 1-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.

**[F] 909.11.2 Power sources and power surges.** Elements of the smoke control system relying on volatile memories or the like shall be supplied with uninterruptable power sources of sufficient duration to span 15-minute primary power interruption. Elements of the smoke control system susceptible to power surges shall be suitably protected by conditioners, suppressors or other approved means.

**[F] 909.12 Detection and control systems.** Fire detection systems providing control input or output signals to mechanical smoke control systems or elements thereof shall comply with the requirements of Section 907. Such systems shall be equipped with a control unit complying with UL 864 and listed as smoke control equipment.

**909.12.1 Verification.** Control systems for mechanical smoke control systems shall include provisions for verification. Verification shall include positive confirmation of actuation, testing, manual override and the presence of power downstream of all disconnects. A preprogrammed weekly test sequence shall report abnormal conditions audibly, visually and by printed report. The preprogrammed weekly test shall operate all devices, equipment and components used for smoke control.

*The status of dampers shall be determined using limit or proximity switches installed at the damper or incorporated into the damper actuator. Where multiple dampers are grouped together in an assembly requiring one or more actuators, each damper shall be independently controlled by a separate actuator and provided with an individual limit or proximity switch, or the dampers shall be linked together by a reliable and durable mechanical or otherwise permanent means into one or more groups, with each group provided with a common limit or proximity switch.*

*The status of fans shall be determined by sensing the air flow downstream of the fans using pressure differential switches or transmitters, or by other means of positive proof of air flow where approved by the enforcing authority.*

**Exception:** Where verification of individual components tested through the preprogrammed weekly testing sequence will interfere with, and produce unwanted effects to, normal building operation, such individual components are permitted to be bypassed from the preprogrammed weekly testing, where *approved* by the building official and in accordance with both of the following:

1. Where the operation of components is bypassed from the preprogrammed weekly test, presence of power downstream of all disconnects shall be verified weekly by a *listed* control unit.
2. Testing of all components bypassed from the preprogrammed weekly test shall be in accordance with Section 909.20.6 of the *California Fire Code*.

**[F] 909.12.2 Wiring.** In addition to meeting requirements of the *California Electrical Code*, all wiring, regardless of voltage, shall be fully enclosed within continuous raceways.

**[F] 909.12.3 Activation.** Smoke control systems shall be activated in accordance with this section.

**[F] 909.12.3.1 Pressurization, airflow or exhaust method.** Mechanical smoke control systems using the pressurization, airflow or exhaust method shall have completely automatic control.

**[F] 909.12.3.2 Passive method.** Passive smoke control systems actuated by approved spot-type detectors listed for releasing service shall be permitted.

**[F] 909.12.4 Automatic control.** Where completely automatic control is required or used, the automatic-control sequences shall be initiated from an appropriately zoned automatic sprinkler system complying with Section 903.3.1.1, manual controls provided with ready access for the fire department and any smoke detectors required by engineering analysis.

**[F] 909.13 Control air tubing.** Control air tubing shall be of sufficient size to meet the required response times. Tubing shall be flushed clean and dry prior to final connections and shall be adequately supported and protected from damage. Tubing passing through concrete or masonry shall be sleeved and protected from abrasion and electrolytic action.

**[F] 909.13.1 Materials.** Control-air tubing shall be hard-drawn copper, Type L, ACR in accordance with ASTM B42, ASTM B43, ASTM B68/B68M, ASTM B88, ASTM B251 and ASTM B280. Fittings shall be wrought copper or brass, solder type in accordance with ASME B16.18 or ASME B16.22. Changes in direction shall be made with appropriate tool bends. Brass compression-type fittings shall be used at final connection to devices; other joints shall be brazed using a BCuP-5 brazing alloy with solidus above 1,100°F (593°C) and liquids below 1,500°F (816°C). Brazing flux shall be used on copper-to-brass joints only.

**Exception:** Nonmetallic tubing used within control panels and at the final connection to devices provided that all of the following conditions are met:

1. Tubing shall comply with the requirements of Chapter 6 of the *California Mechanical Code*.

*solar-heating devices shall be deemed as complying with the requirements of this section. If nonrenewable fuel is used in these dwellings, rooms so heated shall meet current installation standards.*

3. **[JOSHPD 1, 1R, 2, 3, 4 & 5]** Space heating systems shall comply with the requirements of the California Mechanical Code.
4. **[HCD 1]** When a passive solar energy collector is designed as a conditioned area it shall comply with the California Energy Code. Nonconditioned passive solar energy collectors are exempt from compliance with the California Energy Code.

## SECTION 1204 LIGHTING

**1204.1 General.** Every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings in accordance with Section 1204.2 or shall be provided with artificial light in accordance with Section 1204.3. Exterior glazed openings shall open directly onto a public way or onto a yard or court in accordance with Section 1205.

**[HCD 1]** Glazed openings may open into a passive solar energy collector provided the area of exterior glazed openings in the passive solar energy collector is increased to compensate for the area required by the interior space.

**1204.2 Natural light.** The minimum net glazed area shall be not less than 8 percent of the floor area of the room served.

**1204.2.1 Adjoining spaces.** For the purpose of natural lighting, any room is permitted to be considered as a portion of an adjoining room where one-half of the area of the common wall is open and unobstructed and provides an opening of not less than one-tenth of the floor area of the interior room or 25 square feet (2.32 m<sup>2</sup>), whichever is greater.

**Exception:** Openings required for natural light shall be permitted to open into a sunroom with thermal isolation or a patio cover where the common wall provides a glazed area of not less than one-tenth of the floor area of the interior room or 20 square feet (1.86 m<sup>2</sup>), whichever is greater.

**1204.2.2 Exterior openings.** Exterior openings required by Section 1204.2 for natural light shall open directly onto a public way, yard or court, as set forth in Section 1205.

### Exceptions:

1. Required exterior openings are permitted to open into a roofed porch where the porch meets all of the following criteria:
  - 1.1. Abuts a public way, yard or court.
  - 1.2. Has a ceiling height of not less than 7 feet (2134 mm).
  - 1.3. Has a longer side at least 65 percent open and unobstructed.
2. Skylights are not required to open directly onto a public way, yard or court.

**1204.3 Artificial light.** Artificial light shall be provided that is adequate to provide an average illumination of 10 footcand-

dles (107 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

**1204.4 Stairway illumination.** Stairways within dwelling units and exterior stairways serving a dwelling unit shall have an illumination level on tread runs of not less than 1 footcandle (11 lux). Stairways in other occupancies shall be governed by Chapter 10.

**1204.4.1 Controls.** The control for activation of the required stairway lighting shall be in accordance with the California Electrical Code.

**1204.5 Emergency egress lighting.** The means of egress shall be illuminated in accordance with Section 1008.1.

**1204.6 Light pollution reduction.** **[BSC-CG]** See California Green Building Standards Code, Chapter 5, Division 5.1 for additional light pollution reduction requirements.

**1204.7 Campus lighting for parking facilities and primary walkways at California state universities, colleges and community colleges.** **[BSC]** Artificial light shall be provided for parking facilities and primary walkways at California State Universities, colleges and community colleges in accordance with provisions of this subsection. This subsection shall not apply to the University of California unless the Regents of the University of California, by resolution, make it applicable.

**1204.7.1 Lighting requirements.** Based on the recommendations of the most current edition of the Illumination Engineering Society lighting handbook, the following lighting standards shall be used for all new construction of open parking facilities, covered parking facilities and primary walkways:

1. Open and covered parking facilities.
  - 1.1. Medium-level activity usage when medium usage is present.
  - 1.2. High-level activity usage when high usage is present.
2. Primary campus walkways.
  - 2.1. Medium-level activity usage when medium usage is present.
  - 2.2. High-level activity usage when high usage is present.

## SECTION 1205 YARDS OR COURTS

**1205.1 General.** This section shall apply to yards and courts adjacent to exterior openings that provide natural light or ventilation. Such yards and courts shall be on the same lot as the building.

**1205.2 Yards.** Yards shall be not less than 3 feet (914 mm) in width for buildings two stories or less above grade plane. For buildings more than two stories above grade plane, the minimum width of the yard shall be increased at the rate of 1 foot (305 mm) for each additional story. For buildings exceeding 14 stories above grade plane, the required width of the yard shall be computed on the basis of 14 stories above grade plane.

**1205.3 Courts.** Courts shall be not less than 3 feet (914 mm) in width. Courts having windows opening on opposite sides shall be not less than 6 feet (1829 mm) in width. Courts shall be not less than 10 feet (3048 mm) in length unless bounded on one end by a public way or yard. For buildings more than two stories above grade plane, the court shall be increased 1 foot (305 mm) in width and 2 feet (610 mm) in length for each additional story. For buildings exceeding 14 stories above grade plane, the required dimensions shall be computed on the basis of 14 stories above grade plane.

**1205.3.1 Court access.** Access shall be provided to the bottom of courts for cleaning purposes.

**1205.3.2 Air intake.** Courts more than two stories in height shall be provided with a horizontal air intake at the bottom not less than 10 square feet (0.93 m<sup>2</sup>) in area and leading to the exterior of the building unless abutting a yard or public way.

**1205.3.3 Court drainage.** The bottom of every court shall be properly graded and drained to a public sewer or other approved disposal system complying with the *California Plumbing Code*.

## SECTION 1206 SOUND TRANSMISSION

**1206.1 Purpose and scope.** The purpose of this section is to establish uniform minimum noise insulation performance standards to protect persons within new hotels, motels, dormitories, residential care facilities, apartment houses, dwellings, private schools, and places of worship from the effects of excessive noise, including but not limited to, hearing loss or impairment and interference with speech and sleep.

**1206.1.2 Definitions.** The following special definitions shall apply to this section:

**SOUND TRANSMISSION CLASS (STC)** is a single-number rating used to compare walls, floor-ceiling assemblies and doors for their sound-insulating properties with respect to speech and small household appliance noise. The STC is derived from laboratory measurements of sound transmission loss across a series of 16 test bands. Laboratory STC ratings should be used to the greatest extent possible in determining that the design complies with this section.

**FIELD SOUND TRANSMISSION CLASS (FSTC)** is a single-number rating similar to STC, except that the transmission loss values used to derive the FSTC are measured in the field. All sound transmitted from the source room to the receiving room is assumed to be through the separating wall or floor-ceiling assembly. This section does not require determination of the FSTC, and field-measured values of noise reduction should not be reported as transmission loss.

**IMPACT INSULATION CLASS (IIC)** is a single-number rating used to compare the effectiveness of floor-ceiling assemblies in providing reduction of impact-generated sounds such as footsteps. The IIC is derived from laboratory measurements of impact sound pressure level

across a series of 16 test bands using a standardized tapping machine. Laboratory IIC ratings should be used to the greatest extent possible in determining that the design complies with this section.

**FIELD IMPACT INSULATION CLASS (FIIC)** is a single-number rating similar to the IIC, except that the impact sound pressure levels are measured in the field.

**NOISE ISOLATION CLASS (NIC)** is a single-number rating derived from measured values of noise reduction between two enclosed spaces that are connected by one or more paths. The NIC is not adjusted or normalized to a standard reverberation time.

**NORMALIZED NOISE ISOLATION CLASS (NNIC)** is a single-number rating similar to the NIC, except that the measured noise reduction values are normalized to a reverberation time of one-half second.

**NORMALIZED A-WEIGHTED SOUND LEVEL DIFFERENCE (D<sub>n</sub>)** means for a specified source room sound spectrum, D<sub>n</sub> is the difference, in decibels, between the average sound levels produced in two rooms after adjustment to the expected acoustical conditions when the receiving room under test is normally furnished.

**DAY-NIGHT AVERAGE SOUND LEVEL (L<sub>dn</sub>)** is the A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10 p.m. to 7 a.m.).

**COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)** is a metric similar to the L<sub>dn</sub>, except that a 5 dB adjustment is added to the equivalent continuous sound exposure level for evening hours (7 p.m. to 10 p.m.) in addition to the 10 dB nighttime adjustment used in the L<sub>dn</sub>.

**1206.2 Airborne sound.** Walls, partitions and floor-ceiling assemblies separating dwelling units and sleeping units from each other or from public or service areas shall have a sound transmission class of not less than 50 where tested in accordance with ASTM E90, or have a Normalized Noise Isolation Class (NNIC) rating of not less than 45 if field tested, in accordance with ASTM E336 for airborne noise. Alternatively, the sound transmission class of walls, partitions and floor-ceiling assemblies shall be established by engineering analysis based on a comparison of walls, partitions and floor-ceiling assemblies having sound transmission class ratings as determined by the test procedures set forth in ASTM E90. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. This requirement shall not apply to entrance doors; however, such doors shall be tight fitting to the frame and sill.

**1206.2.1 Masonry.** The sound transmission class of concrete masonry and clay masonry assemblies shall be calculated in accordance with TMS 302 or determined through testing in accordance with ASTM E90.

**1206.3 Structure-borne sound.** Floor-ceiling assemblies between dwelling units and sleeping units or between a dwelling unit or sleeping unit and a public or service area



within the structure shall have an impact insulation class rating of not less than 50 where tested in accordance with ASTM E492, or have a Normalized Impact Sound Rating (NISR) of not less than 45 if field tested in accordance with ASTM E1007. Alternatively, the impact insulation class of floor-ceiling assemblies shall be established by engineering analysis based on a comparison of floor-ceiling assemblies having impact insulation class ratings as determined by the test procedures in ASTM E492.

**Exception:** *Impact sound insulation is not required for floor-ceiling assemblies over nonhabitable rooms or spaces not designed to be occupied, such as garages, mechanical rooms or storage areas.*

**1206.4 Allowable interior noise levels.** *Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric shall be either the day-night average sound level (Ldn) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.*

**1206.5 Acoustical control. [BSC-CG]** *See California Green Building Standards Code, Chapter 5, Division 5.5 for additional sound transmission requirements.*

**1206.6 Relevant standards.** The current edition of the following standards is generally applicable for determining compliance with this section, and copies may be obtained from ASTM International at 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959: ASTM C634, Standard Terminology Relating to Building and Environmental Acoustics; ASTM E90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; ASTM E336, Standard Test Method for Measurement of Airborne Sound Attenuation Between Rooms in Buildings; ASTM E413, Classification for Rating Sound Insulation; ASTM E492, Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine; ASTM E497, Standard Recommended Practice for Installation of Fixed Partitions of Light Frame Type for the Purpose of Conserving Their Sound Insulation Efficiency; ASTM E597, Recommended Practice for Determining a Single-Number Rating of Airborne Sound Isolation in Multi-unit Building Specifications; ASTM E966, Standard Guide for Field Measurements of Airborne Sound Insulation of Building Facades and Facade Elements; ASTM E989, Standard Classification for Determination of Impact Insulation Class (IIC); ASTM E1007, Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures; and ASTM E1014, Standard Guide for Measurement of Outdoor A-Weighted Sound Levels.

**1206.7 Complaints.** Where a complaint as to noncompliance with this division requires a field test, the complainant shall post a bond or adequate funds in escrow for the cost of the field test. Such costs shall be chargeable to the complainant if the field tests show compliance with this division. If the tests show noncompliance, testing costs shall be borne to the owner or builder.

**1206.8 Local modification.** The governing body of any city or county or city and county may, by ordinance, adopt changes or modifications to the requirements of this section as set forth in Section 17922.7 of the Health and Safety Code.

#### **1206.9 Interdwelling sound transmission control.**

**1206.9.1 Wall and floor-ceiling assemblies.** Wall and floor-ceiling assemblies separating dwelling units or guest rooms from each other and from public or service areas such as interior corridors, garages and mechanical spaces shall provide airborne sound insulation for walls, and both airborne and impact sound insulation for floor-ceiling assemblies.

**Exception:** Impact sound insulation is not required for floor-ceiling assemblies over nonhabitable rooms or spaces not designed to be occupied, such as garages, mechanical rooms or storage areas.

**1206.10 Airborne sound insulation.** All such acoustically rated separating wall and floor-ceiling assemblies shall provide airborne sound insulation equal to that required to meet a sound transmission class (STC) rating of 50 based on laboratory tests as defined in ASTM E90 and E413. Field-tested assemblies shall meet a noise isolation class (NIC) rating of 45 for occupied units and a normalized noise isolation class (NNIC) rating of 45 for unoccupied units as defined in ASTM E336 and E413. ASTM E597 may be used as simplified procedure for field tests of the airborne sound isolation between rooms in unoccupied buildings. In such tests, the minimum value of  $D_n$  is 45 dB for compliance. Entrance doors from interior corridors together with their perimeter seals shall have STC ratings not less than 26. Such tested doors shall operate normally with commercially available seals. Solid-core wood-slab doors  $1\frac{3}{8}$  inches (35 mm) thick minimum or 18 gauge insulated steel-slab doors with compression seals all around, including the threshold, may be considered adequate without other substantiating information. Field tests of corridor walls should not include segments with doors. If such tests are impractical, however, the NIC or NNIC rating for the composite wall-door assembly shall not be less than 30. Penetrations or openings in construction assemblies for piping, electrical devices, recessed cabinets, bathtubs, soffits or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings.

**1206.11 Impact sound insulation.** All acoustically rated separating floor-ceiling assemblies shall provide impact sound insulation equal to that required to meet a IIC rating of 50 based on laboratory tests as defined in ASTM E492 and E989. Field-tested assemblies shall meet a field impact insulation class (FIIC) rating of 45 for both occupied and unoccupied units as defined in ASTM E1007 and E989, with the exception that the measured impact sound pressure levels shall not be normalized to a standard amount of absorption in the receiving room. Floor coverings may be included in the assembly to obtain the required ratings. These coverings must be retained as a permanent part of the assembly and may be replaced only by other floor coverings that provide the required impact sound insulation.

**1206.12 Tested assemblies.** Laboratory-tested wall or floor-ceiling designs having STC or IIC ratings of 50 or more may be used by the Building Official to determine compliance with this section during plan review phase. Field tests shall be required by the Building Official when evidence of sound leaks or flanking paths is noted, or when the separating assembly is not built according to the approved design. Generic sound transmission control systems as listed in the Catalog of STC and IIC Ratings for Wall and Floor-Ceiling Assemblies, as published by the Office of Noise Control, California Department of Health Services, or the Fire Resistance Design Manual, as published by the Gypsum Association, may be used to evaluate construction assemblies for their sound transmission properties. Other tests from recognized laboratories may also be used. When ratings for essentially similar assemblies differ, and when ratings are below STC or IIC 50, field testing may be used to demonstrate that the building complies with this section. For field testing, rooms should ideally be large and reverberant for reliable measurements to be made in all test bands. This is often not possible for bathrooms, kitchens, hallways or rooms with large amounts of sound-absorptive materials. Field test results should, however, report the measured values in all bands, noting those which do not meet relevant ASTM criteria for diffusion. It should be noted that STC ratings do not adequately characterize the sound insulation of construction assemblies when the intruding noise is predominantly low-pitched, as is often produced by amplified music or by large pieces of mechanical equipment. It should also be noted that the transmission of impact sound from a standardized tapping machine may vary considerably for a given design due to differences in specimen size, flanking transmission through associated structure and the acoustical response of the room below. Laboratory IIC values should therefore be used with caution when estimating the performance of hard-surfaced floors in the field. Additionally, IIC ratings may not always be adequate to characterize the subjectively annoying creak or boom generated by footfalls on a lumber floor.

**1206.13 Certification.** Field testing, when required, shall be done under the supervision of a person experienced in the field of acoustical testing and engineering, who shall forward test results to the Building Official showing that the sound isolation requirements stated above have been met. Documentation of field test results should generally follow the requirements outlined in relevant ASTM standards.

**1206.14 Exterior sound transmission control.**

**1206.14.1 Application consistent with local land-use standards.** All structures identified in LAMC Subsection 91.1206.1 located in noise critical areas, such as proximity to highways, country roads, city streets, railroads, rapid transit lines, airports or industrial areas shall be designed to prevent the intrusion of exterior noises beyond prescribed levels. Proper design shall include, but shall not be limited to, orientation of the structure, setbacks, shielding and sound insulation of the building itself.

**1206.14.2 Allowable interior noise levels.** Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric shall be either

the day-night average sound level ( $L_{dn}$ ) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

**Note:**  $L_{dn}$  is the preferred metric for implementing these standards. Worst-case noise levels, either existing or future, shall be used as the basis for determining compliance with this section. Future noise levels shall be predicted for a period of at least 10 years from the time of building permit application.

**1206.14.3 Airport noise sources.** Residential structures and all other structures identified in LAMC Subsection 91.1206.1 located where the annual  $L_{dn}$  or CNEL (as defined in California Code of Regulations, Title 21, Division 2.5, Chapter 6, Section 5001) exceeds 60 dB, shall require an acoustical analysis showing that the proposed design will achieve the prescribed allowable interior level.

**Exception:** New single-family detached dwellings and all non-residential noise sensitive structures located outside the noise impact boundary of 65 dB CNEL are exempt from LAMC Section 91.1206.

Alterations or additions to all noise sensitive structures, within the 65 dB and greater CNEL shall comply with LAMC Section 91.1206. If the addition or alteration cost exceeds 75% of the replacement cost of the existing structure, then the entire structure must comply with LAMC Section 91.1206.

For public-use airports or heliports, the  $L_{dn}$  or CNEL shall be determined from the Aircraft Noise Impact Area Map prepared by the Airport Authority. For military bases, the  $L_{dn}$  shall be determined from the facility Air Installation Compatible Use Zone (AICUZ) plan. For all other airports or heliports, or public-use airports or heliports for which a land-use plan has not been developed, the  $L_{dn}$  or CNEL shall be determined from the noise element of the general plan of the local jurisdiction.

When aircraft noise is not the only significant source, noise levels from all sources shall be added to determine the composite site noise level.

**1206.15.4 Other noise sources.** All structures identified in LAMC Subsection 91.1206.1 located where the  $L_{dn}$  or CNEL exceeds 60 dB shall require an acoustical analysis showing that the proposed design will limit exterior noise to the prescribed allowable interior level. The noise element of the local general plan shall be used to the greatest extent possible to identify sites with noise levels potentially greater than 60 dB.

**1206.16 Compliance.** Evidence of compliance shall be submitted with the application for a building permit for all structures identified in LAMC Subsection 91.1206.1. Evidence of compliance shall consist of the submittal of an acoustical analysis report prepared under the supervision of a person experienced in the field of acoustical engineering or the use of prescriptive standards as determined by the Superintendent of Building for residential structures. The report shall show topographical relationships of noise sources and dwelling sites, identification of noise sources and their characteristics, predicted noise spectra and levels at the exterior of

the proposed structure considering present and future land usage, the basis for the prediction (measured or obtained from published data), the noise attenuation measures to be applied, and an analysis of the noise insulation effectiveness of the proposed construction showing that the prescribed interior level requirements are met.

If interior allowable noise levels are met by requiring that windows be unopenable or closed, the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment. The ventilation system must not compromise the interior room noise reduction.

**1206.17 Field testing.** When inspection indicates that the construction is not in accordance with the approved design, or that the noise reduction is compromised due to sound leaks or flanking paths, field testing may be required. A test report showing compliance or noncompliance with prescribed interior allowable levels shall be submitted to the building official. Measurements of outdoor sound levels shall generally follow the guidelines in ASTM E1014. Field measurements of the A-weighted airborne sound insulation of buildings from exterior sources shall generally follow the guidelines in ASTM E966. For the purpose of this standard, sound level differences measured in unoccupied units shall be normalized to a receiving room reverberation time of one-half second. Sound level differences measured in occupied units shall not be normalized to a standard reverberation time.

## SECTION 1207 ENHANCED CLASSROOM ACOUSTICS

**1207.1 General.** Enhanced classroom acoustics, where required by this section, shall comply with Section 808 of ICC A117.1.

**1207.2 Where required.** In Group E occupancies, enhanced classroom acoustics shall be provided in all classrooms with a volume of 20,000 cubic feet (566 m<sup>3</sup>) or less.

## SECTION 1208 INTERIOR SPACE DIMENSIONS

**1208.1 Minimum room widths.** Habitable spaces, other than a kitchen, shall be not less than 7 feet (2134 mm) in any plan dimension. Kitchens shall have a clear passageway of not less than 3 feet (914 mm) between counter fronts and appliances or counter fronts and walls.

*[HCD 1] For limited-density owner-built rural dwellings, there shall be no requirements for room dimensions, provided there is adequate light and ventilation and adequate means of egress.*

**1208.2 Minimum ceiling heights.** Occupiable spaces, habitable spaces and corridors shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) above the finished floor. Bathrooms, toilet rooms, kitchens, storage rooms and laundry

rooms shall have a ceiling height of not less than 7 feet (2134 mm) above the finished floor.

### Exceptions:

1. In one- and two-family dwellings, beams or girders spaced not less than 4 feet (1219 mm) on center shall be permitted to project not more than 6 inches (152 mm) below the required ceiling height.

(Text continues on page 12-9)

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## CHAPTER 13

# ENERGY EFFICIENCY

### SECTION 1300 GENERAL

In order to comply with the purpose of this division, buildings shall be designed to comply with the requirements of Part 6, Title 24 of the California Building Standards Code - California Energy Code.

### SECTION 1301 SOLAR ENERGY COLLECTORS

Approved collectors which function as building components shall comply with the applicable provisions of the Code.

Approved collectors located above or upon a roof and not functioning as building components shall not reduce the required fire-resistant or fire-retardant classification of the roof-covering materials.



## CHAPTER 14

# EXTERIOR WALLS

### User notes:

**About this chapter:** Chapter 14 addresses requirements for exterior walls of buildings. Minimum standards for wall covering materials, such as material performance and fire resistance, installation of wall coverings and the ability of the wall to provide weather protection are provided. This chapter also contains limitations on the areas and heights of combustible wall coverings based on fire separation distances, radiant heat exposure and surface burning characteristics.

**Code development reminder:** Code change proposals to sections preceded by the designation [BS] will be considered by the IBC—Structural Code Development Committee during the 2022 (Group B) Code Development Cycle.

### SECTION 1401 GENERAL

**1401.1 Scope.** The provisions of this chapter shall establish the minimum requirements for exterior walls; exterior wall coverings; exterior wall openings; exterior windows and doors; and architectural trim.

### SECTION 1402 PERFORMANCE REQUIREMENTS

**1402.1 General.** The provisions of this section shall apply to exterior walls, wall coverings and components thereof.

**1402.2 Weather protection.** Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in Section 1404.4. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1403.2, and a means for draining water that enters the assembly to the exterior. Protection against condensation in the exterior wall assembly shall be provided in accordance with Section 1404.3.

#### Exceptions:

1. A weather-resistant exterior wall envelope shall not be required over concrete or masonry walls designed in accordance with Chapters 19 and 21, respectively.
2. Compliance with the requirements for a means of drainage, and the requirements of Sections 1403.2 and 1404.4, shall not be required for an exterior wall envelope that has been demonstrated through testing to resist wind-driven rain, including joints, penetrations and intersections with dissimilar materials, in accordance with ASTM E331 under the following conditions:

The exterior wall envelope design shall be considered to resist wind-driven rain where the results of testing indicate that water did not penetrate control joints in the exterior wall

envelope, joints at the perimeter of openings or intersections of terminations with dissimilar materials.

- 2.1. Exterior wall envelope test assemblies shall include not fewer than one opening, one control joint, one wall/eave interface and one wall sill. Tested openings and penetrations shall be representative of the intended end-use configuration.
- 2.2. Exterior wall envelope test assemblies shall be not less than 4 feet by 8 feet (1219 mm by 2438 mm) in size.
- 2.3. Exterior wall envelope assemblies shall be tested at a minimum differential pressure of 6.24 pounds per square foot (0.297 kN/m<sup>2</sup>).
- 2.4. Exterior wall envelope assemblies shall be subjected to a minimum test exposure duration of 2 hours.
3. Exterior insulation and finish systems (EIFS) complying with Section 1407.4.1.

**1402.2.1 [BSC-CG]** See California Green Building Standards Code, Chapter 5, Division 5.4 for additional weather protection requirements.

**1402.3 Structural.** Exterior walls, and the associated openings, shall be designed and constructed to resist safely the superimposed loads required by Chapter 16 of the LAMC.

In no case shall veneer be considered as part of the wall in computing strength or deflection, nor shall it be considered a part of the required thickness of the wall. Deflection of lateral support of veneer, including wood studs, shall be no greater than  $h/500$ .

**1402.4 Fire resistance.** Exterior walls shall be fire-resistance rated as required by other sections of this code with opening protection as required by Chapter 7.

**1402.5 Water-resistive barriers.** Exterior walls on buildings of Type I, II, III or IV construction that are greater than 40 feet (12 192 mm) in height above grade plane and contain a combustible water-resistive barrier shall be tested in accordance with and comply with the acceptance criteria of NFPA 285. Combustibility shall be determined in accordance with Section 703.3. For the purposes of this section, fenestration

## EXTERIOR WALLS

products, flashing of fenestration products and water-resistive-barrier flashing and accessories at other locations, including through wall flashings, shall not be considered part of the water-resistive barrier.

### Exceptions:

1. Walls in which the water-resistive barrier is the only combustible component and the exterior wall has a wall covering of brick, concrete, stone, terra cotta, stucco or steel with minimum thicknesses in accordance with Table 1404.2.
2. Walls in which the water-resistive barrier is the only combustible component and the water-resistive barrier complies with the following:
  - 2.1. A peak heat release rate of less than 150 kW/m<sup>2</sup>, a total heat release of less than 20 MJ/m<sup>2</sup> and an effective heat of combustion of less than 18 MJ/kg when tested on specimens at the thickness intended for use, in accordance with ASTM E1354, in the horizontal orientation and at an incident radiant heat flux of 50 kW/m<sup>2</sup>.
  - 2.2. A flame spread index of 25 or less and a smoke-developed index of 450 or less as determined in accordance with ASTM E84 or UL 723, with test specimen preparation and mounting in accordance with ASTM E2404.

**[BS] 1402.6 Flood resistance.** For buildings in flood hazard areas as established in Section 1612.3, exterior walls extending below the elevation required by Section 1612 shall be constructed with flood-damage-resistant materials.

**[BS] 1402.7 Flood resistance for coastal high-hazard areas and coastal A zones.** For buildings in coastal high-hazard areas and coastal A zones as established in Section 1612.3, electrical, mechanical and plumbing system components shall not be mounted on or penetrate through exterior walls that are designed to break away under flood loads.

## SECTION 1403 MATERIALS

**1403.1 General.** Materials used for the construction of *exterior walls* shall comply with the provisions of this section. Materials not prescribed herein shall be permitted, provided that any such alternative has been approved.

**1403.2 Water-resistive barrier.** Not fewer than one layer of water-resistive barrier material shall be attached to the studs or sheathing, with flashing as described in Section 1404.4, in such a manner as to provide a continuous water-resistive barrier behind the exterior wall veneer.

Water-resistive barriers shall comply with one of the following:

1. No. 15 felt complying with ASTM D226, Type 1.
2. ASTM E2556, Type I or II.
3. ASTM E331 in accordance with Section 1402.2.
4. Other approved materials installed in accordance with the manufacturer's installation instructions.

**[BS] 1403.3 Wood.** Exterior walls of wood construction shall be designed and constructed in accordance with Chapter 23.

**[BS] 1403.3.1 Basic hardboard.** Basic hardboard shall conform to the requirements of ANSI A135.4.

**[BS] 1403.3.2 Hardboard siding.** Hardboard siding shall conform to the requirements of ANSI A135.6 and, where used structurally, shall be so identified by the label of an approved agency.

**[BS] 1403.4 Masonry.** Exterior walls of masonry construction shall be designed and constructed in accordance with this section and Chapter 21. Masonry units, mortar and metal accessories used in anchored and adhered veneer shall meet the physical requirements of Chapter 21. The backing of anchored and adhered veneer shall be of concrete, masonry, steel framing or wood framing. Continuous insulation meeting the applicable requirements of this code shall be permitted between the backing and the masonry veneer.

**[BS] 1403.5 Metal.** Exterior walls constructed of cold-formed or structural steel shall be designed in accordance with Chapter 22. Exterior walls constructed of aluminum shall be designed in accordance with Chapter 20.

**[BS] 1403.5.1 Aluminum siding.** Aluminum siding shall conform to the requirements of AAMA 1402.

**[BS] 1403.5.2 Cold-rolled copper.** Copper shall conform to the requirements of ASTM B370.

**[BS] 1403.5.3 Lead-coated copper.** Lead-coated copper shall conform to the requirements of ASTM B101.

**[BS] 1403.6 Concrete.** Exterior walls of concrete construction shall be designed and constructed in accordance with Chapter 19.

**[BS] 1403.7 Glass-unit masonry** Exterior walls of glass-unit masonry shall be designed and constructed in accordance with Chapter 21.

**1403.8 Plastics.** Plastic panel, apron or spandrel walls as defined in this code shall not be limited in thickness, provided that such plastics and their assemblies conform to the requirements of Chapter 26 and are constructed of approved weather-resistant materials of adequate strength to resist the wind loads for cladding specified in Chapter 16.

**1403.9 Vinyl siding.** Vinyl siding shall be certified and labeled as conforming to the requirements of ASTM D3679 by an approved quality control agency.

**1403.10 Fiber-cement siding.** Fiber-cement siding shall conform to the requirements of ASTM C1186, Type A (or ISO 8336, Category A), and shall be so identified on labeling listing an approved quality control agency.

**1403.11 Exterior insulation and finish systems.** Exterior insulation and finish systems (EIFS) and exterior insulation and finish systems (EIFS) with drainage shall comply with Section 1407.

**1403.12 Polypropylene siding.** Polypropylene siding shall be certified and labeled as conforming to the requirements of ASTM D7254 and those of Section 1403.12.1 or 1403.12.2 by an approved quality control agency. Polypropylene siding shall be installed in accordance with the requirements of



**1504.4.3 Metal roof shingles.** Metal roof shingles applied to a solid or closely fitted deck shall be tested in accordance with ASTM D3161, FM 4474, UL 580 or UL 1897. Metal roof shingles tested in accordance with ASTM D3161 shall meet the classification requirements of Table 1504.2 for the appropriate maximum basic wind speed and the metal shingle packaging shall bear a label to indicate compliance with ASTM D3161 and the required classification in Table 1504.2.

**1504.5 Ballasted low-slope single-ply roof systems.** Ballasted low-slope (roof slope < 2:12) single-ply roof system coverings installed in accordance with Section 1507.12 shall be designed in accordance with ANSI/SPRI RP-4.

**1504.6 Edge systems for low-slope roofs.** Metal edge systems, except gutters and counterflashing, installed on built-up, modified bitumen and single-ply roof systems having a slope less than 2 units vertical in 12 units horizontal (2:12) shall be designed and installed for wind loads in accordance with Chapter 16 and tested for resistance in accordance with Test Methods RE-1, RE-2 and RE-3 of ANSI/SPRI ES-1, except basic design wind speed,  $V$ , shall be determined from Figures 1609.3(1) through 1609.3(12) as applicable.

**1504.6.1 Gutter securement for low-slope roofs.** Gutters that are used to secure the perimeter edge of the roof membrane on low-slope (less than 2:12 slope) built-up, modified bitumen, and single-ply roofs, shall be designed, constructed and installed to resist wind loads in accordance with Section 1609 and shall be tested in accordance with Test Methods G-1 and G-2 of SPRI GT-1.

**1504.7 Physical properties.** Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with

Section 1507 shall demonstrate physical integrity over the working life of the roof based on 2,000 hours of exposure to accelerated weathering tests conducted in accordance with ASTM G152, ASTM G154 or ASTM G155. Those roof coverings that are subject to cyclical flexural response due to wind loads shall not demonstrate any significant loss of tensile strength for unreinforced membranes or breaking strength for reinforced membranes when tested as herein required.

**1504.8 Impact resistance.** Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with Section 1507 shall resist impact damage based on the results of tests conducted in accordance with ASTM D3746, ASTM D4272 or the “Resistance to Foot Traffic Test” in FM 4470.

**1504.9 Wind resistance of aggregate-surfaced roofs.** Parapets shall be provided for aggregate surfaced roofs and shall comply with Table 1504.9.

## SECTION 1505 FIRE CLASSIFICATION

**1505.1 General.** Roof assemblies shall be divided into the classes defined below. Class A, B and C roof assemblies and roof coverings required to be listed by this section shall be tested in accordance with ASTM E108 or UL 790. The minimum roof coverings installed on buildings shall comply with CBC Table 1505.1 based on the type of construction of the building.

**Exception:** Skylights and sloped glazing shall comply with Division 12, Article 1, Chapter IX of the LAMC.

No wood shake or wood shingle roof covering is permitted anywhere in the City.

**TABLE 1504.9  
MINIMUM REQUIRED PARAPET HEIGHT (INCHES) FOR AGGREGATE SURFACED ROOFS<sup>a, b, c</sup>**

AGGREGATE SIZE	MEAN ROOF HEIGHT (ft)	WIND EXPOSURE AND BASIC DESIGN WIND SPEED (MPH)																	
		Exposure B									Exposure C <sup>d</sup>								
		≤ 95	100	105	110	115	120	130	140	150	≤ 95	100	105	110	115	120	130	140	150
ASTMD1863 (No. 7 or No. 67)	15	2	2	2	2	12	12	16	20	24	2	13	15	18	20	23	27	32	37
	20	2	2	2	2	12	14	18	22	26	12	15	17	19	22	24	29	34	39
	30	2	2	2	13	15	17	21	25	30	14	17	19	22	24	27	32	37	42
	50	12	12	14	16	18	21	25	30	35	17	19	22	25	28	30	36	41	47
	100	14	16	19	21	24	27	32	37	42	21	24	26	29	32	35	41	47	53
	150	17	19	22	25	27	30	36	41	46	23	26	29	32	35	38	44	50	56
ASTMD1863 (No. 6)	15	2	2	2	2	12	12	12	15	18	2	2	2	13	15	17	22	26	30
	20	2	2	2	2	12	12	13	17	21	2	2	12	15	17	19	23	28	32
	30	2	2	2	2	12	12	16	20	24	2	12	14	17	19	21	26	31	35
	50	12	12	12	12	14	16	20	24	28	12	15	17	19	22	24	29	34	39
	100	12	12	14	16	19	21	26	30	35	16	18	21	24	26	29	34	39	45
	150	12	14	17	19	22	24	29	34	39	18	21	23	26	29	32	37	43	48

For SI: 1 inch = 25.4 mm; 1 foot = 304.8 mm; 1 mile per hour = 0.447 m/s.

a. Interpolation shall be permitted for mean roof height and parapet height.

b. Basic design wind speed,  $V$ , and wind exposure shall be determined in accordance with Section 1609.

c. Where the minimum required parapet height is indicated to be 2 inches (51 mm), a gravel stop shall be permitted and shall extend not less than 2 inches (51 mm) from the roof surface and not less than the height of the aggregate.

d. For Exposure D, add 8 inches (203 mm) to the parapet height required for Exposure C and the parapet height shall not be less than 12 inches (305 mm).

**TABLE 1505.1  
MINIMUM ROOF COVERING  
CLASSIFICATION FOR TYPES OF CONSTRUCTION<sup>a</sup>**

IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
B	B	B	C	B	C	B	B	C

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m<sup>2</sup>.

a. Unless otherwise required in accordance with *Chapter 7A* or due to the location of the building within a fire district in accordance with Appendix D.

**1505.1.1 Roof coverings within fire hazard severity zones.** *The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class A.*

**Exception:** *The requirements shall not apply in any jurisdiction that adopts the model ordinance approved by the State Fire Marshal pursuant to Section 51189 of the Government Code or an ordinance that substantially conforms to the model ordinance and transmits a copy to the State Fire Marshal.*

**1505.1.2 Roof coverings within all other areas.** *The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class C.*

**1505.1.3 Roofing requirements in a Wildland-Urban Interface Fire Area.** *Roofing requirements for structures located in a Wildland-Urban Interface Fire Area shall also comply with Section 705A.*

**[BF] 1505.2 Class A roof assemblies.** Class A roof assemblies are those that are effective against severe fire test exposure. Class A roof assemblies and roof coverings shall be listed and identified as Class A by an approved testing agency. Class A roof assemblies shall be permitted for use in buildings or structures of all types of construction.

**Exceptions:**

1. Class A roof assemblies include those with coverings of brick, masonry or an exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile or slate installed on non-combustible decks or ferrous, copper or metal sheets installed without a roof deck on noncombustible framing.
3. Class A roof assemblies include minimum 16 ounce per square foot (0.0416 kg/m<sup>2</sup>) copper sheets installed over combustible decks.
4. Class A roof assemblies include slate installed over ASTM D226, Type II underlayment over combustible decks.

**[BF] 1505.3 Class B roof assemblies.** Class B roof assemblies are those that are effective against moderate fire-test exposure. Class B roof assemblies and roof coverings shall be listed and identified as Class B by an approved testing agency.

**[BF] 1505.4 Class C roof assemblies.** Class C roof assemblies are those that are effective against light fire-test exposure. Class C roof assemblies and roof coverings shall be listed and identified as Class C by an approved testing agency.

**[BF] 1505.5 Nonclassified roofing.** Nonclassified roofing is approved material that is not listed as a Class A, B or C roof covering.

**[BF] 1505.6 Fire-retardant-treated wood shingles and shakes.** Fire-retardant-treated wood shakes and shingles are wood shakes and shingles complying with UBC Standard 15-3 or 15-4 which are impregnated by the full-cell vacuum-pressure process with fire-retardant chemicals, and which have been qualified by UBC Standard 15-2 for use on Class A, B or C roofs.

*Fire-retardant-treated wood shakes and shingles shall comply with ICC-ES EGI07 and with the weathering requirements contained in Health and Safety Code Section 13132.7(j). Each bundle shall bear labels from an ICC accredited quality control agency identifying their roof-covering classification and indicating their compliance with ICC-ES EGI07 and with the weathering requirements contained in Health and Safety Code Section 13132.7(j).*

*Health and Safety Code Section 13132.7(j). No wood roof covering materials shall be sold or applied in this state unless both of the following conditions are met:*

- (1) *The materials have been approved and listed by the State Fire Marshal as complying with the requirements of this section.*
- (2) *The materials have passed at least five years of the 10-year natural weathering test. The 10-year natural weathering test required by this subdivision shall be conducted in accordance with standard 15-2 of the 1994 edition of the Uniform Building Code at a testing facility recognized by the State Fire Marshal.*

**[BF] 1505.7 Special purpose roofs.** Special purpose wood shingle or wood shake roofing shall conform to the grading and application requirements of Section 1507.8 or 1507.9. In addition, an underlayment of <sup>5</sup>/<sub>8</sub>-inch (15.9 mm) Type X water-resistant gypsum backing board or gypsum sheathing shall be placed under minimum nominal <sup>1</sup>/<sub>2</sub>-inch-thick (12.7 mm) wood structural panel solid sheathing or 1-inch (25 mm) nominal spaced sheathing.

**[BF] 1505.8 Building-integrated photovoltaic (BIPV) products.** BIPV products installed as the roof covering shall be tested, listed and labeled for fire classification in accordance with Section 1505.1.

**[BF] 1505.9 Rooftop mounted photovoltaic (PV) panel systems.** Rooftop mounted photovoltaic (PV) panel systems shall be tested, listed and identified with a fire classification in accordance with UL 2703. Listed systems shall be installed in accordance with the manufacturer's installation instructions and their listing. The fire classification shall comply with Table 1505.1 based on the type of construction of the building.

**1507.3.4 Clay tile.** Clay roof tile shall comply with ASTM C1167.

**1507.3.5 Concrete tile.** Concrete roof tile shall comply with ASTM C1492.

**1507.3.6 Fasteners.** Tile fasteners shall be corrosion resistant and not less than 11-gage, [0.120 inch (3 mm)],  $\frac{5}{16}$ -inch (8.0 mm) head, and of sufficient length to penetrate the deck not less than  $\frac{3}{4}$  inch (19.1 mm) or through the thickness of the deck, whichever is less. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.

**1507.3.7 Attachment.** Clay and concrete roof tiles shall be fastened in accordance with Table 1507.3.7.

**1507.3.8 Application.** Tile shall be applied according to the manufacturer's installation instructions, based on the following:

1. Climatic conditions.
2. Roof slope.
3. Underlayment system.
4. Type of tile being installed.

**1507.3.9 Flashing.** At the juncture of the roof vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall be not less than 0.019-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend not less than 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) underlayment of either one layer of Type I underlayment running the full length of the valley, or a self-adhering polymer-modified bitumen sheet bearing a label indicating compliance with ASTM D1970, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.

**1507.3.10 Additional requirements. [DSA-SS & DSA-SS/CC, OSHPD 1, 1R, 2, 4 & 5]** In addition to the requirements of 1507.3.6 and 1507.3.7, the installation of clay and concrete tile roof coverings shall comply with seismic anchorage provisions of Section 1513.

**1507.4 Metal roof panels.** The installation of metal roof panels shall comply with the provisions of this section.

**1507.4.1 Deck requirements.** Metal roof panel roof coverings shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced supports.

**1507.4.2 Deck slope.** Minimum slopes for metal roof panels shall comply with the following:

1. The minimum slope for lapped, nonsoldered seam metal roof panels without applied lap sealant shall be three units vertical in 12 units horizontal (25-percent slope).
2. The minimum slope for lapped, nonsoldered seam metal roof panels with applied lap sealant shall be one-half unit vertical in 12 units horizontal (4-percent slope). Lap sealants shall be applied in accordance with the approved manufacturer's installation instructions.
3. The minimum slope for standing-seam metal roof panel systems shall be one-quarter unit vertical in 12 units horizontal (2-percent slope).

**1507.4.3 Material standards.** Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance with Chapter 22. Metal-sheet roof coverings installed over structural decking shall comply with Table 1507.4.3(1). The materials used for metal-sheet roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses shown in Table 1507.4.3(2).

**1507.4.4 Attachment.** Metal roof panels shall be secured to the supports in accordance with the approved manufacturer's fasteners. In the absence of manufacturer recommendations, the following fasteners shall be used:

1. Galvanized fasteners shall be used for steel roofs.
2. Copper, brass, bronze, copper alloy or 300 series stainless-steel fasteners shall be used for copper roofs.
3. Stainless-steel fasteners are acceptable for all types of metal roofs.
4. Aluminum fasteners are acceptable for aluminum roofs attached to aluminum supports.

**1507.4.5 Underlayment and high wind.** Underlayment shall comply with Section 1507.1.1.

**1507.5 Metal roof shingles.** The installation of metal roof shingles shall comply with the provisions of this section.

**1507.5.1 Deck requirements.** Metal roof shingles shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced sheathing.

**TABLE 1507.3.7**  
**CLAY AND CONCRETE TILE ATTACHMENT<sup>a, b, c</sup>**

GENERAL—CLAY OR CONCRETE ROOF TILE				
Maximum Basic Wind Speed (mph)	Mean roof height (feet)	Roof slope < 3:12	Roof slope 3:12 and over	
85	0-60	Two fasteners per tile.	Two fastners per tile.	
100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer’s mastic.		
110	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
120	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
130	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
All	>60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
85	0-60	Two fasteners per tile.	Two fastners per tile.	
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS <sup>d, e</sup> (Installations on solid sheathing with battens)				
Maximum Basic Wind Speed (mph)	Mean roof height (feet)	Roof slope < 5:12	Roof slope 5:12 < 12:12	Roof slope 12:12 and over
85	0-60	Minimum slope is 4:12. One fastener per tile.	One faster per tile. Tiles with installed weight less than 9 lbs./sq.ft. require a minimum of one fastener per tile.	One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq.ft. require a minimum of one fastener per tile.
100	0-40			
100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer’s mastic.		
110	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
120	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
130	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
All	>60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS (Installations on solid sheathing without battens)				
Maximum Basic Wind Speed (mph)	Mean roof height (feet)	Minimum roof slopes 4 units vertical in 12 units horizontal Maximum slope 7 units vertical in 12 units horizontal		
85	0-60	One fastener per tile.		
100	0-40	One fastener per tile.		
100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. all rake tiles shall be nailed with two nails. the nose of all ridge, hop and rake tiles shall be set in a bead of roofers’s mastic.		
110	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
120	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
130	0-60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		
All	>60	The fastening system shall resist the wind forces in CBC Section 1609.5.3.		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m<sup>2</sup>.

- Minimum fastener size. Hot dipped galvanized ring shank or other corrosion-resistant nails not less than No. 11 gage with  $\frac{5}{16}$  inch (7.93 mm) head. Fasteners shall be long enough to penetrate into the sheathing .75 inch (19.05 mm) or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch (2.108 mm) and shall be copper, brass or stainless steel.
- Snow areas. A minimum of two fasteners per tile are required on battens and one fastener.
- Roof slopes greater than 24:12. The nose of all tiles shall be securely fastened.
- Horizontal battens. Battens shall be not less than 1 inch by 2 inch (25.4 mm x 50.8 mm) nominal. Provisions shall be made for drainage by a minimum of  $\frac{1}{8}$  inch (3.17 mm) riser at each nail or by 4 foot (1219.2 mm) long battens with at least a 0.5 inch (12.7 mm) separation between battens. Horizontal battens are required for slopes over 7:12.
- Perimeter fastening areas include three tile courses but not less than 36 inches (914.4 mm) from either side of hips or ridges and edges of eaves and gable rakes.

**[BG] 1511.6.3 Type V construction.** The height of mechanical equipment screens located on the roof decks of buildings of Type V construction, as measured from grade plane to the highest point on the mechanical equipment screen, shall be permitted to exceed the maximum building height allowed for the building by other provisions of this code where complying with any one of the following limitations, provided that the fire separation distance is greater than 5 feet (1524 mm):

- [BG] 1511.7 Other rooftop structures.** Rooftop structures not regulated by Sections 1511.2 through 1511.6 shall comply with Sections 1511.7.1 through 1511.7.5, as applicable.

**Exception:** Aerial supports not greater than 12 feet (3658 mm) in height as measured from the roof deck to the highest point on the aerial supports shall be permitted to be constructed of combustible materials.

**[BG] 1511.8 Structural fire resistance.** The structural frame and roof construction supporting loads imposed upon the roof by any rooftop structure shall comply with the requirements of Table 601. The fire-resistance reduction permitted by Table 601, Note a, shall not apply to roofs containing rooftop structures.

**1511.9.1 Installation. [DSA-SS, DSA-SS/CC, HCD 1 & HCD 2, OSHPD 1, 1R, 2, 4 & 5]** Supports and attachments of photovoltaic panels to the roof structure, the panels, modules and components shall be designed for applied loads per this code, and shall comply with industry standards determined applicable by the enforcement agency. Seismic design requirements shall be determined from ASCE 7 Section 13.6.12. Wind design pressures shall be determined from ASCE 7 Section 29.4.3 or 29.4.4 using effective wind area per ASCE 7 Section 26.2. Calculations and drawings of the supports and attachments shall be submitted to the enforcement agency for review.

EXISTING ROOFING	NEW OVERLAY ROOFING					
	BUILT UP	ASPHALT SHINGLE	TILE ROOF	METAL ROOF	MODIFIED BITUMEN	SPRAY POLYURETHANE FORM
Built Up	Yes	Yes (2:12)	Yes (2.5:12)	Yes	Yes	Yes
Asphalt Shingle	NP	Yes	Yes (2.5:12)	Yes	Yes	NP
Asphalt over Asphalt	NP	Yes	Yes	Yes	Yes	NP
Tile Roof	NP	NP	NP	NP	NP	NP
Metal Roof	NP	NP	NP	Yes	NP	NP
Modified Bitumen	Yes	Yes	Yes (2.5:12)	Yes	Yes	NP

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## SECTION 1512 REROOFING

**1512.1 General.** Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15.

### Exceptions:

1. Roof replacement or roof recover of existing low-slope roof coverings shall not be required to meet the minimum design slope requirement of  $\frac{1}{4}$  unit vertical in 12 units horizontal (2-percent slope) in Section 1507 for roofs that provide positive roof drainage.
2. Recovering or replacing an existing roof covering shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section 1502.2 for roofs that provide for positive roof drainage. For the purposes of this exception, existing secondary drainage or scupper systems required in accordance with this code shall not be removed unless they are replaced by secondary drains or scuppers designed and installed in accordance with Section 1502.2.

**1512.2 Roof replacement.** Roof replacement shall include the removal of all existing layers of roof assembly materials down to the roof deck.

**Exception:** Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section 1507.

**1512.2.1 Roof recover.** The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:

1. Where the new roof covering is installed in accordance with the roof covering manufacturer's approved instructions.
2. Complete and separate roofing systems, such as standing-seam metal roof panel systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.
3. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear off of existing roof coverings.

**1512.2.1.1 Exceptions.** A roof recover shall not be permitted where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
2. Where the existing roof covering is slate, clay, cement or asbestos-cement tile.

3. Where the existing roof has two or more applications of any type of roof covering.

**1512.3 Roof recovering.** Roof covering may be applied over existing roofing in accordance to LAMC Table 1512.1.

**1512.4 Reinstallation of materials.** Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counterflashings shall not be reinstalled where rusted, damaged or deteriorated. Existing ballast that is damaged, cracked or broken shall not be reinstalled. Existing aggregate surfacing materials from built-up roofs shall not be reinstalled.

**1512.5 Flashings.** Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

## SECTION 1513

### [DSA-SS & DSA-SS/CC, OSHPD 1, 1R, 2, 4 & 5] SEISMIC ANCHORAGE OF SLATE SHINGLE, CLAY AND CONCRETE TILE ROOF COVERINGS

**1513.1 Fasteners.** Nails shall be long enough to penetrate into the sheathing  $\frac{3}{4}$  inch (19 mm). Where sheathing is less than  $\frac{3}{4}$  inch (19 mm) in thickness, nails shall be driven into supports, unless nails with ring shanks are used.

*All fasteners shall be corrosion resistant and fabricated of copper, stainless steel or brass, or shall have a hot dipped galvanized coating not less than 1.0 ounce of zinc per square foot (305 gm/m<sup>2</sup>).*

*Nails for slate shingles and clay or concrete tile shall be copper, brass or stainless steel with gage and length per common ferrous nails.*

**1513.2 Wire.** Wire for attaching slate shingles and clay or concrete tile shall be copper, brass or stainless steel capable of supporting four times the weight of tile.

*Wire supporting a single tile or shingle shall not be smaller than  $\frac{1}{16}$  inch (1.6 mm) in diameter. Continuous wire ties supporting more than one tile shall not be smaller than 0.084 inch (2 mm) in diameter.*

**1513.3 Metal strips.** Metal strips for attaching slate shingles and clay or concrete tile shall be copper, brass or stainless steel capable of supporting four times the weight of tile.

**1513.4 Clay or concrete tiles.** Clay or concrete tile shall be installed in accordance with Table 1507.3.7 and as described herein.

1. On wood roofs or roofs of other material to which wood strips are secured, every cover or top tile when fastened with nails shall be nailed directly into  $1\frac{1}{4}$  inches (32 mm) sound grain soft wood strips of sufficient height to support the tile.

*Pan or bottom tiles shall be nailed directly to the roof sheathing or to wood strips. Wood strips shall be secured to the roof by nails spaced not over 12 inches (305 mm) apart.*

2. *On concrete roofs, wires shall be secured in place by wire loops embedded into the concrete not less than 2 inches (51 mm). The wire loops shall be spaced not more than 36 inches (914 mm) on center parallel to the eaves, and spaced vertically to allow for the minimum 3 inches (76 mm) lapping of the tile.*
3. *Where continuous ties of twisted wire, interlocking wires or metal strips extending from the ridge to eave are used to attach tile, the ties shall be attached to the roof construction at the ridge, eave and at intervals not exceeding 10 feet 0 inch (3048 mm) on center. The ties within 2 feet 0 inch (610 mm) of the rake shall be attached at intervals of 5 feet 0 inch (1524 mm).*

*Attachment for continuous ties shall be nails, screws staples or approved clips of the same material as the ties, and shall not be subjected to withdrawal forces. Attachments for continuous ties shall have an allowable working stress shear resistance of not less than twice the dead weight of the tile tributary to the attachment, but not less than 300 pounds (136 kg).*

4. *Tile with projecting anchor lugs at the bottom of the tiles shall be held in position by means of 1- inch by 2- inch (25mm by 51mm) wood stripping nailed to the roof sheathing over the underlay.*
5. *Clay or concrete tile on roofs with slopes exceeding 24 units vertical in 12 units horizontal (200 percent slope) shall be attached as required for veneer in Chapter 14. The nose of all tiles shall be securely fastened.*
6. *Clay or concrete tile shall have a minimum of two fasteners per tile. Tiles that are 8 inches (203 mm) in width or less are permitted to be fastened at the center of the head with one fastener per tile.*
7. *Interlocking clay or concrete tile shall have a minimum of one nail near center of head or two wire ties per tile.*

**1513.5 Slate shingles.** *Slate shingles on roofs with slopes exceeding 24 units vertical in 12 units horizontal (200 percent slope) shall be attached as required for veneer per Chapter 14.*







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