

REVISION RECORD FOR THE STATE OF CALIFORNIA

SUPPLEMENT

July 1, 2012

2010 Title 24, Part 2, Vol. 1 California Building Code

**PLEASE NOTE: The date of this errata is for identification purposes only.
See the History Note Appendix.**

It is suggested that the section number, as well as the page number be checked when inserting this material and removing the superseded material. In case of doubt, rely on the section numbers rather than the page numbers because the section numbers must run consecutively.

It is further suggested that the superseded material be retained with this revision record sheet so that the prior wording of any section can be easily ascertained.

Please keep the removed pages with this revision page for future reference.

Note

Due to the fact that the application date for a building permit establishes the California Building Standards Code provisions that are effective at the local level, which apply to the plans, specifications, and construction for that permit, it is strongly recommended that the removed pages be retained for historical reference.

Part 2, Vol. 1

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1.8.7.2 Local building departments. The building department of any city, county or city and county may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, demolition or arrangement of an apartment house, hotel, motel, lodging house, dwelling or an accessory structure, except for the following:

1. Structures located in mobilehome parks as defined in California Health and Safety Code Section 18214.
2. Structures located in special occupancy parks as defined in California Health and Safety Code Section 18862.43.
3. Factory-built housing as defined in California Health and Safety Code Section 19971.

1.8.7.2.1 Approval of alternates. The consideration and approval of alternates by a local building department shall comply with the following procedures and limitations:

1. The approval shall be granted on a case-by-case basis.
2. Evidence shall be submitted to substantiate claims that the proposed alternate, in performance, safety and protection of life and health, conforms to, or is at least equivalent to, the standards contained in this code and other rules and regulations promulgated by the Department of Housing and Community Development.
3. The local building department may require tests performed by an approved testing agency at the expense of the owner or owner's agent as proof of compliance.
4. If the proposed alternate is related to accessibility in covered multifamily dwellings or in facilities serving "Covered multifamily dwellings" as defined in Chapter 11A, the proposed alternate must also meet the threshold set for "Equivalent facilitation" as defined in Chapter 11A.

For additional information regarding approval of alternates by a building department pursuant to the State Housing Law, see California Health and Safety Code Section 17951(e) and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1.

1.8.7.3 Department of Housing and Community Development. The Department of Housing and Community Development may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal or demolition of an apartment house, hotel, motel, lodging house, dwelling or an accessory thereto. The consideration and approval of alternates shall comply with the following:

1. The department may require tests at the expense of the owner or owner's agent to substantiate compliance with the California Building Standards Code.
2. The approved alternate shall, for its intended purpose, be at least equivalent in performance and safety

to the materials, designs, tests or methods of construction prescribed by this code.

SECTION 1.8.8 APPEALS BOARD

1.8.8.1 General. Every city, county, or city and county shall establish a process to hear and decide appeals of orders, decisions and determinations made by the enforcing agency relative to the application and interpretation of this code and other regulations governing use, maintenance and change of occupancy. The governing body of any city, county, or city and county may establish a local appeals board and a housing appeals board to serve this purpose. Members of the appeals board(s) shall not be employees of the enforcing agency and shall be knowledgeable in the applicable building codes, regulations and ordinances as determined by the governing body of the city, county, or city and county.

Where no such appeals boards or agencies have been established, the governing body of the city, county, or city and county shall serve as the local appeals board or housing appeals board as specified in California Health and Safety Code Sections 17920.5 and 17920.6.

1.8.8.2 Definitions. The following terms shall for the purposes of this section have the meaning shown.

HOUSING APPEALS BOARD. The board or agency of a city, county or city and county which is authorized by the governing body of the city, county or city and county to hear appeals regarding the requirements of the city, county or city and county relating to the use, maintenance and change of occupancy of buildings and structures, including requirements governing alteration, additions, repair, demolition and moving. In any area in which there is no such board or agency, "Housing appeals board" means the local appeals board having jurisdiction over the area.

LOCAL APPEALS BOARD. The board or agency of a city, county or city and county which is authorized by the governing body of the city, county or city and county to hear appeals regarding the building requirements of the city, county or city and county. In any area in which there is no such board or agency, "Local appeals board" means the governing body of the city, county or city and county having jurisdiction over the area.

1.8.8.3 Appeals. Except as otherwise provided in law, any person, firm or corporation adversely affected by a decision, order or determination by a city, county or city and county relating to the application of building standards published in the California Building Standards Code, or any other applicable rule or regulation adopted by the Department of Housing and Community Development, or any lawfully enacted ordinance by a city, county or city and county, may appeal the issue for resolution to the local appeals board or housing appeals board as appropriate.

The local appeals board shall hear appeals relating to new building construction and the housing appeals board shall hear appeals relating to existing buildings.

SECTION 1.8.9 UNSAFE BUILDINGS OR STRUCTURES

1.8.9.1 Authority to enforce. Subject to other provisions of law, the administration, enforcement, actions, proceedings, abatement, violations and penalties for unsafe buildings and structures are contained in the following statutes and regulations:

1. For applications subject to the State Housing Law as referenced in Section 1.8.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.
2. For applications subject to the Mobilehome Parks Act as referenced in Section 1.8.3.2.2 of this code, refer to Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000.
3. For applications subject to the Special Occupancy Parks Act as referenced in Section 1.8.3.2.3 of this code, refer to Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000.
4. For applications subject to the Employee Housing Act as referenced in Section 1.8.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.
5. For applications subject to the Factory-Built Housing Law as referenced in Section 1.8.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.

1.8.9.2 Actions and proceedings. Subject to other provisions of law, punishments, penalties and fines for violations of building standards are contained in the following statutes and regulations:

1. For applications subject to the State Housing Law as referenced in Section 1.8.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.
2. For applications subject to the Mobilehome Parks Act as referenced in Section 1.8.3.2.2 of this code, refer to Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000.
3. For applications subject to the Special Occupancy Parks Act as referenced in Section 1.8.3.2.3 of this code, refer to Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and Cali-

fornia Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000.

4. For applications subject to the Employee Housing Act as referenced in Section 1.8.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.
5. For applications subject to the Factory-Built Housing Law as referenced in Section 1.8.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.

SECTION 1.8.10 OTHER BUILDING REGULATIONS

1.8.10.1 Existing structures. Subject to the requirements of California Health and Safety Code Sections 17912, 17920.3, 17922, 17922.3, 17958.8 and 17958.9, the provisions contained in Chapter 34 relating to existing structures shall only apply as identified in the Matrix Adoption Table under the authority of the Department of Housing and Community Development as listed in Sections 1.8.2.1.1 through 1.8.2.1.3 of this code.

1.8.10.2 Moved structures. Subject to the requirements of California Health and Safety Code Sections 17922.3 and 17958.9, the provisions contained in Chapter 34 relating to a moved residential structure shall only apply as identified in the Matrix Adoption Table under the authority of the Department of Housing and Community Development as listed in Sections 1.8.2.1.1 through 1.8.2.1.3 of this code.

SECTION 1.9 DIVISION OF THE STATE ARCHITECT

1.9.1 Division of the State Architect—Access Compliance.

General. The purpose of this code is to ensure that barrier-free design is incorporated in all buildings, facilities, site work and other improvements to which this code applies in compliance with state law to ensure that these improvements are accessible to and usable by persons with disabilities. Additions, alterations and structural repairs in all buildings and facilities shall comply with these provisions for new buildings, except as otherwise provided and specified herein.

The provisions of these regulations shall apply to any portable buildings leased or owned by a school district, and shall also apply to temporary and emergency buildings and facilities. Temporary buildings and facilities are not of permanent construction but are extensively used or are essential for public use for a period of time. Examples of temporary buildings or facilities covered include, but are not limited to: reviewing stands, temporary classrooms, bleacher areas, exhibit areas, temporary banking facilities, temporary health screening services or temporary safe pedestrian passageways around a construction site.

In addition, to incorporate standards at least as restrictive as those required by the federal government for barrier-free design under (1) Title III (Public Accommodations and Commercial Facilities), Subpart D (New Construction and Alteration) and Appendix A (Americans with Disabilities Act Standards for Accessible Design) (see 28 C.F.R., Part 36), and (2) Title II (Public Entities), Section 35.151 (New Construction and Alterations) (see 28 C.F.R., Part 35) both from the Americans with Disabilities Act of 1990, and (3) under the Fair Housing Amendments Act of 1988. Some of these regulations may be more stringent than state law in order to meet the federal requirement.

1.9.1.1 Application. See Government Code commencing with Section 4450.

Publicly funded buildings, structures, sidewalks, curbs and related facilities shall be accessible to and usable by persons with disabilities as follows:

1.9.1.1.1 All buildings, structures, sidewalks, curbs and related facilities constructed in the state by the use of state, county or municipal funds, or the funds of any political subdivision of the state.

1.9.1.1.2 All buildings, structures and facilities that are leased, rented, contracted, sublet or hired by any municipal, county or state division of government, or by a special district.

1.9.1.1.3 All publicly funded buildings used for congregate residences or for one- or two-family dwelling unit purposes shall conform to the provisions applicable to living accommodations.

1.9.1.1.4 All existing publicly funded buildings and facilities when alterations, structural repairs or additions are made to such buildings or facilities. For detailed requirements on existing buildings, see Chapter 11B, Division IV.

1.9.1.1.5 With respect to buildings, structures, sidewalks, curbs and related facilities not requiring a building permit, building standards published in the California Building Standards Code relating to access for persons with disabilities and other regulations adopted pursuant to Government Code Section 4450, and in effect at the time construction is commenced, shall be applicable.

1.9.1.2 Application. See Health and Safety Code commencing with Section 19952.

All privately funded public accommodations, as defined and commercial facilities, as defined, shall be accessible to persons with disabilities as follows:

Exception: Certain types of privately funded multistory buildings do not require installation of an elevator to provide access above and below the first floor. See Chapter 11B.

1.9.1.2.1 Any building, structure, facility, complex or improved area, or portions thereof, which are used by the general public.

1.9.1.2.2 Any sanitary facilities which are made available for the public, clients or employees in such accommodations or facilities.

1.9.1.2.3 Any curb or sidewalk intended for public use that is constructed in this state with private funds.

1.9.1.2.4 All existing privately funded public accommodations when alterations, structural repairs or additions are made to such public accommodations as set forth under Chapter 11B.

1.9.1.3 Application—Public housing and private housing available for public use. See Government Code Sections 4450 and 12955.1(d).

1.9.1.4 Enforcing agency.

1.9.1.4.1 The director of the Department of General Services where state funds are utilized for any project or where funds of counties, municipalities or other political subdivisions are utilized for the construction of elementary, secondary or community college projects.

1.9.1.4.2 The governing bodies where funds of counties, municipalities or other political subdivisions are utilized except as otherwise provided above.

1.9.1.4.3 The building department of every city, county or city and county within the territorial area of its city, county or city and county, where private funds are utilized. "Building department" means the department, bureau or officer charged with the enforcement of laws or ordinances regulating the erection or construction, or both the erection and construction, of buildings.

1.9.1.5 Special conditions for persons with disabilities requiring appeals action ratification. Whenever reference is made in these regulations to this section, the findings and determinations required to be rendered by the local enforcing agency shall be subject to ratification through an appeals process.

1.9.1.6 Authority cited—Government Code Section 4450.

1.9.1.7 Reference cited—Government Code Sections 4450 through 4461 and 12955.1(d) and Health and Safety Code Sections 18949.1, 19952 through 19959.

1.9.1.8 Adopting agency identification. The provisions of this code applicable to buildings identified in this Subsection 1.9.1 will be identified in the Matrix Adoption Tables under the acronym DSA-AC.

1.9.2 Division of the State Architect—Structural Safety.

1.9.2.1 DSA-SS Division of the State Architect-Structural Safety.

Application—Public elementary and secondary schools, community colleges and state-owned or state-leased essential services buildings.

Enforcing agency—The Division of the State Architect—Structural Safety (DSA-SS) has been delegated the responsibility and authority by the Department of General Services to review and approve the design and observe the construction of public elementary and secondary schools, community colleges and state-owned or state-leased essential services buildings.

Authority cited—Education Code Sections 17310 and 81142 and Health and Safety Code Section 16022.

Reference—Education Code Sections 17280 through 17317, and 81130 through 81147 and Health and Safety Code Sections 16000 through 16023.

1.9.2.1.1 Applicable administrative standards.

1. Title 24, Part 1, California Code of Regulations:

1.1 Sections 4-301 through 4-355, Group 1, Chapter 4, for public elementary and secondary schools and community colleges.

1.2 Sections 4-201 through 4-249, Chapter 4, for state-owned or state-leased essential services buildings.

2. Title 24, Part 2, California Code of Regulations: [applies to public elementary and secondary schools, community colleges and state-owned or state-leased essential services building(s)]:

2.1. Sections 1.1 and 1.9.2 of Chapter 1, Division I.

2.2. Sections 102.1, 102.2, 102.3, 102.4, 102.5, 104.9, 104.10 and 104.11 of Chapter 1, Division II.

1.9.2.1.2 Applicable building standards. California Building Standards Code, Title 24, Parts 2, 3, 4, 5, 6, 9, 11 and 12, California Code of Regulations, for school buildings, community colleges and state-owned or state-leased essential service buildings.

The provisions of Title 24, Part 2, as adopted and amended by the Division of the State Architect—Structural Safety, shall apply to the applications listed in Section 1.9.2.1.

The Division of the State Architect—Structural Safety adopts the following building standards in Title 24, Part 2:

Chapters 2 through 10, 12, 14, 15, 16A, 17A, 18A, 19A, 20, 21A, 22A, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35 and Appendix J.

1.9.2.1.3 Amendments. Division of the State Architect—Structural Safety amendments in this code appear preceded with the acronym [DSA-SS].

Exceptions:

1. Chapters 16A, 17A, 18A, 19A, 21A, and 22A—Amendments appearing in these chapters without an acronym have been co-adopted by DSA-SS and OSHPD.

2. Chapter 34, Sections 3115-3421—DSA-SS adopts these sections without the use of the DSA-SS acronym.

1.9.2.1.4 Reference to other chapters. Where reference is made within this code to sections in Chapters 16, 17, 18, 19, 21 and 22, the respective sections in Chapters 16A, 17A, 18A, 19A, 21A and 22A shall apply instead.

1.9.2.2 DSA-SS/CC Division of the State Architect- Structural Safety/Community Colleges

Application—Community Colleges. The Division of the State Architect has been delegated the authority by the Department of General Services to promulgate alternate building standards for application to community colleges, which a community college may elect to use in lieu of standards promulgated by DSA-SS in accordance with Section 1.9.2.1.

Enforcing agency—Division of the State Architect-Structural Safety/Community Colleges (DSA-SS/CC)

The Division of the State Architect has been delegated the authority by the Department of General Services to review and approve the design and oversee construction of community colleges electing to use the alternative building standards as provided in this section.

Authority cited—Education Code Section 81053.

Reference—Education Code Sections 81052, 81053, and 81130 through 81147.

1.9.2.2.1 Applicable administrative standards.

1. Title 24, Part 1, California Code of Regulations:

1.1. Sections 4-301 through 4-355, Group 1, Chapter 4.

2. Title 24, Part 2, California Code of Regulations:

2.1. Sections 1.1 and 1.9.2 of Chapter 1, Division I.

2.2. Sections 102.1, 102.2, 102.3, 102.4, 102.5, 104.9, 104.10 and 104.11 of Chapter 1, Division II.

1.9.2.2.2 Applicable building standards. California Building Standards Code, Title 24, Parts 2, 3, 4, 5, 6, 9, 11 and 12, California Code of Regulations.

The Division of the State Architect-Structural Safety/Community Colleges [DSA-SS/CC] adopts the following building standards in Title 24, Part 2:

Chapters 2 through 10, 12, 14, 15, 16, 17A, 18A, 19, 20, 21, 22A, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35 and Appendix J.

1.9.2.2.3 Amendments. Division of the State Architect—Structural Safety/Community Colleges amendments in this code appear preceded with the acronym [DSA-SS/CC].

Exceptions:

1. Chapters 17A, and 18A—Amendments appearing in these chapters without an acronym have been co-adopted by DSA-SS, DSA-SS/CC, and OSHPD.

2. Chapter 34, Sections 3115-3421—DSA-SS/CC adopts these sections without the use of the DSA-SS/CC acronym.

DIVISION II SCOPE AND ADMINISTRATION

Sections adopted or amended by state agencies are specifically indicated by an agency banner or identified in the Matrix Adoption Table.

SECTION 101 GENERAL

101.1 Title. These regulations shall be known as the *California Building Code of the State of California*, hereinafter referred to as “this code.”

101.2 Scope. The provisions of this code shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, equipment, used and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception: Detached one- and two-family *dwelling*s and multiple single-family *dwelling*s (*townhouses*) not more than three *stories* above *grade plane* in height with a separate *means of egress* and their accessory structures shall comply with the *California Residential Code*.

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted.

101.3 Intent. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to firefighters and emergency responders during emergency operations.

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.6 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

- || **101.4.1 Gas.** The provisions of the *California Mechanical Code* shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.
- || **101.4.2 Mechanical.** The provisions of the *California Mechanical Code* shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.
- || **101.4.3 Plumbing.** The provisions of the *California Plumbing Code* shall apply to the installation, *alteration*, repair

and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. The provisions of the *International Private Sewage Disposal Code* shall apply to private sewage disposal systems.

101.4.4 Property maintenance. The provisions of the *International Property Maintenance Code* shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards; responsibilities of owners, operators and occupants; and occupancy of existing premises and structures.

101.4.5 Fire prevention. The provisions of the *California Fire Code* shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, *alteration* or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

101.4.6 Energy. The provisions of the *California Energy Code, Title 24, Part 6* shall apply to all matters governing the design and construction of buildings for energy efficiency.

Exception: [OSHPD 1, 2 & 4] Not required by OSHPD.

SECTION 102 APPLICABILITY

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

102.1.1 Additional requirements. [OSHPD 1, 2, 3, & 4, DSA-SS & DSA-SS/CC] See Chapter 1, Division I, Section 1.1.7.

102.2 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

102.3 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

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

102.4.1 Code References. [OSHPD 1, 2, 3 & 4, DSA-SS & DSA-SS/CC] All reference to International Codes or other similar codes in referenced standards shall be replaced by equivalent provisions in the California Building Standards Codes.

102.4.2 Reference in Standards. [OSHPD 1, 2, 3 & 4, DSA-SS & DSA-SS/CC] All references listed in reference standards shall be replaced by referenced standards listed in Chapter 35 of this code, where applicable, and shall include all amendments to the reference standards in this code.

102.5 Partial invalidity. In the event that any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the California Building Code or the California Fire Code, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

SECTION 103 DEPARTMENT OF BUILDING SAFETY

103.1 Creation of enforcement agency. The Department of Building Safety is hereby created and the official in charge thereof shall be known as the *building official*.

103.2 Appointment. The *building official* shall be appointed by the chief appointing authority of the jurisdiction.

103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the *building official* shall have the authority to appoint a deputy building official, the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the *building official*. For the maintenance of existing properties, see the California Building Code.

SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL

104.1 General. The *building official* is hereby authorized and directed to enforce the provisions of this code. The *building official* shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

104.2 Applications and permits. The *building official* shall receive applications, review *construction documents* and issue *permits* for the erection, and *alteration*, demolition and moving

of buildings and structures, inspect the premises for which such *permits* have been issued and enforce compliance with the provisions of this code.

104.3 Notices and orders. The *building official* shall issue all necessary notices or orders to ensure compliance with this code.

104.4 Inspections. The *building official* shall make all of the required inspections, or the *building official* shall have the authority to accept reports of inspection by *approved agencies* or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved agency* or by the responsible individual. The *building official* is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

104.5 Identification. The *building official* shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *building official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the *building official* is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the *building official* shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the *building official* shall have recourse to the remedies provided by law to secure entry.

104.7 Department records. The *building official* shall keep official records of applications received, *permits* and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

104.8 Liability. The *building official*, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The *building official* or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE CHAPTER 2 – DEFINITIONS

Adopting agency	BSC	SFM	HCD			DSA			OSHPD				CSA	DPH	AGR	DWR	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4							
Adopt entire chapter	X						X	X											
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X	X					X	X	X	X						
Adopt only those sections that are listed below						X													
Chapter/Section																			
201.3		X																	
201.4		X																	
202		X	X	X	X														
Access Aisle						X													
Accessibility			X	X	X	X													
Accessible			X	X	X	X													
Accessible Element						X													
Accessible Means of Egress						X													
Accessible Route			X	X	X	X													
Accessible Route of Travel						X													
Accessible Space						X													
Adaptability						X													
Adaptable Dwelling Unit			X	X	X	X													
Addition						X													
Administrative Authority						X													
Aged Home or Institution		X																	
Aisle						X													
Aisle, Employee Areas						X													
Alteration (or Alter)						X													
Alternate Card Reader						X													
ANSI						X													
Approved (with notes)			X	X	X														
Approved (w/o notes)						X													
Approved Listing Agency			X	X	X														
Approved Testing Agency			X	X	X	X													
Area of Refuge						X													
Assembly Area						X													
Assistive Device			X	X	X	X													
Automatic Door			X	X	X	X													
Automated Teller Machine						X													
Bathroom			X	X	X	X													
Bedridden Person		X																	
Building		X																	
Building (with exception)			X	X	X														
Building (w/o exceptions and notes)						X													
Building Entrance on an Accessible Route			X	X	X	X													
Building, Existing			X	X	X	X													
Building Official						X													
Care and Supervision		X																	

(continued)

**CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE
CHAPTER 2 – DEFINITIONS—continued**

Adopting agency	BSC	SFM	HCD			DSA			OSHPD				CSA	DPH	AGR	DWR	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4							
Adopt entire chapter	X						X	X											
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X	X				X	X	X	X							
Adopt only those sections that are listed below						X													
Chapter/Section																			
Catastrophically Injured		X																	
CCR						X													
Cellular Concrete			X	X	X														
Child-Care Center		X																	
Child or Children		X																	
Chronically Ill		X																	
Circulation Path			X	X	X	X													
Clear						X													
Clear Floor Space						X													
Closed-Circuit Telephone						X													
Commercial Facilities						X													
Common Use Areas			X	X	X	X													
Comply With						X													
Concrete, Cellular			X	X	X														
Congregate Living Health Facility (CLHF)		X																	
Congregate Residence		X																	
Covered Multifamily Dwellings			X	X	X	X													
Cross Slope			X	X	X	X													
Curb Cut			X	X	X	X													
Curb Ramp			X	X	X	X													
Day-Care		X																	
Day-Care Home, Large Family		X																	
Day-Care Home, Small Family		X																	
Department			X	X	X														
Detached Single-Family Dwelling			X	X	X														
Detectable Warning			X	X	X	X													
Directional Sign			X	X	X	X													
Disability						X													
Disabled						X													
Dormitory		X				X													
Dwelling Unit			X	X	X	X													
Efficiency Dwelling Unit			X	X	X														
Electric Vehicle		X																	
Element						X													

(continued)

CHAPTER 2

DEFINITIONS

SECTION 201 GENERAL

201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *California Fuel Gas Code*, *California Fire Code*, *California Mechanical Code* or *California Plumbing Code*, such terms shall have the meanings ascribed to them as in those codes.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

For applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies. Webster's Third New International Dictionary of the English Language, Unabridged, shall be considered as providing ordinarily accepted meanings.

SECTION 202 DEFINITIONS

AAC MASONRY. See Section 2102.1.

ACCESSIBLE. [DSA-AC, HCD 1-AC] See Chapter 11A, Section 1107A.1-A, and Chapter 11B, Section 1102B.

ACCESS AISLE. [DSA-AC] See Chapter 11B, Section 1102B.

ACCESSIBILITY. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.1-A, and Chapter 11B, Section 1102B.

ACCESSIBLE. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.1-A, and Chapter 11B, Section 1102B.

ACCESSIBLE ELEMENT. [DSA-AC] See Chapter 11B, Section 1102B.

ACCESSIBLE MEANS OF EGRESS. See Section 1002.1.

ACCESSIBLE ROUTE. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.1-A.

ACCESSIBLE ROUTE OF TRAVEL. [DSA-AC] See Chapter 11B, Section 1102B.

ACCESSIBLE SPACE. [DSA-AC] See Chapter 11B, Section 1102B.

ACCREDITATION BODY. See Section 2302.1.

ADAPTABILITY. [DSA-AC] See Chapter 11B, Section 1102B.

ADAPTABLE DWELLING UNIT. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.1-A.

ADDITION. An extension or increase in floor area or height of a building or structure.

[DSA-AC] "Addition" is an extension, expansion or increase in floor area or height of a building, facility or structure.

ADHERED MASONRY VENEER. See Section 1402.1.

ADMINISTRATIVE AUTHORITY. [DSA-AC] See Chapter 11B, Section 1102B.

ADOBE CONSTRUCTION. See Section 2102.1.

Adobe, stabilized. See Section 2102.1.

Adobe, unstabilized. See Section 2102.1.

[F] **AEROSOL.** See Section 307.2.

Level 1 aerosol products. See Section 307.2.

Level 2 aerosol products. See Section 307.2.

Level 3 aerosol products. See Section 307.2.

[F] **AEROSOL CONTAINER.** See Section 307.2.

AGED HOME OR INSTITUTION. See Section 310.2.

AGGREGATE. See Section 1502.1.

AGRICULTURAL, BUILDING. A structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.

AIR-INFLATED STRUCTURE. See Section 3102.2.

AIR-SUPPORTED STRUCTURE. See Section 3102.2.

Double skin. See Section 3102.2.

Single skin. See Section 3102.2.

AISLE. See Section 1002.1.

[DSA-AC] See Chapter 11B, Section 1102B.

AISLE ACCESSWAY. See Section 1002.1.

AISLE, EMPLOYEE AREAS. [DSA-AC] See Chapter 11B, Section 1102B.

[F] **ALARM NOTIFICATION APPLIANCE.** See Section 902.1.

[F] **ALARM SIGNAL.** See Section 902.1.

[F] **ALARM VERIFICATION FEATURE.** See Section 902.1.

ALLOWABLE STRESS DESIGN. See Section 1602.1.

DEFINITIONS

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

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

ALTERNATE CARD READER. *[DSA-AC] See Chapter 11C, Section 1101C.1*

ALTERNATING TREAD DEVICE. See Section 1002.1.

AMBULATORY HEALTH CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to individuals who are rendered incapable of self-preservation.

ANCHOR. See Section 2102.1.

ANCHOR BUILDING. See Section 402.2.

ANCHORED MASONRY VENEER. See Section 1402.1.

ANNULAR SPACE. See Section 702.1.

[F] ANNUNCIATOR. See Section 902.1.

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

APPROVED. Acceptable to the code official or authority having jurisdiction.

[DSA-AC, HCD 1 & HCD 2] “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 17921.3 for “Approved” as applied to low-flush water closets in residential construction, as referenced in Section 1.8.2.1.1.*
- 4. See Health and Safety Code Section 19966 for “Approved” as applied to factory-built housing as referenced in Section 1.8.3.2.5.*
- 5. See Health and Safety Code Section 18201 for “Approved” as applied to mobilehome parks as referenced in Section 1.8.2.1.3.*

- 6. 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.*

APPROVED AGENCY. See Section 1702.1.

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.*

APPROVED TESTING AGENCY. *[HCD 1, HCD 2 & DSA-AC] 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.*

APPROVED FABRICATOR. See Section 1702.1.

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.

ARCHITECTURAL TERRA COTTA. See Section 2102.1.

AREA (for masonry). See Section 2102.1.

Bedded. See Section 2102.1.

Gross cross-sectional. See Section 2102.1.

Net cross-sectional. See Section 2102.1.

AREA, BUILDING. See Section 502.1.

AREA OF REFUGE. See Section 1002.1.

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] See Chapter 11B, Section 1102B.*

ASSISTED LIVING FACILITIES. See Section 310.2, “Residential Care/Assisted living facilities.”

ASSISTIVE DEVICE. *[DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.1-A.*

ATRIUM. See Section 404.1.1.

ATTIC. The space between the ceiling beams of the top *story* and the roof rafters.

[F] AUDIBLE ALARM NOTIFICATION APPLIANCE. See Section 902.1.

AUTOCLAVED AERATED CONCRETE (AAC). See Section 2102.1.

AUTOMATED TELLER MACHINE (ATM). *[DSA-AC] See Section 1102B.*

[F] AUTOMATIC. See Section 902.1.

AUTOMATIC DOOR. *[DSA-AC, HCD 1-AC] See Chapter 11A, Section 1107A.1-A, and Chapter 11B, Section 1102B.*

[F] AUTOMATIC FIRE-EXTINGUISHING SYSTEM. See Section 902.1.

[F] AUTOMATIC SMOKE DETECTION SYSTEM. See Section 902.1.

ergarten through twelfth grade (K-12) and is funded pursuant to the Education Code, commencing with Section 17070.10.

NFPA [DSA-AC] is the National Fire Protection Association.

NOMINAL LOADS. See Section 1602.1.

NOMINAL SIZE (LUMBER). See Section 2302.1.

NONAMBULATORY PERSONS. See Section 310.2.

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 E 136 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 $1/8$ 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.

NONCOMBUSTIBLE MEMBRANE STRUCTURE. See Section 3102.2.

NORMAL [HCD 1 & HCD 2] Conforming to a pattern or standard regarded as usual or typical.

[F] NORMAL TEMPERATURE AND PRESSURE (NTP). See Section 415.2.

NOSING (OR NOSE). See Section 1002.1/[DSA-AC, HCD 1-AC] See Chapter 11A, Section 1107A.14-N, and Chapter 11B, Section 1102B.

NOTIFICATION ZONE. See Section 902.1.

[F] NUISANCE ALARM. See Section 902.1.

NURSING HOMES. See Section 308.3.1.

OCCUPANCY CATEGORY. See Section 1602.1.

OCCUPANT LOAD. See Section 1002.1.

OCCUPIABLE SPACE. A room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes or in 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.

OPEN PARKING GARAGE. See Section 406.3.2.

OPEN RISER. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.15-O, and Chapter 11B, Section 1102B.

[F] OPEN SYSTEM. See Section 307.2.

OPERABLE PART. [DSA-AC] See Chapter 11B, Section 1102B.

[F] OPERATING BUILDING. See Section 307.2.

ORDINARY PRECAST STRUCTURAL WALL. See Section 1908.1.1.

ORDINARY REINFORCED CONCRETE STRUCTURAL WALL. See Section 1908.1.1.

ORDINARY STRUCTURAL PLAIN CONCRETE WALL. See Section 1908.1.1.

[F] ORGANIC PEROXIDE. See Section 307.2.

Class I. See Section 307.2.

Class II. See Section 307.2.

Class III. See Section 307.2.

Class IV. See Section 307.2.

Class V. See Section 307.2.

Unclassified detonable. See Section 307.2.

ORGANIZED CAMPS. See Section 440.

ORTHOGONAL. See Section 1613.2.

OTHER STRUCTURES. See Section 1602.1.

OWNER. Any person, agent, firm or corporation having a legal or equitable interest in the property.

[F] OXIDIZER. See Section 307.2.

Class 4. See Section 307.2.

Class 3. See Section 307.2.

Class 2. See Section 307.2.

Class 1. See Section 307.2.

[F] OXIDIZING GAS. See Section 307.2.

PANEL (PART OF A STRUCTURE). See Section 1602.1.

PANIC HARDWARE. See Section 1002.1.

PARTICLEBOARD. See Section 2302.1.

PASSAGE DOOR. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.16-P, and Chapter 11B, Section 1102B.

PASSENGER ELEVATOR. [DSA-AC] See “Elevator, passenger in Chapter 11B, Section 1102B.

[HCD 1 & HCD 2] “Passenger Elevator” is an elevator used primarily to carry persons. 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] See Chapter 11B, Section 1102B.

PEDESTRIAN. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.16-P, and Chapter 11B, Section 1102B.

PEDESTRIAN GRADE SEPARATION. [DSA-AC] See Chapter 11B, Section 1102B.

PEDESTRIAN RAMP. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.16-P, and Chapter 11B, Section 1102B.

DEFINITIONS

PEDESTRIAN WAY. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A, 16-P, and Chapter 11B, Section 1102B.

PENETRATION FIRESTOP. See Section 702.1.

PENTHOUSE. See Section 1502.1.

PERMANENT [DSA-AC] shall mean facilities which, are intended to be used for periods longer than those designated in this code under the definition of “Temporary.”

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.

PERMIT. An official document or certificate issued by the authority having jurisdiction which authorizes performance of a specified activity.

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.

PERSONS WITH DISABILITIES. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.16-P.

PHOTOLUMINESCENT. See Section 1002.1.

[F] **PHYSICAL HAZARD.** See Section 307.2.

[F] **PHYSIOLOGICAL WARNING THRESHOLD LEVEL.** See Section 415.2.

PINRAIL. See Section 410.2.

PLASTIC, APPROVED. See Section 2602.1.

PLASTIC GLAZING. See Section 2602.1.

PLATFORM. See Section 410.2.

PLATFORM (WHEELCHAIR) LIFT. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.16-P, and Chapter 11B, Section 1102B.

POINT-OF-SALE DEVICE. [DSA-AC] See Section 1102B.

PORTABLE BUILDING. [SFM] Portable Building is a classroom building or structure of modular design and construction that houses and or serves student, regardless of occupancy classification, from kindergarten through twelfth grade (K-12) and is funded pursuant to the Education Code, commencing with Section 17070.10 and meets all of the following criteria:

- The portable building or structure is designed and constructed to be relocatable and transportable over public streets.
- The portable building or structure is designed and constructed for relocation without detaching the roof or the floor from the building or structure.
- The portable building or structure is sited upon a temporary foundation in a manner that is designed to permit easy removal.
- The portable building or structure has a floor area of 2,000 square feet or less when measured from the extent of the exterior walls.

- The portable building shall be removed within three years of installation or the school administration may request a three year extension pursuant to Education Code Section 17074.54 (a) and (b).

PORTABLE BUILDING, EXEMPTED. [SFM] A portable building as defined in Section 202 as referenced by California Education Code Section 17074.54, that is certified by the public school administration as being sited on campus for less than three years.

POSITIVE ROOF DRAINAGE. See Section 1502.1.

POWDER ROOM. [DSA-AC & HCD 1-AC] See Chapter 11A, Section 1107A.16-P.

POWER-ASSISTED DOOR [DSA-AC] is 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.

PREFABRICATED WOOD I-JOIST. See Section 2302.1.

PRESTRESSED MASONRY. See Section 2102.1.

PRIMARY ENTRY. [HCD 1-AC] See Chapter 11A, Section 1107A.16-P.

PRIMARY ENTRY LEVEL. [HCD 1-AC] See Chapter 11A, Section 1107A.16-P.

PRIMARY FUNCTION. See Section 3402.1.

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 spandrels;
3. Members of the floor construction and roof construction having direct connections to the columns; and
4. Bracing members that are essential to the vertical stability of the primary structural frame under gravity loading shall be considered part of the primary structural frame whether or not the bracing member carries gravity loads.

PRISM. See Section 2102.1.

PROFESSIONAL OFFICE OF A HEALTH CARE PROVIDER. [DSA-AC] See Chapter 11B, Section 1102B.

PROSCENIUM WALL. See Section 410.2.

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.”

PUBLIC ACCOMMODATION [DSA-AC, HCD 1 & HCD 2] includes, but is not limited to, any public use building or facility that may be classified into one or more of the following categories:

1. Places of public lodging.
2. Establishments serving food or drink open to public use.
3. Places of exhibition or entertainment open to public use.

ped by persons who are *restrained*. This group shall include, but not be limited to, the following:

- Correctional centers
- Detention centers
- Jails
- Prisons
- Reformatories
- Juvenile halls*

Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated in Sections 308.4.1 through 308.4.5 (see Section 408.1).

308.4.1 Condition 1. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas, and other spaces where access or occupancy is permitted, to the exterior via *means of egress* without restraint. A Condition 1 facility is permitted to be constructed as Group R.

308.4.2 Condition 2. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. Egress to the exterior is impeded by locked *exits*.

308.4.3 Condition 3. This occupancy condition shall include buildings in which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual *sleeping units* and group activity spaces, where egress is impeded by remote-controlled release of *means of egress* from such a smoke compartment to another smoke compartment.

308.4.4 Condition 4. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Remote-controlled release is provided to permit movement from *sleeping units*, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

308.4.5 Condition 5. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Staff-controlled manual release is provided to permit movement from *sleeping units*, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

308.5 Group I-4, day care facilities. This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24 hours by individuals other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the *client* cared for. A facility such as the above with *six* or fewer *clients* shall be classified as a Group R-3 or shall comply with the *California Residential Code*. Places of worship during religious functions are not included.

308.5.1 Adult day-care facility. A facility that provides accommodations for less than 24 hours for more than six unrelated adults and provides supervision and *personal care services* shall be classified as Group I-4.

308.5.2 Child day-care facility. A facility that provides supervision and personal care on less than a 24-hour basis

for more than *six* children *under 2 years of age* shall be classified as Group I-4.

Exception: A child day care facility that provides care for more than *six* but no more than 100 children *under 2 years of age*, where the rooms in which the children are cared for are located on a *level of exit discharge* serving such rooms and each of these child care rooms has an *exit door* directly to the exterior, shall be classified as Group E.

308.5.2.1 Special provisions. See Section 442.4 for *daycares* located above or below the first story.

SECTION 309 MERCANTILE GROUP M

309.1 Mercantile Group M. Mercantile Group M occupancy includes, among others, the use of a building or structure or a portion thereof, for the display and sale of merchandise and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to, the following:

- Department stores
- Drug stores
- Markets
- Motor fuel-dispensing facilities
- Retail or wholesale stores
- Sales rooms

309.2 Quantity of hazardous materials. The aggregate quantity of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored or displayed in a single *control area* of a Group M occupancy shall not exceed the quantities in Table 414.2.5(1).

SECTION 310 RESIDENTIAL GROUP R

310.1 Residential Group R. Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the *California Residential Code*. Residential occupancies shall include the following:

R-1 Residential occupancies containing *sleeping units* where the occupants are primarily transient in nature, including:

- Boarding houses* (transient)
- Hotels (transient)
- Motels (transient)
- [HCD 1]** *Efficiency dwelling units* (transient)

Congregate living facilities (transient) or *congregate residences* (transient) with 10 or fewer occupants are permitted to comply with the construction requirements for Group R-3.

R-2 Residential occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily permanent in nature, including:

- Apartment houses
- Boarding houses* (nontransient)
- Convents

Dormitories
 Fraternities and sororities
 Hotels (nontransient)
 Live/work units
 Monasteries
 Motels (nontransient)
 Vacation timeshare properties

[HCD 1] *Efficiency dwelling units (nontransient)*

Congregate living facilities or congregate residences with 16 or fewer occupants are permitted to comply with the construction requirements for Group R-3.

R-2.1 *This occupancy shall include buildings, structures or parts thereof housing clients, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services.*

This occupancy may contain more than six nonambulatory and/or bedridden clients. (See Section 425 Special Provisions for Licensed 24-Hour Care Facilities in a Group R-2.1, R-3.1 or R-4 Occupancy). This group shall include, but not be limited to, the following:

Assisted living facilities such as:

*Residential care facilities,
 Residential care facilities for the elderly (RCFEs),
 Adult residential facilities,
 Congregate living health facilities,
 Group homes,
 Residential care facilities for the chronically ill,
 Congregate living health facilities for the terminally ill.*

Social rehabilitation facilities such as:

*Halfway houses,
 Community correctional centers,
 Community correction reentry centers,
 Community treatment programs,
 Work furlough programs,
 Alcoholism or drug abuse recovery or treatment facilities.*

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-2.1, R-3.1, R-4 or I, including:

*Buildings that do not contain more than two dwelling units.
 Adult care facilities that provide accommodations for six or fewer clients of any age for less than 24 hours. Licensing categories that may use this classification include, but are not limited to: Adult Day Programs.*

Child care facilities that provide accommodations for six or fewer clients of any age for less than 24 hours. Licensing categories that may use this classification include, but are not limited to:

*Day-Care Center for Mildly Ill Children,
 Infant Care Center and School Age Child Day-Care Center.*

Family Day-Care Homes that provide accommodations for 14 or fewer children, in the provider's own home for less than 24-hours.

Congregate living facilities or congregate residences with 16 or fewer persons.

Adult care and child care facilities that are within a single-family home are permitted to comply with the California Residential Code.

R-3.1 [HCD 1] *This occupancy group may include facilities licensed by a governmental agency for a residentially based 24-hour care facility providing accommodations for six or fewer clients of any age. Clients may be classified as ambulatory, nonambulatory or bedridden. A Group R-3.1 occupancy shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in Section 425 Special Provisions For Licensed 24-Hour Care Facilities in a Group R-2.1, R-3.1 or R-4 Occupancy. This group may include:*

*Adult residential facilities
 Congregate living health facilities
 Foster family homes
 Group homes
 Intermediate care facilities for the developmentally disabled habilitative
 Intermediate care facilities for the developmentally disabled nursing
 Nurseries for the full-time care of children under the age of six, but not including "infants" as defined in Section 310
 Residential care facilities for the elderly
 Small family homes and residential care facilities for the chronically ill*

Exception: *Group Homes licensed by the Department of Social Services which provide nonmedical board, room and care for six or fewer ambulatory children or children two years of age or younger, and which do not have any nonambulatory clients shall not be subject to regulations found in Section 425.*

Pursuant to Health and Safety Code Section 13143 with respect to these exempted facilities, no city, county or public district shall adopt or enforce any requirement for the prevention of fire or for the protection of life and property against fire and panic unless the requirement would be applicable to a structure regardless of the special occupancy. Nothing shall restrict the application of state or local housing standards to such facilities if the standards are applicable to residential occupancies and are not based on the use of the structure as a facility for ambulatory children. For the purpose of this exception, ambulatory children does not include relatives of the licensee or the licensee's spouse.

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than six ambulatory clients, excluding staff.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code or shall comply with the California Residential Code provided the building is protected by an automatic sprinkler system installed in accordance with Section 903.2.8.

This occupancy classification may include a maximum six nonambulatory or bedridden clients (see Section 425 Special Provisions for Licensed 24-Hour Care Facilities in a Group

R-2.1, R-3.1 or R-4 Occupancy). Group R-4 occupancies shall include the following:

Assisted living facilities such as:

*Residential care facilities,
Residential care facilities for the elderly (RCFEs),
Adult residential facilities,
Congregate living health facilities,
Group homes.*

Social rehabilitation facilities such as:

*Halfway houses,
Community correctional centers,
Community correction reentry centers,
Community treatment programs,
Work furlough programs,
Alcoholism or drug abuse recovery or treatment facilities.*

310.2 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

AGED HOME OR INSTITUTION. *A facility used for the housing of persons 65 years of age or older in need of care and supervision. (See definition of “care and supervision”)*

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.*

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.

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

*Assistance in dressing, grooming, bathing and other personal hygiene.
Assistance with taking medication.
Central storing and/or distribution of medications.
Arrangement of and assistance with medical and dental care.
Maintenance of house rules for the protection of clients.
Supervision of client schedules and activities.
Maintenance and/or supervision of client cash resources or property.
Monitoring food intake or special diets.
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.

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.*

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.*

CHRONICALLY ILL. *See “Terminally ill.”*

CONGREGATE LIVING HEALTH FACILITY (CLHF). *As termed, is a residential home with a capacity of no more than six beds, which provides inpatient care, including the following basic services: medical supervision, 24-hour skilled nursing and supportive care, pharmacy, dietary, social recreational, and at least provides services for persons who are diagnosed with a terminal illness or who are catastrophically and severely disabled.*

CONGREGATE LIVING FACILITIES. *A building or part thereof that contains sleeping units where residents share bathroom and/or kitchen facilities.*

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.*

DAY CARE. *For the purposes of these regulations, mean the care of persons during any period of a 24-hour day where permanent sleeping accommodations are not provided.*

Note: *“Daycare” 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).)*

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.

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.

INFANT. For the purpose of these regulations, shall mean 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.

MENTALLY RETARDED PERSONS, PROFOUNDLY OR SEVERELY. Shall mean any retarded person 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.

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.

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, Division 2 Occupancies classified as residential facilities (RF) and residential-care facilities for the elderly (RCFE) shall apply uni-

formly 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.

RESIDENTIAL FACILITY (RF). As defined in Section 1502 of the Health and Safety Code, shall mean any family home, group care facility or similar facility determined by the director of Social Services, for 24-hour nonmedical care of persons in need of personal services, supervision, or assistance essential for sustaining the activities of daily living or for the protection of the individual. Such facilities include small family homes and social rehabilitation facilities.

Pursuant to Health and Safety Code Section 13133, regulations of the state fire marshal pertaining to Group R 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.

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.

TRANSIENT. Occupancy of a dwelling unit or sleeping unit for not more than 30 days.

310.3 Large Family Day-Care Homes. See Section 445.

SECTION 311 STORAGE GROUP S

311.1 Storage Group S. Storage Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

311.2 Moderate-hazard storage, Group S-1. Buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

- Aerosols, Levels 2 and 3
- Aircraft hangar (storage and repair)
- Bags: cloth, burlap and paper
- Bamboos and rattan

CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE CHAPTER 4 – SPECIAL DETAILED REQUIREMENTS ON USE AND OCCUPANCY

Adopting agency	BSC	SFM	HCD			DSA			OSHDP				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter	X						X	X	X	X	X	X								
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X																
Adopt only those sections that are listed below						X								X					X	
Chapter/Section																				
403		X																		
403.1		X																		
403.1.1		X																		
403.2		X																		
403.2.1		X																		
403.2.1.1		X																		
403.3		X																		
403.4.6		X																		
403.4.6.1		X																		
403.4.8.1		X																		
403.5.4		X																		
403.6		X																		
403.7		X																		
404.6		X																		
404.10		X																		
406.1.5			X	X																
406.2.2			X	X	X	X														
406.7		X																		
406.7.1		X																		
406.7.2		X																		
406.7.3		X																		
406.7.4		X																		
407.2.2		X																		
407.10		X																		
407.10.4		X																		
408.1.1		X																		
Cell		X																		
Cell Complex		X																		
Cell Tiers		X																		
Central Control Building		X																		
Day Room		X																		
Dormitory		X																		
Holding Facility		X																		
Housing Unit		X																		
Restraint		X																		
Small Management yard		X																		

(continued)

**CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE
CHAPTER 4 – SPECIAL DETAILED REQUIREMENTS ON USE AND
OCCUPANCY—continued**

Adopting agency	BSC	SFM	HCD			DSA			OSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter	X						X	X	X	X	X	X								
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X																
Adopt only those sections that are listed below						X								X					X	
Chapter/Section																				
408.1.2		X																		
408.1.2.2		X																		
408.3.6 – 408.3.6.5		X																		
408.3.8		X																		
408.3.8.2		X																		
408.5.1		X																		
408.8.1		X																		
408.11		X																		
408.12		X																		
408.13		X																		
408.14 - 408.14.5		X																		
410.2 Platform and Stage						X														
412.3.6						X														
414.5		X																		
414.5.6		X																		
415.9 – 415.10.3		X																		
419.7					X															
420		X																		
420.1		X																		
420.4			X	X	X															
420.4.1			X	X	X															
420.4.1.1			X	X	X															
420.4.1.2			X	X	X															
420.4.1.3			X	X	X															
420.4.1.4			X	X	X															
420.4.1.5			X	X	X															
420.4.1.6			X	X	X															
420.4.2			X	X	X															
420.4.2.1			X	X	X															
420.4.2.2			X	X	X															
420.4.2.3			X	X	X															
420.4.2.3.1			X	X	X															
420.4.2.3.2			X	X	X															
420.4.2.4			X	X	X															
420.4.2.5			X	X	X															
420.4.2.6			X	X	X															

(continued)

**CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE
CHAPTER 4 – SPECIAL DETAILED REQUIREMENTS ON USE AND
OCCUPANCY—continued**

Adopting agency	BSC	SFM	HCD				DSA			OSHDPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4									
Adopt entire chapter	X						X	X	X	X	X	X									
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X																	
Adopt only those sections that are listed below						X								X						X	
Chapter/Section																					
420.5		X																			
420.6		X																			
424.1			X		X																
425		X																			
426		X																			
430		X																			
431		X																			
432		X																			
433		X																			
434		X																			
436		X																			
439		X																		X	
440		X												X							
442		X																			
443		X																			
445		X																			

The Office of the State Fire Marshal's adoption of this chapter or individual sections is applicable to structures regulated by other state agencies pursuant to Section 1.11.

CHAPTER 4

SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

SECTION 401 SCOPE

401.1 Detailed use and occupancy requirements. In addition to the occupancy and construction requirements in this code, the provisions of this chapter apply to the special uses and occupancies described herein.

SECTION 402 COVERED MALL AND OPEN MALL BUILDINGS

402.1 Scope. The provisions of this section shall apply to buildings or structures defined herein as *covered mall buildings* not exceeding three floor levels at any point nor more than three stories above grade plane. Except as specifically required by this section, *covered mall buildings* shall meet applicable provisions of this code.

Exceptions:

1. Foyers and lobbies of Groups B, R-1 and R-2 are not required to comply with this section.
2. Buildings need not comply with the provisions of this section when they totally comply with other applicable provisions of this code.

402.2 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

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

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. For the purpose of this chapter, *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 estab-

lishments, entertainment and amusement facilities, offices, and other similar uses, wherein two or more tenants have a main entrance into one or more open malls. For the purpose of Chapter 4 of the *California Building Code*, *anchor buildings* are not considered as a part of the open mall building.

FOOD COURT. A public seating area located in the mall that serves adjacent food preparation tenant spaces.

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.

402.3 Lease plan. Each *covered mall building* owner shall provide both the building and fire departments with a lease plan showing the location of each occupancy and its exits after the certificate of occupancy has been issued. No modifications or changes in occupancy or use shall be made from that shown on the lease plan without prior approval of the *building official*.

402.4 Means of egress. Each tenant space and the *covered mall building* shall be provided with *means of egress* as required by this section and this code. Where there is a conflict between the requirements of this code and the requirements of this section, the requirements of this section shall apply.

402.4.1 Determination of occupant load. The *occupant load* permitted in any individual tenant space in a *covered mall building* shall be determined as required by this code. *Means of egress* requirements for individual tenant spaces shall be based on the *occupant load* thus determined.

402.4.1.1 Occupant formula. In determining required *means of egress* of the mall, the number of occupants for whom *means of egress* are to be provided shall be based on gross leasable area of the *covered mall building* (excluding *anchor buildings*) and the *occupant load* factor as determined by the following equation.

$$OLF = (0.00007)(GLA) + 25 \quad \text{(Equation 4-1)}$$

where:

OLF = The *occupant load* factor (square feet per person).

GLA = The gross leasable area (square feet).

Exception: Tenant spaces attached to a *covered mall building* but with a *means of egress* system that is totally independent of the *covered mall building* shall not be considered as gross leasable area for determining the required *means of egress* for the *covered mall building*.

402.4.1.2 OLF range. The *occupant load factor (OLF)* is not required to be less than 30 and shall not exceed 50.

402.4.1.3 Anchor buildings. The *occupant load of anchor buildings* opening into the mall shall not be included in computing the total number of occupants for the mall.

402.4.1.4 Food courts. The *occupant load* of a food court shall be determined in accordance with Section 1004. For the purposes of determining the *means of egress* requirements for the mall, the food court *occupant load* shall be added to the *occupant load* of the *covered mall building* as calculated above.

402.4.2 Number of means of egress. Wherever the distance of travel to the mall from any location within a tenant space used by persons other than employees exceeds 75 feet (22 860 mm) or the tenant space has an *occupant load* of 50 or more, not less than two *means of egress* shall be provided.

402.4.3 Arrangements of means of egress. Assembly occupancies with an *occupant load* of 500 or more shall be so located in the *covered mall building* that their entrance will be immediately adjacent to a principal entrance to the mall and shall have not less than one-half of their required *means of egress* opening directly to the exterior of the *covered mall building*.

402.4.3.1 Anchor building means of egress. Required *means of egress* for *anchor buildings* shall be provided independently from the mall *means of egress* system. The *occupant load* of *anchor buildings* opening into the mall shall not be included in determining *means of egress* requirements for the mall. The path of egress travel of malls shall not exit through anchor buildings. Malls terminating at an *anchor building* where no other *means of egress* has been provided shall be considered as a dead-end mall.

402.4.4 Distance to exits. Within each individual tenant space in a *covered mall building*, the maximum distance of travel from any point to an *exit* or entrance to the mall shall not exceed 200 feet (60 960 mm).

The maximum distance of travel from any point within a mall to an *exit* shall not exceed 200 feet (60 960 mm).

402.4.5 Access to exits. Where more than one *exit* is required, they shall be so arranged that it is possible to travel in either direction from any point in a mall to separate *exits*. The minimum width of an *exit passageway* or *corridor* from a mall shall be 66 inches (1676 mm).

Exception: Dead ends not exceeding a length equal to twice the width of the mall measured at the narrowest location within the dead-end portion of the mall.

402.4.5.1 Exit passageways. Where *exit passageways* provide a secondary *means of egress* from a tenant space, doorways to the exit passageway shall be protected by 1-hour *fire door assemblies* that are self- or automatic-closing by smoke detection in accordance with Section 715.4.8.3.

402.4.6 Service areas fronting on exit passageways. Mechanical rooms, electrical rooms, building service areas and service elevators are permitted to open directly into *exit passageways*, provided the exit passageway is separated from such rooms with not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. The minimum *fire protection rating* of openings in the *fire barriers* shall be 1 hour.

402.5 Mall width. For the purpose of providing required egress, malls are permitted to be considered as *corridors* but need not comply with the requirements of Section 1005.1 of this code where the width of the mall is as specified in this section.

402.5.1 Minimum width. The minimum width of the mall shall be 20 feet (6096 mm). The mall width shall be sufficient to accommodate the *occupant load* served. There shall be a minimum of 10 feet (3048 mm) clear exit width to a height of 8 feet (2438 mm) between any projection of a tenant space bordering the mall and the nearest kiosk, vending machine, bench, display opening, food court or other obstruction to *means of egress* travel.

402.5.2 Minimum width open mall. The minimum floor and roof opening width above grade shall be 20 feet (9096 mm) in open malls.

402.6 Types of construction. The area of any *covered mall building*, including *anchor buildings*, of Types I, II, III and IV construction, shall not be limited provided the *covered mall building* and attached *anchor buildings* and parking garages are surrounded on all sides by a permanent open space of not less than 60 feet (18 288 mm) and the *anchor buildings* do not exceed three *stories above grade plane*. The allowable height and area of *anchor buildings* greater than three *stories above grade plane* shall comply with Section 503, as modified by Sections 504 and 506. The construction type of *open parking garages* and enclosed parking garages shall comply with Sections 406.3 and 406.4, respectively.

402.6.1 Reduced open space. The permanent open space of 60 feet (18 288 mm) shall be permitted to be reduced to not less than 40 feet (12 192 mm), provided the following requirements are met:

1. The reduced open space shall not be allowed for more than 75 percent of the perimeter of the *covered mall building* and *anchor buildings*.
2. The *exterior wall* facing the reduced open space shall have a minimum *fire-resistance rating* of 3 hours.
3. Openings in the *exterior wall* facing the reduced open space shall have opening protectives with a minimum *fire protection rating* of 3 hours.
4. Group E, H, I or R occupancies are not within the *covered mall building* or *anchor stores*.

402.7 Fire-resistance-rated separation. Fire-resistance-rated separation is not required between tenant spaces and the mall. Fire-resistance-rated separation is not required between a food court and adjacent tenant spaces or the mall.

402.7.1 Attached garage. An attached garage for the storage of passenger vehicles having a capacity of not more than nine

feet above the lowest level of fire department vehicle access shall comply with Sections 403.2 through 403.6.

Exception: The provisions of Sections 403.2 through 403.6 shall not apply to the following buildings and structures:

1. Airport traffic control towers in accordance with Section 412.3.
2. Open parking garages in accordance with Section 406.3.
3. Buildings with a Group A-5 occupancy in accordance with Section 303.1.
4. Special industrial occupancies in accordance with Section 503.1.1.
5. *Buildings such as power plants, lookout towers, steeples, grain houses and similar structures with non-continuous human occupancy, when so determined by the enforcing agency.*

For existing high-rise buildings, see Section 3414 and for existing Group R occupancies, see Section 3413.13.

For the purpose of this section, in determining the level from which the highest occupied floor is to be measured, the enforcing agency should exercise reasonable judgment, including consideration of overall accessibility to the building by fire department personnel and vehicular equipment. When a building is located on sloping terrain and there is building access on more than one level, the enforcing agency may select the level that provides the most logical and adequate fire department access.

403.1.1 Definitions. *The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.*

HIGH-RISE BUILDING. *In other than Group I-2 occupancies “high-rise buildings” as used in this code:*

1. *“Existing high-rise structure” means a high-rise structure, the construction of which is commenced or completed prior to July 1, 1974.*
2. *“High-rise structure” means 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.*
3. *“New high-rise structure” means 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.*

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.*

403.2 Construction. The construction of high-rise buildings shall comply with the provisions of Sections 403.2.1 through 403.2.4.

403.2.1 Reduction in fire-resistance rating. The fire-resistance-rating reductions listed in Sections 403.2.1.1 and 403.2.1.2 shall be allowed in buildings that have sprinkler control valves equipped with supervisory initiating devices and water-flow initiating devices for each floor.

Exception: *Buildings, or portions of buildings, classified as a Group H-1, H-2 or H-3 occupancy.*

403.2.1.1 Type of construction. The following reductions in the minimum fire-resistance rating of the building elements in Table 601 shall be permitted as follows:

1. For buildings not greater than 420 feet (128 m) in building height, the fire-resistance rating of the building elements in Type IA construction shall be permitted to be reduced to the minimum fire-resistance ratings for the building elements in Type IB.

Exception: The required fire-resistance rating of the Structural Frame shall not be permitted to be reduced.

2. In other than Group F-1, M and S-1 occupancies, the fire-resistance rating of the building elements in Type IB construction shall be permitted to be reduced to the fire-resistance ratings in Type IIA.

Exception: *The required fire-resistance rating of the structural frame shall not be permitted to be reduced.*

3. The building height and building area limitations of a building containing building elements with reduced fire-resistance ratings shall be permitted to be the same as the building without such reductions.

403.2.1.2 Shaft enclosures. For buildings not greater than 420 feet (128 m) in building height, the required fire-resistance rating of the fire barriers enclosing vertical shafts, other than exit enclosures and elevator hoistway enclosures, is permitted to be reduced to 1 hour where automatic sprinklers are installed within the shafts at the top and at alternate floor levels.

403.2.2 Seismic considerations. For seismic considerations, see Chapter 16.

403.2.3 Structural integrity of exit enclosures and elevator hoistway enclosures. For high-rise buildings of occupancy category III or IV in accordance with Section 1604.5, and for all buildings that are more than 420 feet (128 m) in *building height*, *exit enclosures* and elevator hoistway enclosures shall comply with Sections 403.2.3.1 through 403.2.3.4.

403.2.3.1 Wall assembly. The wall assemblies making up the *exit enclosures* and elevator hoistway enclosures shall meet or exceed Soft Body Impact Classification Level 2 as measured by the test method described in ASTM C 1629/C 1629M.

403.2.3.2 Wall assembly materials. The face of the wall assemblies making up the *exit enclosures* and elevator hoistway enclosures that are not exposed to the interior of the *exit enclosure* or elevator hoistway enclosure shall be constructed in accordance with one of the following methods:

1. The wall assembly shall incorporate not less than two layers of impact-resistant construction board each of which meets or exceeds Hard Body Impact Classification Level 2 as measured by the test method described in ASTM C 1629/C 1629M.
2. The wall assembly shall incorporate not less than one layer of impact-resistant construction material that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C 1629/C 1629M.
3. The wall assembly incorporates multiple layers of any material, tested in tandem, that meet or exceed Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C 1629/C 1629M.

403.2.3.3 Concrete and masonry walls. Concrete or masonry walls shall be deemed to satisfy the requirements of Sections 403.2.3.1 and 403.2.3.2.

403.2.3.4 Other wall assemblies. Any other wall assembly that provides impact resistance equivalent to that required by Sections 403.2.3.1 and 403.2.3.2 for Hard Body Impact Classification Level 3, as measured by the test method described in ASTM C 1629/C 1629M, shall be permitted.

403.2.4 Sprayed fire-resistant materials (SFRM). The bond strength of the SFRM installed throughout the building shall be in accordance with Table 403.2.4.

**TABLE 403.2.4
MINIMUM BOND STRENGTH**

HEIGHT OF BUILDING ^a	SFRM MINIMUM BOND STRENGTH
Up to 420 feet	430 psf
Greater than 420 feet	1,000 psf

For SI: 1 foot = 304.8 mm, 1 pound per square foot (psf) = 0.0479 kW/m².
a. Above the lowest level of fire department vehicle access.

[F] 403.3 Automatic sprinkler system. Buildings and structures shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 and a secondary

water supply where required by Section 903.3.5.2. A *sprinkler water-flow alarm-initiating device* and a *control valve with a supervisory signal-initiating device* shall be provided at the lateral connection to the riser for each floor.

Exception: An *automatic sprinkler system* shall not be required in *open parking garages* in accordance with Section 406.3.

[F] 403.3.1 Number of sprinkler risers and system design. Each sprinkler system zone in buildings that are more than 420 feet (128 m) in *building height* shall be supplied by a minimum of two risers. Each riser shall supply sprinklers on alternate floors. If more than two risers are provided for a zone, sprinklers on adjacent floors shall not be supplied from the same riser.

[F] 403.3.1.1 Riser location. Sprinkler risers shall be placed in *exit enclosures* that are remotely located in accordance with Section 1015.2.

[F] 403.3.2 Water supply to required fire pumps. Required fire pumps shall be supplied by connections to a minimum of two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: Two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through at least one of the connections.

403.4 Emergency systems. The detection, alarm and emergency systems of high-rise buildings shall comply with Sections 403.4.1 through 403.4.8.

[F] 403.4.1 Smoke detection. Smoke detection shall be provided in accordance with Section 907.2.13.1.

[F] 403.4.2 Fire alarms systems. A fire alarm system shall be provided in accordance with Section 907.2.13.

[F] 403.4.3 Emergency voice/alarm communication system. An emergency voice/alarm communication system shall be provided in accordance with Section 907.5.2.2.

[F] 403.4.4 Emergency responder radio coverage. Emergency responder radio coverage shall be provided in accordance with Section 510 of the *California Fire Code*.

[F] 403.4.5 Fire command. A fire command center complying with Section 911 shall be provided in a location approved by the fire department.

403.4.6 Smoke control.

403.4.6.1 Smoke control system. High-rise buildings shall be provided with a passive or active smoke control system or combination thereof in accordance with Section 909.

[F] 403.4.7 Standby power. A standby power system complying with Chapter 27 shall be provided for standby power loads specified in Section 403.4.7.2.

[F] 403.4.7.1 Special requirements for standby power systems. If the standby system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. System supervision with manual start and transfer features shall be provided at the fire command center.

[F] 403.4.7.2 Standby power loads. The following are classified as standby power loads:

1. Power and lighting for the fire command center required by Section 403.4.5;
2. Ventilation and automatic fire detection equipment for smokeproof enclosures; and
3. Standby power shall be provided for elevators in accordance with Sections 1007.4, 3003, 3007 and 3008.

[F] 403.4.8 Emergency power systems. An emergency power system complying with Chapter 27 shall be provided for emergency power loads specified in Section 403.4.8.1.

[F] 403.4.8.1 Emergency power loads. The following are classified as emergency power loads:

1. Exit signs and *means of egress* illumination required by Chapter 10;
2. Elevator car lighting;
3. Emergency voice/alarm communications systems;
4. Automatic fire detection systems;
5. Fire alarm systems; and
6. Electrically powered fire pumps.

403.5 Means of egress and evacuation. The *means of egress* in high-rise buildings shall comply with Sections 403.5.1 through 403.5.6.

403.5.1 Remoteness of exit stairway enclosures. The required *exit stairway* enclosures shall be separated by a distance not less than 30 feet (9144 mm) or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less. The distance shall be measured in a straight line between the nearest points of the *exit stairway* enclosures. In buildings with three or more *exit stairway* enclosures, at least two of the *exit stairway* enclosures shall comply with this section. Interlocking or *scissor stairs* shall be counted as one *exit stairway*.

403.5.2 Additional exit stairway. For buildings other than Group R-2 that are more than 420 feet (128 m) in *building height*, one additional *exit stairway* meeting the requirements of Sections 1009 and 1022 shall be provided in addition to the minimum number of *exits* required by Section 1021.1. The total width of any combination of remaining *exit stairways* with one *exit stairway* removed shall not be less than the total width required by Section 1005.1. *Scissor*

stairs shall not be considered the additional *exit stairway* required by this section.

Exception: An additional *exit stairway* shall not be required to be installed in buildings having elevators used for occupant self-evacuation in accordance with Section 3008.

403.5.3 Stairway door operation. Stairway doors other than the *exit discharge* doors shall be permitted to be locked from the stairway side. Stairway doors that are locked from the stairway side shall be capable of being unlocked simultaneously without unlatching upon a signal from the fire command center. *Upon failure of electrical power to the locking mechanism the door shall unlock.*

403.5.3.1 Stairway communication system. A telephone or other two-way communications system connected to an *approved* constantly attended station shall be provided at not less than every fifth floor in each *stairway* where the doors to the *stairway* are locked.

403.5.4 Smokeproof exit enclosures. *Every exit enclosure in high-rise buildings shall comply with Sections 909.20 and 1022.9.* Every required level exit stairway in *Group I-2 occupancies* serving floors more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall comply with Sections 909.20 and 1022.9.

403.5.5 Luminous egress path markings. Luminous egress path markings shall be provided in accordance with Section 1024.

403.5.6 Emergency escape and rescue. Emergency escape and rescue openings required by Section 1029 are not required.

403.6 Elevators. Elevator installation and operation in high-rise buildings shall comply with Chapter 30 and Sections 403.6.1 and 403.6.2.

Enclosed elevator lobbies shall be provided in accordance with Section 708.14.1. Exceptions 3, 5, 6 and 8 shall only be permitted where approved by the Fire Chief in accordance with Section 1.11.2.1.1 or in accordance with Section 1.11.2.1.2 for all state-owned buildings, state-occupied buildings, and state institutions throughout the state.

403.6.1 Fire service access elevator. In buildings with an occupied floor more than 120 feet (36 576 mm) above the lowest level of fire department vehicle access, a minimum of one fire service access elevator shall be provided in accordance with Section 3007.

403.6.2 Occupant evacuation elevators. Where installed in accordance with Section 3008, passenger elevators for general public use shall be permitted to be used for occupant self-evacuation.

403.7 Existing high-rise buildings. *For existing high-rise buildings, see Section 3414.*

SECTION 404 ATRIUMS

404.1 General. In other than Group H occupancies, and where permitted by Exception 5 in Section 708.2, the provisions of this section shall apply to buildings or structures containing vertical openings defined herein as “Atriums.”

404.1.1 Definition. The following word and term shall, for the purposes of this chapter and as used elsewhere in this code, have the meaning shown herein.

ATRIUM. An opening connecting two or more *stories* other than enclosed *stairways*, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall. Stories, as used in this definition, do not include balconies within assembly groups or *mezzanines* that comply with Section 505.

404.2 Use. The floor of the atrium shall not be used for other than low fire hazard uses and only *approved* materials and decorations in accordance with the *California Fire Code* shall be used in the atrium space.

Exception: The atrium floor area is permitted to be used for any *approved* use where the individual space is provided with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

[F] 404.3 Automatic sprinkler protection. An *approved automatic sprinkler system* shall be installed throughout the entire building.

Exceptions:

1. That area of a building adjacent to or above the atrium need not be sprinklered provided that portion of the building is separated from the atrium portion by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.
2. Where the ceiling of the atrium is more than 55 feet (16 764 mm) above the floor, sprinkler protection at the ceiling of the atrium is not required.

[F] 404.4 Fire alarm system. A fire alarm system shall be provided in accordance with Section 907.2.14.

404.5 Smoke control. A smoke control system shall be installed in accordance with Section 909.

Exception: Smoke control is not required for atriums that connect only two *stories*.

404.6 Enclosure of atriums. Atrium spaces shall be separated from adjacent spaces by a 1-hour *fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* constructed in accordance with Section 712, or both.

Exceptions:

1. A glass wall forming a smoke partition where automatic sprinklers are spaced 6 feet (1829 mm) or less along both sides of the separation wall, or on the room side only if there is not a walkway on the atrium side,

and between 4 inches and 12 inches (102 mm and 305 mm) away from the glass and designed so that the entire surface of the glass is wet upon activation of the sprinkler system without obstruction. The glass shall be installed in a gasketed frame so that the framing system deflects without breaking (loading) the glass before the sprinkler system operates.

2. A glass-block wall assembly in accordance with Section 2110 and having a $\frac{3}{4}$ -hour *fire protection rating*.
3. *In other than Group I and R-2.1 occupancies*, the adjacent spaces of any three *floors* of the atrium shall not be required to be separated from the atrium where such spaces are accounted for in the design of the smoke control system.

[F] 404.7 Standby power. Equipment required to provide smoke control shall be connected to a standby power system in accordance with Section 909.11.

404.8 Interior finish. The *interior finish* of walls and ceilings of the atrium shall not be less than Class B with no reduction in class for sprinkler protection.

404.9 Travel distance. In other than the lowest level of the atrium, where the required *means of egress* is through the atrium space, the portion of exit access travel distance within the atrium space shall not exceed 200 feet (60 960 mm). The travel distance requirements for areas of buildings open to the atrium and where access to the *exits* is not through the atrium, shall comply with the requirements of Section 1016.

404.10 Group I and R-2.1 occupancy means of egress. *Required means of egress from sleeping rooms in Group I and R-2.1 occupancies shall not pass through the atrium.*

SECTION 405 UNDERGROUND BUILDINGS

405.1 General. The provisions of this section apply to building spaces having a floor level used for human occupancy more than 30 feet (9144 mm) below the finished floor of the lowest *level of exit discharge*.

Exceptions:

1. One- and two-family *dwelling*s, sprinklered in accordance with Section 903.3.1.3.
2. Parking garages with automatic sprinkler systems in compliance with Section 405.3.
3. Fixed guideway transit systems.
4. Grandstands, *bleachers*, stadiums, arenas and similar facilities.
5. Where the lowest *story* is the only *story* that would qualify the building as an underground building and has an area not exceeding 1,500 square feet (139 m²) and has an *occupant load* less than 10.
6. Pumping stations and other similar mechanical spaces intended only for limited periodic use by service or maintenance personnel.

TABLE 415.3.1—continued
MINIMUM SEPARATION DISTANCES FOR BUILDINGS CONTAINING EXPLOSIVE MATERIALS

QUANTITY OF EXPLOSIVE MATERIAL ^a		MINIMUM DISTANCE (feet)		
		Lot lines ^b and inhabited buildings ^c		Separation of magazines ^{d, e, f}
Pounds over	Pounds not over	Barricaded ^d	Unbarricaded	
20,000	25,000	1,055	2,000	210
25,000	30,000	1,130	2,000	224
30,000	35,000	1,205	2,000	238
35,000	40,000	1,275	2,000	248
40,000	45,000	1,340	2,000	258
45,000	50,000	1,400	2,000	270
50,000	55,000	1,460	2,000	280
55,000	60,000	1,515	2,000	290
60,000	65,000	1,565	2,000	300
65,000	70,000	1,610	2,000	310
70,000	75,000	1,655	2,000	320
75,000	80,000	1,695	2,000	330
80,000	85,000	1,730	2,000	340
85,000	90,000	1,760	2,000	350
90,000	95,000	1,790	2,000	360
95,000	100,000	1,815	2,000	370
100,000	110,000	1,835	2,000	390
110,000	120,000	1,855	2,000	410
120,000	130,000	1,875	2,000	430
130,000	140,000	1,890	2,000	450
140,000	150,000	1,900	2,000	470
150,000	160,000	1,935	2,000	490
160,000	170,000	1,965	2,000	510
170,000	180,000	1,990	2,000	530
180,000	190,000	2,010	2,010	550
190,000	200,000	2,030	2,030	570
200,000	210,000	2,055	2,055	590
210,000	230,000	2,100	2,100	630
230,000	250,000	2,155	2,155	670
250,000	275,000	2,215	2,215	720
275,000	300,000	2,275	2,275	770

For SI: 1 pound = 0.454 kg, 1 foot = 304.8 mm, 1 square foot = 0.0929m².

- a. The number of pounds of explosives listed is the number of pounds of trinitrotoluene (TNT) or the equivalent pounds of other explosive.
- b. The distance listed is the distance to lot line, including lot lines at public ways.
- c. For the purpose of this table, an inhabited building is any building on the same lot that is regularly occupied by people. Where two or more buildings containing explosives or magazines are located on the same lot, each building or magazine shall comply with the minimum distances specified from inhabited buildings and, in addition, they shall be separated from each other by not less than the distance shown for "Separation of magazines," except that the quantity of explosive materials contained in detonator buildings or magazines shall govern in regard to the spacing of said detonator buildings or magazines from buildings or magazines containing other explosive materials. If any two or more buildings or magazines are separated from each other by less than the specified "Separation of Magazines" distances, then such two or more buildings or magazines, as a group, shall be considered as one building or magazine, and the total quantity of explosive materials stored in such group shall be treated as if the explosive were in a single building or magazine located on the site of any building or magazine of the group, and shall comply with the minimum distance specified from other magazines or inhabited buildings.
- d. Barricades shall effectively screen the building containing explosives from other buildings, public ways or magazines. Where mounds or revetted walls of earth are used for barricades, they shall not be less than 3 feet in thickness. A straight line from the top of any side wall of the building containing explosive materials to the eave line of any other building, magazine or a point 12 feet above the centerline of a public way shall pass through the barricades.
- e. Magazine is a building or structure, other than an operating building, approved for storage of explosive materials. Portable or mobile magazines not exceeding 120 square feet in area need not comply with the requirements of this code, however, all magazines shall comply with the *California Fire Code*.
- f. The distance listed is permitted to be reduced by 50 percent where approved natural or artificial barriers are provided in accordance with the requirements in Note d.

[F] TABLE 415.3.2
DETACHED BUILDING REQUIRED

A DETACHED BUILDING IS REQUIRED WHEN THE QUANTITY OF MATERIAL EXCEEDS THAT LISTED HEREIN			
Material	Class	Solids and Liquids (tons) ^{a, b}	Gases (cubic feet) ^{a, b}
Explosives	Division 1.1	Maximum Allowable Quantity	Not Applicable
	Division 1.2	Maximum Allowable Quantity	
	Division 1.3	Maximum Allowable Quantity	
	Division 1.4	Maximum Allowable Quantity	
	Division 1.4 ^c	1	
	Division 1.5	Maximum Allowable Quantity	
	Division 1.6	Maximum Allowable Quantity	
Oxidizers	Class 4	Maximum Allowable Quantity	Maximum Allowable Quantity
Unstable (reactives) detonable	Class 3 or 4	Maximum Allowable Quantity	Maximum Allowable Quantity
Oxidizer, liquids and solids	Class 3	1,200	Not Applicable
	Class 2	2,000	Not Applicable
Organic peroxides	Detonable	Maximum Allowable Quantity	Not Applicable
	Class I	Maximum Allowable Quantity	Not Applicable
	Class II	25	Not Applicable
	Class III	50	Not Applicable
Unstable (reactives) nondetonable	Class 3	1	2,000
	Class 2	25	10,000
Water reactives	Class 3	1	Not Applicable
	Class 2	25	Not Applicable
Pyrophoric gases	Not Applicable	Not Applicable	2,000

For SI: 1 ton = 906 kg, 1 cubic foot = 0.02832 m³, 1 pound = 0.454 kg.

- a. For materials that are detonable, the distance to other buildings or lot lines shall be as specified in Table 415.3.1 based on trinitrotoluene (TNT) equivalence of the material. For materials classified as explosives, see Chapter 33 the *California Fire Code*. For all other materials, the distance shall be as indicated in Section 415.3.1.
- b. "Maximum Allowable Quantity" means the maximum allowable quantity per control area set forth in Table 307.1(1).
- c. Limited to Division 1.4 materials and articles, including articles packaged for shipment, that are not regulated as an explosive under Bureau of Alcohol, Tobacco and Firearms (BATF) regulations or unpackaged articles used in process operations that do not propagate a detonation or deflagration between articles, providing the net explosive weight of individual articles does not exceed 1 pound.

[F] 415.6.1 Combustible dusts, grain processing and storage. The provisions of Sections 415.6.1.1 through 415.6.1.6 shall apply to buildings in which materials that produce combustible dusts are stored or handled. Buildings that store or handle combustible dusts shall comply with the applicable provisions of NFPA 61, NFPA 85, NFPA 120, NFPA 484, NFPA 654, NFPA 655 and NFPA 664, and the *California Fire Code*.

[F] 415.6.1.1 Type of construction and height exceptions. Buildings shall be constructed in compliance with the height and area limitations of Table 503 for Group H-2; except that where erected of Type I or II construction, the heights and areas of grain elevators and similar structures shall be unlimited, and where of Type IV construction, the maximum height shall be 65 feet (19 812 mm) and except further that, in isolated areas, the maximum height of Type IV structures shall be increased to 85 feet (25 908 mm).

[F] 415.6.1.2 Grinding rooms. Every room or space occupied for grinding or other operations that produce combustible dusts shall be enclosed with *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. The minimum *fire-resistance rating* shall

be 2 hours where the area is not more than 3,000 square feet (279 m²), and 4 hours where the area is greater than 3,000 square feet (279 m²).

[F] 415.6.1.3 Conveyors. Conveyors, chutes, piping and similar equipment passing through the enclosures of rooms or spaces shall be constructed dirt tight and vapor tight, and be of *approved* noncombustible materials complying with Chapter 30.

[F] 415.6.1.4 Explosion control. Explosion control shall be provided as specified in the *California Fire Code*, or spaces shall be equipped with the equivalent mechanical ventilation complying with the *California Mechanical Code*.

[F] 415.6.1.5 Grain elevators. Grain elevators, malt houses and buildings for similar occupancies shall not be located within 30 feet (9144 mm) of interior *lot lines* or structures on the same lot, except where erected along a railroad right-of-way.

[F] 415.6.1.6 Coal pockets. Coal pockets located less than 30 feet (9144 mm) from interior *lot lines* or from structures on the same lot shall be constructed of not less than Type IB construction. Where more than 30 feet (9144 mm) from interior *lot lines*, or where erected along a railroad right-of-way, the minimum type of construc-

[F] 418.6 Finished products. Storage rooms for finished products that are flammable or combustible liquids shall be separated from the processing area by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

SECTION 419 LIVE/WORK UNITS

419.1 General. A live/work unit is a *dwelling unit* or *sleeping unit* in which a significant portion of the space includes a non-residential use that is operated by the tenant and shall comply with Sections 419.1 through 419.8.

Exception: *Dwelling* or *sleeping units* that include an office that is less than 10 percent of the area of the *dwelling unit* shall not be classified as a live/work unit.

419.1.1 Limitations. The following shall apply to all live/work areas:

1. The live/work unit is permitted to be a maximum of 3,000 square feet (279 m²);
2. The nonresidential area is permitted to be a maximum 50 percent of the area of each live/work unit;
3. The nonresidential area function shall be limited to the first or main floor only of the live/work unit; and
4. A maximum of five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time.

419.2 Occupancies. Live/work units shall be classified as a Group R-2 occupancy. Separation requirements found in Sections 420 and 508 shall not apply within the live/work unit when the live/work unit is in compliance with Section 419. High-hazard and storage occupancies shall not be permitted in a live/work unit. The aggregate area of storage in the nonresidential portion of the live/work unit shall be limited to 10 percent of the space dedicated to nonresidential activities.

419.3 Means of egress. Except as modified by this section, the provisions for Group R-2 occupancies in Chapter 10 shall apply to the entire live/work unit.

419.3.1 Egress capacity. The egress capacity for each element of the live/work unit shall be based on the *occupant load* for the function served in accordance with Table 1004.1.1.

419.3.2 Sliding doors. Where doors in a *means of egress* are of the horizontal-sliding type, the force to slide the door to its fully open position shall not exceed 50 pounds (220 N) with a perpendicular force against the door of 50 pounds (220 N).

419.3.3 Spiral stairways. *Spiral stairways* that conform to the requirements of Section 1009.9 shall be permitted.

419.3.4 Locks. Egress doors shall be permitted to be locked in accordance with Item 4 of Section 1008.1.9.3.

419.4 Vertical openings. Floor openings between floor levels of a live/work unit are permitted without enclosure.

419.5 Fire protection. The live/work unit shall be provided with a monitored fire alarm system where required by Section 907.2.9 and an *automatic sprinkler system* in accordance with Section 903.2.8.

419.6 Structural. Floor loading for the areas within a live/work unit shall be designed to conform to Table 1607.1 based on the function within the space.

419.7 Accessibility. Accessibility shall be designed in accordance with Chapters *11A* and/or *11B*, when applicable.

419.8 Ventilation. The applicable requirements of the *California Mechanical Code* shall apply to each area within the live/work unit for the function within that space.

SECTION 420 GROUPS R-1, R-2, R-2.1, R-3, R-3.1 and R-4

420.1 General. Occupancies in Groups R-1, R-2, *R-2.1*, R-3, *R-3.1* and *R-4* shall comply with the provisions of this section and other applicable provisions of this code.

420.2 Separation walls. Walls separating *dwelling units* in the same building, walls separating *sleeping units* in the same building and walls separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *fire partitions* in accordance with Section 709.

420.3 Horizontal separation. Floor assemblies separating *dwelling units* in the same buildings, floor assemblies separating *sleeping units* in the same building and floor assemblies separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *horizontal assemblies* in accordance with Section 712.

420.4 Carbon monoxide alarms. [HCD 1, HCD 2 & HCD 1-AC]

420.4.1 Carbon monoxide alarms in new construction. *Newly constructed Group R occupancies located in a building containing a fuel-burning appliance or a building that has an attached garage shall be equipped with single station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in the California Building Code, or an enclosed parking garage ventilated in accordance with the California Mechanical Code shall not be deemed to be an attached garage.*

Exception: *Sleeping units or dwelling units that do not themselves contain a fuel-burning appliance or have an attached garage, but that are located in a building with a fuel-burning appliance or an attached garage, need not be provided with single station carbon monoxide alarms provided that:*

1. *The sleeping unit or dwelling unit is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage; and*
2. *The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and*
3. *The building is equipped with a common area carbon monoxide detection system that includes all enclosed common area spaces.*

420.4.1.1 Carbon monoxide detection systems. Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.

420.4.1.2 Power supply. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. Where there is no commercial power supply, the carbon monoxide alarm may be solely battery operated.
2. Other power sources recognized for use by NFPA 720.

420.4.1.3 Interconnection. Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.

420.4.1.4 Alarm requirements. No person shall install, market, distribute, offer for sale, or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.

Carbon monoxide alarms required by Section 420.4.1 shall be installed and maintained in the following locations:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).
2. On every level of a dwelling unit including basements.
3. Group R-1 Occupancies only.
 - a. On the ceiling of every sleeping unit or other locations within the sleeping unit in compliance with the manufacturer's installation instructions.

420.4.1.5 Multiple-purpose alarms. Carbon monoxide alarms combined with smoke alarms shall comply with Section 420.4, all applicable standards, and requirements for listing and approval by the Office of the State Fire Marshal, for smoke alarms.

420.4.1.6 Visible alarms. In buildings containing covered multifamily dwellings as defined in Chapter 11A, with fuel-burning appliances and/or attached garages as described in Section 420.4.1, all required carbon monoxide alarms shall be equipped with the capability to support visible alarm notification in accordance with NFPA 720 and Chapter 11B.

420.4.2 Carbon monoxide alarms in existing dwellings or sleeping units. Existing Group R occupancies located in a building with a fossil fuel-burning heater or appliance, fireplace or an attached garage shall have single station carbon monoxide alarms installed in accordance with this section. The carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in the California Building Code, or an enclosed parking garage ventilated in accordance with the California Mechanical Code shall not be deemed to be an attached garage.

Exception: Sleeping units or dwelling units that do not themselves contain a fossil fuel-burning heater or appliance, fireplace or an attached garage, but that are located in a building with a fossil fuel-burning appliance or an attached garage, need not be provided with single station carbon monoxide alarms provided that:

1. The sleeping unit or dwelling unit is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage; and
2. The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and
3. The building is equipped with a common area carbon monoxide detection system, carbon monoxide detector or combination detector in the same space as permanently installed fuel-burning appliance(s).

420.4.2.1 Carbon monoxide detection systems. Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.

420.4.2.2 Existing dwellings or sleeping units requiring a permit. When a permit is required for alterations, repairs or additions with a total cost or calculated valuation exceeding one thousand dollars (\$1,000), existing dwellings or sleeping units with a fossil fuel-burning heater or appliance, fireplace or an attached garage shall have a carbon monoxide alarm installed in accordance with Section 420.4.2. Carbon monoxide alarms shall only be required in the specific dwelling unit or sleeping unit for which the permit was obtained.

420.4.2.3 Existing dwellings or sleeping units not requiring a permit (no construction taking place). Pursuant to Health and Safety Code Section 17926, a carbon monoxide alarm(s) shall be installed in every existing dwelling unit or sleeping unit with a fossil fuel-burning heater or appliance, fireplace or an attached garage as follows:

420.4.2.3.1 Carbon monoxide alarms on or after July 1, 2011. Carbon monoxide alarms shall be

installed in accordance with Section 420.4.2 in existing detached single-family dwellings or sleeping units intended for human occupancy that have a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms in existing buildings are permitted to be solely battery operated or plug-in type with battery back-up in areas where no construction is taking place.

420.4.2.3.2 Carbon monoxide alarms on or after January 1, 2013. Carbon monoxide alarms shall be installed in accordance with Section 420.4.2 in all other existing dwelling units intended for human occupancy as defined in Health and Safety Code Section 13262(b) that have a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms in existing buildings are permitted to be solely battery operated or plug-in type with battery back-up in areas where no construction is taking place.

420.4.2.4 Power supply. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. In existing dwelling units where there is no commercial power supply, the carbon monoxide alarm may be solely battery operated.
2. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with a battery backup where repairs or alterations do not result in the removal of wall and ceiling finishes.
3. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery backup where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.
4. In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery backup when work is limited to the installation, alteration or repair of plumbing or mechanical systems or the installation, alteration or repair of electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure.
5. Other power sources recognized for use by NFPA 720.

420.4.2.5 Interconnection. Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.

Exceptions:

1. In existing dwelling units or within sleeping units, interconnection is not required where repairs do not result in the removal of wall and ceiling finishes and no previous method for interconnection existed.
2. In existing dwelling units, carbon monoxide alarms are not required to be interconnected where no construction is taking place.
3. In existing dwelling units, carbon monoxide alarms are not required to be interconnected where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.
4. In existing dwelling units, carbon monoxide alarms are not required to be interconnected when work is limited to the installation, alteration or repair of plumbing or mechanical systems or the installation, alteration or repair of electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure.

420.4.2.6 Alarm requirements. No person shall install, market, distribute, offer for sale, or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.

Carbon monoxide alarms required by Section 420.4.2 shall be installed and maintained in the following locations:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).
2. On every level of a dwelling unit including basements.
3. Group R-1 Occupancies only.
 - a. On the ceiling of every sleeping unit or other locations within the sleeping unit in compliance with the manufacturer's installation instructions.

420.5 Licensed 24-hour care facilities in a Group R-2.1, R-3.1 or R-4 occupancy. See Section 425 for Special Provisions for licensed 24-hour care facilities in a Group R-2.1, R-3.1, or R-4 occupancy.

420.6 Existing Group R Occupancies. See Chapter 34.

SECTION 421 HYDROGEN CUTOFF ROOMS

[F] 421.1 General. When required by the *California Fire Code*, hydrogen cutoff rooms shall be designed and constructed in accordance with Sections 421.1 through 421.8.

[F] 421.2 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

[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 at least 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.

[F] HYDROGEN CUTOFF ROOM. A room or space that is intended exclusively to house a gaseous hydrogen system.

[F] 421.3 Location. Hydrogen cutoff rooms shall not be located below grade.

[F] 421.4 Design and construction. Hydrogen cutoff rooms shall be classified with respect to occupancy in accordance with Section 302.1 and separated from other areas of the building by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both; or as required by Section 508.2, 508.3 or 508.4, as applicable.

[F] 421.4.1 Opening protectives. Doors within the *fire barriers*, including doors to *corridors*, shall be self-closing in accordance with Section 715. Interior door openings shall be electronically interlocked to prevent operation of the hydrogen system when doors are opened or ajar or the room shall be provided with a mechanical exhaust ventilation system designed in accordance with Section 421.4.1.1.

[F] 421.4.1.1 Ventilation alternative. When an exhaust system is used in lieu of the interlock system required by Section 421.4.1, exhaust ventilation systems shall operate continuously and shall be designed to operate at a negative pressure in relation to the surrounding area. The average velocity of ventilation at the face of the door opening with the door in the fully open position shall not be less than 60 feet per minute (0.3048 m/s) with a minimum of 45 feet per minute (0.2287 m/s) at any point in the door opening.

[F] **421.4.2 Windows.** Operable windows in interior walls shall not be permitted. Fixed windows shall be permitted when in accordance with Section 715.

[F] **421.5 Ventilation.** Cutoff rooms shall be provided with mechanical ventilation in accordance with the applicable provisions for repair garages in Chapter 5 of the *California Mechanical Code*.

[F] **421.6 Gas detection system.** Hydrogen cutoff rooms shall be provided with an *approved* flammable gas detection system in accordance with Sections 421.6.1 through 421.6.3.

[F] **421.6.1 System design.** The flammable gas detection system shall be *listed* for use with hydrogen and any other flammable gases used in the room. The gas detection system shall be designed to activate when the level of flammable gas exceeds 25 percent of the lower flammability limit (LFL) for the gas or mixtures present at their anticipated temperature and pressure.

[F] **421.6.2 Operation.** Activation of the gas detection system shall result in all of the following:

1. Initiation of distinct audible and visual alarm signals both inside and outside of the cutoff room.
2. Activation of the mechanical ventilation system.

[F] **421.6.3 Failure of the gas detection system.** Failure of the gas detection system shall result in activation of the mechanical ventilation system, cessation of hydrogen generation and the sounding of a trouble signal in an *approved* location.

[F] **421.7 Explosion control.** Explosion control shall be provided in accordance with Chapter 9 of the *California Fire Code*.

[F] **421.8 Standby power.** Mechanical ventilation and gas detection systems shall be connected to a standby power system in accordance with Chapter 27.

SECTION 422 AMBULATORY HEALTH CARE FACILITIES

422.1 General. Occupancies classified as Group B ambulatory health care facilities shall comply with the provisions of Sections 422.1 through 422.6 and other applicable provisions of this code.

422.2 Smoke barriers. *Smoke barriers* shall be provided to subdivide every ambulatory care facility greater than 10,000 square feet (929 m²) into a minimum of two smoke compartments per *story*. The travel distance from any point in a smoke compartment to a *smoke barrier* door shall not exceed 200 feet (60 960 mm). The *smoke barrier* shall be installed in accordance with Section 710.

422.3 Refuge area. At least 30 net square feet (2.8 m²) per nonambulatory patient shall be provided within the aggregate area of *corridors*, patient rooms, treatment rooms, lounge or dining areas and other low-hazard areas on each side of each *smoke barrier*.

422.4 Independent egress. A *means of egress* shall be provided from each smoke compartment created by smoke barriers without having to return through the smoke compartment from which *means of egress* originated.

422.5 Automatic sprinkler systems. *Automatic sprinkler systems* shall be provided for ambulatory care facilities in accordance with Section 903.2.2.

422.6 Fire alarm systems. A fire alarm system shall be provided in accordance with Section 907.2.2.1.

SECTION 423 STORM SHELTERS

423.1 General. In addition to other applicable requirements in this code, storm shelters shall be constructed in accordance with ICC-500.

423.1.1 Scope. This section applies to the construction of storm shelters constructed as separate detached buildings or constructed as safe rooms within buildings for the purpose of providing safe refuge from storms that produce high winds, such as tornados and hurricanes. Such structures shall be designated to be hurricane shelters, tornado shelters, or combined hurricane and tornado shelters.

423.2 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

STORM SHELTER. A building, structure or portions(s) thereof, constructed in accordance with ICC 500 and designated for use during a severe wind storm event, such as a hurricane or tornado.

Community storm shelter. A storm shelter not defined as a "Residential Storm Shelter."

Residential storm shelter. A storm shelter serving occupants of *dwelling units* and having an *occupant load* not exceeding 16 persons.

SECTION 424 SPECIAL PROVISIONS FOR RESIDENTIAL HOTELS [HCD 1 & HCD 1-AC]

424.1 Locking mail receptacles. A *locking mail receptacle* for each residential unit shall be provided in all residential hotels pursuant to the requirements specified in *Health and Safety Code Section 17958.3*.

SECTION 425 SPECIAL PROVISIONS FOR LICENSED 24-HOUR CARE FACILITIES IN A GROUP R-2.1, R-3.1, R-4 [SFM]

425.1 Scope. The provisions of this section shall apply to 24-hour care facilities in a Group R-2.1, R-3.1 or R-4 occupancy licensed by a governmental agency.

425.2 General. The provisions in this section shall apply in addition to general requirements in this code.

425.2.1 Restraint shall not be practiced in a Group R-2.1, R-3.1 or R-4 Occupancies.

Exception: Occupancies which meet all the requirements for a Group I-3 Occupancy.

425.2.2 Pursuant to Health and Safety Code Section 13133, regulations of the state fire marshal pertaining to 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 inconsistent 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.

Exception: Local regulations relating to roof coverings in facilities licensed as a residential care facility for the elderly (RCFE) per Health and Safety Code Section 13133.

425.3 Building height and area provisions.

425.3.1 Group R-2.1, R-3.1 and R-4 shall be constructed in accordance with Table 503.

425.3.2 Limitations six or less clients. Group R-3.1 occupancies where nonambulatory clients are housed above the first story, having more than two stories in height or having more than 3,000 square feet (279 m²) of floor area above the first story shall not be of less than one-hour fire-resistance-rated construction throughout.

In Group R3.1 occupancies housing a bedridden client, the client sleeping room shall not be located above or below the first story.

Exception: Clients who become bedridden as a result of a temporary illness as defined in Health and Safety Code Sections 1566.45, 1568.0832 and 1569.72. A temporary illness is an illness, which persists for 14 days or less. A bedridden client may be retained in excess of the 14 days upon approval by the Department of Social Services and may continue to be housed on any story in a Group R-3.1 occupancy classified as a licensed residential facility.

Every licensee admitting or retaining a bedridden resident shall, within 48 hours of the resident's admission or retention in the facility, notify the local fire authority with jurisdiction of the estimated length of time the resident will retain his or her bedridden status in the facility.

425.3.3 Limitations seven or more clients. Group R-4 occupancies where nonambulatory clients are housed above the first story and there is more than 3,000 square feet (279 m²) of floor area above the first story or housing more than 16

clients above the first story shall be constructed of not less than one-hour fire-resistance-rated construction throughout.

425.3.4 Nonambulatory elderly clients. Group R-4 occupancies housing nonambulatory elderly clients shall be of not less than one-hour fire-resistance-rated construction throughout.

425.4 Type of construction provisions.

425.4.1 Group R-2.1, occupancies are not permitted in nonfire-resistance-rated construction, see Health and Safety Code Section 13131.5.

425.5 Fire-resistance-rated construction provisions.

425.5.1 Smoke barriers required. Group R-2.1 and R-4 occupancies licensed as a Residential Care Facility (RCF) with individual floor areas over 6,000 square feet (557 m²) per floor, shall be provided with smoke barriers, constructed in accordance with Section 710.

Group R-2.1 occupancies housing bedridden clients shall be provided with smoke barriers constructed in accordance with Section 710 regardless of the number of clients.

When smoke barriers are required, the area within a smoke compartment shall not exceed 22,500 square feet (2090 m²) nor shall its travel distance exceed 200 feet (60 960 mm). Such smoke barriers shall divide the floor as equally as possible.

425.5.2 Smoke partitions. Group R-2.1 occupancies where smoke partitions are required, framing shall be covered with noncombustible materials having an approved thermal barrier with an index of not less than 15 in accordance with FM 4880, UL 1040, NFPA 286 or UL 1715.

425.5.3 Independent egress. At least two means of egress shall be provided from each smoke compartment created by smoke barriers. Means of egress may pass through adjacent compartments provided it does not return through the smoke compartment from which means of egress originated.

425.6 Interior finish provisions.

425.6.1 Interior wall and ceiling finish. Group R-3.1 occupancies housing a bedridden client shall comply with interior wall and ceiling finish requirements specified for Group I-2 occupancies in Table 803.9.

425.7 Fire protection system provisions.

425.7.1 Automatic sprinkler systems in Group R-2.1, R-3.1 and R-4 occupancies. An automatic sprinkler system shall be installed where required in Section 903.

425.7.2 Fire alarm systems in Group R-2.1 and R-4 occupancies. An approved fire alarm system shall be installed where required in Section 907.

425.7.3 Smoke alarms in Groups R-2.1, R-3.1 and R-4 occupancies. Smoke alarms shall be installed where required in Section 907.2.11.1.

425.7.4 Hearing impaired. See Section 907.5.2.3.

425.8 Means of egress provisions.

shall not be less than 32 inches (813 mm) in clear width and 6 feet 8 inches (2032 mm) in height. Rooms or areas housing eight or less persons shall be provided with at least one such exit direct to the exterior.

3. Every exit door shall be openable from the inside without the use of any key, special knowledge or effort.
4. Exit doors need not be hung to swing in the direction of exit travel. Where exit doors are hung to swing in the direction of exit travel, a landing conforming to the provisions of Section 1008.1.5 shall be provided.
5. When the distance (measured vertically) between the ground level and the floor level exceeds 8 inches (203 mm), a stairway from each exit shall be provided. Steps shall have a rise of not more than 8 inches (203 mm) and a run of not less than 9 inches (229 mm). Such stairway shall be at least as wide as the door it serves.

Exception: In lieu of a stairway, a ramp having a slope of not more than 1 foot (305 mm) of rise for each 8 feet (2438 mm) of run may be provided.
6. When the floor level at any door opening of any building or structure is more than 30 inches (762 mm) above the adjacent ground level, handrails or guardrails shall be provided on the landing, balcony or porch, and on every stairway or ramp to ground level.
7. Buildings and structures or groups of buildings and structures shall be separated from each other by not less than 10 feet (3048 mm). This section shall not apply to existing buildings and structures of existing Group C Occupancies.

440.5.2 Tents and tent structures. In addition to the provisions of Section 440.7, tents and tent structures, or groups thereof, shall conform to the provisions of Section 440.5, except as follows:

1. Regardless of any other provisions of this section, heating of tents and tent structures shall be prohibited unless written permission is obtained from the fire chief.
2. All canvas or other fabric material shall be treated and maintained in a flame-retardant condition.

Exceptions:

1. Tents in existence prior to January 1, 1979, provided the following conditions are met:
 - 1.1. Tents shall not exceed 80 square feet (7.4 m²) in area.
 - 1.2. No electrical devices, except flashlights, are installed or used in the tents.
 - 1.3. Tents are not located closer than 30 feet (9144 mm) to any open fire.
 - 1.4. Smoking is prohibited in the tents.
 - 1.5. All other applicable provisions of this article are met.

2. Canvas or materials used exclusively to protect windows and similar openings in walls.
3. Canvas or materials used as a windbreak enclosure of not more than three sides and open to the sky.

Note: It is not the intent of Section 440.5.2 that strict adherence to the width and height requirements of exit openings be enforced for exits from tents.

440.6 Building and structures for sleeping. Buildings and structures, or portions thereof, used or intended for sleeping purposes and which exceed the height, area or capacity limitations specified in Section 440.4.1 shall conform to the provisions of this section.

440.6.1 Area, height and type of construction. Buildings and structures, or portions thereof, shall not exceed the limits of area, height and type of construction specified in these regulations for a Group R-2.1 occupancy. Such buildings and structures shall not be of less than one-hour fire-resistive construction throughout.

440.6.2 Location on property. The fire-resistive protection of exterior walls and openings, as determined by location on property, shall be in accordance with the provisions of these regulations for a Group R-2.1 occupancy.

440.6.3 Exits. Stairs, exits and smoke-proof enclosures shall be provided in accordance with the provisions of Chapter 10.

440.6.4 Enclosure of vertical openings. Exits shall be enclosed as specified in Chapter 10. Elevator shafts, vent shafts and other vertical openings shall be enclosed and enclosures shall be as set forth in Chapter 7.

440.6.5 Fire-extinguishing systems. Automatic fire-extinguishing systems, standpipes, and basement pipe inlets shall be installed when and as specified in Chapter 9 for buildings, based on the occupancy they most nearly resemble.

440.6.6 Automatic fire alarm system. See Section 907.

440.7 Special requirements. The provisions of this section shall apply to the premises and to all buildings and structures of all organized camps.

440.7.1 Electrical. The installation of all electrical wiring shall conform to the applicable provisions of the California Electrical Code.

440.7.2 Heating equipment. Heating equipment, and the installation thereof, shall conform to the provisions of the California Mechanical Code.

440.7.3 Motion picture booths. Motion picture machine booths shall conform to the requirements of Section 409.

440.7.4 Interior finish. Interior finish shall conform to the requirements of Chapter 8, except as permitted in Section 440.5.1, Item 1.

440.7.5 Heater room openings. All exterior openings in rooms containing central heating equipment, low-pressure boilers or water-heating boilers used as part of the heating system, if located below openings in another story, or if less than 10 feet (3048 mm) from other doors or windows of the

same building, shall be protected by a fire assembly having a three-fourths-hour fire-resistive rating. Such fire assemblies shall be fixed, automatic or self-closing.

Exception: The requirement for three-fourths-hour fire assembly protection of openings may be deleted if the entire room is protected by an automatic sprinkler system conforming to the provisions of Section 903.

440.7.6 Heating rooms. Every room containing central-heating equipment, low-pressure boiler or water-heating boiler used as part of the heating system shall be separated from the rest of the building by a one-hour fire-resistive fire barrier with all openings protected as set forth in Section 707.6.

Exceptions:

1. Boilers or central heating plants where the largest piece of fuel equipment does not exceed 400,000 Btu per hour (135 kW) input.
2. When any such opening is protected by a pair of fire doors, the inactive leaf shall be normally secured in the closed position and shall be openable only by use of a tool. An astragal shall be provided and the active leaf shall be self-closing.

440.7.7 Exits. For purposes of determining occupant load for exit requirements, see Section 440.3.2.

440.7.8 Liquefied petroleum gas. The construction and installation of all tanks, cylinders, equipment and systems used or intended for use in conjunction with any liquefied petroleum gas shall conform to the provisions of the California Mechanical Code and the California Fire Code.

440.7.9 Air-conditioning and ventilation systems. Heating units used as an integral part of an air-conditioning and ventilation system shall be installed in accordance with Sections 440.7.2, 440.7.3 and 440.7.6.

440.8 Camp fire alarm. Every organized camp shall provide and maintain a device or devices suitable for sounding a fire alarm. Such device or devices may be of any type acceptable to the enforcing agency provided they are distinctive in tone from all other signaling devices or systems and shall be audible throughout the camp premises. When an automatic fire alarm system is provided, as required by Section 440.6.6, all signaling devices required by this section shall be of the same type as that used in the automatic system.

**SECTION 441
RESERVED**

**SECTION 442
GROUP E [SFM]**

442.1 Location on property. All buildings housing Group E occupancies shall front directly on a public street or an exit discharge not less than 20 feet (6096 mm) in width. The exit discharge to the public street shall be a minimum 20-foot-wide (6096 mm) right-of-way, unobstructed and maintained only as access to the public street. At least one required exit shall be located on the public street or on the exit discharge.

442.2 Separate means of egress systems required. Every room with an occupant load of 300 or more shall have one of its exits or exit-access doorways lead directly into a separate means of egress system that consists of not less than two paths of exit travel which are separated by a smoke barrier in accordance with Section 710 in such a manner to provide an atmospheric separation that precludes contamination of both paths of exit travel by the same fire. Not more than two required exits or exit-access doorways shall enter into the same means of egress system.

442.3 Fences and gates. School grounds may be fenced and gates therein may be equipped with locks, provided that safe dispersal areas based on 3 square feet (0.28 m²) per occupant are located between the school and the fence. Such required safe dispersal areas shall not be located less than 50 feet (15 240 mm) from school buildings.

Every public and private school shall conform with Section 32020 of the Education Code which states:

The governing board of every public school district, and the governing authority of every private school, which maintains any building used for the instruction or housing of school pupils on land entirely enclosed (except for building walls) by fences or walls, shall, through cooperation with the local law enforcement and fire-protection agencies having jurisdiction of the area, make provision for the erection of gates in such fences or walls. The gates shall be of sufficient size to permit the entrance of the ambulances, police equipment and fire-fighting apparatus used by the law enforcement and fire-protection agencies. There shall be no less than one such access gate and there shall be as many such gates as needed to assure access to all major buildings and ground areas. If such gates are to be equipped with locks, the locking devices shall be designed to permit ready entrance by the use of the chain or bolt-cutting devices with which the local law enforcement and fire-protection agencies may be equipped.

442.4 Special provisions. Rooms used by kindergarten, first-, or second-grade pupils, and Group E day care, shall not be located above or below the first story.

Exceptions:

1. Kindergarten, first-, or second-grade pupils, or day care may be located in basements or stories having floor levels located within 4 feet (1219 mm), measured vertically, from the adjacent ground level at the level of exit discharge, provided the basement or story has exterior exit doors at that level.
2. In buildings equipped with an automatic sprinkler system throughout, rooms used for kindergarten, first- and second-grade children or for day-care purposes may be located on the second story, provided there are at least two exterior exit doors, or other egress systems complying with Section 1018 with two exits, for the exclusive use of such occupants. Egress systems for the exclusive use of such occupants shall be maintained until exit discharge at grade is attained.
3. Group E day-care facilities may be located above the first story in buildings of Type I-A, Type I-B, Type II-A

504.2 Automatic sprinkler system increase. Where a building is equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1, the value specified in Table 503 for maximum *building height* is increased by 20 feet (6096 mm) and the maximum number of *stories* is increased by one. Increases are permitted in addition to the *building area* increase in accordance with Section 506.2. *In other than Group A, E, H, I, L, and R occupancies, high-rise buildings, and other applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, these increases are permitted in addition to the area increase in accordance with Section 506.3.* For Group R-2 buildings of *Type VA construction* equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1, the value specified in Table 503 for maximum *building height* is increased by 20 feet (6096 mm) and the maximum number of *stories* is increased by one, but shall not exceed 60 feet (18 288 mm) or four *stories*, respectively, *these increases are permitted in addition to the area increase in accordance with Section 506.3.*

Exceptions:

1. Buildings, or portions of buildings, classified as a Group I-2 occupancy of Type IIB, III, IV or V construction.
2. Buildings, or portions of buildings, classified as a Group H-1, H-2, H-3 or H-5 occupancy.
3. *Fire-resistance rating* substitution in accordance with Table 601, Note d.
4. *[SFM] Buildings, or portions of buildings, classified as a Group L occupancy.*
5. *[SFM] Buildings, or portions of buildings, classified as a Licensed Group R-2.1 or R-4 occupancy.*

504.3 Roof structures. Towers, spires, steeples and other roof structures shall be constructed of materials consistent with the required type of construction of the building except where other construction is permitted by Section 1509.2.4. Such structures shall not be used for habitation or storage. The structures shall be unlimited in height if of noncombustible materials and shall not extend more than 20 feet (6096 mm) above the allowable *building height* if of combustible materials (see Chapter 15 for additional requirements).

SECTION 505 MEZZANINES

505.1 General. A *mezzanine* or *mezzanines* in compliance with Section 505 shall be considered a portion of the *story* in which it is contained. Such *mezzanines* shall not contribute to either the *building area* or number of *stories* as regulated by Section 503.1. The area of the *mezzanine* shall be included in determining the *fire area* defined in Section 902. The clear height above and below the *mezzanine* floor construction shall not be less than 7 feet (2134 mm).

505.2 Area limitation. The aggregate area of a *mezzanine* or *mezzanines* within a room shall not exceed one-third of the floor area of that room or space in which they are located. The enclosed portion of a room shall not be included in a determina-

tion of the floor area of the room in which the *mezzanine* is located. In determining the allowable *mezzanine* area, the area of the *mezzanine* shall not be included in the floor area of the room.

Exceptions:

1. The aggregate area of *mezzanines* in buildings and structures of Type I or II construction for special industrial occupancies in accordance with Section 503.1.1 shall not exceed two-thirds of the floor area of the room.
2. The aggregate area of *mezzanines* in buildings and structures of Type I or II construction shall not exceed one-half of the floor area of the room in buildings and structures equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1 and an *approved* emergency voice/alarm communication system in accordance with Section 907.5.2.2.

505.3 Egress. Each occupant of a *mezzanine* shall have access to at least two independent *means of egress* where the *common path of egress travel* exceeds the limitations of Section 1014.3. Where a *stairway* provides a means of *exit access* from a *mezzanine*, the maximum travel distance includes the distance traveled on the *stairway* measured in the plane of the tread nosing. *Accessible means of egress* shall be provided in accordance with Section 1007.

Exception: A single *means of egress* shall be permitted in accordance with Section 1015.1.

505.4 Openness. A *mezzanine* shall be open and unobstructed to the room in which such *mezzanine* is located except for walls not more than 42 inches (1067 mm) high, columns and posts.

Exceptions:

1. *Mezzanines* or portions thereof are not required to be open to the room in which the *mezzanines* are located, provided that the *occupant load* of the aggregate area of the enclosed space does not exceed 10.
2. A *mezzanine* having two or more *means of egress* is not required to be open to the room in which the *mezzanine* is located if at least one of the *means of egress* provides direct access to an *exit* from the *mezzanine* level.
3. *Mezzanines* or portions thereof are not required to be open to the room in which the *mezzanines* are located, provided that the aggregate floor area of the enclosed space does not exceed 10 percent of the *mezzanine* area.
4. In industrial facilities, *mezzanines* used for control equipment are permitted to be glazed on all sides.
5. In occupancies other than Groups H and I, that are no more than two *stories* above *grade plane* and equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, a *mezzanine* having two or more *means of egress* shall not be required to be open to the room in which the *mezzanine* is located.

505.5 Equipment platforms. *Equipment platforms* in buildings shall not be considered as a portion of the floor below. Such *equipment platforms* shall not contribute to either the *building area* or the number of *stories* as regulated by Section 503.1. The area of the *equipment platform* shall not be included in determining the *fire area* in accordance with Section 903. *Equipment platforms* shall not be a part of any *mezzanine* and such platforms and the walkways, *stairs*, *alternating tread devices* and ladders providing access to an *equipment platform* shall not serve as a part of the *means of egress* from the building.

505.5.1 Area limitations. The aggregate area of all *equipment platforms* within a room shall not exceed two-thirds of the area of the room in which they are located. Where an *equipment platform* is located in the same room as a *mezzanine*, the area of the *mezzanine* shall be determined by Section 505.2 and the combined aggregate area of the *equipment platforms* and *mezzanines* shall not exceed two-thirds of the room in which they are located.

[F] **505.5.2 Fire suppression.** Where located in a building that is required to be protected by an *automatic sprinkler system*, *equipment platforms* shall be fully protected by sprinklers above and below the platform, where required by the standards referenced in Section 903.3.

505.5.3 Guards. *Equipment platforms* shall have *guards* where required by Section 1013.1.

**SECTION 506
BUILDING AREA MODIFICATIONS**

506.1 General. The *building areas* limited by Table 503 shall be permitted to be increased due to frontage (I_f) and *automatic sprinkler system* protection (I_s) in accordance with the following:

$$A_a = \{A_t + [A_t \times I_f] + [A_t \times I_s]\} \quad \text{(Equation 5-1)}$$

where:

A_a = Allowable *building area* per *story* (square feet).

A_t = Tabular *building area* per *story* in accordance with Table 503 (square feet).

I_f = Area increase factor due to frontage as calculated in accordance with Section 506.2.

I_s = Area increase factor due to sprinkler protection as calculated in accordance with Section 506.3.

506.2 Frontage increase. Every building shall adjoin or have access to a *public way* to receive a *building area* increase for frontage. Where a building has more than 25 percent of its perimeter on a *public way* or open space having a minimum width of 20 feet (6096 mm), the frontage increase shall be determined in accordance with the following:

$$I_f = [F / P - 0.25]W / 30 \quad \text{(Equation 5-2)}$$

where:

I_f = Area increase due to frontage.

F = Building perimeter that fronts on a *public way* or open space having 20 feet (6096 mm) open minimum width (feet).

P = Perimeter of entire building (feet).

W = Width of *public way* or open space (feet) in accordance with Section 506.2.1.

506.2.1 Width limits. The value of W shall be at least 20 feet (6096 mm). Where the value of W varies along the perimeter of the building, the calculation performed in accordance with Equation 5-2 shall be based on the weighted average of each portion of *exterior wall* and open space where the value of W is greater than or equal to 20 feet (6096 mm). Where the value of W exceeds 30 feet (9144 mm), a value of 30 feet (9144 mm) shall be used in calculating the weighted average, regardless of the actual width of the open space. Where two or more buildings are on the same lot, W shall be measured from the exterior face of a building to the exterior face of an opposing building, as applicable.

Exception: The value of W divided by 30 shall be permitted to be a maximum of 2 when the building meets all requirements of Section 507 except for compliance with the 60-foot (18 288 mm) *public way* or *yard* requirement, as applicable.

506.2.2 Open space limits. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or *approved fire lane*.

506.3 Automatic sprinkler system increase. Where a building is equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1, the *building area* limitation in Table 503 is permitted to be increased by an additional 200 percent ($I_s = 2$) for buildings with more than one *story above grade plane* and an additional 300 percent ($I_s = 3$) for buildings with no more than one *story above grade plane*. In other than Group A, E, H, I, L and R occupancies, high-rise buildings, and other applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, these increases are permitted in addition to the height and story increases in accordance with Section 504.2. For Group R-2 buildings of Type VA construction equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1, these increases are permitted in addition to the height and story increase in accordance with Section 504.2.

Exception: The *building area* limitation increases shall not be permitted for the following conditions:

1. The *automatic sprinkler system* increase shall not apply to *buildings* with an occupancy in Group H-1.
2. The *automatic sprinkler system* increase shall not apply to the *building area* of an occupancy in Group H-2 or H-3. For *buildings* containing such occupancies, the allowable *building area* shall be determined in accordance with Section 508.4.2, with the sprinkler system increase applicable only to the portions of the building not classified as Group H-2 or H-3.
3. *Fire-resistance rating* substitution in accordance with Table 601, Note d.
4. [SFM] The *automatic sprinkler system* increase shall not apply to *buildings* with an occupancy in Group L.

506.4 Single occupancy buildings with more than one story. The total allowable *building area* of a single occupancy build-

3. The beam or column web depth does not exceed 16 inches (400 mm).
4. The average and minimum bond strength values shall be determined based on a minimum of five bond tests conducted in accordance with ASTM E 736. Bond tests conducted in accordance with ASTM E 736 shall indicate a minimum average bond strength of 80 percent and a minimum individual bond strength of 50 percent, when compared to the bond strength of the SFRM as applied to clean uncoated $\frac{1}{8}$ -inch-thick (3-mm) steel plate.

704.13.4 Temperature. A minimum ambient and substrate temperature of 40°F (4.44°C) shall be maintained during and for a minimum of 24 hours after the application of the SFRM, unless the manufacturer's installation instructions allow otherwise.

704.13.5 Finished condition. The finished condition of SFRM applied to structural members or assemblies shall not, upon complete drying or curing, exhibit cracks, voids, spalls, delamination or any exposure of the substrate. Surface irregularities of SFRM shall be deemed acceptable.

SECTION 705 EXTERIOR WALLS

705.1 General. *Exterior walls* shall comply with this section.

705.2 Projections. Cornices, eave overhangs, exterior balconies and similar projections extending beyond the *exterior wall* shall conform to the requirements of this section and Section 1406. Exterior egress balconies and *exterior exit stairways* shall also comply with Sections 1019 and 1026, respectively. Projections shall not extend beyond the distance determined by the following three methods, whichever results in the lesser projection:

1. A point one-third the distance from the exterior face of the wall to the *lot line* where protected openings or a combination of protected and unprotected openings are required in the *exterior wall*.
2. A point one-half the distance from the exterior face of the wall to the *lot line* where all openings in the *exterior wall* are permitted to be unprotected or the building is equipped throughout with an *automatic sprinkler system* installed under the provisions of Section 705.8.2.
3. More than 12 inches (305 mm) into areas where openings are prohibited.

Buildings on the same lot and considered as portions of one building in accordance with Section 705.3 are not required to comply with this section.

705.2.1 Type I and II construction. Projections from walls of Type I or II construction shall be of noncombustible materials or combustible materials as allowed by Sections 1406.3 and 1406.4.

705.2.2 Type III, IV or V construction. Projections from walls of Type III, IV or V construction shall be of any *approved material*.

705.2.3 Combustible projections. Combustible projections located where openings are not permitted or where protection of openings is required shall be of at least 1-hour fire-resistance-rated construction, Type IV construction, *fire-retardant-treated wood* or as required by Section 1406.3.

Exception: Type V construction shall be allowed for Group R-3 occupancies.

705.3 Buildings on the same lot. For the purposes of determining the required wall and opening protection and roof-covering requirements, buildings on the same lot shall be assumed to have an imaginary line between them.

Where a new building is to be erected on the same lot as an existing building, the location of the assumed imaginary line with relation to the existing building shall be such that the *exterior wall* and opening protection of the existing building meet the criteria as set forth in Sections 705.5 and 705.8.

Exception: Two or more buildings on the same lot shall either be regulated as separate buildings or shall be considered as portions of one building if the aggregate area of such buildings is within the limits specified in Chapter 5 for a single building. Where the buildings contain different occupancy groups or are of different types of construction, the area shall be that allowed for the most restrictive occupancy or construction.

705.4 Materials. *Exterior walls* shall be of materials permitted by the building type of construction.

705.5 Fire-resistance ratings. *For other than Group A, E, H, I, L and R occupancies, high-rise buildings, and other applications listed in Section 1.11* regulated by the Office of the State Fire Marshal, exterior walls shall be fire-resistance rated in accordance with Tables 601 and 602 and this section. The required fire-resistance rating of exterior walls with a fire separation distance of greater than 10 feet (3048 mm) shall be rated for exposure to fire from the inside. The required fire-resistance rating of exterior walls a fire separation distance of less than or equal to 10 feet (3048 mm) shall be rated for exposure to fire from both sides.

For Group A, E, H, I, L and R occupancies, high-rise buildings, and other applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, exterior walls shall be fire-resistance rated in accordance with Tables 601 and 602 and this section. The required fire-resistance rating of exterior walls shall be rated for exposure to fire from both sides.

705.6 Structural stability. The wall shall extend to the height required by Section 705.11 and shall have sufficient structural stability such that it will remain in place for the duration of time indicated by the required *fire-resistance rating*.

705.7 Unexposed surface temperature. Where protected openings are not limited by Section 705.8, the limitation on the rise of temperature on the unexposed surface of *exterior walls* as required by ASTM E 119 or UL 263 shall not apply. Where protected openings are limited by Section 705.8, the limitation on the rise of temperature on the unexposed surface of *exterior walls* as required by ASTM E 119 or UL 263 shall not apply provided that a correction is made for radiation from the unexposed *exterior wall* surface in accordance with the following formula:

$$A_e = A + (A_f \times F_{eo}) \tag{Equation 7-1}$$

where:

A_e = Equivalent area of protected openings.

A = Actual area of protected openings.

A_f = Area of *exterior wall* surface in the *story* under consideration exclusive of openings, on which the temperature limitations of ASTM E 119 or UL 263 for walls are exceeded.

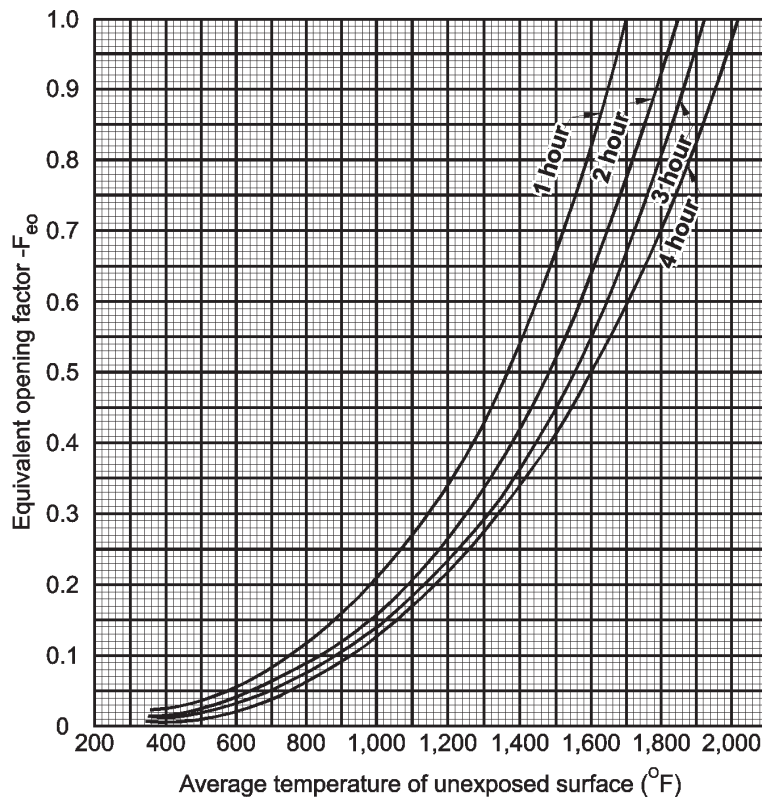
F_{eo} = An “equivalent opening factor” derived from Figure 705.7 based on the average temperature of the unexposed wall surface and the *fire-resistance rating* of the wall.

705.8 Openings. Openings in *exterior walls* shall comply with Sections 705.8.1 through 705.8.6.

705.8.1 Allowable area of openings. The maximum area of unprotected and protected openings permitted in an *exterior wall* in any *story* of a building shall not exceed the percentages specified in Table 705.8.

Exceptions:

1. In other than Group H occupancies, unlimited unprotected openings are permitted in the first *story* above grade either:
 - 1.1. Where the wall faces a street and has a *fire separation distance* of more than 15 feet (4572 mm); or
 - 1.2. Where the wall faces an unoccupied space. The unoccupied space shall be on the same lot or dedicated for public use, shall not be less than 30 feet (9144 mm) in width and shall have access from a street by a posted fire lane in accordance with the *California Fire Code*.
2. Buildings whose exterior bearing walls, exterior nonbearing walls and exterior primary structural frame are not required to be fire-resistance rated shall be permitted to have unlimited unprotected openings.



For SI: °C = [(°F) - 32] / 1.8.

**FIGURE 705.7
EQUIVALENT OPENING FACTOR**

706.6.1 Stepped buildings. Where a *fire wall* serves as an *exterior wall* for a building and separates buildings having different roof levels, such wall shall terminate at a point not less than 30 inches (762 mm) above the lower roof level, provided the *exterior wall* for a height of 15 feet (4572 mm) above the lower roof is not less than 1-hour fire-resistance-rated construction from both sides with openings protected by fire assemblies having a *fire protection rating* of not less than 3/4 hour.

Exception: Where the *fire wall* terminates at the underside of the roof sheathing, deck or slab of the lower roof, provided:

1. The lower roof assembly within 10 feet (3048 mm) of the wall has not less than a 1-hour *fire-resistance rating* and the entire length and span of supporting elements for the rated roof assembly has a fire-resistance rating of not less than 1 hour.
2. Openings in the lower roof shall not be located within 10 feet (3048 mm) of the *fire wall*.

706.7 Combustible framing in fire walls. Adjacent combustible members entering into a concrete or masonry *fire wall* from opposite sides shall not have less than a 4-inch (102 mm) distance between embedded ends. Where combustible members frame into hollow walls or walls of hollow units, hollow spaces shall be solidly filled for the full thickness of the wall and for a distance not less than 4 inches (102 mm) above, below and between the structural members, with noncombustible materials *approved* for fireblocking.

706.8 Openings. Each opening through a *fire wall* shall be protected in accordance with Section 715.4 and shall not exceed 156 square feet (15 m²). The aggregate width of openings at any floor level shall not exceed 25 percent of the length of the wall.

Exceptions:

1. Openings are not permitted in party walls constructed in accordance with Section 706.1.1.
2. Openings shall not be limited to 156 square feet (15 m²) where both buildings are equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1.

706.9 Penetrations. Penetrations of *fire walls* shall comply with Section 713.

706.10 Joints. Joints made in or between *fire walls* shall comply with Section 714.

706.11 Ducts and air transfer openings. Ducts and air transfer openings shall not penetrate *fire walls*.

Exception: Penetrations by ducts and air transfer openings of *fire walls* that are not on a *lot line* shall be allowed provided the penetrations comply with Section 716. The size and aggregate width of all openings shall not exceed the limitations of Section 706.8.

**SECTION 707
FIRE BARRIERS**

707.1 General. *Fire barriers* installed as required elsewhere in this code or the *California Fire Code* shall comply with this section.

707.2 Materials. *Fire barriers* shall be of materials permitted by the building type of construction.

707.3 Fire-resistance rating. The *fire-resistance rating* of *fire barriers* shall comply with this section.

707.3.1 Shaft enclosures. The *fire-resistance rating* of the *fire barrier* separating building areas from a shaft shall comply with Section 708.4.

707.3.2 Exit enclosures. The *fire-resistance rating* of the *fire barrier* separating building areas from an *exit* shall comply with Section 1022.1.

707.3.3 Exit passageway. The *fire-resistance rating* of the *fire barrier* separating building areas from an *exit* passageway shall comply with Section 1023.3.

707.3.4 Horizontal exit. The *fire-resistance rating* of the separation between building areas connected by a horizontal *exit* shall comply with Section 1025.1.

707.3.5 Atriums. The *fire-resistance rating* of the *fire barrier* separating atriums shall comply with Section 404.6.

707.3.6 Incidental accessory occupancies. The *fire barrier* separating incidental accessory occupancies from other spaces in the building shall have a *fire-resistance rating* of not less than that indicated in Table 508.2.5.

707.3.7 Control areas. *Fire barriers* separating *control areas* shall have a *fire-resistance rating* of not less than that required in Section 414.2.4.

707.3.8 Separated occupancies. Where the provisions of Section 508.4 are applicable, the *fire barrier* separating mixed occupancies shall have a *fire-resistance rating* of not less than that indicated in Table 508.4 based on the occupancies being separated.

707.3.9 Fire areas. The *fire barriers* or *horizontal assemblies*, or both, separating a single occupancy into different *fire areas* shall have a *fire-resistance rating* of not less than that indicated in Table 707.3.9. The *fire barriers* or *horizontal assemblies*, or both, separating *fire areas* of mixed occupancies shall have a *fire-resistance rating* of not less than the highest value indicated in Table 707.3.9 for the occupancies under consideration.

**TABLE 707.3.9
FIRE-RESISTANCE RATING REQUIREMENTS FOR FIRE
BARRIER ASSEMBLIES OR HORIZONTAL ASSEMBLIES
BETWEEN FIRE AREAS**

OCCUPANCY GROUP	FIRE-RESISTANCE RATING (hours)
H-1, H-2	4
F-1, H-3, S-1	3
A, B, E, F-2, H-4, H-5, I, L, M, R, S-2	2
U	1

707.4 Exterior walls. Where *exterior walls* serve as a part of a required fire-resistance-rated shaft or *exit* enclosure, or separation, such walls shall comply with the requirements of Section 705 for *exterior walls* and the fire-resistance-rated enclosure or separation requirements shall not apply.

Exception: *Exterior walls* required to be fire-resistance rated in accordance with Section 1019 for exterior egress balconies, Section 1022.6 for *exit* enclosures and Section 1026.6 for exterior *exit* ramps and *stairways*.

707.5 Continuity. Fire barriers shall extend from the top of the floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Such *fire barriers* shall be continuous through concealed spaces, such as the space above a suspended ceiling.

707.5.1 Supporting construction. The supporting construction for a *fire barrier* shall be protected to afford the required *fire-resistance rating* of the *fire barrier* supported. Hollow vertical spaces within a *fire barrier* shall be fireblocked in accordance with Section 717.2 at every floor level.

Exceptions:

1. The maximum required *fire-resistance rating* for assemblies supporting *fire barriers* separating tank storage as provided for in Section 415.6.2.1 shall be 2 hours, but not less than required by Table 601 for the building construction type.
2. Shaft enclosures shall be permitted to terminate at a top enclosure complying with Section 708.12.
3. Supporting construction for 1-hour *fire barriers* required by Table 508.2.5 in buildings of Type IIB, IIIB and VB construction is not required to be fire-resistance rated unless required by other sections of this code.

707.6 Openings. Openings in a *fire barrier* shall be protected in accordance with Section 715. Openings shall be limited to a maximum aggregate width of 25 percent of the length of the wall, and the maximum area of any single opening shall not exceed 156 square feet (15 m²). Openings in *exit* enclosures and *exit* passageways shall also comply with Sections 1022.3 and 1023.5, respectively.

Exceptions:

1. Openings shall not be limited to 156 square feet (15 m²) where adjoining floor areas are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
2. Openings shall not be limited to 156 square feet (15 m²) or an aggregate width of 25 percent of the length of the wall where the opening protective is a *fire door* serving an *exit* enclosure.
3. Openings shall not be limited to 156 square feet (15 m²) or an aggregate width of 25 percent of the length of the wall where the opening protective has been tested in accordance with ASTM E 119 or UL 263 and has a minimum *fire-resistance rating* not less than the *fire-resistance rating* of the wall.

4. Fire window assemblies permitted in atrium separation walls shall not be limited to a maximum aggregate width of 25 percent of the length of the wall.
5. Openings shall not be limited to 156 square feet (15 m²) or an aggregate width of 25 percent of the length of the wall where the opening protective is a *fire door* assembly in a *fire barrier* separating an *exit* enclosure from an *exit* passageway in accordance with Section 1022.2.1.

707.7 Penetrations. Penetrations of *fire barriers* shall comply with Section 713.

707.7.1 Prohibited penetrations. Penetrations into an *exit* enclosure or an *exit* passageway shall be allowed only when permitted by Section 1022.4 or 1023.6, respectively.

707.8 Joints. Joints made in or between *fire barriers*, and joints made at the intersection of *fire barriers* with underside of the floor or roof sheathing, slab or deck above, shall comply with Section 714.

707.9 Ducts and air transfer openings. Penetrations in a *fire barrier* by ducts and air transfer openings shall comply with Section 716.

**SECTION 708
SHAFT ENCLOSURES**

708.1 General. The provisions of this section shall apply to shafts required to protect openings and penetrations through floor/ceiling and roof/ceiling assemblies. Shaft enclosures shall be constructed as *fire barriers* in accordance with Section 707 or *horizontal assemblies* in accordance with Section 712, or both.

708.2 Shaft enclosure required. Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this section.

Exceptions:

1. A shaft enclosure is not required for openings totally within an individual residential *dwelling unit* and connecting four *stories* or less.
2. *In other than Groups I-2, I-2.1, and I-3*, a shaft enclosure is not required in a building equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 for an escalator opening or *stairway* that is not a portion of the *means of egress* protected according to Item 2.1 or 2.2.
 - 2.1. Where the area of the floor opening between *stories* does not exceed twice the horizontal projected area of the escalator or *stairway* and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Groups B and M, this application is limited to openings that do not connect more than four *stories*.
 - 2.2. Where the opening is protected by *approved* power-operated automatic shutters at every penetrated floor. The shutters shall be of noncombustible construction and have a

protected as required for corridors in accordance with Section 716.5.4.1. Elevator lobbies shall have at least one means of egress complying with Chapter 10 and other provisions within this code.

Exceptions:

1. Enclosed elevator lobbies are not required at the street floor, provided the entire street floor is equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
2. Elevators not required to be located in a shaft in accordance with Section 708.2 are not required to have enclosed elevator lobbies.
3. Enclosed elevator lobbies are not required where additional doors are provided at the hoistway opening in accordance with Section 3002.6. Such doors shall be tested in accordance with UL 1784 without an artificial bottom seal.
4. Enclosed elevator lobbies are not required where the building is protected by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. This exception shall not apply to the following:
 - 4.1. *Group A occupancies;*
 - 4.2. *Group E occupancies;*
 - 4.3. *Group H occupancies;*
 - 4.4. *Group I occupancies;*
 - 4.5. *Group L occupancies;*
 - 4.6. *Group R-1, R-2 and R-2.1 occupancies; and*
 - 4.7. High-rise buildings.
5. Smoke partitions shall be permitted in lieu of *fire partitions* to separate the elevator lobby at each floor where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. In addition to the requirements in Section 711 for smoke partitions, doors protecting openings in the smoke partitions shall also comply with Sections 711.5.2, 711.5.3, and 715.4.8 and duct penetrations of the smoke partitions shall be protected as required for *corridors* in accordance with Section 716.5.4.1.
6. [SFM] When approved, in other than *Group I-2 occupancies* enclosed elevator lobbies are not required where the elevator hoistway is pressurized in accordance with Section 708.14.2.
7. Enclosed elevator lobbies are not required where the elevator serves only *open parking garages* in accordance with Section 406.3.
8. [SFM] Enclosed elevator lobbies are not required where the hoistway door has a *fire-protection rating* as required by Section 708.7 and the hoistway

door opening is also protected by a listed and labeled smoke containment system complying with ICC ES AC 77.

See Section 403.6 for additional requirements for high-rise buildings.

708.14.1.1 Areas of refuge. Areas of refuge shall be provided as required in Section 1007.

708.14.2 Enclosed elevator lobby. Where elevator hoistway pressurization is provided in lieu of required enclosed elevator lobbies, the pressurization system shall comply with this section.

708.14.2.1 Pressurization requirements. Elevator hoistways shall be pressurized to maintain a minimum positive pressure of 0.10 inches of water (25 Pa) and a maximum positive pressure of 0.25 inches of water (67 Pa) with respect to adjacent occupied space on all floors. This pressure shall be measured at the midpoint of each hoistway door, with all elevator cars at the floor of recall and all hoistway doors on the floor of recall open and all other hoistway doors closed. The opening and closing of hoistway doors at each level must be demonstrated during this test. The supply air intake shall be from an outside, uncontaminated source located a minimum distance of 20 feet (6096 mm) from any air exhaust system or outlet.

708.14.2.2 Rational analysis. A rational analysis complying with Section 909.4 shall be submitted with the *construction documents*.

708.14.2.3 Ducts for system. Any duct system that is part of the pressurization system shall be protected with the same *fire-resistance rating* as required for the elevator shaft enclosure.

708.14.2.4 Fan system. The fan system provided for the pressurization system shall be as required by this section.

708.14.2.4.1 Fire resistance. When located within the building, the fan system that provides the pressurization shall be protected with the same *fire-resistance rating* required for the elevator shaft enclosure.

708.14.2.4.2 Smoke detection. The fan system shall be equipped with a smoke detector that will automatically shut down the fan system when smoke is detected within the system.

708.14.2.4.3 Separate systems. A separate fan system shall be used for each elevator hoistway.

708.14.2.4.4 Fan capacity. The supply fan shall either be adjustable with a capacity of at least 1,000 cfm (.4719 m³/s) per door, or that specified by a *registered design professional* to meet the requirements of a designed pressurization system.

708.14.2.5 Standby power. The pressurization system shall be provided with standby power from the same source as other required emergency systems for the building.

708.14.2.6 Activation of pressurization system. The elevator pressurization system shall be activated upon activation of the building fire alarm system or upon activation of the elevator lobby smoke detectors. Where both a building fire alarm system and elevator lobby smoke detectors are present, each shall be independently capable of activating the pressurization system.

708.14.2.7 Special inspection. *Special inspection* for performance shall be required in accordance with Section 909.18.8. System acceptance shall be in accordance with Section 909.19.

708.14.2.8 Marking and identification. Detection and control systems shall be marked in accordance with Section 909.14.

708.14.2.9 Control diagrams. Control diagrams shall be provided in accordance with Section 909.15.

708.14.2.10 Control panel. A control panel complying with Section 909.16 shall be provided.

708.14.2.11 System response time. Hoistway pressurization systems shall comply with the requirements for smoke control system response time in Section 909.17.

SECTION 709 FIRE PARTITIONS

709.1 General. The following wall assemblies shall comply with this section.

1. Walls separating *dwelling units* in the same building as required by Section 420.2.
2. Walls separating *sleeping units* in the same building as required by Section 420.2.
3. Walls separating tenant spaces in *covered mall buildings* as required by Section 402.7.2.
4. Corridor walls as required by Section 1018.1.
5. Elevator lobby separation as required by Section 708.14.1.
6. *Walls separating enclosed tenant spaces in high-rise buildings and in buildings of Types I, IIA, IIIA, IV or VA construction of Group A, E, H, I, L and R-2.1 occupancies and other applications listed in Section 1.11 regulated by the Office of the State Fire Marshal.*

709.2 Materials. The walls shall be of materials permitted by the building type of construction.

709.3 Fire-resistance rating. Fire partitions shall have a *fire-resistance rating* of not less than 1 hour.

Exceptions:

1. Corridor walls permitted to have a 1/2 hour *fire-resistance rating* by Table 1018.1.
2. *Dwelling unit* and *sleeping unit* separations in buildings of Type IIB, IIIB and VB construction shall have *fire-resistance ratings* of not less than 1/2 hour in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
3. *Walls separating enclosed tenant spaces in Group B high-rise buildings of Type I and II construction*

equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

709.4 Continuity. Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. If the partitions are not continuous to the sheathing, deck or slab, and where constructed of combustible construction, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with Sections 717.2 and 717.3 at the partition line. The supporting construction shall be protected to afford the required *fire-resistance rating* of the wall supported, except for walls separating tenant spaces in *covered mall buildings*, walls separating *dwelling units*, walls separating *sleeping units* and *corridor* walls in buildings of Type IIB, IIIB and VB construction.

Exceptions:

1. The wall need not be extended into the crawl space below where the floor above the crawl space has a minimum 1-hour *fire-resistance rating*.
2. Where the room-side fire-resistance-rated membrane of the *corridor* is carried through to the underside of the floor or roof sheathing, deck or slab of a fire-resistance-rated floor or roof above, the ceiling of the *corridor* shall be permitted to be protected by the use of ceiling materials as required for a 1-hour fire-resistance-rated floor or roof system.
3. Where the *corridor* ceiling is constructed as required for the *corridor* walls, the walls shall be permitted to terminate at the upper membrane of such ceiling assembly.
4. The fire partitions separating tenant spaces in a *covered mall building*, complying with Section 402.7.2, are not required to extend beyond the underside of a ceiling that is not part of a fire-resistance-rated assembly. A wall is not required in *attic* or ceiling spaces above tenant separation walls.
5. Fireblocking or draftstopping is not required at the partition line in Group R-2 buildings that do not exceed four *stories above grade plane*, provided the *attic* space is subdivided by draftstopping into areas not exceeding 3,000 square feet (279 m²) or above every two *dwelling units*, whichever is smaller.
6. Fireblocking or draftstopping is not required at the partition line in buildings equipped with an *automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1 or 903.3.1.2, provided that automatic sprinklers are installed in *all* combustible floor/ceiling and roof/ceiling spaces.

709.5 Exterior walls. Where *exterior walls* serve as a part of a required fire-resistance-rated separation, such walls shall comply with the requirements of Section 705 for *exterior walls*, and the fire-resistance-rated separation requirements shall not apply.

Exception: *Exterior walls* required to be fire-resistance rated in accordance with Section 1019.2 for exterior egress balconies, Section 1022.6 for *exit* enclosures and Section 1026.6 for exterior *exit* ramps and *stairways*.

**CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE
CHAPTER 9 – FIRE PROTECTION SYSTEMS—continued**

Adopting agency	BSC	SFM	HCD				DSA		OSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter	X		X	X			X	X	X	X	X	X								
Adopt entire chapter as amendeded (amended sections listed below)		X																		
Adopt only those sections that are listed below						X													X	
Chapter/Section																				
907.2.25.1		X																		
907.2.25.2		X																		
907.2.26		X																		
907.2.26.1		X																		
907.2.26.2		X																		
907.2.26.3		X																		
907.2.26.4		X																		
907.2.26.4.1		X																		
907.2.26.4.2		X																		
907.2.27		X																		
907.2.28		X																		
907.2.28.1		X																		
907.3		X																		
907.3.1		X																		
907.3.2		X																		
907.3.2.1		X																		
907.3.2.2		X																		
907.3.2.3		X																		
907.3.3		X																		
907.4.1		X																		
907.4.2.1		X																		
907.4.2.2						X														
907.4.2.5		X																		
907.4.2.6		X																		
907.5.2.1		X				X														
907.5.2.1.1						X														
907.5.2.1.2		X				X														
907.5.2.1.3		X				X														
907.5.2.2		X																		
907.5.2.3		X				X														
907.5.2.3.1		X				X														
907.5.2.3.2						X														
907.5.2.3.3		X				X														
Table 907.5.2.3.3		X				X														
907.5.2.3.4		X				X														
907.5.2.3.5		X				X														
907.5.2.4		X																		
907.5.2.5		X																		
907.6.3		X																		

(continued)

CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE CHAPTER 9 – FIRE PROTECTION SYSTEMS—continued

Adopting agency	BSC	SFM	HCD			DSA			OSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter	X		X	X			X	X	X	X	X	X								
Adopt entire chapter as amendeded (amended sections listed below)		X																		
Adopt only those sections that are listed below						X													X	
Chapter/Section																				
907.6.3.1		X																		
907.6.3.1.1		X																		
907.6.3.2		X																		
907.6.3.3		X																		
907.6.5		X																		
907.6.5.2		X																		
907.7		X																		
909.5.2		X																		
909.12		X																		
909.16.1		X																		
909.20.1		X																		
909.20.2.1		X																		
909.20.2.2		X																		
909.20.2.3		X																		
909.20.2.4		X																		
909.20.2.5		X																		
909.20.4		X																		
909.20.4.1		X																		
909.20.4.2		X																		
910.1		X																		
910.2		X																		
910.2.1		X																		
910.3.1		X																		
910.3.2.2		X																		
910.3.2.2.1		X																		
910.3.2.2.2		X																		
910.3.2.2.3		X																		
910.4		X																		
910.4.1		X																		
910.4.2		X																		
911.1		X																		
911.1.5		X																		
912.3		X																		
912.5		X																		

The Office of the State Fire Marshal's adoption of this chapter or individual sections is applicable to structures regulated by other state agencies pursuant to Section 1.11.

into two or more buildings by fire walls of less than four hour fire resistance rating without openings.

[F] 903.2.1.4 Group A-4. An automatic sprinkler system shall be provided for Group A-4 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²);
2. The fire area has an occupant load of 300 or more; or
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.

[F] 903.2.1.5 Group A-5. An automatic sprinkler system shall be provided for Group A-5 occupancies in the following areas: concession stands, retail areas, press boxes and other accessory use areas in excess of 1,000 square feet (93 m²).

[F] 903.2.2 Group B ambulatory health care facilities. An automatic sprinkler system shall be installed throughout all fire areas containing a Group B ambulatory health care facility occupancy when either of the following conditions exists at any time:

1. Four or more care recipients are incapable of self-preservation.
2. One or more care recipients who are incapable of self-preservation are located at other than the level of exit discharge serving such an occupancy.

[F] 903.2.3 Group E. Except as provided for in Section 903.2.3.1 for a new public school campus, an automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 12,000 square feet (1115 m²) in area.
2. Throughout every portion of educational buildings below the lowest level of exit discharge serving that portion of the building.

Exception: An automatic sprinkler system is not required in any area below the lowest level of exit discharge serving that area where every classroom throughout the building has at least one exterior exit door at ground level.

3. In rooms or areas with special hazards such as laboratories, vocational shops and other such areas where hazardous materials in quantities not exceeding the maximum allowable quantity are used or stored.
4. Throughout any Group E structure greater than 12,000 square feet (1115 m²) in area, which contains more than one fire area, and which is separated into two or more buildings by fire walls of less than four hour fire resistance rating without openings.

903.2.3.1 Public schools—automatic sprinkler system requirements.

903.2.3.1.1 New public school campus. An approved automatic sprinkler system shall be provided in all buildings of a new public school campus as defined in Section 202 regardless of occupancy classification.

Exceptions:

1. Exempted portable buildings.
2. Ticket booths and athletic field storage buildings that are less than 500 square feet in floor area and located a minimum of 100 feet from all other buildings.
3. Shade or lunch shelters that are incapable of trapping heat, smoke or other by-products of combustion and located a minimum of 20 feet from all other buildings.
4. Shade or lunch shelters that are constructed of noncombustible materials and located a minimum of 20 feet from all other buildings.

903.2.3.1.1.1 Sprinklers shall be installed in spaces where the ceiling creates a “ceiling-plenum” or space above the ceiling is utilized for environmental air.

903.2.3.1.2 Permanent portable buildings. 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 Section 903.2.3.1.1.

903.2.3.1.3 Fire-resistive substitution for new campus. A new public school campus as defined in Section 202 shall be entitled to include in the design and construction documents all of the applicable fire-resistive construction substitutions as permitted by this code.

[F] 903.2.4 Group F-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 fire area exceeds 12,000 square feet (1115 m²).
2. A Group F-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m²).

[F] 903.2.4.1 Woodworking operations. An automatic sprinkler system shall be provided throughout all Group F-1 occupancy fire areas that contain woodworking operations in excess of 2,500 square feet (232 m²) in area

which generate finely divided combustible waste or use finely divided combustible materials. *[SFM] A fire wall of less than four-hour fire-resistance rating, or any fire wall with openings, shall not be used to establish separate fire areas without openings.*

[F] 903.2.5 Group H. *Automatic sprinkler systems shall be provided in high-hazard occupancies as required in Sections 903.2.5.1 through 903.2.5.3.*

[F] 903.2.5.1 General. *An automatic sprinkler system shall be installed in Group H occupancies.*

[F] 903.2.5.2 Group H-5. *An automatic sprinkler system shall be installed throughout buildings containing Group H-5 occupancies. The design of the sprinkler system shall not be less than that required by this code for the occupancy hazard classifications in accordance with Table 903.2.5.2. Where the design area of the sprinkler system consists of a corridor protected by one row of sprinklers, the maximum number of sprinklers required to be calculated is 13.*

**[F] TABLE 903.2.5.2
GROUP H-5 SPRINKLER DESIGN CRITERIA**

LOCATION	OCCUPANCY HAZARD CLASSIFICATION
Fabrication areas	Ordinary Hazard Group 2
Service corridors	Ordinary Hazard Group 2
Storage rooms without dispensing	Ordinary Hazard Group 2
Storage rooms with dispensing	Extra Hazard Group 2
Corridors	Ordinary Hazard Group 2

[F] 903.2.5.3 Pyroxylin plastics. *An automatic sprinkler system shall be provided in buildings, or portions thereof, where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled in quantities exceeding 100 pounds (45 kg).*

903.2.5.4 Group H occupancies located above the 10th story. *The fire sprinkler system shall be designed and zoned to provide separate indication upon water-flow for each side of the 2-hour fire-smoke barrier above the 10th story.*

[F] 903.2.6 Group I. *An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.*

Exceptions:

- Those areas exempted by Section 407.5 of the California Building Code.*
- Pursuant to Health and Safety Code Section 13113 (d), Group I-2 occupancies, or any alterations thereto, located in Type IA construction in existence on March 4, 1972.*

903.2.6.1 Group I-2. *In an existing, unsprinklered Group I-2, nurses' station open to fire-resistive exit access corridors shall be protected by an automatic sprinkler system located directly above the nurses'*

station. It shall be permitted to connect the automatic sprinkler system to the domestic water service.

903.2.6.2 Group I-3. *Every building, or portion thereof, where inmates are restrained shall be protected by an automatic sprinkler system conforming to NFPA 13. The main sprinkler control valve or valves and all other control valves in the system shall be locked in the open position and electrically supervised so that at least an audible and visual alarm will sound at a constantly attended location when valves are closed. The sprinkler branch piping serving cells may be embedded in the concrete construction.*

Exception: *Sprinklers are not required in cells housing two or fewer inmates and the building shall be considered sprinklered throughout when all the following criteria are met:*

- Automatic fire sprinklers shall be mounted outside the cell a minimum of 6 feet (1829 mm) on center and 12 inches (305 mm) from the wall with quick response sprinkler heads. Where spacing permits, the head shall be centered over the cell door opening.*
- The maximum amount of combustibles, excluding linen and clothing, shall be maintained at three pounds per inmate.*
- For local detention facilities, each individual housing cell shall be provided with a two-way inmate or sound-actuated audio monitoring system for communication directly to the control station serving the cell(s).*
- The provisions of the exception in Section 804.4.2 shall not apply.*

[F] 903.2.7 Group M. *An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:*

- A Group M fire area exceeds 12,000 square feet (1115 m²).*
- A Group M fire area is located more than three stories above grade plane.*
- The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m²).*
- A Group M occupancy is used for the display and sale of upholstered furniture.*
- The structure exceeds 24,000 square feet (465 m²), contains more than one fire area containing a Group M occupancy, and is separated into two or more buildings by fire walls of less than 4-hour fire resistance rating without openings.*

[F] 903.2.7.1 High-piled storage. *An automatic sprinkler system shall be provided in accordance with the California Fire Code in all buildings of Group M where storage of merchandise is in high-piled or rack storage arrays.*

laboratories and similar areas of a Group L occupancy shall not be less than that required for Ordinary Hazard Group 2 with a design area of not less than 3,000 square feet (279 m²).

In mixed occupancies, portions of floors or buildings not classified as Group L occupancies shall be provided with sprinkler protection designed of not less than that required for Ordinary Hazard Group 1 with a design area of not less than 3,000 square feet (279 m²).

903.2.16.1 Group L occupancies located above the 10th story. The automatic sprinkler system shall be designed and zoned to provide separate indication upon water-flow for each side of the 2-hour fire-smoke barrier above the 10th story.

903.2.17 Fixed guideway transit systems.

903.2.17.1 Automatic sprinkler system. An automatic sprinkler system shall be installed in all stations of fixed guideway transit systems.

Exceptions:

1. Guideways when the closest sprinkler heads to the guideway are within 3 feet (914 mm) of the edge, over the platform, and spaced 6 feet (1829 mm) on center parallel to the guideway
2. Station agent booths not exceeding 150 square feet (13.9 m²) in area, when provided with an approved smoke detector connected to the building fire alarm system
3. Power substations
4. Machinery rooms, electrical rooms and train control rooms protected by an approved automatic fixed fire-extinguishing system
5. Open stations
6. Station platform areas open to three or more sides

903.2.17.2 Station guideway deluge system. Underground stations and stations in open cuts with walls 5 feet (1524 mm) above the top of the running rail and with a raised platform shall be provided with an under-vehicle guideway manually activated deluge sprinkler system. In open cut stations, such system shall be provided in guideways which are situated between a raised platform edge and a retaining wall.

903.2.17.2.1 Systems shall be provided along the entire length of track at each station platform.

903.2.17.2.2 Deluge nozzles with caps shall be located in the approximate center of track with spacing designed to completely wet the undersides of the vehicle at the applied density.

903.2.17.2.3 System density shall be a minimum of 0.19 gallon per minute (gpm) per square foot (0.72 L/m per m²) for the design area. When more than one zone is provided, two adjacent zones are required to be considered operating for calculating purposes.

903.2.17.2.4 Deluge systems shall be directly connected to a water supply capable of supplying the required flow rate for a minimum 30-minute duration.

903.2.17.2.5 Controls or manually operable valves shall be in a location acceptable to the Fire Code Official. All deluge systems shall be monitored by the station fire alarm system.

903.2.17.2.6 Each valve shall be monitored by a separate circuit. The alarm panel shall be located in an area normally occupied by station personnel or signals shall be transmitted to the operations control center (OCC).

903.2.18 Group U private garages and carports accessory to Group R-3 occupancies. Carports with habitable space above and attached garages, accessory to Group R-3 occupancies, shall be protected by residential fire sprinklers in accordance with this section. Residential fire sprinklers shall be connected to, and installed in accordance with, an automatic residential fire sprinkler system that complies with Section R313 of the California Residential Code or with NFPA 13D. Fire sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a minimum density of 0.05 gpm/ft² (2.04 mm/min) over the area of the garage and/or carport, but not to exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions with respect to sprinkler placement.

Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing carports and/or garages that do not have an automatic residential fire sprinkler system installed in accordance with this section.

[F] 903.3 Installation requirements. Automatic sprinkler systems shall be designed and installed in accordance with Sections 903.3.1 through 903.3.6.

[F] 903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Section 903.3.1.1, unless otherwise permitted by Sections 903.3.1.2 and 903.3.1.3.

[F] 903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Section 903.3.1.1.1.

[F] 903.3.1.1.1 Exempt locations. In other than Group I-2, I-2.1 and I-3 occupancies, automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance-rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.

2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when *approved* by the fire code official.
3. *Elevator hoistways, elevator machine rooms, elevator machinery spaces, elevator control spaces, or elevator control rooms in accordance with Section 3006.4.1.*
4. *Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, and associated electrical power distribution equipment, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour fire barriers constructed in accordance with Section 707 or not less than 2-hour horizontal assemblies constructed in accordance with Section 712, or both.*

[F] 903.3.1.2 NFPA 13R sprinkler systems. *Automatic sprinkler systems in Group R occupancies up to and including four stories in height shall be permitted to be installed throughout in accordance with NFPA 13R as amended in Chapter 35.*

[F] 903.3.1.2.1 Balconies and decks. Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of *dwelling units* where the building is of Type V construction, provided there is a roof or deck above. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

[F] 903.3.1.3 NFPA 13D sprinkler systems. *Automatic sprinkler systems installed in one- and two-family dwellings and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D.*

[F] 903.3.2 Quick-response and residential sprinklers. Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers shall be installed in the following areas in accordance with Section 903.3.1 and their listings:

1. Throughout all spaces within a smoke compartment containing patient sleeping units in Group I-2 in accordance with this code.
2. *Dwelling units, and sleeping units* in Group R occupancies.
3. Light-hazard occupancies as defined in NFPA 13.

[F] 903.3.3 Obstructed locations. Automatic sprinklers shall be installed with due regard to obstructions that will delay activation or obstruct the water distribution pattern. Automatic sprinklers shall be installed in or under covered kiosks, displays, booths, concession stands, or equipment

that exceeds 4 feet (1219 mm) in width. Not less than a 3-foot (914 mm) clearance shall be maintained between automatic sprinklers and the top of piles of combustible fibers.

Exception: Kitchen equipment under exhaust hoods protected with a fire-extinguishing system in accordance with Section 904.

[F] 903.3.4 Actuation. *Automatic sprinkler systems shall be automatically actuated unless specifically provided for in this code.*

[F] 903.3.5 Water supplies. Water supplies for *automatic sprinkler systems* shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with *Health and Safety Code Section 13114.7.*

[F] 903.3.5.1 Domestic services. Where the domestic service provides the water supply for the *automatic sprinkler system*, the supply shall be in accordance with this section.

[F] 903.3.5.1.1 Limited area sprinkler systems. Limited area sprinkler systems serving fewer than 20 sprinklers on any single connection are permitted to be connected to the domestic service where a wet automatic standpipe is not available. Limited area sprinkler systems connected to domestic water supplies shall comply with each of the following requirements:

1. Valves shall not be installed between the domestic water riser control valve and the sprinklers.

Exception: An *approved* indicating control valve supervised in the open position in accordance with Section 903.4.

2. The domestic service shall be capable of supplying the simultaneous domestic demand and the sprinkler demand required to be hydraulically calculated by NFPA 13, NFPA 13R or NFPA 13D.

[F] 903.3.5.1.2 Residential combination services. A single combination water supply shall be allowed provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

[F] 903.3.5.2 Secondary water supply. A secondary on-site water supply shall be provided for high-rise buildings and *Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access* in Seismic Design Category C, D, E or F as determined by this code. The secondary water supply shall *have a usable capacity of not less than the hydraulically calculated sprinkler demand plus 100 GPM for the inside hose stream allowance, for a duration of not less than 30 minutes or as determined by the sprinkler system design occupancy hazard classification in accordance with NFPA 13, whichever is greater. The Class I standpipe system demand shall not be required to be included in the secondary on-site water supply calculations. In no case*

discharge of exits serving the dwelling unit or sleeping unit; or

3. The building contains more than 16 *dwelling units* or *sleeping units*.
4. *Congregate living facilities or congregate residences with more than 16 occupants.*

Exceptions:

1. A fire alarm system is not required in buildings not more than two *stories* in height where all *dwelling units* or *sleeping units* and contiguous *attic* and crawl spaces are separated from each other and public or common areas by at least 1-hour *fire partitions* and each *dwelling unit* or *sleeping unit* has an *exit* directly to a *public way, exit court* or *yard*.
2. Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and the occupant notification appliances will automatically activate throughout the notification zones upon a sprinkler waterflow.
3. A fire alarm system is not required in buildings that do not have interior *corridors* serving *dwelling units* and are protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that *dwelling units* either have a *means of egress* door opening directly to an exterior *exit access* that leads directly to the *exits* or are served by open-ended *corridors* designed in accordance with Section 1026.6, Exception 4.

[F] 907.2.9.2 Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.

[F] 907.2.9.3 Licensed Group R-2.1 occupancies. *Licensed Group R-2.1 occupancies housing more than six nonambulatory, elderly clients shall be provided with an approved manual and automatic fire alarm system.*

Exceptions: *Buildings housing nonambulatory clients on the first story only and which are protected throughout by the following:*

1. *An approved and supervised automatic sprinkler system, as specified in Sections 903.3.1.1 or 903.3.1.2, which upon activation will initiate the fire alarm system to notify all occupants.*
2. *A manual fire alarm system.*
3. *Smoke alarms required by Section 907.2.11.*

[F] 907.2.10 Group R-4. Fire alarm systems and smoke alarms shall be installed in Group R-4 occupancies as required in Sections 907.2.10.1 through 907.2.10.3.

[F] 907.2.10.1 Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-4 occupancies.

Exceptions:

1. A manual fire alarm system is not required in buildings not more than two *stories* in height where all individual *sleeping units* and contiguous *attic* and crawl spaces to those units are separated from each other and public or common areas by at least 1-hour *fire partitions* and each individual *sleeping unit* has an *exit* directly to a *public way, exit court* or *yard*.
2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:
 - 2.1. The building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2;
 - 2.2. The notification appliances will activate upon sprinkler waterflow; and
 - 2.3. At least one manual fire alarm box is installed at an *approved* location.
3. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at *exits* where located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.2.1 are not exceeded.

[F] 907.2.10.2 Automatic smoke detection system. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in *corridors*, waiting areas open to *corridors* and *habitable spaces* other than *sleeping units* and kitchens.

Exceptions:

1. Smoke detection in *habitable spaces* is not required where the facility is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1.
2. An automatic smoke detection system is not required in buildings that do not have interior *corridors* serving *sleeping units* and where each *sleeping unit* has a *means of egress* door opening directly to an *exit* or to an exterior *exit access* that leads directly to an *exit*.

[F] 907.2.10.3 Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.

[F] 907.2.11 Single- and multiple-station smoke alarms. *Listed* single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with Sections 907.2.11.1 through 907.2.11.4 and NFPA 72.

Exception: *For Group R occupancies. A fire alarm system with smoke detectors located in accordance with this section may be installed in lieu of smoke alarms. Upon actuation of the detector, only those notification*

appliances in the dwelling unit or guest room where the detector is actuated shall activate.

[F] **907.2.11.1 Group R-1.** Single- or multiple-station smoke alarms shall be installed in all of the following locations in Group R-1:

1. In sleeping areas.
2. In every room in the path of the *means of egress* from the sleeping area to the door leading from the *sleeping unit*.
3. In each *story* within the *sleeping unit*, including basements. For *sleeping units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.

[F] **907.2.11.2 Groups R-2, R-2.1, R-3, R-3.1 and R-4.** Single- or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-2.1, R-3, R-3.1 and R-4 regardless of *occupant load* at all of the following locations:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
2. In each room used for sleeping purposes.

Exception: Single- or multiple-station smoke alarms in Group I-1 shall not be required where smoke detectors are provided in the sleeping rooms as part of an automatic smoke detection system.

3. In each *story* within a *dwelling unit*, including basements but not including crawl spaces and uninhabitable *attics*. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.
4. In a *Group R-3.1 occupancy*, in addition to the above, smoke alarms shall be provided throughout the habitable areas of the *dwelling unit* except kitchens.

907.2.11.2.1 Group I-4 occupancies. Large family day-care homes shall be equipped with State Fire Marshal approved and listed single station residential type smoke alarms.

907.2.11.2.2 Group R-3.1. In all facilities housing a bedridden client, smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall be electrically interconnected so as to cause all smoke alarms to sound a distinctive alarm signal upon actuation of any single smoke alarm. Such alarm signal shall be audible throughout the facility at a minimal level of 15 db above ambient noise level. These devices need not be interconnected to any other

fire alarm device, have a control panel, or be electrically supervised or provided with emergency power.

[F] **907.2.11.3 Interconnection.** Where more than one smoke alarm is required to be installed within an individual *dwelling unit* or *sleeping unit* in Group R-1, R-2, R-3, R-3.1 or R-4, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

[F] **907.2.11.4 Power source.** In new construction and in newly classified *Group R-3.1 Occupancies*, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exception: Smoke alarms are not required to be equipped with battery backup where they are connected to an emergency electrical system.

907.2.11.5 Existing Group R-3 Occupancies. See the *California Residential Code* for existing *Group R-3 occupancies* or *Chapter 46 of the California Fire Code* for all other existing *Group R occupancies*.

[F] **907.2.12 Special amusement buildings.** An automatic smoke detection system shall be provided in *special amusement buildings* in accordance with Sections 907.2.12.1 through 907.2.12.3.

[F] **907.2.12.1 Alarm.** Activation of any single smoke detector, the *automatic sprinkler system* or any other automatic fire detection device shall immediately sound an alarm at the building at a *constantly attended location* from which emergency action can be initiated, including the capability of manual initiation of requirements in Section 907.2.12.2.

[F] **907.2.12.2 System response.** The activation of two or more smoke detectors, a single smoke detector equipped with an alarm verification feature, the *automatic sprinkler system* or other *approved* fire detection device shall automatically:

1. Cause illumination of the *means of egress* with light of not less than 1 foot-candle (11 lux) at the walking surface level;
2. Stop any conflicting or confusing sounds and visual distractions;
3. Activate an *approved* directional *exit* marking that will become apparent in an emergency; and
4. Activate a prerecorded message, audible throughout the *special amusement building*, instructing patrons to proceed to the nearest *exit*. Alarm signals used in conjunction with the prerecorded message shall produce a sound which is

devices suitable for sounding a fire alarm. Such audible appliances or devices may be of any type acceptable to the enforcing agency provided they are distinctive in tone from all other signaling devices or systems and shall be audible throughout the camp premises. When an automatic fire alarm system is provided, as required by Section 440.6.6 of the California Building Code, all audible appliances required by this section shall be of the same type as that used in the automatic system.

907.2.26 Fixed guideway transits systems fire alarm and communication systems.

907.2.26.1 General. Every fixed guideway transit station shall be provided with an approved emergency voice/alarm communication system in accordance with NFPA 72. The emergency voice/alarm communication system, designed and installed so that damage to any one speaker will not render any paging zone of the system inoperative.

Exception: Open stations

907.2.26.2 System components. Each station fire alarm system shall consist of:

1. Fire alarm control unit at a location as permitted by the enforcing agency.
2. An alarm annunciator(s). The annunciator(s) shall be located at a point acceptable to the enforcing agency. The annunciator(s) shall indicate the type of device and general location of alarm. All alarm, supervisory and trouble signals shall be transmitted to the local annunciator(s) and the operations control center.
3. Manual fire alarm boxes shall be provided throughout passenger platforms and stations.

Exception: Two-way emergency communication reporting devices (emergency telephones) are allowed to be used in lieu of manual fire alarm boxes as permitted by the enforcing agency. Such devices shall provide two-way communication between the operations control center and each device. Such devices shall be located as required for manual fire alarm boxes, and shall be distinctly identified by signs, coloring or other means acceptable to the enforcing agency.

4. Automatic smoke detectors in all ancillary spaces.

Exceptions:

1. Ancillary spaces protected by an approved fixed automatic extinguishing system; or
2. Ancillary spaces protected by quick-response sprinklers.
5. Automatic control of exiting components.

907.2.26.3 Emergency voice/alarm communication system. Each station shall be provided with an emergency voice/alarm communication system capable of transmitting voice, recorded or electronically generated textual messages to all areas of the station. The system(s) shall be configured such that the messages can be initi-

ated from either the Emergency Management Panel (EMP) or the operations control center.

907.2.26.4 Emergency telephones. A dedicated two-way emergency communication phone system designed and installed in accordance with NFPA 72 shall be provided in all underground stations to facilitate direct communications for emergency response between remote locations and the EMP.

907.2.26.4.1 Remote emergency phones shall be located at ends of station platforms, each hose outlet connection and station valve rooms.

907.2.26.4.2 Provisions shall be made in the design of this two-way emergency communication phone system for extensions of the system to the next passenger station or guideway portal.

907.2.27 Winery caves. An approved manual fire alarm system conforming to the provisions of Section 907.2 shall be provided in all Type 3 winery caves.

907.2.28 Group L. A manual fire alarm system shall be installed throughout buildings containing Group L occupancies. When Group L occupancies are located in mixed use buildings, at least one manual fire alarm shall be located in the Group L occupancy.

907.2.28.1 Group L occupancies located above the 10th story. Manual fire alarm boxes shall be required on each side of the 2-hour fire-smoke barrier and at each exit above the 10th story.

[F] 907.3 Fire safety functions. Automatic fire detectors utilized for the purpose of performing fire safety functions shall be connected to the building's fire alarm control unit where a fire alarm system is installed. Detectors shall, upon actuation, perform the intended function and activate the alarm notification appliances or activate a visible and audible supervisory signal at a constantly attended location. In buildings not equipped with a fire alarm system, the automatic fire detector shall be powered by normal electrical service and, upon actuation, perform the intended function. The detectors shall be located in accordance with NFPA 72.

[F] 907.3.1 Duct smoke detectors. Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is installed. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall perform the intended fire safety function in accordance with this code and the California Mechanical Code. Duct smoke detectors shall not be used as a substitute for required open area detection.

Exceptions:

1. The supervisory signal at a constantly attended location is not required where duct smoke detectors activate the building's alarm notification appliances.
2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector

shall activate a visible and an audible signal in an *approved* location. Smoke detector trouble conditions shall activate a visible or audible signal in an *approved* location and shall be identified as air duct detector trouble.

[F] 907.3.2 Delayed egress locks. Where delayed egress locks are installed on *means of egress* doors in accordance with Section 1008.1.9.6, an automatic smoke detection system shall be installed as required by this section and Section 1008.1.9.7.

907.3.2.1 *In other than Group I, R-2.1 and Group R-4 occupancies for single-story buildings smoke detectors shall be installed at ceilings throughout all occupied areas and mechanical/electrical spaces. For multiple-story buildings smoke detectors shall be installed throughout all occupied areas and mechanical/electrical spaces for the story where delayed egress devices are installed. Additional detectors are required on adjacent stories where occupants of those stories utilize the same means of egress.*

907.3.2.2 For Group I and R-2.1 occupancies. *Smoke detectors shall be installed at ceilings throughout all occupied areas and mechanical/electrical spaces of smoke-compartments where delayed egress devices are installed. Additional detectors are required in adjacent smoke-compartments where occupants of those compartments utilize the same means of egress.*

907.3.2.3 For Group R-4. *Occupancies licensed as residential care facilities for the elderly, and housing clients with Alzheimer's disease or dementia residential facilities, smoke detectors shall be installed at ceilings throughout all occupiable rooms and areas and mechanical/electrical rooms and spaces.*

[F] 907.3.3 Elevator emergency operation. Automatic fire detectors installed for elevator emergency operation shall be installed in accordance with the provisions of *California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders* and NFPA 72.

[F] 907.3.4 Wiring. The wiring to the auxiliary devices and equipment used to accomplish the above fire safety functions shall be monitored for integrity in accordance with NFPA 72.

[F] 907.4 Initiating devices. Where manual or automatic alarm initiation is required as part of a fire alarm system, the initiating devices shall be installed in accordance with Sections 907.4.1 through 907.4.3.1.

[F] 907.4.1 Protection of fire alarm control unit. In areas that are not continuously occupied, a single smoke detector shall be provided at the location of each fire alarm control unit, notification appliance circuit power extenders, and supervising station transmitting equipment.

Exception: Where ambient conditions prohibit installation of a smoke detector, a *heat detector* shall be permitted.

[F] 907.4.2 Manual fire alarm boxes. Where a manual fire alarm system is required by another section of this code, it

shall be activated by fire alarm boxes installed in accordance with Sections 907.4.2.1 through 907.4.2.5.

[F] 907.4.2.1 Location. Manual fire alarm boxes shall be located not more than 5 feet (1524 mm) from the entrance to each *exit*. Additional manual fire alarm boxes shall be located so that travel distance to the nearest box does not exceed 200 feet (60 960 mm).

Exception: *When individual dwelling units are served by a single exit stairway, additional boxes at other than the ground floor may be omitted.*

[F] 907.4.2.2 Height. The height of the manual fire alarm boxes shall be a minimum of 42 inches (1067 mm) and a maximum of 48 inches (1372 mm) measured vertically, from the floor level to the *highest point of the activating handle or lever of the box*. *Manual fire alarm boxes shall also comply with Section 1117B.6, Item 4.*

Exception: *[DSA-AC] In existing buildings there is no requirement to retroactively relocate existing manual fire alarm boxes to a minimum of 42 inches (1067 mm) and a maximum of 48 inches (1219 mm) from the floor level to the activating handle or lever of the box.*

[F] 907.4.2.3 Color. Manual fire alarm boxes shall be red in color.

[F] 907.4.2.4 Signs. Where fire alarm systems are not monitored by a supervising station, an *approved* permanent sign shall be installed adjacent to each manual fire alarm box that reads: WHEN ALARM SOUNDS CALL FIRE DEPARTMENT.

Exception: Where the manufacturer has permanently provided this information on the manual fire alarm box.

[F] 907.4.2.5 Protective covers. The fire code official is authorized to require the installation of *listed* manual fire alarm box protective covers to prevent malicious false alarms or to provide the manual fire alarm box with protection from physical damage. The protective cover shall be transparent or red in color with a transparent face to permit visibility of the manual fire alarm box. Each cover shall include proper operating instructions. A protective cover that emits a local alarm signal shall not be installed unless *approved*. Protective covers shall not project more than that permitted by Section 1003.3.3.

907.4.2.6 Operation. *Manual fire alarm boxes shall be operable with one hand including boxes with protective covers.*

[F] 907.4.3 Automatic smoke detection. Where an automatic smoke detection system is required it shall utilize smoke detectors unless ambient conditions prohibit such an installation. In spaces where smoke detectors cannot be utilized due to ambient conditions, *approved* automatic *heat detectors* shall be permitted.

907.4.3.1 Automatic sprinkler system. For conditions other than specific fire safety functions noted in Section 907.3, in areas where ambient conditions prohibit the installation of smoke detectors, an *automatic sprinkler system* installed in such areas in accordance with Section

909.20.2.5 Relief vent. A relief vent capable of discharging a minimum of 2,500 cubic feet per minute (1180 L/s) of air at the design pressure difference shall be located in the upper portion of such pressurized exit enclosures.

Exception: When approved by the enforcing agency, other engineered design methods capable of discharging a minimum of 2,500 cubic feet per minute (1180 L/s) of air at the design pressure difference shall be permitted.

909.20.3 Natural ventilation alternative. The provisions of Sections 909.20.4.1 and 909.20.4.2 shall apply to ventilation of smokeproof enclosures by natural means.

909.20.3.1 Balcony doors. Where access to the stairway is by way of an open exterior balcony, the door assembly into the enclosure shall be a *fire door assembly* in accordance with Section 715.4.

909.20.3.2 Vestibule ventilation. Each vestibule shall have a minimum net area of 16 square feet (1.5 m²) of opening in a wall facing an outer *court, yard* or *public way* that is at least 20 feet (6096 mm) in width.

909.20.4 Ventilating equipment. The activation of ventilating equipment required by Section 909.20.3 shall be by smoke detectors installed at each floor level at an *approved* location at the entrance to the smokeproof enclosure and upon activation of the automatic controls required by Section 909.12.3. When the closing device for the stair shaft and vestibule doors is activated by smoke detection or power failure, the mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 907.10.

909.20.4.1 Ventilation systems. Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.
2. Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.
3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2-hour *fire barriers* constructed in accor-

dance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

Exceptions:

1. Control wiring and power wiring utilizing a 2-hour rated cable or cable system.
2. Where encased with not less than 2 inches (51 mm) of concrete.

909.20.4.2 Standby power. Mechanical vestibule and stair shaft ventilation systems and automatic fire detection systems shall be powered by an *approved* standby power system conforming to Section 403.4.7 and Chapter 27.

909.20.4.3 Acceptance and testing. Before the mechanical equipment is *approved*, the system shall be tested in the presence of the *building official* to confirm that the system is operating in compliance with these requirements.

SECTION 910 SMOKE AND HEAT VENTS

[F] 910.1 General. Where required by this code or otherwise installed, smoke and heat vents, or mechanical smoke exhaust systems, and draft curtains shall conform to the requirements of this section.

Exceptions:

1. Frozen food warehouses used solely for storage of Class I and II commodities where protected by an *approved automatic sprinkler system*.
2. *Automatic smoke and heat vents or mechanical smoke exhaust systems are not required within areas of buildings equipped with early suppression fast-response (ESFR) sprinklers unless any of the following conditions exist:*
 - 2.1. *The building is a state institution,*
 - 2.2. *The building is a state-owned or state-occupied building,*
 - 2.3. *The building is any of the applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, or*
 - 2.4. *The area of a Group F-1 or S-1 occupancy protected with the early suppression fast-response (ESFR) sprinklers has an exit access travel distance of more than 250 feet (76 200 mm).*

[F] 910.2 Where required. Smoke and heat vents or *mechanical smoke exhaust systems* shall be installed in the roofs of one-story buildings or portions thereof occupied for the uses set forth in Sections 910.2.1 and 910.2.2.

[F] 910.2.1 Group F-1 or S-1. Buildings and portions thereof used as a Group F-1 or S-1 occupancy having more than 50,000 square feet (4645 m²) in undivided area.

Exception: *Group F-1 aircraft manufacturing buildings and Group S-1 aircraft repair hangars.*

[F] TABLE 910.3
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS^a

OCCUPANCY GROUP AND COMMODITY CLASSIFICATION	DESIGNATED STORAGE HEIGHT (feet)	MINIMUM DRAFT CURTAIN DEPTH (feet)	MAXIMUM AREA FORMED BY DRAFT CURTAINS (square feet)	VENT-AREA-TO-FLOOR-AREA RATIO ^c	MAXIMUM SPACING OF VENT CENTERS (feet)	MAXIMUM DISTANCE FROM VENTS TO WALL OR DRAFT CURTAIN ^b (feet)
Group F-1 and S-1	—	0.2 × H ^d but ≥ 4	50,000	1:100	120	60
High-piled Storage (see Section 910.2.2) Class I-IV commodities (Option 1)	≤ 20	6	10,000	1:100	100	60
	> 20 ≤ 40	6	8,000	1:75	100	55
High-piled Storage (see Section 910.2.2) Class I-IV commodities (Option 2)	≤ 20	4	3,000	1:75	100	55
	> 20 ≤ 40	4	3,000	1:50	100	50
High-piled Storage (see Section 910.2.2) High-hazard commodities (Option 1)	≤ 20	6	6,000	1:50	100	50
	> 20 ≤ 30	6	6,000	1:40	90	45
High-piled Storage (see Section 910.2.2) High-hazard commodities (Option 2)	≤ 20	4	4,000	1:50	100	50
	> 20 ≤ 30	4	2,000	1:30	75	40

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m².

- a. Additional requirements for rack storage heights in excess of those indicated shall be in accordance with Chapter 23. For solid-piled storage heights in excess of those indicated, an approved engineered design shall be used.
- b. Vents adjacent to walls or draft curtains shall be located within a horizontal distance not greater than the maximum distance specified in this column as measured perpendicular to the wall or draft curtain that forms the perimeter of the draft curtained area.
- c. Where draft curtains are not required, the vent area to floor area ratio shall be calculated based on a minimum draft curtain depth of 6 feet (Option 1).
- d. “H” is the height of the vent, in feet, above the floor.

[F] **910.2.2 High-piled combustible storage.** Buildings and portions thereof containing high-piled combustible stock or rack storage in any occupancy group in accordance with Section 413 and the *California Fire Code*.

[F] **910.3 Design and installation.** The design and installation of smoke and heat vents and draft curtains shall be as specified in Sections 910.3.1 through 910.3.5.2 and Table 910.3.

[F] **910.3.1 Design.** Smoke and heat vents shall be *listed* and labeled to indicate compliance with *FM 4430, ICC ES AC 331, or UL 793*.

[F] **910.3.2 Vent operation.** Smoke and heat vents shall be capable of being operated by *approved* automatic and manual means. Automatic operation of smoke and heat vents shall conform to the provisions of Sections 910.3.2.1 through 910.3.2.3.

[F] **910.3.2.1 Gravity-operated drop-out vents.** Automatic smoke and heat vents containing heat-sensitive glazing designed to shrink and drop out of the vent opening when exposed to fire shall fully open within 5 minutes after the vent cavity is exposed to a simulated fire, represented by a time-temperature gradient that reaches an air temperature of 500°F (260°C) within 5 minutes.

[F] **910.3.2.2 Sprinklered buildings.** Where installed in buildings provided with an *approved automatic sprinkler*

system, smoke and heat vents shall be designed in accordance with Sections 910.3.2.2.1 through 910.3.2.2.3.

910.3.2.2.1 Automatic operation. *Smoke and heat vents shall be designed to operate automatically.*

910.3.2.2.2 Control mode sprinkler system. *Smoke and heat vents installed in areas of buildings with a control mode sprinkler system shall have operating elements with a higher temperature classification than the automatic fire sprinklers in accordance with NFPA 13.*

910.3.2.2.3 Early suppression fast-response (ESFR) sprinkler system. *Smoke and heat vents installed in areas of buildings with early suppression fast-response (ESFR) sprinklers shall be equipped with a standard-response operating mechanism with a minimum temperature rating of 360°F (182°C) or 100°F (56°C) above the operating temperature of the sprinklers, whichever is higher.*

[F] **910.3.2.3 Nonsprinklered buildings.** Where installed in buildings not provided with an *approved automatic sprinkler system*, smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at between 100°F (38°C) and 220°F (104°C) above ambient.

Exception: Gravity-operated drop-out vents complying with Section 910.3.2.1.

[F] 910.3.3 Vent dimensions. The effective venting area shall not be less than 16 square feet (1.5 m²) with no dimension less than 4 feet (1219 mm), excluding ribs or gutters having a total width not exceeding 6 inches (152 mm).

[F] 910.3.4 Vent locations. Smoke and heat vents shall be located 20 feet (6096 mm) or more from adjacent *lot lines* and *fire walls* and 10 feet (3048 mm) or more from *fire barriers*. Vents shall be uniformly located within the roof in the areas of the building where the vents are required to be installed by Section 910.2 with consideration given to roof pitch, draft curtain location, sprinkler location and structural members.

[F] 910.3.5 Draft curtains. Where required by Table 910.3, draft curtains shall be installed on the underside of the roof in accordance with this section.

Exception: Where areas of buildings are equipped with ESFR sprinklers, draft curtains shall not be provided within these areas. Draft curtains shall only be provided at the separation between the ESFR sprinklers and the non-ESFR sprinklers.

[F] 910.3.5.1 Construction. Draft curtains shall be constructed of sheet metal, lath and plaster, gypsum board or other *approved* materials which provide equivalent performance to resist the passage of smoke. Joints and connections shall be smoke tight.

[F] 910.3.5.2 Location and depth. The location and minimum depth of draft curtains shall be in accordance with Table 910.3.

[F] 910.4 Mechanical smoke exhaust. Engineered mechanical smoke exhaust *systems* shall be an acceptable alternate to smoke and heat vents.

[F] 910.4.1 Location. Exhaust fans shall be uniformly spaced and the maximum distance between fans shall not be greater than 100 feet (30 480 mm).

[F] 910.4.2 Size. Fans shall have a maximum individual capacity of 30,000 cfm (14.2 m³/s). *For sprinklered buildings, the aggregate capacity of smoke exhaust fans shall provide a minimum of two complete air changes per hour based on the volume of the building or portions thereof without deduction for any commodity storage. For nonsprinklered buildings, the aggregate capacity of smoke exhaust fans shall be determined by the equation:*

$$C = A \times 300 \quad \text{(Equation 9-4)}$$

where:

C = Capacity of mechanical ventilation required, in cubic feet per minute (m³/s).

A = Area of roof vents provided in square feet (m²) in accordance with Table 910.3.

[F] 910.4.3 Operation. Mechanical smoke exhaust fans shall be automatically activated by the *automatic sprinkler system* or by *heat detectors* having operating characteristics equivalent to those described in Section 910.3.2. Individual manual controls of each fan unit shall also be provided.

[F] 910.4.4 Wiring and control. Wiring for operation and control of smoke exhaust fans shall be connected ahead of the main disconnect and protected against exposure to temperatures in excess of 1,000°F (538°C) for a period of not less than 15 minutes. Controls shall be located so as to be immediately accessible to the fire service from the exterior of the building and protected against interior fire exposure by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

[F] 910.4.5 Supply air. Supply air for exhaust fans shall be provided at or near the floor level and shall be sized to provide a minimum of 50 percent of required exhaust. Openings for supply air shall be uniformly distributed around the periphery of the area served.

[F] 910.4.6 Interlocks. In combination comfort air-handling/smoke removal systems or independent comfort air-handling systems, fans shall be controlled to shut down in accordance with the *approved* smoke control sequence.

SECTION 911 FIRE COMMAND CENTER

[F] 911.1 General. Where required by other sections of this code and in all buildings classified as high-rise buildings by this code and *Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access*, a fire command center for fire department operations shall be provided and shall comply with Sections 911.1.1 through 911.1.5.

[F] 911.1.1 Location and access. The location and accessibility of the fire command center shall be *approved* by the fire chief.

[F] 911.1.2 Separation. The fire command center shall be separated from the remainder of the building by not less than a 1-hour *fire barrier* constructed in accordance with Section 707 or *horizontal assembly* constructed in accordance with Section 712, or both.

[F] 911.1.3 Size. The room shall be a minimum of 200 square feet (19 m²) with a minimum dimension of 10 feet (3048 mm).

[F] 911.1.4 Layout approval. A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation.

[F] 911.1.5 Required features. The fire command center shall comply with NFPA 72 and shall contain the following features:

1. The emergency voice/alarm communication system control unit.
2. The fire department communications system.
3. Fire detection and alarm system annunciator.
4. Annunciator unit visually indicating the location of the elevators and whether they are operational.

5. Status indicators and controls for air distribution systems.
6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking *stairway* doors simultaneously.
8. Sprinkler valve and waterflow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, *means of egress*, fire protection systems, fire-fighting equipment and fire department access and the location of *fire walls, fire barriers, fire partitions, smoke barriers* and smoke partitions.
13. Work table.
14. Generator supervision devices, manual start and transfer features.
15. Public address system, where specifically required by other sections of this code.
16. Elevator fire recall switch in accordance with *California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders*.
17. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

Fire command centers shall not be used for the housing of any boiler, heating unit, generator, combustible storage, or similar hazardous equipment or storage.

SECTION 912 FIRE DEPARTMENT CONNECTIONS

[F] 912.1 Installation. Fire department connections shall be installed in accordance with the NFPA standard applicable to the system design and shall comply with Sections 912.2 through 912.5.

[F] 912.2 Location. With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be *approved* by the fire chief.

[F] 912.2.1 Visible location. Fire department connections shall be located on the street side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as otherwise *approved* by the fire chief.

[F] 912.2.2 Existing buildings. On existing buildings, wherever the fire department connection is not visible to

approaching fire apparatus, the fire department connection shall be indicated by an *approved* sign mounted on the street front or on the side of the building. Such sign shall have the letters "FDC" at least 6 inches (152 mm) high and words in letters at least 2 inches (51 mm) high or an arrow to indicate the location. All such signs shall be subject to the approval of the fire code official.

[F] 912.3 Access. Immediate access to fire department connections shall be maintained at all times and without obstruction by fences, bushes, trees, walls or any other fixed or moveable object. Access to fire department connections shall be *approved* by the fire chief.

Exceptions:

1. Fences, where provided with an access gate equipped with a sign complying with the legend requirements of Section 912.4 and a means of emergency operation. The gate and the means of emergency operation shall be *approved* by the fire chief and maintained operational at all times.
2. *When acceptable to the fire authority having jurisdiction, fire department connections for Group I-3 detention facilities may be located inside all security walls or fences on the property.*

[F] 912.3.1 Locking fire department connection caps. The fire code official is authorized to require locking caps on fire department connections for water-based *fire protection systems* where the responding fire department carries appropriate key wrenches for removal.

[F] 912.3.2 Clear space around connections. A working space of not less than 36 inches (762 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided and maintained in front of and to the sides of wall-mounted fire department connections and around the circumference of free-standing fire department connections, except as otherwise required or *approved* by the fire chief.

[F] 912.3.3 Physical protection. Where fire department connections are subject to impact by a motor vehicle, vehicle impact protection shall be provided in accordance with Section 312 of the *California Fire Code*.

[F] 912.4 Signs. A metal sign with raised letters at least 1 inch (25 mm) in size shall be mounted on all fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.

[P] 912.5 Backflow protection. The potable water supply to automatic sprinkler and standpipe systems shall be protected against backflow as required by *Health and Safety Code Section 13114.7*.

SECTION 913 FIRE PUMPS

[F] 913.1 General. Where provided, fire pumps shall be installed in accordance with this section and NFPA 20.

[F] 913.2 Protection against interruption of service. The fire pump, driver and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

913.2.1 Protection of fire pump rooms. Fire pumps shall be located in rooms that are separated from all other areas of the building by 2-hour *fire barriers* constructed in accordance with Section 707 or 2-hour *horizontal assemblies* constructed in accordance with Section 712, or both.

Exceptions:

1. In other than high-rise buildings, separation by 1-hour *fire barriers* constructed in accordance with Section 707 or 1-hour *horizontal assemblies* constructed in accordance with Section 712, or both, shall be permitted in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Separation is not required for fire pumps physically separated in accordance with NFPA 20.

[F] 913.3 Temperature of pump room. Suitable means shall be provided for maintaining the temperature of a pump room or pump house, where required, above 40°F (5°C).

[F] 913.3.1 Engine manufacturer's recommendation. Temperature of the pump room, pump house or area where engines are installed shall never be less than the minimum recommended by the engine manufacturer. The engine manufacturer's recommendations for oil heaters shall be followed.

[F] 913.4 Valve supervision. Where provided, the fire pump suction, discharge and bypass valves, and isolation valves on the backflow prevention device or assembly shall be supervised open by one of the following methods:

1. Central-station, proprietary or remote-station signaling service.
2. Local signaling service that will cause the sounding of an audible signal at a *constantly attended location*.
3. Locking valves open.
4. Sealing of valves and *approved* weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

[F] 913.4.1 Test outlet valve supervision. Fire pump test outlet valves shall be supervised in the closed position.

[F] 913.5 Acceptance test. Acceptance testing shall be done in accordance with the requirements of NFPA 20.

SECTION 914 EMERGENCY RESPONDER SAFETY FEATURES

[F] 914.1 Shaftway markings. Vertical shafts shall be identified as required by Sections 914.1.1 and 914.1.2.

[F] 914.1.1 Exterior access to shaftways. Outside openings accessible to the fire department and that open directly on a hoistway or shaftway communicating between two or more floors in a building shall be plainly marked with the word "SHAFTWAY" in red letters at least 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible from the outside of the building.

[F] 914.1.2 Interior access to shaftways. Door or window openings to a hoistway or shaftway from the interior of the building shall be plainly marked with the word "SHAFTWAY" in red letters at least 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible.

Exception: Markings shall not be required on shaftway openings that are readily discernible as openings onto a shaftway by the construction or arrangement.

[F] 914.2 Equipment room identification. Fire protection equipment shall be identified in an *approved* manner. Rooms containing controls for air-conditioning systems, sprinkler risers and valves or other fire detection, suppression or control elements shall be identified for the use of the fire department. *Approved* signs required to identify fire protection equipment and equipment location shall be constructed of durable materials, permanently installed and readily visible.

SECTION 915 EMERGENCY RESPONDER RADIO COVERAGE

[F] 915.1 General. Emergency responder radio coverage shall be provided in all new buildings in accordance with Section 510 of the *California Fire Code*.

CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE CHAPTER 10 – MEANS OF EGRESS

Adopting agency	BSC	SFM	HCD			DSA			OSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter	X						X	X												
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X						X	X	X	X							
Adopt only those sections that are listed below					X	X														
Chapter/Section																				
1001.3		X																		
1002.1		X																		
Accessible Means of Egress						X														
Area of Refuge						X														
Exit						X														
Guard (or Guardrail)			X	X	X	X														
Handrail						X														
Public Way						X														
Stair						X														
Stairway						X														
1003.1		X	X	X	X	X														
1003.2		X	X	X	X															
1003.3		X																		
1003.3.3.1		X																		
1003.3.4			X	X	X															
1003.5		X	X	X	X															
1004.1.1		X																		
1005.1		X																		
1005.3		X																		
1006.1		X																		
1007.1		X	X	X	X	X														
1007.2			X	X	X	X														
1007.2.1						X														
1007.3		X	X	X	X	X														
1007.4		X				X														
1007.5			X	X	X	X														
1007.5.1						X														
1007.6						X														
1007.6.1		X	X	X	X	X														
1007.6.2						X														
1007.6.3		X				X														
1007.7						X														

(continued)

**CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE
CHAPTER 10 – MEANS OF EGRESS—continued**

Adopting agency	BSC	SFM	HCD			DSA			OSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter	X						X	X												
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X						X	X	X	X							
Adopt only those sections that are listed below					X	X														
Chapter/Section																				
1007.7.1						X														
1007.7.2						X														
1007.8						X														
1007.8.1						X														
1007.8.1.1						X														
1007.8.2						X														
1007.9					X	X														
1007.10						X														
1007.11						X														
1007.12		X			X	X														
1008 (1 st paragraph below title only)						X														
1008.1.1		X			X															
1008.1.1.1		X																		
1008.1.2		X																		
1008.1.4.1			X	X																
1008.1.4.4		X																		
1008.1.4.6		X																		
1008.1.5			X	X	X															
1008.1.7			X	X	X															
1008.1.8			X	X	X															
1008.1.9.1		X	X	X	X															
1008.1.9.6		X																		
1008.1.9.7		X																		
1008.1.9.7 (Item 5.1 only)						X														
1008.1.9.9		X																		
1008.1.10		X																		
1009 (1 st paragraph below title only)						X														
1009.1		X																		
1009.4.2 Exc. 6						X														
1009.4.2		X	X	X																
1009.5		X	X	X																
1009.12		X	X	X																
1009.12 (2 nd paragraph only)						X														
1010 (1 st paragraph below title only)						X														
1010.1			X	X	X															
1010.6.3			X	X	X															

(continued)

**CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE
CHAPTER 10 – MEANS OF EGRESS—continued**

Adopting agency	BSC	SFM	HCD				DSA		OSHDP				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter	X						X	X												
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X						X	X	X	X							
Adopt only those sections that are listed below					X	X														
Chapter/Section																				
1010.6.4			X	X	X															
1010.6.5			X	X	X															
1010.9			X	X	X															
1011.1		X																		
1011.3			X	X	X	X														
1011.6		X																		
1011.7		X																		
1012 (1 st paragraph below title only)						X														
1012.8		X																		
1013.1						X														
1013.2						X														
1013.3		X				X														
1014.2		X																		
1014.2.2		X																		
1014.2.2.1		X																		
1014.2.7		X																		
1014.3		X																		
1015.1		X																		
Table 1015.1		X																		
1015.5		X																		
1015.7		X																		
Table 1016.1		X																		
1016.3		X																		
1017 (1 st paragraph below title only)						X														
1017.2 Exc. only						X														
1018.1		X																		
Table 1018.1		X																		
1018.2		X																		
1018.4		X																		
1018.5		X																		
1018.5.1		X																		
1018.6		X																		
1021.2		X																		
Table 1021.2		X																		
1022.1		X																		
1022.8		X																		
1022.8 (2 nd paragraph only)						X														

(continued)

**CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE
CHAPTER 10 – MEANS OF EGRESS—continued**

Adopting agency	BSC	SFM	HCD			DSA			OSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter	X						X	X												
Adopt entire chapter as amendeded (amended sections listed below)		X	X	X					X	X	X	X								
Adopt only those sections that are listed below					X	X														
Chapter/Section																				
1022.8.1		X																		
1022.9		X																		
1022.9.1		X																		
1022.9.2		X																		
1023.2		X																		
1026.2		X																		
1027.6		X																		
1028.1		X																		
1028.2		X																		
1028.3		X																		
1028.3.1		X																		
1028.6.1		X																		
1028.6.4		X																		
1028.9.1		X																		
1028.10		X																		
1029.1		X																		
1029.4		X																		

The Office of the State Fire Marshal's adoption of this chapter or individual sections is applicable to structures regulated by other state agencies pursuant to Section 1.11.

CHAPTER 10

MEANS OF EGRESS

SECTION 1001 ADMINISTRATION

1001.1 General. Buildings or portions thereof shall be provided with a *means of egress* system as required by this chapter. The provisions of this chapter shall control the design, construction and arrangement of *means of egress* components required to provide an *approved means of egress* from structures and portions thereof.

1001.2 Minimum requirements. It shall be unlawful to alter a building or structure in a manner that will reduce the number of *exits* or the capacity of the *means of egress* to less than required by this code.

[F] 1001.3 Maintenance. *Means of egress* shall be maintained in accordance with the *California Fire Code*.

SECTION 1002 DEFINITIONS

1002.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

ACCESSIBLE MEANS OF EGRESS. A continuous and unobstructed way of egress travel from any *accessible* point in a building or facility to a *public way*.

AISLE. An unenclosed *exit access* component that defines and provides a path of egress travel.

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

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.

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

BLEACHERS. Tiered seating supported on a dedicated structural system and two or more rows high and is not a building element (see "*Grandstands*").

COMMON PATH OF EGRESS TRAVEL. That portion of *exit access* which the occupants are required to traverse before two separate and distinct paths of egress travel to two *exits* are available. Paths that merge are common paths of travel. Common paths of egress travel shall be included within the permitted travel distance.

CORRIDOR. An enclosed *exit access* component that defines and provides a path of egress travel to an *exit*.

DOOR, BALANCED. A door equipped with double-pivoted hardware so designed as to cause a semicounter balanced swing action when opening.

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

EMERGENCY ESCAPE AND RESCUE OPENING. An operable window, door or other similar device that provides for a means of escape and access for rescue in the event of an emergency.

EXIT. That portion of a *means of egress* system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives as required to provide a protected path of egress travel between the *exit access* and the *exit discharge*. Exits include exterior exit doors at the *level of exit discharge*, vertical *exit enclosures*, *exit passageways*, exterior *exit stairways*, exterior *exit ramps* and *horizontal exits*.

EXIT ACCESS. That portion of a *means of egress* system that leads from any occupied portion of a building or structure to an *exit*.

EXIT ACCESS DOORWAY. A door or access point along the path of egress travel from an occupied room, area or space where the path of egress enters an intervening room, corridor, unenclosed *exit access stair* or unenclosed *exit access ramp*.

EXIT DISCHARGE. That portion of a *means of egress* system between the termination of an *exit* and a *public way*.

EXIT DISCHARGE, LEVEL OF. The *story* at the point at which an *exit* terminates and an *exit discharge* begins.

EXIT ENCLOSURE. An *exit* component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a vertical or horizontal direction to the *exit discharge* or the *public way*.

EXIT, HORIZONTAL. A path of egress travel from one building to an area in another building on approximately the same level, or a path of egress travel through or around a wall or partition to an area on approximately the same level in the same building, which affords safety from fire and smoke from the area of incidence and areas communicating therewith.

EXIT PASSAGEWAY. An *exit* component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a horizontal direction to the *exit discharge* or the *public way*.

FIRE EXIT HARDWARE. Panic hardware that is *listed* for use on *fire door assemblies*.

FLIGHT. A continuous run of rectangular treads, *winders* or combination thereof from one landing to another.

FLOOR AREA, GROSS. The floor area within the inside perimeter of the *exterior walls* of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion

thereof, not provided with surrounding *exterior walls* shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts.

FLOOR AREA, NET. The actual occupied area not including unoccupied accessory areas such as corridors, stairways, toilet rooms, mechanical rooms and closets.

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.

GRANDSTAND. Tiered seating supported on a dedicated structural system and two or more rows high and is not a building element (see “*Bleachers*”).

GUARD ([DSA-AC, HCD 1 & HCD 2] 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.

HANDRAIL. A horizontal or sloping rail intended for grasping by the hand for guidance or support.

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*.

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 moveable fixtures, cases, racks, counters and partitions as indicated in Section 105.2 from which customers browse or shop.

NOSING. The leading edge of treads of *stairs* and of landings at the top of *stairway flights*.

OCCUPANT LOAD. The number of persons for which the *means of egress* of a building or portion thereof is designed.

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.

PHOTOLUMINESCENT. Having the property of emitting light that continues for a length of time after excitation by visible or invisible light has been removed.

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).

RAMP. A walking surface that has a running slope steeper than one unit vertical in 20 units horizontal (5-percent slope).

SCISSOR STAIR. Two interlocking *stairways* providing two separate paths of egress located within one stairwell enclosure.

SELF-LUMINOUS. Illuminated by a self-contained power source, other than batteries, and operated independently of external power sources.

SMOKE-PROTECTED ASSEMBLY SEATING. Seating served by *means of egress* that is not subject to smoke accumulation within or under a structure.

STAIR. A change in elevation, consisting of one or more risers.

STAIRWAY. One or more *flights* of *stairs*, either exterior or interior, with the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one level to another.

STAIRWAY, EXTERIOR. A *stairway* that is open on at least one side, except for required structural columns, beams, *handrails* and *guards*. The adjoining open areas shall be either *yards*, *courts* or *public ways*. The other sides of the exterior *stairway* need not be open.

STAIRWAY, INTERIOR. A *stairway* not meeting the definition of an *exterior stairway*.

STAIRWAY, SPIRAL. A *stairway* having a closed circular form in its plan view with uniform section-shaped treads attached to and radiating from a minimum-diameter supporting column.

SUITE. A group of patient treatment rooms or patient sleeping rooms within Group I-2 occupancies where staff are in attendance within the *suite*, for supervision of all patients within the *suite* and the *suite* is in compliance with the requirements of Sections 1014.2.2 through 1014.2.7.

WINDER. A tread with nonparallel edges.

SECTION 1003 GENERAL MEANS OF EGRESS

1003.1 Applicability. The general requirements specified in Sections 1003 through 1013 shall apply to all three elements of the *means of egress* system, in addition to those specific requirements for the *exit access*, the *exit* and the *exit discharge* detailed elsewhere in this chapter.

Exception: *Exiting requirements for Fixed Guideway Transit Systems shall be as per Section 433.3.*

[DSA-AC & HCD 1-AC] *In addition to the requirement of this chapter, means of egress, which provide access to, or egress from, buildings or facilities where accessibility is required for applications listed in Section 1.8.2.1.2 regulated by the Department of Housing and Community Development, or Section 1.9.1 regulated by the Division of the State Architect-Access Compliance, shall also comply with Chapter 11A or Chapter 11B, as applicable.*

1003.1.1 Means of egress for hospitals, skilled nursing facilities, and intermediate care facilities and correctional treatment centers. [OSHPD 1 & 4] *See Section 3417A.*

|| **1003.1.2 Means of egress for single-story light frame skilled nursing facilities and intermediate care facilities.**
|| **[OSHPD 2] See Section 3424.**

1003.2 Ceiling height. The *means of egress* shall have a ceiling height of not less than 7 feet 6 inches (2286 mm).

Exceptions:

1. Sloped ceilings in accordance with Section 1208.2.

2. Ceilings of dwelling units and sleeping units within residential occupancies in accordance with Section 1208.2.
3. Allowable projections in accordance with Section 1003.3.
4. Stair headroom in accordance with Section 1009.2.
5. Door height in accordance with Section 1008.1.1.

6. Ramp headroom in accordance with Section 1010.5.2.
7. The clear height of floor levels in vehicular and pedestrian traffic areas in parking garages in accordance with Section 406.2.2. **[HCD 1-AC]** *The clear height of vehicle and pedestrian areas required to be accessible, or identified as accessible, shall comply with Chapter 11A or Chapter 11B, as applicable.*
8. Areas above and below mezzanine floors in accordance with Section 505.1.
9. *In Group I-2, I-2.1 and I-3 occupancies, the means of egress shall have a ceiling height of not less than 8 feet (2439mm).*

1003.3 Protruding objects. Protruding objects shall comply with the requirements of Sections 1003.3.1 through 1003.3.4.

Exception: *In Group I-2 and Group I-2.1 occupancies, protruding objects shall not extend more than 12 inches (305 mm) below the minimum ceiling height required by Section 1003.2.*

1003.3.1 Headroom. Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 provided a minimum headroom of 80 inches (2032 mm) shall be provided for any walking surface, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.

Exception: Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).

A barrier shall be provided where the vertical clearance is less than 80 inches (2032 mm) high. The leading edge of such a barrier shall be located 27 inches (686 mm) maximum above the floor.

1003.3.2 Post-mounted objects. A free-standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the walking surface. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (686 mm) maximum or 80 inches (2032 mm) minimum above the finished floor or ground.

Exception: These requirements shall not apply to sloping portions of handrails between the top and bottom riser of stairs and above the ramp run.

1003.3.3 Horizontal projections. Structural elements, fixtures or furnishings shall not project horizontally from either side more than 4 inches (102 mm) over any walking surface between the heights of 27 inches (686 mm) and 80 inches (2032 mm) above the walking surface.

Exception: Handrails are permitted to protrude 4¹/₂ inches (114 mm) from the wall.

1003.3.3.1 Horizontal projections for Group I-2 occupancies. *Structural elements, fixtures or furnishings shall not project horizontally from either side more than*

1-¹/₂ inches (38 mm) into the required width of an exit access corridor serving any area caring for one or more nonambulatory or bedridden persons.

Exceptions:

1. Handrails are permitted to protrude 3¹/₂ inches (89 mm) from the wall.
2. Alcohol-based hand-rub dispensers are permitted to protrude 4 inches.
3. Manual fire alarm boxes with a protective cover installed are permitted to protrude 4 inches.

1003.3.4 Clear width. Protruding objects shall not reduce the minimum clear width of accessible routes as required in Chapter 11A or Chapter 11B, Section 1133B.8.6.

1003.4 Floor surface. Walking surfaces of the means of egress shall have a slip-resistant surface and be securely attached.

1003.5 Elevation change. Where changes in elevation of less than 12 inches (305 mm) exist in the means of egress, sloped surfaces shall be used. Where the slope is greater than one unit vertical in 20 units horizontal (5-percent slope), ramps complying with Section 1010 shall be used. Where the difference in elevation is 6 inches (152 mm) or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials.

Exceptions:

1. A single step with a maximum riser height of 7 inches (178 mm) is permitted for buildings with occupancies in Groups F, H, R-2, R-3, S and U at exterior doors not required to be accessible by Chapter 11A or 11B.
2. A stair with a single riser or with two risers and a tread is permitted at locations not required to be accessible by Chapter 11A or 11B, provided that the risers and treads comply with Section 1009.4, the minimum depth of the tread is 13 inches (330 mm) and at least one handrail complying with Section 1012 is provided within 30 inches (762 mm) of the centerline of the normal path of egress travel on the stair.
3. A step is permitted in aisles serving seating that has a difference in elevation less than 12 inches (305 mm) at locations not required to be accessible by Chapter 11A or 11B, provided that the risers and treads comply with Section 1028.11 and the aisle is provided with a handrail complying with Section 1028.13.

Throughout a story in a Group I-2 and Group I-2.1 occupancies, any change in elevation in portions of the exit access that serve nonambulatory persons shall be by means of a ramp or sloped walkway.

1003.6 Means of egress continuity. The path of egress travel along a means of egress shall not be interrupted by any building element other than a means of egress component as specified in this chapter. Obstructions shall not be placed in the required width of a means of egress except projections permitted by this chapter. The required capacity of a means of egress system shall not be diminished along the path of egress travel.

1006.3 Illumination emergency power. The power supply for *means of egress* illumination shall normally be provided by the premises' electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

1. *Aisles* and unenclosed egress *stairways* in rooms and spaces that require two or more *means of egress*.
2. *Corridors*, *exit enclosures* and *exit passageways* in buildings required to have two or more *exits*.
3. Exterior egress components at other than their *levels of exit discharge* until *exit discharge* is accomplished for buildings required to have two or more *exits*.
4. Interior *exit discharge* elements, as permitted in Section 1027.1, in buildings required to have two or more *exits*.
5. Exterior landings as required by Section 1008.1.6 for *exit discharge* doorways in buildings required to have two or more *exits*.

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Chapter 27.

1006.4 Performance of system. Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle (11 lux) and a minimum at any point of 0.1 foot-candle (1 lux) measured along the path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle (6 lux) average and a minimum at any point of 0.06 foot-candle (0.6 lux) at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

SECTION 1007 ACCESSIBLE MEANS OF EGRESS

1007.1 Accessible means of egress required. *Accessible means of egress* shall comply with this section. *Accessible* spaces shall be provided with not less than one *accessible means of egress*. Where more than one *means of egress* are required by Section 1015.1 or 1021.1 from any *accessible* space, each *accessible* portion of the space shall be served by *accessible means of egress* in at least the same number as required by Section 1015.1 or 1021.1. In addition to the requirements of this chapter, *means of egress*, which provide access to, or egress from, buildings for persons with disabilities, shall also comply with the requirements of Chapter 11A or 11B as applicable.

Exceptions:

1. *Accessible means of egress* are not required in alterations to existing buildings.
2. One *accessible means of egress* is required from an *accessible mezzanine* level in accordance with Section 1007.3, 1007.4 or 1007.5, and Chapter 11A or 11B, as applicable.

3. In assembly areas with sloped or stepped *aisles*, one *accessible means of egress* is permitted where the common path of travel is *accessible* and meets the requirements in Section 1028.8, and Chapter 11A or 11B, as applicable.

1007.2 Continuity and components. Each required *accessible means of egress* shall be continuous to a *public way* and shall consist of one or more of the following components:

1. *Accessible routes* complying with Chapter 11A, Sections 1110A.1 and 1120A, or Chapter 11B, Section 1114B.1.2, as applicable.
2. *Interior exit stairways* complying with Sections 1007.3, 1026, and Chapter 11A, Section 1123A, or Chapter 11B, Section 1133B.4, as applicable.
3. *Exterior exit stairways* complying with Sections 1007.3, 1026, and Chapter 11A, Section 1115A, or Chapter 11B, Section 1133B.4, as applicable.
4. Elevators complying with Section 1007.4, and Chapter 11A, Section 1124A, or Chapter 11B, Section 1116B.1, as applicable..
5. Platform lifts complying with Section 1007.5 and Chapter 11A, Section 1124A, or Chapter 11B, Section 1116B.2 as applicable.
6. *Horizontal exits* complying with Section 1025.
7. *Ramps* complying with Section 1010, and Chapter 11A, Sections 1114A and 1122A, or Chapter 11B, Section 1133B.5, as applicable.
8. *Areas of refuge* complying with Section 1007.6.

Exceptions:

1. Where the *exit discharge* is not *accessible*, an exterior area for assisted rescue must be provided in accordance with Section 1007.7.
2. Where the *exit stairway* is open to the exterior, the *accessible means of egress* shall include either an *area of refuge* in accordance with Section 1007.6 or an exterior area for assisted rescue in accordance with Section 1007.7.

1007.2.1 Elevators required. In buildings where a required *accessible* floor is four or more stories above or below a *level of exit discharge*, at least one required *accessible means of egress* shall be an elevator complying with Section 1007.4.

Exceptions:

1. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a *horizontal exit* and located at or above the *levels of exit discharge*.
2. In buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a

ramp conforming to the provisions of Section 1010.

1007.3 Stairways. In order to be considered part of an *accessible means of egress*, an *exit access stairway* as permitted by Section 1016.1 or *exit stairway* shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an *area of refuge* within an enlarged floor-level landing or shall be accessed from either an *area of refuge* complying with Section 1007.6 or a *horizontal exit*. [DSA-AC] *In addition, exit stairways shall comply with Chapter 11A, Sections 1115A and 1123A, or Chapter 11B, Section 1133B.4, as applicable.*

Exceptions:

1. The *area of refuge* is not required at open *exit access* or *exit stairways* as permitted by Sections 1016.1 and 1022.1 in buildings that are equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
2. The clear width of 48 inches (1219 mm) between *handrails* is not required at *exit access stairway* as permitted by Section 1016.1 or *exit stairways* in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
3. *Areas of refuge* are not required at *exit stairways* in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
4. The clear width of 48 inches (1219 mm) between *handrails* is not required for *exit stairways* accessed from a *horizontal exit*.
5. *Areas of refuge* are not required at *exit stairways* serving *open parking garages*.
6. *Areas of refuge* are not required for smoke protected seating areas complying with Section 1028.6.2.
7. The *areas of refuge* are not required in Group R-2 occupancies.

1007.4 Elevators. In order to be considered part of an *accessible means of egress*, an elevator shall comply with the emergency operation and signaling device requirements of *California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders*. Standby power shall be provided in accordance with Chapter 27 and Section 3003. The elevator shall be accessed from either an *area of refuge* complying with Section 1007.6 or a *horizontal exit*.

Exceptions:

1. Elevators are not required to be accessed from an *area of refuge* or *horizontal exit* in *open parking garages*.
2. Elevators are not required to be accessed from an *area of refuge* or *horizontal exit* in buildings and facilities equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
3. Elevators not required to be located in a shaft in accordance with Section 708.2 are not required to be accessed from an *area of refuge* or *horizontal exit*.

4. Elevators are not required to be accessed from an *area of refuge* or *horizontal exit* for smoke protected seating areas complying with Section 1028.6.2.

1007.5 Platform lifts. Platform (wheelchair) lifts shall not serve as part of an *accessible means of egress*, except where allowed as part of a required *accessible route* in *Chapter 11A, Sections 1121A and 1124A.11, or Chapter 11B, Section 1116B.2 Items 1 through 4, as applicable*. Standby power shall be provided in accordance with Chapter 27 for platform lifts permitted to serve as part of a *means of egress*.

[DSA-AC] *See Chapter 11B, Section 1116B.2.5 for additional accessible means of egress requirements at platform (wheelchair) lifts.*

1007.5.1 Openness. Platform lifts on an *accessible means of egress* shall not be installed in a fully enclosed hoistway.

1007.6 Areas of refuge. Every required *area of refuge* shall be *accessible* from the space it serves by an *accessible means of egress*. The maximum travel distance from any *accessible* space to an *area of refuge* shall not exceed the travel distance permitted for the occupancy in accordance with Section 1016.1. Every required *area of refuge* shall have direct access to a *stairway* within an *exit enclosure* complying with Sections 1007.3 and 1022 or an elevator complying with Section 1007.4. Where an elevator lobby is used as an *area of refuge*, the shaft and lobby shall comply with Section 1022.9 for *smokeproof enclosures* except where the elevators are in an *area of refuge* formed by a *horizontal exit* or *smoke barrier*. [DSA-AC] *Areas of refuge shall comply with the requirements of this code and shall adjoin an accessible route of travel complying with Section 1114B.1.2.*

Exceptions:

1. A *stairway* serving an *area of refuge* is not required to be enclosed where permitted in Sections 1016.1 and 1022.1.
2. A *smokeproof enclosure* is not required for an elevator lobby used as an *area of refuge* where the elevator is not required to be enclosed.

1007.6.1 Size. Each *area of refuge* shall be sized to accommodate two *wheelchair spaces* that are not less than 30 inches by 48 inches (762 mm by 1219 mm). The total number of such 30-inch by 48-inch (762 mm by 1219 mm) spaces per story shall be not less than one for every 200 persons of calculated occupant load served by the *area of refuge*. Such *wheelchair spaces* shall not reduce the required *means of egress* width. Access to any of the required *wheelchair spaces* in an *area of refuge* shall not be obstructed by more than one adjoining *wheelchair space*.

Exception: *The enforcing agency may reduce the size of each required area of refuge to accommodate one wheelchair space that is not less than 30 inches by 48 inches (762 mm by 1219 mm) on floors where the occupant load is less than 200.*

1007.6.2 Separation. Each *area of refuge* shall be separated from the remainder of the story by a *smoke barrier* complying with Section 710 or a *horizontal exit* complying

shall begin at the same elevation as the platform, landing or floor surface.

Exception: *Alternating tread devices* used as an element of a *means of egress* in buildings from a mezzanine area not more than 250 square feet (23 m²) in area which serves not more than five occupants shall have a minimum projected tread of 8½ inches (216 mm) with a minimum tread depth of 10½ inches (267 mm). The rise to the next alternating tread surface should not be more than 8 inches (203 mm).

1009.11 Ship ladders. Ship ladders are permitted to be used in Group I-3 as a component of a *means of egress* to and from control rooms or elevated facility observation stations not more than 250 square feet (23 m²) with not more than three occupants and for access to unoccupied roofs.

Ship ladders shall have a minimum tread depth of 5 inches (127 mm). The tread shall be projected such that the total of the tread depth plus the *nosing* projection is no less than 8½ inches (216 mm). The maximum riser height shall be 9½ inches (241 mm).

Handrails shall be provided on both sides of ship ladders. The minimum clear width at and below the *handrails* shall be 20 inches (508 mm).

1009.12 Handrails. *Stairways* shall have *handrails* on each side and shall comply with Section 1012. Where glass is used to provide the *handrail*, the *handrail* shall also comply with Section 2407.

Exceptions:

1. *Handrails* for *aisle stairs* are not required where permitted by Section 1028.13.
2. *Stairways* within dwelling units, *spiral stairways* and *aisle stairs* serving seating only on one side are permitted to have a *handrail* on one side only.
3. Decks, patios and walkways that have a single change in elevation where the landing depth on each side of the change of elevation is greater than what is required for a landing do not require *handrails*.
4. [SFM] In Group R-3 occupancies, a continuous run of treads or flight of stairs with less than four risers does not require *handrails*.
5. Changes in room elevations of three or fewer risers within dwelling units and sleeping units in Group R-2 and R-3 do not require *handrails*.

[DSA-AC] For applications listed in Section 1.9.1 regulated by the Division of the State Architect-Access Compliance, see Chapter 11B, Section 113B.4.1.

1009.13 Stairway to roof. In buildings four or more stories above *grade plane*, one *stairway* shall extend to the roof surface, unless the roof has a slope steeper than four units vertical in 12 units horizontal (33-percent slope). In buildings without an occupied roof, access to the roof from the top story shall be permitted to be by an *alternating tread device*.

1009.13.1 Roof access. Where a *stairway* is provided to a roof, access to the roof shall be provided through a *penthouse* complying with Section 1509.2.

Exception: In buildings without an occupied roof, access to the roof shall be permitted to be a roof hatch or trap door not less than 16 square feet (1.5 m²) in area and having a minimum dimension of 2 feet (610 mm).

1009.13.2 Protection at roof hatch openings. Where the roof hatch opening providing the required access is located within 10 feet (3049 mm) of the roof edge, such roof access or roof edge shall be protected by *guards* installed in accordance with the provisions of Section 1013.

1009.14 Stairway to elevator equipment. Roofs and *penthouses* containing elevator equipment that must be accessed for maintenance are required to be accessed by a *stairway*.

SECTION 1010 RAMPS

[DSA-AC] In addition to the requirements of this section, *means of egress*, which provide access to, or egress from, buildings or facilities where accessibility is required for applications listed in Section 1.9.1 regulated by the Division of the State Architect-Access Compliance, shall also comply with Chapter 11A or Chapter 11B, Section 1133B.5, as applicable.

1010.1 Scope. The provisions of this section shall apply to *ramps* used as a component of a *means of egress*.

Exceptions:

1. Other than *ramps* that are part of the *accessible routes* providing access in accordance with Chapter 11A or 11B, ramped *aisles* within assembly rooms or spaces shall conform with the provisions in Section 1028.11.
2. Curb *ramps* shall comply with Chapter 11A or 11B, Section 1127B.5, as applicable.
3. Vehicle ramps in parking garages for pedestrian *exit access* shall not be required to comply with Sections 1010.3 through 1010.9 when they are not an *accessible route* serving *accessible* parking spaces, other required accessible elements or part of an *accessible means of egress*.

1010.2 Slope. *Ramps* used as part of a *means of egress* shall have a running slope not steeper than one unit vertical in 12 units horizontal (8-percent slope). The slope of other pedestrian *ramps* shall not be steeper than one unit vertical in eight units horizontal (12.5-percent slope).

Exception: *Aisle ramp* slope in occupancies of Group A or assembly occupancies accessory to Group E occupancies shall comply with Section 1028.11.

1010.3 Cross slope. The slope measured perpendicular to the direction of travel of a *ramp* shall not be steeper than one unit vertical in 48 units horizontal (2-percent slope).

1010.4 Vertical rise. The rise for any *ramp* run shall be 30 inches (762 mm) maximum.

1010.5 Minimum dimensions. The minimum dimensions of *means of egress ramps* shall comply with Sections 1010.5.1 through 1010.5.3.

1010.5.1 Width. The minimum width of a *means of egress ramp* shall not be less than that required for *corridors* by Section 1018.2. The clear width of a *ramp* between *handrails*, if provided, or other permissible projections shall be 36 inches (914 mm) minimum.

1010.5.2 Headroom. The minimum headroom in all parts of the *means of egress ramp* shall not be less than 80 inches (2032 mm).

1010.5.3 Restrictions. *Means of egress ramps* shall not reduce in width in the direction of egress travel. Projections into the required *ramp* and landing width are prohibited. Doors opening onto a landing shall not reduce the clear width to less than 42 inches (1067 mm).

1010.6 Landings. *Ramps* shall have landings at the bottom and top of each *ramp*, points of turning, entrance, exits and at doors. Landings shall comply with Sections 1010.6.1 through 1010.6.5.

1010.6.1 Slope. Landings shall have a slope not steeper than one unit vertical in 48 units horizontal (2-percent slope) in any direction. Changes in level are not permitted.

1010.6.2 Width. The landing shall be at least as wide as the widest *ramp* run adjoining the landing.

1010.6.3 Length. The landing length shall be 60 inches (1525 mm) minimum.

Exceptions:

1. In Group R-2 and R-3 individual dwelling and sleeping units that are not required to be *accessible* in accordance with *Chapter 11A*, landings are permitted to be 36 inches (914 mm) minimum.
2. Where the *ramp* is not a part of an *accessible route*, the length of the landing shall not be required to be more than 48 inches (1220 mm) in the direction of travel.

1010.6.4 Change in direction. Where changes in direction of travel occur at landings provided between *ramp* runs, the landing shall be 60 inches by 60 inches (1524 mm by 1524 mm) minimum.

Exception: In Group R-2 and R-3 individual dwelling or sleeping units that are not required to be *accessible* in accordance with *Chapter 11A*, landings are permitted to be 36 inches by 36 inches (914 mm by 914 mm) minimum.

1010.6.5 Doorways. Where doorways are located adjacent to a *ramp* landing, maneuvering clearances required for *accessibility* are permitted to overlap the required landing area as specified in *Chapter 11A* or *11B, Section 1133B.5*.

1010.7 Ramp construction. All *ramps* shall be built of materials consistent with the types permitted for the type of construction of the building, except that wood *handrails* shall be permitted for all types of construction. *Ramps* used as an *exit*

shall conform to the applicable requirements of Sections 1022.1 through 1022.6 for *exit enclosures*.

1010.7.1 Ramp surface. The surface of *ramps* shall be of slip-resistant materials that are securely attached.

1010.7.2 Outdoor conditions. Outdoor *ramps* and outdoor approaches to *ramps* shall be designed so that water will not accumulate on walking surfaces.

1010.8 Handrails. *Ramps* with a rise greater than 6 inches (152 mm) shall have handrails on both sides. *Handrails* shall comply with Section 1012.

Exception: *Handrails* for ramped *aisles* are not required where permitted by Section 1028.13.

1010.9 Edge protection. Edge protection complying with Section 1010.9.1 or 1010.9.2 shall be provided on each side of *ramp* runs and at each side of *ramp* landings.

Exceptions:

1. Edge protection is not required on *ramps* that are not required to have *handrails*, provided they have flared sides that comply with *Chapter 11A* or *11B, Section 1127B.5*.
2. Edge protection is not required on the sides of ramp landings serving an adjoining *ramp* run or *stairway*.
3. Edge protection is not required on the sides of *ramp* landings having a vertical drop off of not more than 1/2 inch (12.7 mm) within 10 inches (254 mm) horizontally of the required landing area.
4. In assembly spaces with fixed seating, edge protection is not required on the sides of *ramps* where the *ramps* provide access to the adjacent seating and *aisle accessways*.

1010.9.1 Curb, rail, wall or barrier. A curb, rail, wall or barrier shall be provided to serve as edge protection. A curb must be a minimum of 4 inches (102 mm) in height. Barriers must be constructed so that the barrier prevents the passage of a 4-inch-diameter (102 mm) sphere, where any portion of the sphere is within 4 inches (102 mm) of the floor or ground surface.

1010.9.2 Extended floor or ground surface. The floor or ground surface of the *ramp* run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a *handrail* complying with Section 1012.

1010.10 Guards. *Guards* shall be provided where required by Section 1013 and shall be constructed in accordance with Section 1013.

**SECTION 1011
EXIT SIGNS**

1011.1 Where required. *Exits* and *exit access* doors shall be marked by an *approved exit* sign readily visible from any direction of egress travel. The path of egress travel to *exits* and within *exits* shall be marked by readily visible *exit* signs to clearly indicate the direction of egress travel in cases where the *exit* or the path of egress travel is not immediately visible to the occupants. Intervening *means of egress* doors within *exits* shall

be marked by *exit* signs. *Exit* sign placement shall be such that no point in an *exit access corridor* or *exit passageway* is more than 100 feet (30 480 mm) or the *listed* viewing distance for the sign, whichever is less, from the nearest visible *exit* sign.

Exceptions:

1. *Exit* signs are not required in rooms or areas that require only one *exit* or *exit access*.
2. Main exterior *exit* doors or gates that are obviously and clearly identifiable as *exits* need not have *exit* signs where *approved* by the *building official*.
3. *Exit* signs are not required in occupancies in Group U and individual sleeping units or dwelling units in Group R-1, R-2, R-3 or R-3.1.
4. *Exit* signs are not required where *inmates are housed*, or *held* in dayrooms, sleeping rooms or dormitories in occupancies in Group I-3.
5. In occupancies in Groups A-4 and A-5, *exit* signs are not required on the seating side of vomitories or openings into seating areas where *exit* signs are provided in the concourse that are readily apparent from the vomitories. Egress lighting is provided to identify each vomitory or opening within the seating area in an emergency.

1011.2 Illumination. *Exit* signs shall be internally or externally illuminated.

Exception: Tactile signs required by Section 1011.3 need not be provided with illumination.

> **1011.3 Tactile exit signs.** *Tactile exit signs shall be required at the following locations:*

1. Each grade-level exterior exit door that is required to comply with Section 1011.1 shall be identified by a tactile exit sign with the word, "EXIT."
2. Each exit door that is required to comply with Section 1011.1 and that leads directly to a grade-level exterior exit by means of a stairway or ramp shall be identified by a tactile exit sign with the following words as appropriate:
 - 2.1. "EXIT STAIR DOWN"
 - 2.2. "EXIT RAMP DOWN"
 - 2.3. "EXIT STAIR UP"
 - 2.4. "EXIT RAMP UP"
3. Each exit door that is required to comply with Section 1011.1 and that leads directly to a grade-level exterior exit by means of an exit enclosure that does not utilize a stair or ramp, or an exit passageway shall be identified by a tactile exit sign with the words, "EXIT ROUTE."
4. Each exit access door from an interior room or area that is required to comply with Section 1011.1 shall be identified by a tactile exit sign with the words, "EXIT ROUTE."
5. Each exit door through a horizontal exit that is required to comply with Section 1011.1 shall be identified by a tactile exit sign with the words, "TO EXIT."

For the purposes of this Section "tactile exit signs" shall comply with Section 1117B.5.1 Item 1.

1011.4 Internally illuminated exit signs. Electrically powered, *self-luminous* and *photoluminescent exit* signs shall be *listed* and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer's instructions and Chapter 27. *Exit* signs shall be illuminated at all times.

1011.5 Externally illuminated exit signs. Externally illuminated *exit* signs shall comply with Sections 1011.5.1 through 1011.5.3.

1011.5.1 Graphics. Every *exit* sign and directional *exit* sign shall have plainly legible letters not less than 6 inches (152 mm) high with the principal strokes of the letters not less than $\frac{3}{4}$ inch (19.1 mm) wide. The word "EXIT" shall have letters having a width not less than 2 inches (51 mm) wide, except the letter "I," and the minimum spacing between letters shall not be less than $\frac{3}{8}$ inch (9.5 mm). Signs larger than the minimum established in this section shall have letter widths, strokes and spacing in proportion to their height.

The word "EXIT" shall be in high contrast with the background and shall be clearly discernible when the means of *exit* sign illumination is or is not energized. If a chevron directional indicator is provided as part of the *exit* sign, the construction shall be such that the direction of the chevron directional indicator cannot be readily changed.

1011.5.2 Exit sign illumination. The face of an *exit* sign illuminated from an external source shall have an intensity of not less than 5 foot-candles (54 lux).

1011.5.3 Power source. *Exit* signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Chapter 27.

Exception: *Approved exit* sign illumination means that provide continuous illumination independent of external power sources for a duration of not less than 90 minutes, in case of primary power loss, are not required to be connected to an emergency electrical system.

1011.6 Floor-level exit signs. Where *exit* signs are required by Chapter 10, additional approved low-level *exit* signs which are internally or externally illuminated photoluminescent or self-luminous, shall be provided in all interior corridors of Group A, E, I and R-2.1 occupancies and in all interior rated *exit* corridors serving guest rooms of hotels in Group R, Division 1 occupancies.

Exceptions:

1. Group A occupancies that are protected throughout by an approved supervised fire sprinkler system.
2. Group E occupancies where direct exits have been provided from each classroom.
3. Group I and R-2.1 occupancies which are provided with smoke barriers constructed in accordance with Section 407.4
4. Group I-3 occupancies.

The bottom of the sign shall not be less than 6 inches (152 mm) or more than 8 inches (203 mm) above the floor level and shall indicate the path of exit travel. For exit and exit-access doors, the sign shall be on the door or adjacent to the door with the closest edge of the sign or marker within 4 inches (102 mm) of the door frame.

Note: Pursuant to Health and Safety Code Section 13143, this California amendment applies to all newly constructed buildings or structures subject to this section for which a building permit is issued (or construction commenced, where no building permit is issued) on or after January 1, 1989.

1011.7 Path marking. When exit signs are required by Chapter 10, in addition to approved floor-level exit signs, approved path marking shall be installed at floor level or no higher than 8 inches (203 mm) above the floor level in all interior rated exit corridors of unsprinklered Group A, R-1 and R-2 occupancies.

Such marking shall be continuous except as interrupted by door-ways, corridors or other such architectural features in order to provide a visible delineation along the path of travel.

Note: Pursuant to Health and Safety Code Section 13143, the California amendments of this section shall apply to all newly constructed buildings or structures subject to this section for which a building permit is issued (or construction commenced, where no building permit is issued) on or after January 1, 1989.

SECTION 1012 HANDRAILS

[DSA-AC] In addition to the requirements of this section, means of egress, which provide access to, or egress from, buildings or facilities where accessibility is required for applications listed in Section 1.9.1 regulated by the Division of the State Architect—Access Compliance, shall also comply with Chapter 11A or Chapter 11B, Sections 1133B.4.1 or 1133B.5.5, as applicable.

1012.1 Where required. Handrails for stairways and ramps shall be adequate in strength and attachment in accordance with Section 1607.7. Handrails required for stairways by Section 1009.12 shall comply with Sections 1012.2 through 1012.9. Handrails required for ramps by Section 1010.8 shall comply with Sections 1012.2 through 1012.8.

1012.2 Height. Handrail height, measured above stair tread nosings, or finish surface of ramp slope, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). Handrail height of alternating tread devices and ship ladders, measured above tread nosings, shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

1012.3 Handrail graspability. All required handrails shall comply with Section 1012.3.1 or shall provide equivalent graspability.

Exception: In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or acces-

sory to individual dwelling units in Group R-2 occupancies; handrails shall be Type I in accordance with Section 1012.3.1, Type II in accordance with Section 1012.3.2 or shall provide equivalent graspability.

1012.3.1 Type I. Handrails with a circular cross section shall have an outside diameter of at least 1 $\frac{1}{4}$ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6 $\frac{1}{4}$ inches (160 mm) with a maximum cross-section dimension of 2 $\frac{1}{4}$ inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

1012.3.2 Type II. Handrails with a perimeter greater than 6 $\frac{1}{4}$ inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of $\frac{3}{4}$ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least $\frac{5}{16}$ inch (8 mm) within $\frac{7}{8}$ inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least $\frac{3}{8}$ inch (10 mm) to a level that is not less than 1 $\frac{3}{4}$ inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 $\frac{1}{4}$ inches (32 mm) to a maximum of 2 $\frac{3}{4}$ inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

1012.4 Continuity. Handrail gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Handrails within dwelling units are permitted to be interrupted by a newel post at a turn or landing.
2. Within a dwelling unit, the use of a volute, turnout, starting easing or starting newel is allowed over the lowest tread.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1 $\frac{1}{2}$ inches (38 mm) of the bottom of the handrail shall not be considered obstructions. For each $\frac{1}{2}$ inch (12.7 mm) of additional handrail perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of 1 $\frac{1}{2}$ inches (38 mm) shall be permitted to be reduced by $\frac{1}{8}$ inch (3 mm).
4. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of the handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.

1012.5 Fittings. Handrails shall not rotate within their fittings.

1012.6 Handrail extensions. Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent stair flight or ramp run. Where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. At ramps where handrails are not continuous between

devices or spiral stairs are permitted in the means of escape.

6. Ladders are permitted in the means of egress.

1015.7 Large family day-care home. Every story or basement of a large family day-care home shall be provided with two exits which are remotely located from each other. Every required exit shall be of a size to permit the installation of a door not less than 32 inches (813 mm) in clear width and not less than 6 feet 8 inches (2,032 mm) in height. A manually operated horizontal sliding door may be used as one of the two required exits.

Where basements are used for day-care purposes, one of the two required exits shall provide access directly to the exterior without entering the first story. The second exit from the basement may either pass through the story above or exit directly to the exterior.

Rooms used for day-care purposes shall not be located above the first story.

Exception: Buildings equipped with an automatic sprinkler system throughout and which have at least one of the required exits providing access directly to the exterior. NFPA 13R may be used in large family day-care homes. The sprinkler omissions of NFPA 13R shall not apply unless approved by the enforcing agency.

Exit doors, including manually operated horizontal sliding doors, shall be openable from the inside without use of a key or any special knowledge or effort.

Tables 1021.1 and 1021.2 are not applicable to this occupancy classification.

**SECTION 1016
EXIT ACCESS TRAVEL DISTANCE**

1016.1 Travel distance limitations. Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story along the natural and unobstructed path of egress travel to an exterior exit door at the level of exit discharge, an entrance to a vertical exit enclosure, an exit passageway, a horizontal exit, an exterior exit stairway or an exterior exit ramp, shall not exceed the distances given in Table 1016.1.

Exceptions:

1. Travel distance in open parking garages is permitted to be measured to the closest riser of open exit stairways.
2. In outdoor facilities with open exit access components and open exterior exit stairways or exit ramps, travel distance is permitted to be measured to the closest riser of an exit stairway or the closest slope of the exit ramp.
3. In other than occupancy Groups H and I, the exit access travel distance to a maximum of 50 percent of the exits is permitted to be measured from the most remote point within a building to an exit using unenclosed exit access stairways or ramps when connecting a maximum of two stories. The two connected stories shall be provided with at least two means of egress. Such interconnected stories shall not be open to other stories.

4. In other than occupancy Groups H and I, exit access travel distance is permitted to be measured from the most remote point within a building to an exit using unenclosed exit access stairways or ramps in the first and second stories above grade plane in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. The first and second stories above grade plane shall be provided with at least two means of egress. Such interconnected stories shall not be open to other stories.

Where applicable, travel distance on unenclosed exit access stairways or ramps and on connecting stories shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.

**TABLE 1016.1
EXIT ACCESS TRAVEL DISTANCE^a**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, M, R, S-1	200	250 ^b
R-2.1	Not Permitted	250 ^c
B	200	300 ^c
F-2, S-2, U	300	400 ^c
H-1	Not Permitted	75 ^c
H-2	Not Permitted	100 ^c
H-3	Not Permitted	150 ^c
H-4	Not Permitted	175 ^c
H-5	Not Permitted	200 ^c
I-2, I-2.1, I-3 ^d , I-4	Not Permitted	200 ^c
L	Not Permitted	200 ^c

For SI: 1 foot = 304.8 mm.

- a. See the following sections for modifications to exit access travel distance requirements:
 - Section 402.4: For the distance limitation in malls.
 - Section 404.9: For the distance limitation through an atrium space.
 - Section 407.4: For the distance limitation in Group I-2.
 - Sections 408.6.1 and 408.8.1: For the distance limitations in Group I-3.
 - Section 411.4: For the distance limitation in special amusement buildings.
 - Section 1014.2.2: For the distance limitation in Group I-2 hospital suites.
 - Section 1015.4: For the distance limitation in refrigeration machinery rooms.
 - Section 1015.5: For the distance limitation in refrigerated rooms and spaces.
 - Section 1016.3: For increased limitation in Groups F-1 and S-1.
 - Section 1021.2: For buildings with one exit.
 - Section 1028.7: For increased limitation in assembly seating.
 - Section 1028.7: For increased limitation for assembly open-air seating.
 - Section 3103.4: For temporary structures.
 - Section 3104.9: For pedestrian walkways.
- b. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
- c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- d. Not permitted in nonsprinklered Group I-3 occupancies.

1016.2 Exterior egress balcony increase. Travel distances specified in Section 1016.1 shall be increased up to an additional 100 feet (30 480 mm) provided the last portion of the exit access leading to the exit occurs on an exterior egress balcony constructed in accordance with Section 1019. The length of such balcony shall not be less than the amount of the increase taken.

1016.3 Group F-1 and S-1 increase. *The maximum exit access travel distance shall be 400 feet (122 m) in Group F-1 or S-1 occupancies where all of the following are met:*

1. *The portion of the building classified as Group F-1 or S-1 is limited to one story in height,*
2. *The minimum height from the finished floor to the bottom of the ceiling or roof slab or deck is 24 feet (7315 mm), and*
3. *The building is equipped throughout with an automatic fire sprinkler system in accordance with Section 903.3.1.1.*

SECTION 1017 AISLES

[DSA-AC] *In addition to the requirements of this section, means of egress, which provide access to, or egress from, buildings or facilities where accessibility is required for applications listed in Section 1.9.1 regulated by the Division of the State Architect-Access Compliance, shall also comply with Chapter 11A or Chapter 11B, Section 1133B.6, as applicable.*

1017.1 General. *Aisles serving as a portion of the exit access in the means of egress system shall comply with the requirements of this section. Aisles shall be provided from all occupied portions of the exit access which contain seats, tables, furnishings, displays and similar fixtures or equipment. Aisles serving assembly areas shall comply with Section 1028. Aisles serving reviewing stands, grandstands and bleachers shall also comply with Section 1028. The required width of aisles shall be unobstructed.*

Exception: Doors complying with Section 1005.2.

1017.2 Aisles in Groups B and M. *In Group B and M occupancies, the minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than 36 inches (914 mm).*

Exception: *Nonpublic aisles serving less than 50 people and not required to be accessible by Chapter 11B (see Sections 1103B.1, Exception 2 and 1123B.2, Exception) need not exceed 28 inches (711 mm) in width.*

1017.3 Aisle accessways in Group M. *An aisle accessway shall be provided on at least one side of each element within the merchandise pad. The minimum clear width for an aisle accessway not required to be accessible shall be 30 inches (762 mm). The required clear width of the aisle accessway shall be measured perpendicular to the elements and merchandise within the merchandise pad. The 30-inch (762 mm) minimum clear width shall be maintained to provide a path to an adjacent aisle or aisle accessway. The common path of travel shall not exceed 30 feet (9144 mm) from any point in the merchandise pad.*

Exception: *For areas serving not more than 50 occupants, the common path of travel shall not exceed 75 feet (22 880 mm).*

1017.4 Seating at tables. *Where seating is located at a table or counter and is adjacent to an aisle or aisle accessway, the measurement of required clear width of the aisle or aisle accessway shall be made to a line 19 inches (483 mm) away from and parallel to the edge of the table or counter. The 19-inch (483 mm) distance shall be measured perpendicular to the side of the table or counter. In the case of other side boundaries for aisle or aisle accessways, the clear width shall be measured to walls, edges of seating and tread edges, except that handrail projections are permitted.*

Exception: *Where tables or counters are served by fixed seats, the width of the aisle accessway shall be measured from the back of the seat.*

1017.4.1 Aisle accessway for tables and seating. *Aisle accessways serving arrangements of seating at tables or counters shall have sufficient clear width to conform to the capacity requirements of Section 1005.1 but shall not have less than the appropriate minimum clear width specified in Section 1017.4.2.*

1017.4.2 Table and seating accessway width. *Aisle accessways shall provide a minimum of 12 inches (305 mm) of width plus 1/2 inch (12.7 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3658 mm) of aisle accessway length measured from the center of the seat farthest from an aisle.*

Exception: *Portions of an aisle accessway having a length not exceeding 6 feet (1829 mm) and used by a total of not more than four persons.*

1017.4.3 Table and seating aisle accessway length. *The length of travel along the aisle accessway shall not exceed 30 feet (9144 mm) from any seat to the point where a person has a choice of two or more paths of egress travel to separate exits.*

SECTION 1018 CORRIDORS

1018.1 Construction. *Corridors shall be fire-resistance rated in accordance with Table 1018.1. The corridor walls required to be fire-resistance rated shall comply with Section 709 for fire partitions.*

Exceptions:

1. *A fire-resistance rating is not required for corridors in an occupancy in Group E where each room that is used for instruction has at least one door opening directly to the exterior and rooms for assembly purposes have at least one-half of the required means of egress doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.*
2. *A fire-resistance rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R.*
3. *A fire-resistance rating is not required for corridors in open parking garages.*
4. *A fire-resistance rating is not required for corridors in an occupancy in Group B which is a space requiring only a single means of egress complying with Section 1015.1.*
5. *A fire-resistance rating is not required for corridors within suites in a Group I-2 occupancy provided with an automatic sprinkler system throughout and constructed in accordance with Section 1014.2.3 or 1014.2.4.*

1018.2 Corridor width. *The minimum corridor width shall be as determined in Section 1005.1, but not less than 44 inches (1118 mm).*

Exceptions:

1. *Twenty-four inches (610 mm)—For access to and utilization of electrical, mechanical or plumbing systems or equipment.*

surface on which to locate the stripe, the stripe shall be permitted to be located on the wall surrounding the frame.

1024.3 Uniformity. Placement and dimensions of markings shall be consistent and uniform throughout the same *exit enclosure*.

1024.4 Self-luminous and photoluminescent. Luminous egress path markings shall be permitted to be made of any material, including paint, provided that an electrical charge is not required to maintain the required luminance. Such materials shall include, but are not limited to, *self-luminous* materials and *photoluminescent* materials. Materials shall comply with either:

1. UL 1994; or
2. ASTM E 2072, except that the charging source shall be 1 foot-candle (11 lux) of fluorescent illumination for 60 minutes, and the minimum luminance shall be 30 millicandelas per square meter at 10 minutes and 5 millicandelas per square meter after 90 minutes.

1024.5 Illumination. *Exit enclosures* where photoluminescent exit path markings are installed shall be provided with the minimum *means of egress* illumination required by Section 1006 for at least 60 minutes prior to periods when the building is occupied.

SECTION 1025 HORIZONTAL EXITS

1025.1 Horizontal exits. *Horizontal exits* serving as an *exit* in a *means of egress* system shall comply with the requirements of this section. A *horizontal exit* shall not serve as the only *exit* from a portion of a building, and where two or more *exits* are required, not more than one-half of the total number of *exits* or total *exit* width shall be *horizontal exits*.

Exceptions:

1. *Horizontal exits* are permitted to comprise two-thirds of the required *exits* from any building or floor area for occupancies in Group I-2.
2. *Horizontal exits* are permitted to comprise 100 percent of the *exits* required for occupancies in Group I-3. At least 6 square feet (0.6 m²) of accessible space per occupant shall be provided on each side of the *horizontal exit* for the total number of people in adjoining compartments.

1025.2 Separation. The separation between buildings or refuge areas connected by a *horizontal exit* shall be provided by a *fire wall* complying with Section 706; or it shall be provided by a *fire barrier* complying with Section 707 or a *horizontal assembly* complying with Section 712, or both. The minimum *fire-resistance rating* of the separation shall be 2 hours. Opening protectives in *horizontal exits* shall also comply with Section 715. Duct and air transfer openings in a *fire wall* or *fire*

barrier that serves as a *horizontal exit* shall also comply with Section 716. The *horizontal exit* separation shall extend vertically through all levels of the building unless floor assemblies have a *fire-resistance rating* of not less than 2 hours with no unprotected openings.

Exception: A *fire-resistance rating* is not required at *horizontal exits* between a building area and an above-grade *pedestrian walkway* constructed in accordance with Section 3104, provided that the distance between connected buildings is more than 20 feet (6096 mm).

Horizontal exits constructed as *fire barriers* shall be continuous from *exterior wall* to *exterior wall* so as to divide completely the floor served by the *horizontal exit*.

1025.3 Opening protectives. *Fire doors* in *horizontal exits* shall be self-closing or automatic-closing when activated by a *smoke detector* in accordance with Section 715.4.8.3. Doors, where located in a cross-corridor condition, shall be automatic-closing by activation of a *smoke detector* installed in accordance with Section 715.4.8.3.

1025.4 Capacity of refuge area. The refuge area of a *horizontal exit* shall be a space occupied by the same tenant or a public area and each such refuge area shall be adequate to accommodate the original *occupant load* of the refuge area plus the *occupant load* anticipated from the adjoining compartment. The anticipated *occupant load* from the adjoining compartment shall be based on the capacity of the *horizontal exit* doors entering the refuge area. The capacity of the refuge area shall be computed based on a net floor area allowance of 3 square feet (0.2787 m²) for each occupant to be accommodated therein.

Exception: The net floor area allowable per occupant shall be as follows for the indicated occupancies:

1. Six square feet (0.6 m²) per occupant for occupancies in Group I-3.
2. Fifteen square feet (1.4 m²) per occupant for ambulatory occupancies in Group I-2.
3. Thirty square feet (2.8 m²) per occupant for nonambulatory occupancies in Group I-2.

The refuge area into which a *horizontal exit* leads shall be provided with *exits* adequate to meet the occupant requirements of this chapter, but not including the added *occupant load* imposed by persons entering it through *horizontal exits* from other areas. At least one refuge area *exit* shall lead directly to the exterior or to an *exit enclosure*.

Exception: The adjoining compartment shall not be required to have a *stairway* or door leading directly outside, provided the refuge area into which a *horizontal exit* leads has stairways or doors leading directly outside and are so arranged that egress shall not require the occupants to return through the compartment from which egress originates.

SECTION 1026 EXTERIOR EXIT RAMPS AND STAIRWAYS

1026.1 Exterior exit ramps and stairways. *Exterior exit ramps and stairways* serving as an element of a required *means of egress* shall comply with this section.

Exception: *Exterior exit ramps and stairways* for outdoor stadiums complying with Section 1022.1, Exception 2.

1026.2 Use in a means of egress. *Exterior exit stairways* shall not be used as an element of a required *means of egress* for Group I-2 occupancies. For occupancies in other than Group I-2, *exterior exit ramps and stairways* shall be permitted as an element of a required *means of egress* for buildings not exceeding six stories above *grade plane* or *buildings defined as a high-rise or Group I-2 occupancies* having occupied floors more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

1026.3 Open side. *Exterior exit ramps and stairways* serving as an element of a required *means of egress* shall be open on at least one side. An open side shall have a minimum of 35 square feet (3.3 m²) of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches (1067 mm) above the adjacent floor or landing level.

1026.4 Side yards. The open areas adjoining *exterior exit ramps or stairways* shall be either *yards, courts or public ways*; the remaining sides are permitted to be enclosed by the *exterior walls* of the building.

1026.5 Location. *Exterior exit ramps and stairways* shall be located in accordance with Section 1027.3.

1026.6 Exterior ramps and stairway protection. *Exterior exit ramps and stairways* shall be separated from the interior of the building as required in Section 1022.1. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1 or R-2, in buildings that are no more than two stories above *grade plane* where a *level of exit discharge* serving such occupancies is the first *story above grade plane*.
2. Separation from the interior of the building is not required where the *exterior ramp or stairway* is served by an exterior *ramp* or balcony that connects two remote *exterior stairways* or other *approved exits*, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the openings no less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an *exterior ramp or stairway* located in a building or structure that is permitted to have unenclosed *interior stairways* in accordance with Section 1022.1.

4. Separation from the interior of the building is not required for *exterior ramps or stairways* connected to open-ended *corridors*, provided that Items 4.1 through 4.4 are met:

- 4.1. The building, including *corridors, ramps and stairs*, shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
- 4.2. The open-ended *corridors* comply with Section 1018.
- 4.3. The open-ended *corridors* are connected on each end to an *exterior exit ramp or stairway* complying with Section 1026.
- 4.4. At any location in an open-ended *corridor* where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3.3 m²) or an *exterior ramp or stairway* shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

SECTION 1027 EXIT DISCHARGE

1027.1 General. *Exits* shall discharge directly to the exterior of the building. The *exit discharge* shall be at grade or shall provide direct access to grade. The *exit discharge* shall not reenter a building. The combined use of Exceptions 1 and 2 below shall not exceed 50 percent of the number and capacity of the required *exits*.

Exceptions:

1. A maximum of 50 percent of the number and capacity of the *exit enclosures* is permitted to egress through areas on the level of discharge provided all of the following are met:
 - 1.1. Such *exit enclosures* egress to a free and unobstructed path of travel to an exterior *exit* door and such *exit* is readily visible and identifiable from the point of termination of the *exit* enclosure.
 - 1.2. The entire area of the *level of exit discharge* is separated from areas below by construction conforming to the *fire-resistance rating* for the *exit enclosure*.
 - 1.3. The egress path from the *exit enclosure* on the *level of exit discharge* is protected throughout by an *approved automatic sprinkler system*. All portions of the *level of exit discharge* with access to the egress path shall either be protected throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, or separated from the egress path in accordance with the requirements for the enclosure of *exits*.

SECTION 1105A GARAGES, CARPORTS AND PARKING FACILITIES

1105A.1 General. Garages, carports and other parking facilities, which are accessory to covered multifamily dwelling units, shall be accessible as required in Section 1109A.

SECTION 1106A SITE AND BUILDING CHARACTERISTICS

1106A.1 General. Covered multifamily dwellings with elevators shall be designed and constructed to provide at least one accessible entrance on an accessible route, regardless of terrain or unusual characteristics of the site. Covered multifamily dwellings without elevators shall be designed and constructed to provide at least one accessible entrance on an accessible route unless terrain or unusual characteristics of the site prevent an accessible route based on the conditions listed below:

- 1. Accessible entrance.** Regardless of site considerations described in Section 1150A, an accessible entrance on an accessible route is required when there is an elevator connecting the parking area with the dwelling units on a ground floor. (In this case, those dwelling units on the ground floor served by an elevator, and at least one of each type of public- and common-use areas, would be subject to these requirements.)
- 2. Elevator building.** When a building elevator or elevators are provided as a means of access to dwelling units other than dwelling units on a ground floor (see Section 1104A.2), the building is an elevator building. All dwelling units become covered multifamily dwellings in that building. The elevator in that building must provide accessibility to all dwelling units in the building, regardless of the slope of the natural terrain. For multistory dwelling units in buildings with one or more elevators, see Section 1102A.3.2.

Note: Where a building elevator is provided only as means of creating an accessible route to covered multifamily dwelling units on a ground floor, the building is not considered to be an elevator building, only dwelling units located on the ground floor shall be required to comply with this chapter.

- 3. Elevated walkway.** When an elevated walkway is planned between a building entrance and a vehicular or pedestrian arrival point, and the planned walkway has a slope no greater than 10 percent (1 unit vertical in 10 units horizontal), the floor being served by the elevated walkway becomes a ground floor and accessibility to all dwellings on that ground floor is required.

Note: Since the planned walkway meets the 10 percent slope criterion, it is required to provide an accessible route to the entrance, and the slope of the walkway must be reduced to 1 unit vertical in 12 units horizontal (8.33 percent slope) maximum.

1106A.2 Site impracticality. For tests to determine site impracticality due to terrain considerations in nonelevator buildings, see Section 1150A.

SECTION 1107A DEFINITIONS

For the purpose of this chapter, certain terms are defined as follows:

1107A.1-A

ACCESSIBLE for covered multifamily dwellings is the public- or common-use areas of the building that can be approached, entered and used by persons with disabilities.

ACCESSIBLE ROUTE is a continuous and unobstructed path connecting all accessible elements and spaces in a building or within a site that can be negotiated by a person with a disability using a wheelchair, and that is also safe for and usable by persons with other disabilities. Interior accessible routes may include corridors, hallways, floors, ramps, elevators and lifts. Exterior accessible routes may include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, ramps and lifts.

ACCESSIBILITY is the combination of various elements in a building or area which allows access, circulation and the full use of the building and facilities by persons with disabilities.

ADAPTABLE DWELLING UNIT is an accessible dwelling unit within a covered multifamily building as designed with elements and spaces allowing the dwelling unit to be adapted or adjusted to accommodate the user. See Division IV.

ASSISTIVE DEVICE is an aid, tool or instrument used by persons with disabilities to assist in activities of daily living.

AUTOMATIC DOOR is 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.

1107A.2-B

BATHROOM is, for the purposes of this chapter, a room which includes a water closet (toilet), lavatory (sink), 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 this chapter.

BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE is 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.

1107A.3-C

CARRIAGE UNIT is 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.

COMMON USE AREAS are private use areas within multifamily residential facilities where the use of these areas is lim-

ited exclusively to owners, residents and their guests. The areas may be defined as rooms or spaces or elements inside or outside of a building.

COVERED MULTIFAMILY DWELLINGS are dwelling units in buildings consisting of 3 or more dwelling units or 4 or more condominium units. Covered multifamily dwellings include dwelling units listed in Section 1102A.1. Dwelling units within a single structure separated by firewalls do not constitute separate buildings.

Note: For buildings or complexes containing publicly funded dwelling units, see Chapter 11B, Section 1111B.5 for provisions of the Division of the State Architect—Access Compliance (DSA-AC).

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

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

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

1107A.4-D

DETECTABLE WARNING is a standardized surface or feature built into or applied to walking surfaces or other elements to warn visually impaired persons of hazards in the path of travel. Only approved DSA-AC detectable warning products and directional surfaces shall be installed as provided in the CCR, Title 24, Part 1, Articles 2, 3 and 4. Refer to CCR, Title 24, Part 12, Chapter 12-11A and B for building and facility access specifications for product approval for detectable warning products and directional surfaces.

Note: Detectable warning products and directional surfaces installed after January 1, 2001, shall be evaluated by an independent entity, selected by the Department of General Services, Division of the State Architect - Access Compliance, for all occupancies, including transportation and other outdoor environments, except that when products and surfaces are for use in residential housing, evaluation shall be in consultation with the Department of Housing and Community Development. See Government Code Section 4460.

DWELLING UNIT is a single unit of residence for a family of one or more persons. Examples of dwelling units covered by this chapter 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.

1107A.5-E

EQUIVALENT FACILITATION is an alternate means of complying with the literal requirements of these standards and

specifications that provides access consistent with the purpose of these standards and specifications.

Notes:

1. See Section 1.8.1, Purpose.
2. In determining equivalent facilitation, consideration shall be given to means that provide for the maximum independence of persons with disabilities while presenting the least risk of harm, injury or other hazard to such persons or others.

1107A.6-F

FACILITY (or FACILITIES) is a building, structure, room, site, complex or any portion thereof, that is built, altered, improved or developed to serve a particular purpose.

1107A.7-G

GRAB BAR is a bar for the purpose of being grasped by the hand for support.

GROUND FLOOR is the floor of a building with a building entrance on an accessible route. A building may have one or more ground floors.

1107A.8-H (No definitions)

1107A.9-I

INDEPENDENT ENTITY. See Chapter 2, Section 202.

INTERNATIONAL SYMBOL OF ACCESSIBILITY is that symbol adopted by Rehabilitation International's 11th World Congress for the purpose of indicating that buildings and facilities are accessible to persons with disabilities. See Chapter 11A, Figure 11A-1A.

1107A.10-J (No definitions)

1107A.11-K

KICK PLATE is an abrasion-resistant plate affixed to the bottom portion of a door to prevent a trap condition and protect its surface.

1107A.12-L

LEVEL AREA is a specified surface that does not have a slope in any direction exceeding $1/4$ inch (6.4 mm) in 1 foot (305 mm) from the horizontal (2.083-percent gradient).

LIFT, PLATFORM (WHEELCHAIR). See "Platform (Wheelchair) Lift."

1107A.13-M

MARKED CROSSING is a crosswalk or other identified marked path intended for pedestrian use in crossing a vehicular way.

MULTISTORY DWELLING UNIT is a dwelling unit with finished living space located on one floor and the floor or floors immediately above or below it.

1107A.14-N

NEWLY CONSTRUCTED is a building that has never before been used or occupied for any purpose.

sloped surface not greater than 1 unit vertical in 20 units horizontal (5-percent slope), or a curb ramp, ramp, elevator or platform (wheelchair) lift. Stairs shall not be part of an accessible route. When stairs are located along or adjacent to an accessible route they shall comply with Section 1115A for exterior stairways.

SECTION 1112A CURB RAMPS ON ACCESSIBLE ROUTES

1112A.1 General. Curb ramps within the boundary of the site shall be constructed at each corner of street intersections and where a pedestrian way crosses a curb. The preferred and recommended location for curb ramps is in the center of the crosswalk of each street corner. Where it is necessary to locate a curb ramp in the center of the curb return, the street surfaces shall be marked to identify pedestrian crosswalks, and the lower end of the curb ramp shall terminate within such crosswalk areas. Curb ramps do not require handrails.

1112A.2 Obstructions. Curb ramps shall be located or protected to prevent obstruction by parked cars. Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes, parking spaces, or the adjacent loading and unloading access aisle.

1112A.3 Width of curb ramps. Curb ramps shall be a minimum of 48 inches (1219 mm) in width.

1112A.4 Diagonal curb ramps. If diagonal (or corner-type) curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have a 48-inch (1219 mm) minimum clear space as shown in Figures 11A-3A through 11A-3M. If diagonal curb ramps are provided at marked crossings, the 48-inch (1219 mm) clear space shall be within the markings (see Figures 11A-3A through 11A-3M). If diagonal curb ramps have flared sides, they shall also have at least a 24-inch-long (610 mm) segment of straight curb located on each side of the curb ramp and within the marked crossing. See Figures 11A-3A through 11A-3M.

1112A.5 Slope of curb ramps. The slope of curb ramps shall not exceed 1 unit vertical to 12 units horizontal (8.33-percent slope) and shall lie, generally, in a single sloped plane. Transitions from ramps to walks, gutters or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1 unit vertical to 20 units horizontal (5-percent slope) within 4 feet (1219 mm) of the top and bottom of the curb ramp.

If a curb ramp is located where pedestrians must walk across the ramp, then it shall have flared sides; the maximum slope of the flare shall be 1 unit vertical in 10 units horizontal (10-percent slope). Curb ramps with returned curbs may be used where pedestrians would not normally walk across the ramp. See Figures 11A-3A through 11A-3M.

1112A.6 Level landing. A level landing 48 inches (1219 mm) deep shall be provided at the upper end of each curb ramp over its full width to permit safe egress from the ramp surface, or the slope of the flared or flared sides of the curb ramp, shall not

exceed 1 unit vertical to 12 units horizontal (8.33-percent slope).

1112A.7 Finish. The surface of each curb ramp and its flared sides shall be stable, firm and slip-resistant and shall be of contrasting finish from that of the adjacent sidewalk.

1112A.8 Border. All curb ramps shall have a grooved border 12 inches (305 mm) wide at the level surface of the sidewalk along the top and each side approximately $\frac{3}{4}$ inch (19 mm) on center. All curb ramps constructed between the face of the curb and the street shall have a grooved border at the level surface of the sidewalk. See Figures 11A-3A through 11A-3K.

1112A.9 Detectable warnings. See Chapter 11B, Section 1127B.5, Item 7.

SECTION 1113A WALKS AND SIDEWALKS ON AN ACCESSIBLE ROUTE

1113A.1 Width and continuous surface. Walks and sidewalks subject to this chapter shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding $\frac{1}{2}$ inch (12.7 mm). (See Section 1111A).

1113A.1.1 Width. Walks and sidewalks shall be a minimum of 48 inches (1219 mm) in width, except that walks serving an individual dwelling unit in covered multifamily buildings may be reduced to 36 inches (914 mm) in clear width except at doors.

1113A.1.2 Surfaces. Surfaces shall be slip-resistant as follows:

1. Surfaces with a slope of less than 6 percent gradient shall be at least as slip-resistant as that described as a medium salted finish.
2. Surfaces with a slope of 6 percent or greater gradient shall be slip-resistant.

1113A.1.3 Surface cross slopes. Surface cross slopes shall not exceed $\frac{1}{4}$ inch (6.35 mm) per foot (2.083-percent slope) except when the enforcing agency finds that due to local conditions it creates an unreasonable hardship, the cross slope may be increased to a maximum of $\frac{1}{2}$ inch (12.7 mm) per foot (4.2-percent slope) for distances not to exceed 20 feet (6096 mm).

1113A.2 Walks with continuous gradients. All walks on an accessible route with continuous gradients shall have level areas at least 60 inches (1524 mm) in length at intervals of at least every 400 feet (122 m).

1113A.3 Five percent gradient. When the slope in the direction of travel of any walk on an accessible route exceeds 1 unit vertical in 20 units horizontal (5-percent slope), it shall comply with the ramp provisions of Section 1114A.

1113A.4 Level areas. Walks on an accessible route shall be provided with a level area not less than 60 inches by 60 inches (1524 mm by 1524 mm) at a door or gate that swings toward the walk, and not less than 48 inches wide by 44 inches (1219 mm by 1118 mm) deep at a door or gate that swings away from the walk. See Section 1126A.3.2 for strike edge maneuvering space at doors or gates.

1113A.5 Smooth surface. The bottom 10 inches (254 mm) of all doors and/or gates except automatic and sliding doors or gates shall have a smooth, uninterrupted surface to allow the door or gate to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10-inch (254 mm) high smooth panel shall be installed on the push side of the door, which will allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition.

1113A.6 Gratings. Walks, sidewalks and pedestrian ways on an accessible route shall be free of gratings whenever possible. Gratings located in the surface of any of these areas, grid openings in gratings shall be limited to 1/2 inch (12.7 mm) in the direction of traffic flow.

Exceptions:

1. Where the enforcement agency determines that compliance with this section would create an unreasonable hardship, an exception may be granted when equivalent facilitation is provided.
2. This section shall not apply in those conditions where, due to legal or physical constraints, all or portions of the site of the project will not allow compliance with these building standards or equivalent facilitation on all or portions of one site without creating an unreasonable hardship.

**SECTION 1114A
EXTERIOR RAMPS AND LANDINGS ON
ACCESSIBLE ROUTES**

1114A.1 Width. The width of ramps shall be consistent with the requirements for exits in Chapter 10 of this code, but in no case shall the ramp width be less than the following:

1. Ramps serving accessible entrances to covered multi-family buildings where the ramp is the only exit discharge path and serves an occupant load of 300 or more shall have a minimum clear width of 60 inches (1524 mm).
2. Ramps serving accessible entrances of covered multi-family dwellings with an occupant load of 10 or less may be 36 inches (914 mm) in clear width.
3. All other ramps shall have a minimum clear width of 48 inches (1219 mm).
4. Handrails, curbs, wheel guides and/or appurtenances shall not project into the required clear width of a ramp.

Note: See Section 1114A.6.2.4 for handrail projections.

1114A.2 Slope. The maximum slope of ramps on an accessible route shall be no greater than 1 unit vertical in 12 units horizontal (8.33-percent slope). Transitions from ramps to walks, gutters or streets shall be flush and free of abrupt changes.

Exception: Ramps serving decks, patios or balconies as specified in Section 1132A.4.

1114A.2.1 Cross slope. The cross slope of ramp surfaces shall be no greater than 1/4 inch (6.35 mm) per foot (2.083-percent slope).

1114A.3 Outdoor ramps. Outdoor ramps, ramp landings and their approaches shall be designed so that water will not accumulate on the walking surface.

1114A.4 Landings. Ramp landings shall be level and comply with this section.

1114A.4.1 Location of landings. Landings shall be provided at the top and bottom of each ramp. Intermediate landings shall be provided at intervals not exceeding 30 inches (762 mm) of vertical rise and at each change of direction. Landings are not considered in determining the maximum horizontal distance of each ramp.

Note: Examples of ramp dimensions are:

SLOPE (Grading %)	MAXIMUM RISE (Inches)	MAXIMUM HORIZONTAL PROJECTION (Feet)
	(x 25.4 for mm)	(x 304.8 for mm)
1:12 (8.33%)	30	30
1:15 (6.67%)	30	37.5
1:16 (6.25%)	30	40
1:20 (5.00%)	30	50

1114A.4.2 Size of top landings. Top landings shall not be less than 60 inches (1524 mm) wide. Top landings shall have a minimum length of not less than 60 inches (1524 mm) in the direction of the ramp run. See Section 1126A.3 for maneuvering clearances at doors.

1114A.4.3 Landing width. The minimum width of bottom and intermediate landings shall not be less than the width of the ramp.

1114A.4.4 Encroachment of doors. Doors in any position shall not reduce the minimum dimension of the landing to less than 42 inches (1067 mm) and shall not reduce the required width by more than 3 inches (76.2 mm) when fully open. (See Figure 11A-6D).

1114A.4.5 Strike edge extension. The width of the landing shall comply with Section 1126A.3 for strike edge extension and maneuvering space at doors.

1114A.4.6 Change of direction. Intermediate and bottom landings at a change of direction in excess of 30 degrees shall have a length in the direction of ramp run of not less than 72 inches (1829 mm). (See Figures 11A-6C).

1114A.4.7 Other intermediate landings. Other intermediate landings shall have a dimension in the direction of ramp run of not less than 60 inches (1524 mm). (See Figure 11-A6C).

1114A.5 Ramp height. Ramps more than 30 inches (762 mm) above the adjacent floor or ground and open on one or both sides shall be provided with guardrails as required by Section 1013. Guardrails shall be continuous from the top of the ramp to the bottom of the ramp.

1114A.6 Ramp handrails.

1114A.6.1 Where required. Handrails shall be provided at each side of ramps when the slope exceeds 1 unit vertical in 20 units horizontal (5-percent slope). Handrails on all ramps shall be continuous.

Exceptions:

1. Curb ramps.
2. Ramps that serve an individual dwelling unit may have one handrail, except that ramps open on one or both sides shall have handrails provided on the open side or sides.
3. Ramps at exterior door landings with less than 6 inches (152 mm) rise or less than 72 inches (1829 mm) in length.

1114A.6.2 Handrail configuration.

1114A.6.2.1 Handrail heights. The top of handrails shall be 34 to 38 inches (864 to 965 mm) above the ramp surface.

1114A.6.2.2 Handrail ends. Handrail ends shall be returned.

1114A.6.2.3 Handrail extension. Handrails shall extend a minimum of 12 inches (305 mm) beyond the top and bottom of the ramp. Where the extension creates a hazard, the termination of the extension shall be rounded or returned smoothly to floor, wall or post. (See Figure 11A-5A).

1114A.6.2.4 Handrail projections. Handrails projecting from a wall shall have a space of 1½ inches (38.1 mm) between the wall and the handrail. Handrails shall not reduce the required minimum clear width of ramps.

Handrails may be located in a recess if the recess is a maximum of 3 inches (76.2 mm) deep and extends at least 18 inches (457 mm) above the top of the rail. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. (See Figure 11A-6B).

1114A.6.2.5 Handrail grips. The handgrip portion of handrails shall not be less than 1¼ inches (31.75 mm) nor more than 2 inches (50.8 mm) in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Edges shall have a minimum radius of ⅛ inch (3.17 mm). Handrails shall not rotate within their fittings. (See Figure 11A-6B).

Note: For public use areas, public accommodations and housing which is publicly funded, see Chapter 11B, Division III, Section 1133B.5.5 for provisions of the Division of the State Architect-Access Compliance (DSA-AC).

1114A.7 Edge protection. Ramps and ramp landings shall be provided with a continuous and uninterrupted barrier on each side along the entire length in compliance with Sections 1010.9 and 1010.9.1. (See Figure 11A-5A.)

Note: Extended floors or ground surfaces, as permitted in Section 1010.9.2, are not allowed for ramps and ramp landings part of an accessible route.

**SECTION 1115A
EXTERIOR STAIRWAYS**

1115A.1 General. Exterior stairways serving buildings on a site containing covered multifamily dwelling units shall comply with this section.

1115A.2 Open risers. Open risers are not permitted on exterior stairways.

Exceptions:

1. An opening of not more than ½ inch (12.7 mm) may be permitted between the base of the riser and the tread.
2. Risers constructed of grating containing openings of not more than ½ inch (12.7 mm) may be permitted.

1115A.3 Treads. All tread surfaces shall be slip resistant. Threads shall have smooth, rounded or chamfered exposed edges, and no abrupt edges at the nosing (lower front edge).

1115A.4 Nosing. Nosing shall not project more than 1¼ inches (31.8 mm) past the face of the riser below. Risers shall be sloped or the underside of the nosing shall have an angle not more than 30 degrees (0.52 rad) from the vertical. (See Figure 11A-6A).

1115A.5 Striping for the visually impaired. Exterior stairs serving buildings on a site containing multifamily dwelling units shall have the upper approach and all treads marked by a stripe providing clear visual contrast.

The stripe shall be a minimum of 2 inches (50.8 mm) wide to a maximum of 4 inches (101.6 mm) wide placed parallel to, and not more than 1 inch (25.4 mm) from, the nose of the step or upper approach. The stripe shall extend the full width of the step or upper approach and shall be of material that is at least as slip resistant as the other treads of the stair. A painted stripe shall be acceptable.

1115A.6 Exterior stairway handrails.

1115A.6.1 Where required. Stairways shall have handrails on each side. Intermediate handrails shall be located equidistant from the sides of the stairway and comply with Section 1012.9.

Exception: Stairways serving an individual dwelling unit may have one handrail, except that stairways open on one or both sides shall have handrails on the open side or sides.

1115A.6.2 Handrail configuration.

1115A.6.2.1 Handrail heights. The top of handrails shall be 34 to 38 inches (864 to 965 mm) above the nosing of the treads.

1115A.6.2.2 Handrail ends. Ends shall be returned or shall terminate in newel posts or safety terminals.

1115A.6.2.3 Handrail extension. Handrails shall extend a minimum of 12 inches (305 mm) beyond the top nosing and 12 inches (305 mm), plus the tread width, beyond the bottom nosing.

Where the extension creates a hazard, the termination of the extension shall be rounded or returned smoothly to floor, wall or post. Where the stairs are continuous from landing to landing, the inner rail shall be continuous and need not extend out into the landing. (See Figures 11A-6A and 11A-6E).

1115A.6.2.4 Handrail projections. Handrails projecting from a wall shall have a space of 1½ inches (38.1 mm) between the wall and the handrail.

Handrails may be located in a recess if the recess is a maximum of 3 inches (76.2 mm) deep and extends at least 18 inches (457 mm) above the top of the rail. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. (See Figure 11A-6B).

1115A.6.2.5 Handrail grips. The handgrip portion of handrails shall not be less than 1¼ inches (31.75 mm) nor more than 2 inches (50.8 mm) in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Edges shall have a minimum radius of 1⁄8 inch (3.17 mm). Handrails shall not rotate within their fittings. (See Figure 11A-6B).

Note: For public use areas, public accommodations, and housing which is publicly funded, see Chapter 11B, Division III, Section 1133B.4.2.6 for provisions of the Division of the State Architect-Access Compliance (DSA-AC).

SECTION 1116A HAZARDS ON ACCESSIBLE ROUTES

1116A.1 Warning curbs. Abrupt changes in level exceeding 4 inches (101.6 mm) in vertical dimension, such as changes in level at planters or fountains located in or adjacent to walks, sidewalks or other pedestrian ways shall be identified by curbs or other approved barriers projecting at least 6 inches (152.4

mm) in height above the walk or sidewalk surface to warn the blind of a potential drop-off.

Exceptions:

1. Between a walk or sidewalk and an adjacent street or driveway.
2. When a guardrail or handrail is provided with a wheel guide centered 2 to 4 inches (50.8 to 101.6 mm) above the surface of the walk or sidewalk.

1116A.2 Headroom clearance. Walks, pedestrian ways and other circulation spaces, which are part of the required egress system, shall have a minimum clear headroom of 84 inches (2134 mm). Other walks, pedestrian ways and circulation spaces shall have a minimum clear headroom of 80 inches (2032 mm). If the vertical clearance of an area adjoining an accessible route is reduced to less than 80 inches (2032 mm) nominal dimension, a guardrail or other barrier having its leading edge at or below 27 inches (686 mm) above the finished floor shall be provided.

Exception: Doorways and archways less than 24 inches (610 mm) in depth may have a minimum clear headroom of 80 inches (2032 mm) nominal. (See Section 1126A.)

1116A.3 Overhanging obstructions. Any obstruction that overhangs a pedestrian way shall be a minimum of 80 inches (2032 mm) above the walking surface as measured from the bottom of the obstruction. (See Figure 11A-1B.) Where a guy support is used parallel to a path of travel, including, but not limited to, sidewalks, a guy brace, sidewalk guy or similar device shall be used to prevent an overhanging obstruction (see Section 1116A.2 for required headroom clearance).

1116A.4 Free-standing signs. Wherever signs mounted on posts or pylons protrude from the post or pylons and the bottom edge of the sign is less than 80 inches (2032 mm) above the finished floor or ground level, the edges of such signs shall be rounded or eased and the corners shall have a minimum radius of 0.125 inches (see Section 1116A.2 for required headroom clearance).

1122A.4 Ramp height. Ramps more than 30 inches (762 mm) above the adjacent floor or ground and open on one or both sides shall be provided with a guard as required by Section 1013. Guardrails shall be continuous from the top of the ramp to the bottom of the ramp.

1122A.5 Ramp handrails.

1122A.5.1 Where required. Handrails shall be provided at each side of ramps when the slope exceeds 1 unit vertical in 20 units horizontal (5-percent slope). Handrails on all ramps shall be continuous.

Exceptions:

1. Curb ramps.
2. Ramps that serve an individual dwelling unit may have one handrail, except that ramps open on one or both sides shall have handrails provided on the open side or sides.

1122A.5.2 Handrail configuration.

1122A.5.2.1 Handrail heights. The top of handrails shall be 34 to 38 inches (864 to 965 mm) above the ramp surface.

1122A.5.2.2 Handrail ends. Handrail ends shall be returned.

1122A.5.2.3 Handrail extension. Handrails shall extend a minimum of 12 inches (305 mm) beyond the top and bottom of the ramp. Where the extension creates a hazard, the termination of the extension shall be rounded or returned smoothly to floor, wall or post. (See Figure 11A-5A).

1122A.5.2.4 Handrail projections. Handrails projecting from a wall shall have a space of 1½ inches (38.1 mm) between the wall and the handrail.

Handrails may be located in a recess if the recess is a maximum of 3 inches (76.2 mm) deep and extends at least 18 inches (457 mm) above the top of the rail. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. (See Figure 11A-6B).

1122A.5.2.5 Handrail grips. The handgrip portion of handrails shall not be less than 1¼ inches (31.75 mm) nor more than 2 inches (50.8 mm) in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Edges shall have a minimum radius of ¼ inch (3.17 mm). Handrails shall not rotate within their fittings. (See Figure 11A-6B).

Note: For public use areas, public accommodations, and housing which is publicly funded, see Chapter 11B, Division III, Section 1133B.5.5 for provisions of the Division of the State Architect-Access Compliance (DSA-AC).

1122A.6 Edge protection. Ramps and ramp landings shall be provided with a continuous and uninterrupted barrier on each side along the entire length in compliance with Sections 1010.9 and 1010.9.1. (See Figure 11A-5A.)

Note: Extended floors or ground surfaces, as permitted in Section 1010.9.2, are not allowed for ramps and ramp landings providing access to, or egress from, buildings or facilities where accessibility is required.

**SECTION 1123A
INTERIOR STAIRWAYS**

1123A.1 General. Interior stairways serving buildings containing covered multifamily dwelling units shall comply with this section.

1123A.2 Open risers. Open risers shall not be permitted on interior stairways.

Exception: Stairways within an individual dwelling unit.

1123A.3 Treads. All tread surfaces shall be slip resistant. Treads shall have smooth, rounded or chamfered exposed edges and no abrupt edges at the nosing (lower front edge).

1123A.4 Nosing. Nosing shall not project more than 1¼ inches (31.8 mm) past the face of the riser below. Risers shall be sloped or the underside of the nosing shall have an angle not more than 30 degrees (0.52 rad) from the vertical. (See Figure 11A-6A)

1123A.5 Striping for the visually impaired. Interior stairs shall have the upper approach and lower tread marked by a stripe providing clear visual contrast.

Exception: Stairways within an individual dwelling unit.

The stripe shall be a minimum of 2 inches (50.8 mm) wide to a maximum of 4 inches (101.6 mm) wide placed parallel to, and not more than 1 inch (25.4 mm) from, the nose of the step or upper approach. The stripe shall extend the full width of the step or upper approach and shall be of material that is at least as slip resistant as the other treads of the stair. A painted stripe shall be acceptable.

1123A.6 Interior stairway handrails.

1123A.6.1 Where required. Stairways shall have handrails on each side. Intermediate handrails shall be located equidistant from the sides of the stairway and comply with Section 1012.9.

Exception: Stairways serving an individual dwelling unit may have one handrail, except that stairways open on one or both sides shall have handrails on the open side or sides.

1123A.6.2 Handrail configuration.

1123A.6.2.1 Handrail heights. The top of handrails shall be 34 to 38 inches (864 to 965 mm) above the nosing of the treads.

1123A.6.2.2 Handrail ends. Ends shall be returned or shall terminate in newel posts or safety terminals.

1123A.6.2.3 Handrail extension. Handrails shall extend a minimum of 12 inches (305 mm) beyond the top nosing and 12 inches (305 mm), plus the tread width, beyond the bottom nosing. Where the extension creates a

hazard, the termination of the extension shall be rounded or returned smoothly to floor, wall or post. Where the stairs are continuous from landing to landing, the inner rail shall be continuous and need not extend out into the landing. (See Figures 11A-6A and 11A-6E).

Exception: Stairways within an individual dwelling unit.

1123A.6.2.4 Handrail projections. Handrails projecting from a wall shall have a space of $1\frac{1}{2}$ inches (38.1 mm) between the wall and the handrail.

Handrails may be located in a recess if the recess is a maximum of 3 inches (76.2 mm) deep and extends at least 18 inches (457 mm) above the top of the rail. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. (See Figure 11A-6B).

1123A.6.2.5 Handrail grips. The handgrip portion of handrails shall not be less than $1\frac{1}{4}$ inches (31.75 mm) nor more than 2 inches (50.8 mm) in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Edges shall have a minimum radius of $\frac{1}{8}$ inch (3.17 mm). Handrails shall not rotate within their fittings. (See Figure 11A-6B).

Note: For public use areas, public accommodations and housing which is publicly funded, see Chapter 11B, Division III, Section 1133B.4.2.6 for provisions of the Division of the State Architect-Access Compliance (DSA-AC).

SECTION 1124A ELEVATORS AND PLATFORM (WHEELCHAIR) LIFTS

1124A.1 General. Elevators provided in covered multifamily buildings shall be accessible. Elevators required to be accessible shall comply with this chapter, ASME A17.1, Safety Code for Elevators and Escalators, Title 8, of the California Code of Regulations, under "Elevator Safety Orders," and any other applicable safety regulations of other administrative authorities having jurisdiction.

Exception: Private elevators serving only one dwelling unit.

1124A.2 Location. Passenger elevators shall be located on a major accessible route and provisions shall be made to ensure that they remain accessible and usable at all times that the building is occupied.

1124A.3 Size of cab and control locations.

1124A.3.1 General. Elevators serving covered multifamily buildings shall be sized to accommodate a wheelchair in accordance with this section.

Exception: When the enforcing agency determines that compliance with any requirement of this section would create an unreasonable hardship, an exception to the requirement shall be granted when equivalent facilitation is provided, and where it can be demonstrated that a

person using a wheelchair can enter and operate the elevator.

1124A.3.2 Car inside. The car inside shall allow for the turning of a wheelchair. The minimum clear distance between walls or between wall and door, excluding return panels, shall not be less than 80 inches by 54 inches (2032 mm by 1372 mm) for center-opening doors, and 68 inches by 54 inches (1727 mm by 1372 mm) for side-slide opening doors. (See Figure 11A-7A). Minimum distance from wall to return panel shall not be less than 51 inches (1295 mm).

1124A.3.2.1 Door size. Elevator doors shall provide a minimum clear width of 36 inches (914 mm).

1124A.3.3 Car controls.

1124A.3.3.1 Car control location. Elevator floor buttons shall be within 54 inches (1372 mm) above the finish floor for side approach and 48 inches (1219 mm) for front approach. Except for photoelectric tube bypass switches, emergency controls, including the emergency stop and alarm, shall be grouped in or adjacent to the bottom of the panel and shall be no lower than 35 inches (889 mm) from the floor. For multiple controls only, one set must comply with these height requirements. Floor buttons shall be provided with visual indicators to show when each call is registered. The visual indicators shall be extinguished when each call is answered.

Note: Where possible, a 48-inch (1219 mm) maximum height for elevator floor buttons is preferred.

1124A.3.3.2 Car control buttons. Passenger elevator car controls shall have a minimum dimension of $\frac{3}{4}$ inch (19.1 mm) and shall be raised $\frac{1}{8}$ inch (3.2 mm) plus or minus $\frac{1}{32}$ inch (0.8 mm) above the surrounding surface.

Control buttons shall be illuminated, shall have square shoulders and shall be activated by a mechanical motion that is detectable.

All control buttons shall be designated by a $\frac{5}{8}$ -inch-minimum (15.9 mm) raised characters and standard raised symbols that comply with Sections 1143A.8 and 1143A.9 immediately to the left of the control button. Contracted Grade 2 Braille that conforms to Section 1143A.9 shall be located immediately below the numeral, character or symbol. A minimum clear space of $\frac{3}{8}$ inch (9.5 mm) or other suitable means of separation shall be provided between rows of control buttons. (See Figure 11A-7B.)

The raised characters and symbols shall be white on a black background. Controls and emergency equipment identified by raised symbols shall include, but not be limited to, "door open," "door close," "alarm bell," "emergency stop" and "telephone." The call button for the main entry floor shall be designated by a raised star at the left of the floor designation.

1124A.3.4 Emergency telephone. The emergency telephone handset shall be positioned no higher than 48 inches (1219 mm) above the floor, and the handset cord shall be a minimum of 29 inches (737 mm) in length. If the telephone system is located in a closed compartment, the compartment

> || door hardware shall conform to the provisions of Section 1127A.9.6.4. Emergency intercommunication shall not require voice communication.

1124A.4 Hall call buttons. Call operation buttons shall be centered 42 inches (1067 mm) above the floor. Buttons shall be a minimum of $\frac{3}{4}$ -inch (19.1 mm) in size and shall be raised $\frac{1}{8}$ -inch (3.2 mm) plus or minus $\frac{1}{32}$ -inch (0.8 mm) above the surrounding surface. The button designating the “up” direction shall be on top.

Visual indication shall be provided to show each call registered and extinguished when answered. Objects adjacent to, and below, hall call buttons shall not project more than 4 inches (101.6 mm) from the wall. Hall call buttons shall be internally illuminated with a white light over the entire surface of the button.

1124A.5 Minimum illumination. The minimum illumination at the car controls threshold and the landing when the car and landing doors are open shall not be less than 5 foot-candles (54 lx).

1124A.6 Hall lantern. A visual and audible signal shall be provided at each hoistway entrance indicating to the prospective passenger the car answering the call and its direction of travel as follows:

1. The visual signal for each direction shall be a minimum of $2\frac{1}{2}$ inches (63.5 mm) high by $2\frac{1}{2}$ inches (63.5 mm) wide, and visible from the proximity of the hall call button.
2. The audible signal shall sound once for the “up” direction and twice for the “down” direction or of a configuration which distinguishes between up and down elevator travel.
3. The center line of the fixture shall be located a minimum of 6 feet (1829 mm) in height from the lobby floor.
4. The use of in-car lanterns, located in or on the car doorjamb, visible from the proximity of the hall call buttons and conforming to the above requirements of this section shall or will be acceptable.

Note: The use of arrow shapes are preferred for visible signals.

1124A.7 Door delay.

1124A.7.1 Hall call. The minimum acceptable time from notification that a car is answering a call (lantern and audible signal) until the doors of the car start to close shall be calculated by the following equations but shall be no less than 5 seconds:

$$T = D / (1.5 \text{ ft/s}) \text{ or } T = D / (445 \text{ mm/s})$$

Where T is the total time in seconds and D is the distance from a point in the lobby or landing area 60 inches (1524 mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door (see Figure 11A-7D). For cars with in-car lanterns, T begins when the lantern is visible from the vicinity of hall call buttons and an audible signal is sounded.

1124A.7.2 Door delay for car calls. The minimum acceptable time for the door to remain fully open after receiving a call shall not be less than 5 seconds.

1124A.8 Doorjamb marking. The floor level at all elevator hoistway entrances shall be designated by raised characters provided on both jambs. Characters shall be 2 inches (50.8 mm) in height located with the centerline 60 inches (1524 mm) from the floor. On the main entry level, a raised five-pointed star shall be placed to the left of the raised character. The outside diameter of the star shall be 2 inches (50.8 mm) and all points shall be of equal length. The raised characters and the star shall be white on a black background. Contracted Grade 2 Braille, conforming to Section 1143A.9, shall be placed below the corresponding raised characters and the star. The Braille translation for the star shall state “MAIN”. The raised characters shall comply with Section 1143A.8. (See Figure 11A-7C.)

1124A.9 Door protective and reopening devices. Doors closed by automatic means shall be provided with a door-reopening device that will function to stop and reopen a car door and adjacent hoistway door in case the car door is obstructed while closing.

This reopening device shall also be capable of sensing an object or person in the path of a closing door without requiring contact for activation at a nominal 5 inches and 29 inches (127 mm and 737 mm) above the floor.

Door-reopening devices shall remain effective for a period of not less than 20 seconds. After such an interval, the doors may close in accordance with the requirements of ASME A17.1.

1124A.10 Operation and leveling. The elevator shall be automatic and be provided with a self-leveling feature that will automatically bring the car to the floor landings within a tolerance of plus or minus $\frac{1}{2}$ inch (12.7 mm) under rated loading to zero loading conditions. This self-leveling shall, within its zone, be entirely automatic and independent of the operating device and shall correct the overtravel or undertravel. The car shall also be maintained approximately level with the landing, irrespective of load.

The clearance between the car platform sill and the edge of the hoistway landing shall be no greater than $1\frac{1}{4}$ inches (31.75 mm).

1124A.11 Platform (wheelchair) lifts.

1124A.11.1 General. Platform (wheelchair) lifts may be provided between levels, in lieu of passenger elevators, when the vertical distance between landings, as well as the structural design and safeguards are as allowed by ASME A18.1, “Safety Standard for Platform Lifts and Stairway Chair Lifts;” the State of California, Department of Industrial Relations, Division of Occupational Safety and Health (Title 8 “Elevator Safety Orders”) and any applicable safety regulations of other administrative authorities having jurisdiction.

If lifts are provided, they shall be designed and constructed to facilitate unassisted entry, operation and exit from the lift, and shall comply with restrictions and enhancements of this section in conjunction with Title 8 of the California Code of Regulations.

1124A.11.2 Size and clear floor space. Platform (wheelchair) lifts shall be of sufficient size to accommodate a wheelchair in accordance with Section 1127A.9.4.

1124A.11.3 Lift access. There shall be a level and clear floor area or landing at each floor or level served by platform (wheelchair) lifts. Clear floor areas or landings shall meet the applicable “accessible route” requirements.

1124A.11.4 Standby power. To ensure continued operation in case of primary power loss, platform (wheelchair) lifts shall be provided with standby power or with self-rechargeable battery power that provides sufficient power to operate all platform lift functions for a minimum of five upward and downward trips.

1124A.11.5 Openness. Platform (wheelchair) lifts on an accessible means of egress shall not be installed in a fully enclosed hoistway.

1124A.11.6 Doors and gates. Lifts shall have low energy power-operated doors or gates, which shall remain open for 20 seconds minimum. End doors shall have 32 inches (813 mm) minimum clear opening width. Side doors clear opening width shall be 42 inches (1067 mm) minimum.

Exception: Lifts having doors or gates on opposite sides shall be permitted to have self-closing manual doors or gates.

1124A.11.7 Restriction sign. A sign complying with Sections 1143A.3 and 1143A.4 shall be securely fastened in a conspicuous place at each landing and on the platform. The sign shall state “No Freight” in letters not less than $\frac{3}{8}$ inch (16 mm) high and include the International Symbol of Accessibility.

SECTION 1125A HAZARDS ON ACCESSIBLE ROUTES

1125A.1 Warning curbs. Abrupt changes in level exceeding 4 inches (101.6 mm) in vertical dimension, such as changes in level at planters or fountains located in or adjacent to walks, halls, corridors, passageways, aisles, pedestrian ways and other circulation spaces shall be identified by curbs projecting at least 6 inches (152.4 mm) in height above the walk or sidewalk surface to warn the blind of a potential drop-off.

Exception: When a guardrail or handrail is provided with a wheel guide centered 2 to 4 inches (50.8 to 101.6 mm) above the surface of the walk or sidewalk.

1125A.2 Headroom clearance. Walks, halls, corridors, passageways, aisles, pedestrian ways and other circulation spaces which are part of the required egress system shall have a minimum clear headroom of 84 inches (2134 mm). Other walks, pedestrian ways and circulation spaces shall have a minimum clear headroom of 80 inches (2032 mm). If the vertical clearance of an area adjoining an accessible route is reduced to less than 80 inches (2032 mm) nominal dimension, a guardrail or other barrier having its leading edge at or below 27 inches (686 mm) above the finished floor shall be provided.

Exception: Doorways and archways less than 24 inches (610 mm) in depth may have a minimum clear headroom of 80 inches (2032 mm) nominal. (See Section 1126A).

1125A.3 Overhanging obstructions. Any obstruction that overhangs a pedestrian way shall be a minimum of 80 inches (2032 mm) above the walking surface as measured from the bottom of the obstruction. (See Figure 11A-1B.) Where a guy support is used parallel to a path of travel, including, but not limited to, sidewalks, a guy brace, sidewalk guy or similar device shall be used to prevent an overhanging obstruction (see Section 1125A.2 for required headroom clearance).

1125A.4 Free-standing signs. Wherever signs mounted on posts or pylons protrude from the posts or pylons and the bottom edge of the sign is less than 80 inches (2032 mm) above the finished floor or ground level, the edges of such signs shall be rounded or eased and the corners shall have a minimum radius of 0.125 inches. (See Section 1125A.2 for required headroom clearance).

SECTION 1126A DOORS

1126A.1 Width and height of doors. Doorways which provide access to common use areas or covered multifamily dwellings shall comply with the following:

1. Permit the installation of a door not less than 36 inches (914 mm) in width, not less than 80 inches (2032 mm) in height and provide a clear width of not less than 32 inches (813 mm), measured with the door positioned at an angle of 90 degrees from its closed position.
2. Be capable of opening at least 90 degrees.
3. A pair of doors, manual or automatic, must have at least one leaf which provides a clear width of not less than 32 inches (813 mm), measured with the door positioned at an angle of 90 degrees from its closed position.
4. The width of any component in the egress system shall not be less than the minimum width required by Section 1005.

Revolving doors shall not be used as required entrances for persons with disabilities.

1126A.2 Level floor or landing. The floor or landing on each side of an exit door shall be level. (See Chapter 10).

1126A.2.1 Thresholds and changes in elevation at doors. The floor or landing shall not be more than $\frac{1}{2}$ inch (12.7 mm) lower than the top of the threshold of the doorway. (See Figure 11A-8I).

Changes in level between $\frac{1}{4}$ inch (6.35 mm) and $\frac{1}{2}$ inch (12.7 mm) shall be beveled with a slope no greater than 1 unit vertical in 2 units horizontal (50% slope). Changes in level greater than $\frac{1}{2}$ inch (12.7 mm) shall be accomplished by means of a ramp (see Section 1122A).

1126A.3 Maneuvering clearances at doors.

1126A.3.1 General. The level floor or landing of an exit door shall have a length in the direction of the door swing of at least 60 inches (1524 mm) and a length opposite the direction of the door swing of at least 44 inches (1118 mm) measured at right angles to the plane of the door in its closed position. (See Figures 11A-8D, 11A-8E and 11A-8F for maneuvering spaces at sliding doors).

1126A.3.2 Strike edge maneuvering space. The width of the level area on the side to which the door swings shall extend

at least 24 inches (610 mm) past the strike edge of the door for exterior doors and at least 18 inches (457 mm) past the strike edge for interior doors.

Note: Twenty-four inches (610 mm) is preferred for strike-side clearance.

1126A.3.2.1 Front approach. The following provisions shall apply to swinging doors with front approach:

1. For pull side approach, the level floor or landing shall extend in the direction of the door swing at least 60 inches (1524 mm). (See Figure 11A-8A).
2. For push side approach, the level floor or landing shall extend opposite the direction of the door swing at least 48 inches (1219 mm). (See Figure 11A-8A).
3. Doors with push side approach having both a closer and a latch shall be provided with a clear and level area extending a minimum of 12 inches (305 mm) past the strike edge on the approach side of the door. (See Figure 11A-8A).

1126A.3.2.2 Hinge side approach. The following provisions shall apply to swinging doors with hinge side approach:

1. Doors with pull side approach shall be provided with a level floor or landing not less than 60 inches (1524 mm) in depth. A clear and level area shall extend a minimum of 36 inches (914 mm) past the strike edge on the approach side of the door. (See Figure 11A-8B).

Exception: Doors with pull side approach and a level floor or landing greater than 60 inches (1524 mm) in depth shall be provided with a clear and level area at least 24 inches (610 mm) past the strike edge of the door for exterior doors and at least 18 inches (457 mm) past the strike edge for interior doors.

2. Doors with push side approach shall have a level floor or landing not less than 44 inches (1118 mm) in depth, and shall be provided with a clear and level area extending a minimum of 54 inches (1372 mm) from the strike edge of the door jamb past the hinge side of the door. Doors with a latch and closer shall have a level floor or landing not less than 48 inches (1219 mm) depth at the push side of the door. (See Figure 11A-8B).

1126A.3.2.3 Latch side approach. The following provisions shall apply to swinging doors with latch side approach:

1. Doors with pull side approach shall have a level floor or landing not less than 60 inches (1524 mm) in depth, and shall be provided with a clear and level area extending a minimum of 24 inches (610 mm) past the strike edge on the approach side of the door. (See Figure 11A-8C).

Exception: Doors serving individual covered multifamily dwelling units shall have a minimum landing depth of 44 inches (1118 mm)

except that doors with a closer shall have a minimum landing depth of 54 inches (1372 mm).

2. Doors with push side approach shall have a level floor or landing not less than 44 inches (1118 mm) in depth, and shall be provided with a clear and level area extending a minimum of 24 inches (610 mm) past the strike edge on the approach side of the door. Doors with a closer shall have a level floor or landing not less than 48 inches (1219 mm) depth at the push side of the door. (See Figure 11A-8C).

1126A.3.3 Space between consecutive doors. The minimum space between two hinged or pivoted doors in series, serving other than a required exit stairway, shall provide a minimum of 48 inches (1219 mm) plus the width of the door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors. (See Figures 11A-8G and 11A-8H).

Where the door opens into a stair or smokeproof enclosure, the landing need not have a minimum length of 60 inches (1524 mm). (See Figure 11A-8H).

1126A.4 Closer-effort to operate doors. Maximum effort to operate doors shall not exceed 8¹/₂ pounds (38 N) for exterior doors and 5 pounds (22 N) for interior doors, such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet these standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate enforcement agency, not to exceed 15 pounds (66.7 N).

1126A.4.1 Door closer. If the door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the landing edge of the door.

1126A.5 Type of lock or latch. The type of latch and lock required for all doors shall be in accordance with Chapter 10, Section 1008.

1126A.6 Hand-activated door hardware. Hand-activated door latching, locking and opening hardware shall be centered between 30 inches (762 mm) and 44 inches (1118 mm) above the floor. Latching and locking doors that are hand-activated and on an accessible route shall be operable with a single effort by lever type hardware, panic bars, push-pull activating bars or other hardware designed to provide passage without requiring the ability to grasp the opening hardware. Locked exit doors shall operate consistent with Section 1126A.4, in the direction of egress.

1126A.6.1 Lever type hardware. The lever or lever of actuated latches or locks shall be curved with a return to within 1/2 inch (12.7 mm) of the door to prevent catching on the clothing of persons during egress.

Exception: Group R and U occupancies with an occupant load of 10 or less.

1126A.7 Smooth surface. The bottom 10 inches (254 mm) of all doors and/or gates shall have a smooth, uninterrupted surface to allow the door or gate to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10-inch high (254 mm) smooth panel shall be installed on the push side of the door, which will allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition.

Exception: Automatic and sliding doors or gates.

SECTION 1127A COMMON USE FACILITIES

Note: For public use facilities, see Chapter 11B of this code.

1127A.1 General. When provided, common use areas and facilities in covered multifamily housing developments shall be accessible to persons with disabilities. Common use facilities include, but are not limited to, lobbies, toilet and bathing facilities, laundry facilities, community rooms, clubhouses, health and fitness facilities, game rooms and portions of common use tenant storage. All entrances, doors, fixtures and controls shall be on an accessible route. Facilities and fixtures required to be accessible shall comply with the following provisions:

1. **Doors.** Doors to accessible bathrooms shall comply with Section 1126A. Doors shall not swing into the floor space required for any fixture.
2. **Clear floor space.** All fixtures and controls shall be on an accessible route. Clear floor spaces at fixtures and controls, the accessible route and the turning space may overlap. This clear space shall comply with Sections 1127A.9.4 and 1127A.9.5.
3. **Water closets.** Where a toilet stall is provided, it shall comply with Section 1127A.2.1 or 1127A.2.2, and its water closet shall comply with Section 1127A.2.3.
4. **Lavatory and mirrors.** Where a lavatory and/or mirror is provided, it shall comply with Sections 1127A.3 and/or 1127A.8.3.
5. **Controls and dispensers.** Where controls, dispensers, receptacles or other types of equipment are provided, at least one of each shall be on an accessible route and shall comply with Sections 1127A. 8 and 1127A.9.5.
6. **Bathing and shower facilities.** Where bathtubs or showers are provided, at least one fixture of each type provided shall be accessible per room. For bathtubs, see Section 1127A.5.2. For showers, see Section 1127A.5.3.
7. **Toilet facilities.** Toilet facilities shall comply with Section 1127A.2.
8. **Laundry facilities.** Laundry facilities shall comply with Section 1127A.10.
9. **Storage facilities.** Storage facilities shall comply with Section 1127A.11.
10. **Fixed or built-in seating, tables and counters.** Fixed or built-in seating, tables and counters shall comply with Section 1127A.12.

1127A.2 Toilet facilities. When common use toilet facilities are provided for residents or guests, at least one percent of the total number of fixtures but not less than one of each type shall comply with this section.

1127A.2.1 Multiple-accommodation toilet facilities. Multiple-accommodation toilet facilities shall have the following:

Notes:

1. See definition in Chapter 2.
2. See Figure 11A-9A.
1. **Wheelchair clearance.** A clear space measured from the floor to a height of 27 inches (686 mm) above the floor, within the sanitary facility room, of sufficient size to inscribe a circle with a diameter not less than 60 inches (1524 mm), or a clear space 56 inches by 63 inches (1422 mm by 1600 mm) in size. Other than the door to the accessible water closet compartment, a door, in any position, may encroach into this space by not more than 12 inches (305 mm).
2. **Clear space at fixtures.** Doors shall not swing into the floor space required for any fixture.
3. **Accessible water closet compartment.** A water closet fixture located in a compartment shall provide a minimum 28-inch-wide (711 mm) clear space from a fixture, or a minimum 32-inch-wide (813 mm) clear space from a wall at one side of the water closet. The other side of the water closet shall provide 18 inches (457 mm) from the centerline of the water closet to the wall. The stall shall be a minimum of 60 inches (1524 mm) wide. A minimum 48-inch-long (1219 mm) clear space shall be provided in front of the water closet if the compartment has an end-opening door (facing the water closet). A minimum 60-inch-long (1524 mm) clear space shall be provided in a compartment with the door located at the side.
4. **Grab bars.** Grab bars shall be installed in accordance with Section 1127A.4 and shall not project more than 3 inches (76.2 mm) into the clear spaces.
5. **Compartment doors.** Compartment doors shall comply with the following:
 - 5.1. The water closet compartment shall be equipped with a door that has an automatic-closing device, and shall have a clear, unobstructed opening width of 32 inches (813 mm) when located at the end and 34 inches (864 mm) when located at the side with the door positioned at an angle of 90 degrees from its closed position.
 - 5.2. When standard compartment doors are used, with a minimum 9-inch (228.6 mm) clearance for footrests underneath and a self-closing device, clearance at the strike edge as specified in Section 1126A.3.2 is not required.
 - 5.3. The inside and outside of the compartment door shall be equipped with a loop or U-shaped handle immediately below the latch. The latch shall be flip-over style, sliding

or other hardware not requiring the user to grasp or twist.

- 5.4. Except for door-opening widths and door swings, a clear, unobstructed access of not less than 44 inches (1118 mm) shall be provided to water closet compartments designed for use by persons with disabilities, and the space immediately in front of a water closet compartment shall not be less than 48 inches (1219 mm) as measured at right angles to compartment door in its closed position.

6. **Large toilet rooms.** Where six or more stalls are provided within a multiple-accommodation toilet room, at least one stall shall comply with Section 1127A.2.1, Items 2 and 3. At least one additional stall shall be 36 inches (914 mm) wide with an outward swinging self-closing door and grab bars complying with Sections 1127A.4.3, 1127A.4.4 and 1127A.4.5 installed on each compartment side wall.

1127A.2.2 Single-accommodation toilet facilities. Single-accommodation toilet facilities shall comply with the following:

1. **Wheelchair clearance.** There shall be sufficient space in the toilet room for a wheelchair measuring 30 inches (762 mm) wide by 48 inches (1219 mm) long to enter the room and permit the door to close. There shall be in the room a clear floor space of at least 60 inches (1524 mm) in diameter, or a T-shaped space complying with Figure 11A-1D.
2. **Encroachment of doors.** Doors shall not encroach into the clear floor space specified in Item 1 of this section by more than 12 inches (305 mm), except for the panel door to any water closet compartment. (See Figure 11A-9B).
3. **Accessible water closet.** The water closet shall be located in a space which provides a minimum 28-inch-wide (711 mm) clear space from a fixture or a minimum 32-inch-wide (813 mm) clear space from a wall at one side. The other side shall provide 18 inches (457 mm) from the centerline of the water closet to the wall. A minimum 48 inches (1219 mm) of clear space shall be provided in front of the water closet.
4. **Grab bars.** Grab bars shall be installed in accordance with Section 1127A.4.
5. **Accessible route.** All doors, fixtures and controls shall be on an accessible route. The minimum clear width of an accessible route shall be 36 inches (914 mm) except at doors (See Section 1126A). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Figure 11A-1C. (See also Figure 11A-9B).

1127A.2.3 Water closets. Water closets required to be accessible shall comply with the following:

1. **Height.** The height of accessible water closets shall be a minimum of 17 inches (432 mm) to a maximum of

19 inches (483 mm) measured to the top of a maximum 2-inch-high (50.8 mm) toilet seat.

2. **Controls.** Controls shall be operable with one hand and shall not require tight grasping, pinching or twisting. Controls for the flush valves shall be mounted on the wide side of toilet areas, no more than 44 inches (1118 mm) above the floor. The force required to activate controls shall be no greater than 5 pound-force (lbf) (22.2 N).
3. **Toilet seats.** Seats shall not be sprung to return to a lifted position.

1127A.2.4 Accessible urinals. Urinals required to be accessible shall comply with the following:

1. **Height and wall projection.** Urinals shall be floor mounted or wall hung. Where one or more wall-hung urinals are provided, at least one with a rim projecting a minimum of 14 inches (356 mm) to a maximum of 17 inches (432 mm) from the wall and a maximum of 17 inches (432 mm) above the floor shall be provided.
2. **Flush controls.** Flush controls shall be operable with one hand, shall not require tight grasping, pinching or twisting of the wrist and shall be mounted no more than 44 inches (1118 mm) above the floor. The force required to activate controls shall be no greater than 5 pound-force (lbf) (22.2 N). Electronic automatic flushing controls are acceptable and preferable.
3. **Clear floor space and reach ranges.** Where urinals are provided, at least one shall have a clear floor space 30 inches by 48 inches (762 mm by 1219 mm) in front of the urinal to allow forward approach. Clear floor space and reach ranges shall comply with Sections 1127A.9.4 and 1127A.9.5.

1127A.3 Accessible lavatories. When common use lavatories are provided for residents or guests, at least one, and not less than 1 percent of all lavatories, shall comply with the following:

1. **Location.** Lavatories shall be installed with the centerline of the fixture a minimum of 18 inches (457 mm) horizontally from an adjoining wall or fixture. The top of the fixture rim shall be a maximum of 34 inches (864 mm) above the finished floor.
2. **Floor space.** A clear maneuvering space at least 30 inches by 48 inches (762 mm by 1219 mm) shall be provided in front of accessible lavatories to allow forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall not extend into the knee and toe space underneath the lavatory more than 19 inches (483 mm). This clear space shall comply with Section 1127A.9.5 for allowable reach ranges.
3. **Knee and toe space.** Knee and toe space (see Figure 11A-9D) shall be provided as follows:
 - 3.1. The knee space shall be at least 30 inches (762 mm) wide and 8 inches deep (203.2 mm).
 - 3.2. The knee space shall be at least 29 inches (737 mm) high at the front face and reducing to not

less than 27 inches (686 mm) at a point 8 inches (203.2 mm) back from the front edge.

3.3. Knee space required by this section shall be clear and unobstructed.

3.4. The toe space required in this section shall be provided as follows:

3.4.1. Shall be at least 30 inches (762 mm) wide and centered on the lavatory.

3.4.2. Shall be at least 17 inches (432 mm) deep, measured from the front edge.

3.4.3. Shall be at least 9 inches (228.6 mm) high from the floor.

4. **Finished floor.** The finished floor beneath the lavatory shall be extended to the wall.

5. **Plumbing protection.** Hot water and drain pipes accessible under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories.

6. **Lavatory faucet controls.** Faucet controls and operation mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist.

The force required to activate controls shall be no greater than 5 pound-force (lbf) (22.2N). Lever operated, push type and electronically controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.

1127A.4 Grab bars, tub and shower seats, fasteners and mounting devices.

1127A.4.1 General. Grab bars, tub and shower seats, fasteners and mounting devices required by this chapter shall comply with this section.

1127A.4.2 Location. Grab bars which are located on each side, or on one side and the back, of the accessible toilet stall or compartment shall be securely attached and centered 33 inches (838 mm) above and parallel to the floor, except that, where a tank-type toilet obstructs placement at 33 inches (838 mm), the grab bar may be centered as high as 36 inches (914 mm). The space between the grab bar and objects below shall be a minimum of 1½ inches (38.1 mm). Grab bars shall be at least 42 inches (1067 mm) in length with the front end positioned 24 inches (610 mm) in front of the water closet stool. Grab bars at the back shall not be less than 36 inches (914 mm) in length. (See Figures 11A-9A and 11A-9B).

1127A.4.3 Diameter or width. The diameter or width of the gripping surfaces of a grab bar shall be 1¼ inches to 1½ inches (31.75 mm to 38.1 mm) or of a shape that provides an equivalent gripping surface. If grab bars are mounted adjacent to a wall, the space between the wall and the grab bars shall be 1½ inches (38.1 mm). (See Figure 11A-9C).

1127A.4.4 Structural strength. The structural strength of grab bars, tub and shower seats, fasteners and mounting devices shall meet the following specifications:

1. Bending stress in a grab bar or seat induced by the maximum bending moment from the application of a

250-pound (1112 N) point load shall be less than the allowable stress for the material of the grab bar or seat.

2. Shear stress induced in a grab bar or seat by the application of a 250-pound (1112N) point load shall be less than the allowable shear stress for the material of the grab bar or seat, and if its mounting bracket or other support is considered to be fully restrained, then direct and torsional shear stresses shall not exceed the allowable shear stress.

3. Shear force induced in a fastener or mounting device from the application of a 250-pound (1112 N) point load shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.

4. Tensile force induced in a fastener by a direct tension force of a 250-pound (1112 N) point load, plus the maximum moment from the application of a 250-pound (1112 N) point load, shall be less than the allowable withdrawal load between the fastener and supporting structure.

5. Grab bars shall not rotate within their fittings.

1127A.4.5 Surface. A grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements. Edges shall have a minimum radius of 1/8 inch (3.17 mm).

1127A.5 Bathing facilities.

1127A.5.1 General. When common use bathing facilities are provided for residents or guests, including showers, bathtubs or lockers, at least one of each type of fixture in each facility, and not less than 1 percent of all fixtures, shall comply with this section.

1127A.5.2 Bathtubs. Bathtubs required to be accessible shall comply with the following:

1. **Floor space.** Clear floor space at bathtubs shall be as shown in Figure 11A-9E.

2. **Seat.** An in-tub seat or a seat at the head end of the tub shall be provided as shown in Figures 11A-9E and 11A-9F. The structural strength of seats and their attachments shall comply with Section 1127A.4.4. Seats shall be mounted securely and shall not slip during use.

3. **Grab bars.** Grab bars complying with Sections 1127A.4.3, 1127A.4.4 and 1127A.4.5 shall be provided as shown in Figures 11A-9F and 11A-9G.

4. **Controls.** Faucets and other controls shall be located as shown in Figure 11A-9F. They shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than a 5 pound force (lbf) (22.2 N).

5. **Shower spray unit.** A shower spray unit with a hose at least 60 inches (1524 mm) long that can be used both as a fixed shower head and as a hand-held shower shall be provided.

6. **Bathtub enclosures.** If provided, enclosures for bathtubs shall not obstruct controls or transfer from wheelchairs onto bathtub seats or into tubs. Enclosures on bathtubs shall not have tracks mounted on their rims.

1127A.5.3 Showers. Showers required to be accessible shall comply with the following:

1. **Size.** Showers shall be consistent with one of the following: (1) 60 inches (1524 mm) minimum in width between wall surfaces and 30 inches (762 mm) minimum in depth with a full opening width on the long side; or (2) 42 inches (1067 mm) in width between wall surfaces and 48 inches (1219 mm) minimum in depth with an entrance opening of 42 inches (1067 mm); or (3) showers 60 inches (1524 mm) minimum in width may be 36 inches (914 mm) minimum in depth as long as the entrance opening width is a minimum 36 inches (914 mm).
2. **Thresholds.** When a threshold or recessed drop is permitted, it shall be a maximum of $1/2$ inch (12.7 mm) in height and shall be beveled or sloped at an angle not exceeding 45 degrees (100 percent gradient) from the horizontal.
3. **Multiple Showers.** Where, within the same functional area, two or more accessible showers are provided, there shall be at least one shower constructed opposite hand from the other or others (i.e., one left-hand control versus right-hand controls).
4. **Accessories.** Shower accessories shall include:
 - 4.1. **Water Controls.** Water controls of a single-lever design shall be located on the side wall of the compartment adjacent to the seat and operable with a maximum force of 5 pounds (22.2 N), mounted at 40 inches (1016 mm) [plus or minus 1 inch (25.4 mm) tolerance] above the shower floor. The centerline of the controls shall be within a reach range of no less than 18 inches (457 mm) and no more than 24 inches (610 mm) from the rear edge of the seat.
 - 4.2. **Hand-held sprayer unit.** A flexible hand-held sprayer unit with a hose at least 60 inches (1524 mm) long shall be provided within reach range of the seat at a distance not to exceed 27 inches (686 mm) horizontally measured from the rear seat edge to the centerline of the mounting bracket. This unit shall be mounted at a maximum height of 48 inches (1219 mm) [plus or minus 1 inch (25.4 mm) tolerance] above the shower floor.
 - 4.3. **Sprayer unit alternative.** Where accessible shower facilities are provided in areas subject to excessive vandalism, in lieu of providing the fixed flexible hose, two wall-mounted shower heads shall be installed. Each shower head shall be installed so that it can be operated independently of the other and shall have swivel angle adjustments, both vertically and

horizontally. One shower head shall be located at a height of 48 inches (1219 mm) [plus or minus 1 inch (25.4 mm) tolerance] above the floor.

- 4.4. **Floor slope.** The maximum slope of the floor shall be 2 percent per foot in any direction. Where drains are provided, grate openings shall be a maximum of $1/4$ inch (6.35 mm) and located flush with the floor surface.

5. **Shower fixtures.** Shower fixtures shall include:

- 5.1. A folding seat located within 27 inches (686 mm) of the controls, mounted 18 inches (457 mm) above the floor and with a minimum space of 1 inch (25.4 mm) and maximum space of $1\frac{1}{2}$ inches (38.1 mm) allowed between the edge of the seat and any wall. When folded, the seat shall not extend more than 6 inches (152.4 mm) from the mounting wall. (See Figures 11A-9H, 11A-9I, 11A-9J and 11A-9K).
- 5.2. Grab bars located on walls adjacent to and opposite the seat. Grab bars shall comply with the diameter, loading and projection requirements of Sections 1127A.4.3, 1127A.4.4 and 1127A.4.5. Grab bars shall be mounted between a minimum of 33 inches (838 mm) and a maximum of 36 inches (914 mm) above the shower floor with an L-shaped grab bar mounted on walls opposite and adjacent to the front edge of the seat, but not extended to include that portion of wall over the seat. (See Figure 11A-9H or 11A-9I).
6. **Soap dish.** When a soap dish is provided, it shall be located on the control wall at a maximum height of 40 inches (1016 mm) above the shower floor, and within reach limits from the seat.
7. **Enclosures.** Enclosures, when provided for shower stalls, shall not obstruct transfer from wheelchairs onto shower seats.

Note: See Figures 11A-9H, 11A-9I, 11A-9J and 11A-9K.

1127A.5.3.1 Open showers. Where no separate shower compartments are provided, the shower for persons with disabilities shall be located in a corner with L-shaped grab bars extending along two adjacent walls with a folding seat adjacent to the shower controls. (See Figures 11A-9H, 11A-9I, 11A-9J and 11A-9K).

1127A.6 Lockers.

1127A.6.1 General. Where lockers are provided for residents or guests, at least one locker and not less than 1 percent of all lockers shall be accessible to persons with disabilities. A path of travel not less than 36 inches (914 mm) in clear width shall be provided to these lockers. See Section 1127A.9 for required clear space, allowable reach ranges and requirements for control and operating mechanisms.

1127A.7 Signs.

1127A.7.1 General. All accessible toilet and bathing facilities shall be identified by the “International Symbol of Accessibility.” Signs need not be provided for facilities within a dwelling unit or guestroom.

1127A.7.2 Identification symbols. Doorways leading to sanitary facilities shall be identified by a geometric symbol in compliance with this section. Geometric symbols shall be centered horizontally on the door at a height of 60 inches (1524 mm) above the finish floor or ground surface measured to the center of the symbol. Edges of accessibility signage shall be rounded, chamfered or eased. Corners shall have a minimum radius of $1/8$ inch (3.2 mm). See Section 1143A.10 for additional signage requirements applicable to sanitary facilities.

1127A.7.2.1 Men’s sanitary facilities. Men’s sanitary facilities shall be identified by an equilateral triangle, $1/4$ inch (6.4 mm) thick with edges 12 inches (305 mm) long and a vertex pointing upward. The triangle symbol shall contrast with the door, either light on a dark background or dark on a light background.

1127A.7.2.2 Women’s sanitary facilities. Women’s sanitary facilities shall be identified by a circle, $1/4$ inch (6.4 mm) thick and 12 inches (305 mm) in diameter. The circle symbol shall contrast with the door, either light on a dark background or dark on a light background.

1127A.7.2.3 Unisex sanitary facilities. Unisex sanitary facilities shall be identified by a circle, $1/4$ inch (6.4 mm) thick and 12 inches (305 mm) in diameter with a $1/4$ inch (6.4 mm) thick triangle superimposed on the circle and within the 12-inch (305 mm) diameter. The triangle symbol shall contrast with the circle symbol, either light on a dark background or dark on a light background. The circle symbol shall contrast with the door, either light on a dark background or dark on a light background.

1127A.8 Toilet room fixtures and accessories.

1127A.8.1 Towel, sanitary napkins, waste receptacles. Where towel, sanitary napkins, waste receptacles and other similar dispensing and disposal fixtures are provided, at least one of each type shall be located with all operable parts, including coin slots, within 40 inches (1016 mm) from the finished floor. Controls and operating mechanisms shall comply with Section 1127A.9.6.4.

1127A.8.2 Toilet tissue dispensers. Toilet tissue dispensers shall be located on the wall within 12 inches (305 mm) of the front edge of the toilet seat. Dispensers that control delivery or that do not permit continuous paper flow shall not be used. (See Figure 11A-9B).

1127A.8.3 Mirrors. Where mirrors are provided, at least one shall be accessible. Mirrors shall be mounted with the bottom edge no higher than 40 inches (1016 mm) from the floor.

1127A.9 Space allowances and reach ranges in common use areas.

1127A.9.1 Wheelchair passage width. The minimum clear width for single wheelchair passage shall be 36 inches (914 mm) continuously. (See Figure 11A-1E).

Exception: Thirty-two inches (813 mm) in width is acceptable at a point not to exceed 24 inches (610 mm) in length.

1127A.9.2 Width for wheelchair passing. The minimum width for two wheelchairs to pass is 60 inches (1524 mm) (see Figure 11A-1F).

1127A.9.3 Wheelchair turning space. The space required for a wheelchair to make a 180-degree turn is a clear space of 60 inches (1524 mm) diameter (See Figure 11A-1D(a) or a T-shaped space, see Figure 11A-1D(b)).

1127A.9.4 Clear floor or ground space for wheelchairs.

1127A.9.4.1 Size and approach. The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 inches by 48 inches (762 mm by 1219 mm). (See Figure 11A-1G.) The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object (See Figure 11A-1G). Clear floor or ground space for wheelchairs may be part of the knee space required under some objects.

1127A.9.4.2 Relationship of maneuvering clearances to wheelchair spaces. One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or a part of three sides, additional maneuvering clearances shall be provided as shown in Figure 11A-1H.

1127A.9.4.3 Surfaces of wheelchair spaces. Clear floor or ground spaces for wheelchairs shall comply with Sections 1119A.2, 1120A.3 and 1121A.

1127A.9.4.3.1 Gratings. Gratings located in ground and floor surfaces along accessible routes shall be limited to spaces no greater than $1/2$ -inch (12.7 mm) wide in one direction. If gratings have elongated openings, they shall be placed so that the long dimension is perpendicular to the dominant direction of traffic.

1127A.9.5 Reach ranges.

1127A.9.5.1 Forward reach. If the clear floor space allows only forward approach to an object, the maximum high forward reach allowed shall be 48 inches (1219 mm) and the minimum low forward reach shall be unobstructed and no less than 15 inches (381 mm) above the floor (see Figure 11A-1I(a)). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Figure 11A-1I(b).

1127A.9.5.2 Side reach. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (1372 mm) and the low side reach shall be no less than 9 inches (228.6 mm) above the floor (see Figure 11A-1J(a) and 11A-1J(b)). If the side reach is over an obstruction, the reach and clearances shall be as shown in Figure 11A-1J(c).

1127A.9.6 Controls and operating mechanisms.

Note: See also Section 1142A, for electrical installation.

1127A.9.6.1 General. Controls and operating mechanisms in accessible spaces, along accessible routes or as part of accessible elements (e.g., light switches and dispenser controls) shall comply with this section.

1127A.9.6.2 Clear floor space. Clear floor space complying with Section 1127A.9.4 that allows a forward or parallel approach by a person using a wheelchair shall be provided at controls, dispensers, receptacles and other operable equipment.

1127A.9.6.3 Height. Controls shall be located no higher than 48 inches (1219 mm), and no lower than 15 inches (381 mm), above the finished floor measured to the center of the grip. If the reach is over an obstruction (for example, washer or dryer) between 20 and 25 inches (508 and 635 mm) in depth, the maximum height is reduced to 44 inches (1118 mm) for forward approach, or 46 inches (1168 mm) for side approach, provided the obstruction is no more than 24 inches (610 mm) in depth. Controls that do not satisfy these specifications are acceptable, provided that comparable controls or outlets, that perform the same functions, are provided within the same area and are accessible.

1127A.9.6.4 Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 pounds (22.2 N) of force.

1127A.10 Common accessible laundry rooms.

1127A.10.1 General. Where common use laundry rooms are provided, at least one of each type of appliance provided in each laundry area shall be accessible, shall be on an accessible route and shall comply with this section. Such appliances include clothes washing machines, dryers, soap dispensers and any related features such as wash sinks, tables and storage areas.

Where laundry rooms are provided on floors of an elevator building, each laundry room shall be accessible. Where there is one laundry room on a ground floor in each building, each laundry room shall be accessible. Where there is a laundry room on the ground floor of a building and another located in the basement, it is acceptable to have only the ground floor laundry room accessible.

1127A.10.2 Clear floor space. There shall be a minimum clear space 30 inches perpendicular by 48 inches parallel (762 mm by 1219 mm) in front of clothes washers and dryers required to be accessible. There shall be a minimum clear space 30 inches by 48 inches (762 mm by 1219 mm) provided for at least one of each type of fixture or appliance provided in the laundry room (e.g., soap dispensers, wash sinks, tables, storage areas).

1127A.10.3 Controls. Clothes washers and dryers including stacked clothes washers and dryers required to be accessible shall have controls (including coin slots) within the reach range of a seated user. Controls shall be located

no higher than 48 inches (1219 mm), and no lower than 15 inches (381 mm), above the finished floor measured to the center of the grip. If the reach is over an obstruction (for example, washer or dryer) between 20 and 25 inches (508 and 635 mm) in depth, the maximum height is reduced to 44 inches (1118 mm) for forward approach, or 46 inches (1168 mm) for side approach. Controls that do not satisfy these specifications are acceptable, provided that comparable controls or outlets, that perform the same functions, are provided within the same area and are accessible.

Controls shall be operable with one hand and not require tight grasping, pinching or twisting of the wrist.

1127A.10.4 Washing machines and clothes dryer. Washing machines and clothes dryers in accessible common use laundry rooms shall be front loading.

1127A.11 Storage.

1127A.11.1 General. If fixed storage facilities such as cabinets, shelves, closets or drawers are provided where access is required by Sections 1.8.2.1.2 and 1102A, at least one of each type of facility provided shall comply with this section. Additional storage may be provided outside of the reach ranges shown in Figure 11A-1J.

1127A.11.2 Clear floor space. A clear floor space at least 30 inches by 48 inches (762 mm by 1219 mm) complying with Section 1127A.9.4 that allows either a forward or parallel approach by a person using a wheelchair shall be provided at accessible storage facilities.

1127A.11.3 Height. Accessible storage spaces shall be within at least one of the reach ranges specified in Section 1127A.9.5. Clothes rods shall be a maximum of 54 inches (1372 mm) from the floor for a side approach (see Figure 11A-1J). Where the distance from the wheelchair to the clothes rod or shelf exceeds 10 inches (254 mm), as in closets without accessible doors, the height and depth to the rod or shelf shall comply with Figure 11A-1J.

1127A.11.4 Hardware. Hardware for accessible storage facilities shall comply with Section 1127A.9.6. Touch latches and U-shaped pulls are acceptable.

1127A.12 Fixed or built-in seating, tables and counters.

1127A.12.1 Minimum seating. Where fixed or built-in seating, tables or counters are provided for residents or guests, 5 percent, but not less than one, shall be accessible as provided in this section.

1127A.12.2 Seating. When seating spaces for persons in wheelchairs are provided at fixed tables or counters, clear floor space complying with Section 1127A.9.4 shall be provided. Such clear floor space shall not overlap knee space by more than 19 inches (483 mm). (See Figure 11A-1K).

1127A.12.3 Knee clearance. When seating for persons in wheelchairs is provided at fixed tables or counters, knee spaces at least 27 inches (686 mm) high, 30 inches (762 mm) wide and 19 inches (483 mm) deep shall be provided. (See Figure 11A-1K).

1127A.12.4 Height of work surfaces. The tops of tables and counters shall be 28 inches to 34 inches (711 mm to 864 mm) from the floor or ground.

Division IV – DWELLING UNIT FEATURES**Division IV Table of Contents**

Section 1128A	Covered Dwelling Units
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**SECTION 1128A
COVERED DWELLING UNITS**

1128A.1 General. Covered multifamily dwelling units shall be adaptable and accessible into and throughout the dwelling unit as provided in this division.

Note: See Sections 1101A “Application” and 1102A “Building Accessibility” for dwelling units required to comply with this division.

**SECTION 1129A
Reserved**

**SECTION 1130A
ACCESSIBLE ROUTE WITHIN COVERED
MULTIFAMILY DWELLING UNITS**

1130A.1 General. An accessible route shall be provided through all rooms and spaces of the dwelling unit. The accessible route shall pass through the primary entry door, and shall connect with all additional exterior doors, required clear floor spaces at kitchen appliances and bathroom fixtures. For the purpose of this section, “accessible routes” may include hallways, corridors and ramps.

Exception: An accessible route is not required from the interior of the unit into a basement or garage, except as provided in Section 1105A.1.

1130A.2 Width. The accessible route into and throughout covered multifamily dwelling units shall be at least 36 inches (914 mm) wide.

**SECTION 1131A
CHANGES IN LEVEL ON ACCESSIBLE ROUTES**

1131A.1 Changes in level not exceeding 1/2 inch. Abrupt changes in level along any accessible route shall not exceed 1/2 inch (12.7 mm). When changes in level do occur, they shall be beveled with a slope no greater than 1 unit vertical in 2 units horizontal (50-percent slope). Changes in level not exceeding 1/4 inch (6.35 mm) may be vertical.

1131A.2 Changes greater than 1/2 inch. Changes in level greater than 1/2 inch (12.7 mm) shall be made by means of a ramp, elevator or platform (wheelchair) lift. See Section 1122A for ramps and Section 1124A.11 for platform (wheelchair) lifts.

**SECTION 1132A
DOORS**

1132A.1 Primary entry doors and required exit doors. The primary entry door and all required exit doors shall comply with the requirements of this section. The requirements of Sections 1126A.3 shall apply to maneuvering clearances at the side of the door exposed to common or public use spaces (e.g., entry or exit doors which open from the covered multifamily dwelling unit into a corridor, hallway or lobby, or directly to the outside).

1132A.2 Interior doors and secondary exterior doors. Except as allowed by Section 1109A.2, doors intended for user passage and secondary exterior doors shall comply with this section. The provisions of this section shall apply to the dwelling unit side of doors leading from the interior of the dwelling unit to an unfinished basement or an attached garage.

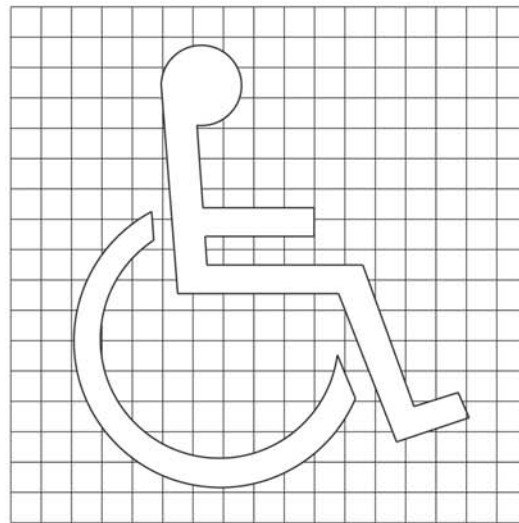
1132A.3 Width and height of doors. Doors shall comply with the following:

1. Doors shall not be less than 6 feet 8 inches (2032 mm) in height.
2. Swinging doors shall provide a net clear opening width of not less than 32 inches (813 mm), measured with the door or doors positioned at an angle of 90 degrees from the closed position. A 34-inch (864 mm) door is acceptable. The primary entry door and all required exit doors shall comply with the requirements of Section 1126A.1.
3. Swinging doors shall be capable of opening at least 90 degrees.
4. A nominal 32-inch (813 mm) clear opening provided by a standard 6-foot wide (1829 mm) sliding patio door assembly is acceptable.
5. A pair of doors, manual or automatic, must have at least one leaf which provides a clear width of not less than 32 inches (813 mm), measured with the door positioned at an angle of 90 degrees from its closed position.
6. The width of any component in the means of egress system shall not be less than the minimum width required by Section 1005.

1132A.4 Level floor or landing. See also Chapter 10. The floor or landing on each side of a door shall be level. Primary entry doors, required exit doors or secondary exterior doors with changes in height between the interior surface or floor level and the exterior surface or floor level shall comply with the following:

1. Exterior landings of impervious construction (e.g., concrete, brick, flagstone) serving primary entry doors and required exit doors are limited to not more than 1/2 inch (12.7 mm) of change in height between floor surfaces. Changes in level shall comply with Section 1131A.

> Division VII – FIGURES



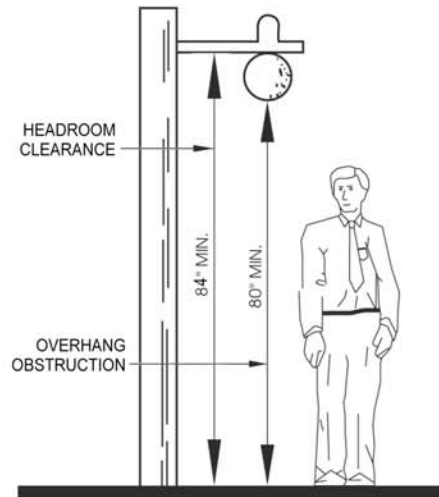
(a) SYMBOL PROPORTIONS



(b) DISPLAY CONDITIONS

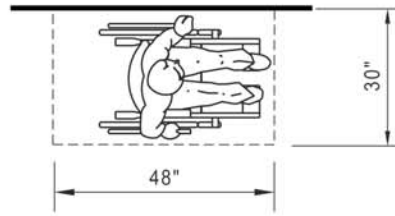
THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11A-1A—INTERNATIONAL ACCESSIBILITY SYMBOL

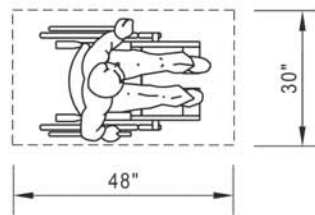


THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

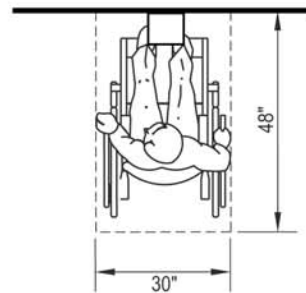
FIGURE 11A-1B—HEADROOM CLEARANCE AND OVERHANGING OBSTRUCTION



PARALLEL APPROACH



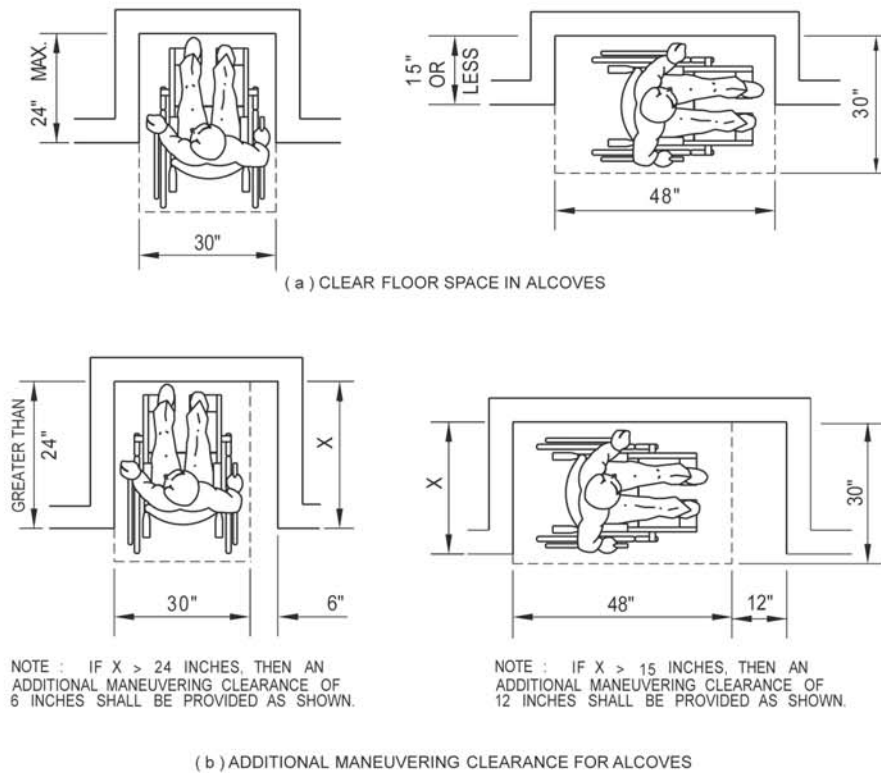
CLEAR FLOOR SPACE



FORWARD APPROACH

THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION

FIGURE 11A-1G—MINIMUM CLEAR FLOOR SPACE FOR WHEELCHAIRS



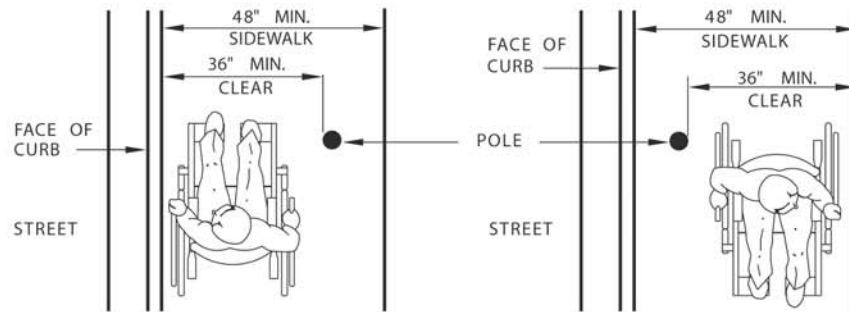
THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION

FIGURE 11A-1H—MINIMUM CLEAR FLOOR SPACE FOR WHEELCHAIRS

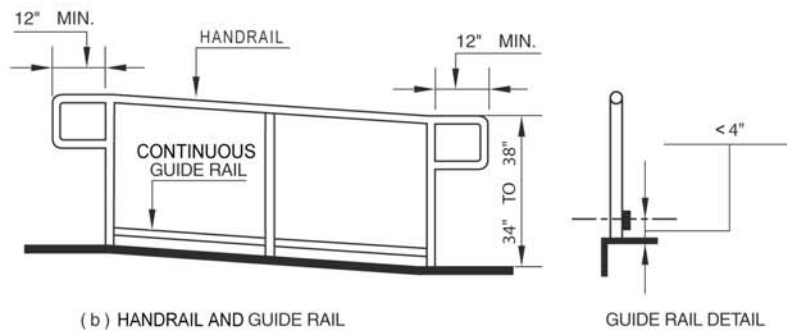
FIGURE 11A-3M - RETURNED CURB STYLE (See Figure 11B-21)

FIGURE 11A-3N - TRUNCATED DOMES (See Figure 11B-23A)

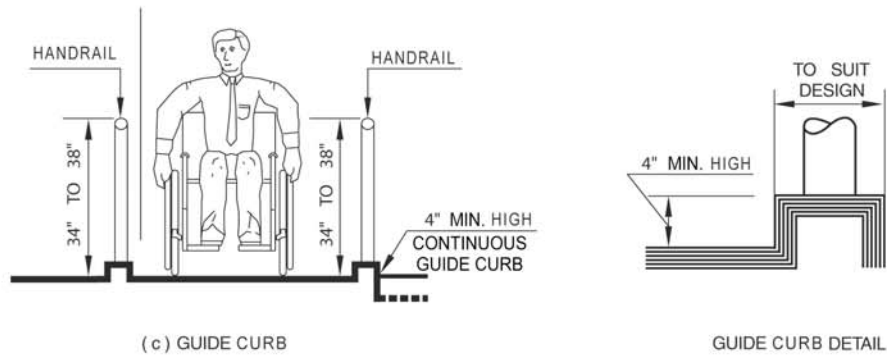
FIGURE 11A-3—(RESERVED)



(a) SIDEWALK OBSTRUCTIONS



(b) HANDRAIL AND GUIDE RAIL

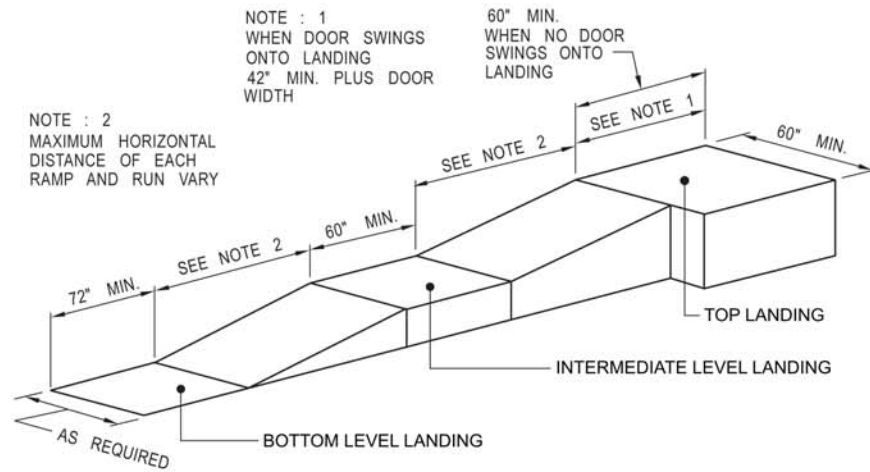


(c) GUIDE CURB

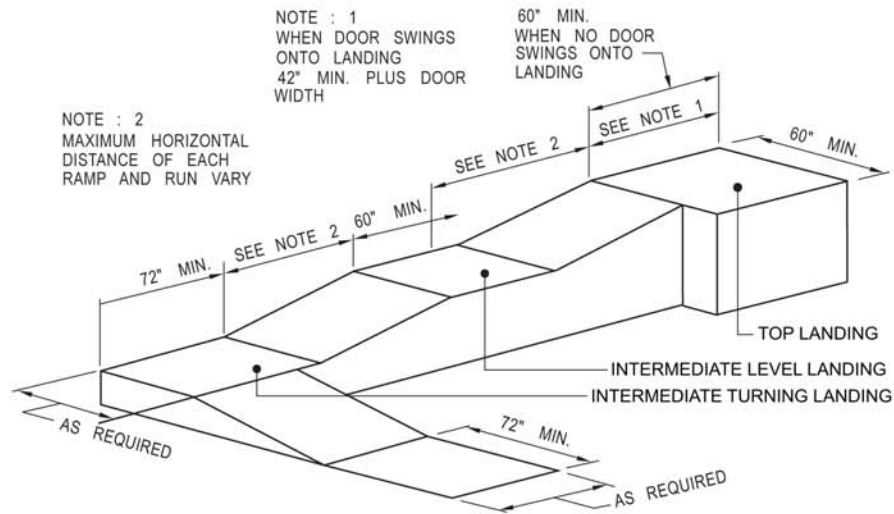
GUIDE CURB DETAIL

THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11A-5A—RAMPS AND SIDEWALKS



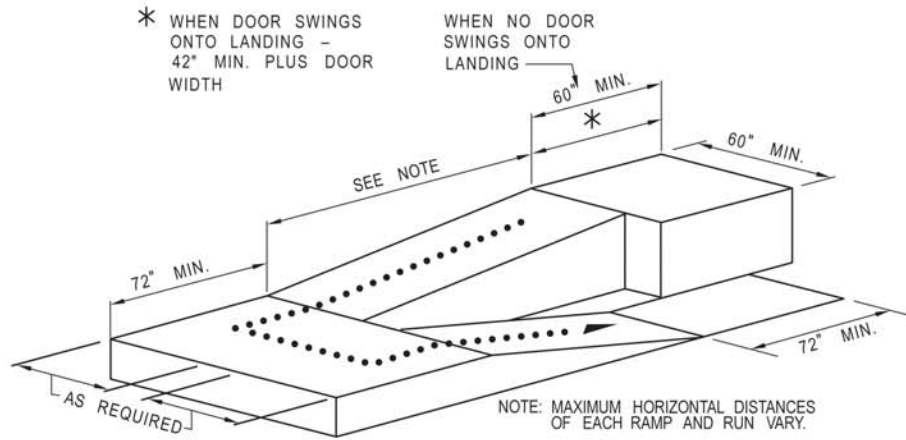
(a) STRAIGHT RAMP RUN



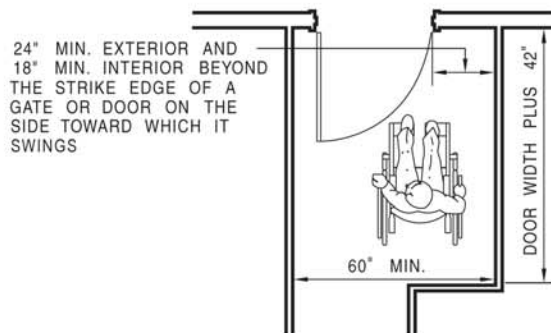
(b) RAMP WITH TURNING LANDING

THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11A-6C—RAMP DIMENSIONS



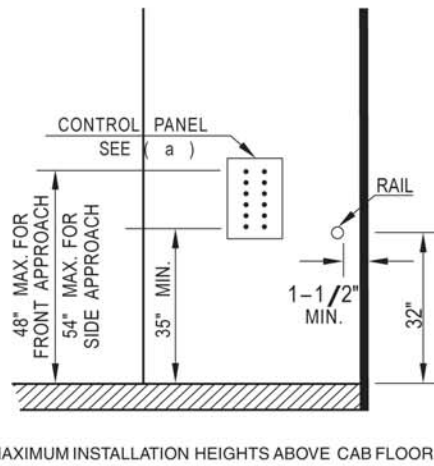
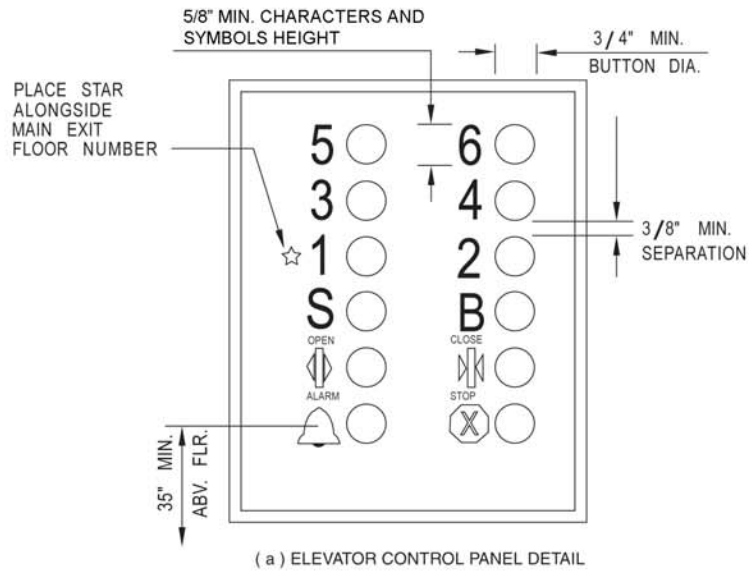
(a) RAMP WITH INTERMEDIATE SWITCH BACK LANDING



(b) RAMP LANDING AT DOORWAY

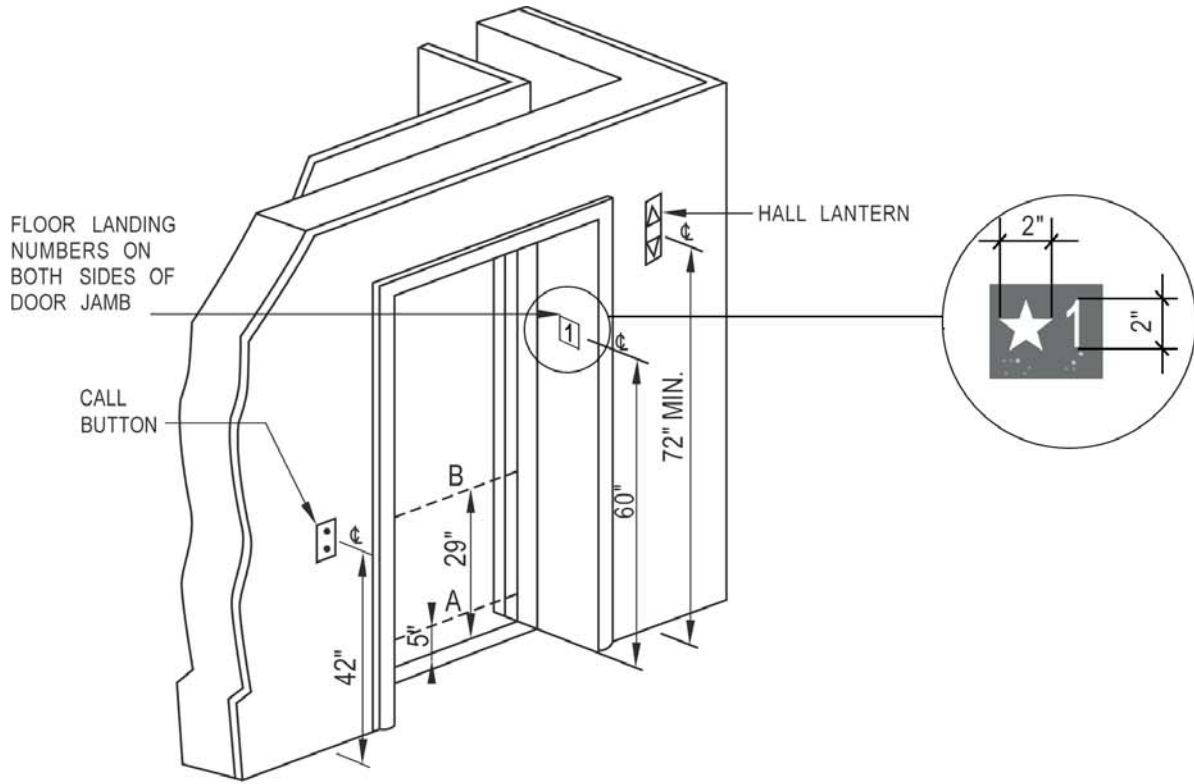
THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11A-6D—RAMP LANDING AND DOORWAY



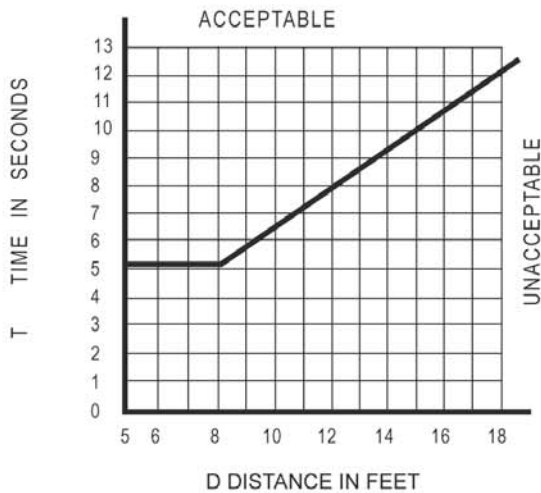
THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11A-7B—ELEVATOR CONTROL PANEL



NOTE:
THE AUTOMATIC DOOR REOPENING DEVICE IS ACTIVATED IF AN OBJECT PASSES THROUGH EITHER LINE A OR LINE B. LINE A AND LINE B REPRESENT THE VERTICAL LOCATION OF THE DOOR REOPENING DEVICE NOT REQUIRING CONTACT.

FIGURE 11A-7C—HOISTWAY AND ELEVATOR ENTRANCES



THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11A-7D—GRAPH OF TIMING EQUATION

CHAPTER 11B

ACCESSIBILITY TO PUBLIC BUILDINGS, PUBLIC ACCOMMODATIONS, COMMERCIAL BUILDINGS AND PUBLICLY FUNDED HOUSING

Note: For housing accessibility, see Chapter 11A.

Division I – NEW BUILDINGS

SECTION 1101B SCOPE

See Chapter 1, Section 1.9.1.5.

1101B.1 General.

1. Buildings or facilities or portions of buildings or facilities shall be accessible to persons with disabilities as required by this chapter.
2. Departures from particular technical and scoping requirements of this chapter by the use of other designs and technologies are permitted where the alternative designs and technologies used will provide equivalent or greater access to and usability of the building or facility.
3. In determining equivalent facilitation, consideration shall be given to means that provide for the maximum independence of persons with disabilities while presenting the least risk of harm, injury or other hazard to such persons or others.

1101B.2 Design. The design and construction of accessible building and facility elements shall be in accordance with this chapter.

1101B.3 Maintenance of accessible features.

1. A public accommodation shall maintain in operable working condition those features of facilities and equipment that are required to be accessible to and usable by persons with disabilities.
2. This section does not prohibit isolated or temporary interruptions in service or access due to maintenance or repairs.

1101B.4 Dimension conventions. Dimensions that are not stated as “maximum” or “minimum” are absolute.

1101B.5 Construction and manufacturing tolerances. All dimensions are subject to conventional industry tolerances except where the requirement is stated as a range with specific minimum and maximum end points.

1101B.6 Commercial facilities located in private residences.

1. When a commercial facility is located in a private residence, the portion of the residence used exclusively as a residence is not covered by this chapter, except as required by Section 1111B.5, but that portion used both for the commercial facility and for residential purposes is covered by the new construction and alteration requirements of this code.

2. The portion of the residence covered extends to those elements used to enter the commercial facility, including the homeowner’s front sidewalk, if any, the door or entryway, and hallways; and those portions of the residence, interior or exterior, available to or used by employees or visitors of the commercial facility, including sanitary facilities.

1101B.7 Provisions for adults. Unless otherwise indicated, the dimensions and specifications in these regulations are based upon adult dimensions and anthropometrics.

SECTION 1102B DEFINITIONS

For additional definitions pertinent to the Division of the State Architect-Access Compliance accessibility requirements, see Chapter 2, Section 202.

For the purpose of the chapter, certain terms are defined as follows:

ACCESS AISLE is an accessible pedestrian space adjacent to or between parking spaces that provides clearances in conformance with this chapter.

ACCESSIBILITY is the combination of various elements in a building, facility, site, or area, or portion thereof which allows access, circulation and the full use of the building and facilities by persons with disabilities in conformance with this chapter.

ACCESSIBLE is approachable and usable by persons with disabilities in compliance with this code.

ACCESSIBLE ELEMENT is an element specified by the regulations adopted by the Division of the State Architect-Access Compliance.

ACCESSIBLE MEANS OF EGRESS. See Section 1002.1.

ACCESSIBLE ROUTE OF TRAVEL is a continuous unobstructed path connecting all accessible elements and spaces in an accessible building or facility that can be negotiated by a person with a disability using a wheelchair and that is also safe for and usable by persons with other disabilities, and that is consistent with the definition of “Path of travel” in this section. Interior accessible routes may include corridors, floors, ramps, elevators, lifts and clear floor space at fixtures. Exterior accessible routes may include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, sidewalks, ramps, and lifts. An accessible route does not include stairs, steps or escalators.

ACCESSIBLE SPACE is a space that complies with the regulations adopted by the Division of the State Architect-Access Compliance.

ADAPTABILITY is the capability of spaces or facilities to be readily modified and made accessible.

ADMINISTRATIVE AUTHORITY is a governmental agency that adopts or enforces regulations and guidelines for the design, construction, or alteration of buildings and facilities.

AISLE is a circulation path between objects such as seats, tables, merchandise, equipment, displays, shelves, desks, etc., that provides clearances in conformance with this chapter.

AISLE, EMPLOYEE AREAS (as required for architectural accessibility) is a space that serves as a passageway, which is created by architectural components such as walls, fixed cabinetry or fixtures and not moveable components such as furniture.

AREA OF REFUGE. See Section 1002.1.

ASSEMBLY AREA is a room or space accommodating a group of individuals for recreational, educational, political, social or amusement purposes, or for the consumption of food and drink.

AUTOMATED TELLER MACHINE (ATM) means any electronic information processing device which 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.

AUTOMATIC DOOR is 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.

CIRCULATION PATH is an exterior or interior way of passage from one place to another for pedestrians, including, but not limited to, walks, hallways, courtyards, stairways and stair landings.

CLEAR means unobstructed.

CLEAR FLOOR SPACE is the minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair and occupant.

CLOSED-CIRCUIT TELEPHONE is a telephone with dedicated line(s) such as a house phone, courtesy phone or phone that must be used to gain entrance to a facility.

COMMON USE AREAS are those interior and exterior rooms, spaces or elements that are made available for the use of a restricted group of people (for example, occupants of a homeless shelter; the occupants of an office building or the guests of such occupants).

COMPLY WITH means to meet one or more specifications of these regulations.

CROSS SLOPE is the slope that is perpendicular to the direction of travel (as differentiated from running slope).

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

CURB RAMP is a sloping pedestrian way, intended for pedestrian traffic, which provides access between a walk or sidewalk and a surface located above or below an adjacent curb face, as differentiated from a ramp.

DETECTABLE WARNING is a standardized surface or feature built into or applied to walking surfaces or other elements to warn visually impaired persons of hazards in the path of travel. Only approved DSA-AC detectable warning products and directional surfaces shall be installed as provided in the California Code of Regulations (CCR), Title 24, Part 1, Articles 2, 3 and 4. Refer to CCR Title 24, Part 12, Chapter 12-11A and B for building and facility access specifications for product approval for detectable warning products and directional surfaces.

Detectable warning products and directional surfaces installed after January 1, 2001, shall be evaluated by an independent entity, selected by the Department of General Services, Division of the State Architect-Access Compliance, for all occupancies, including transportation and other outdoor environments, except that when products and surfaces are for use in residential housing, evaluation shall be in consultation with the Department of Housing and Community Development. See Government Code Section 4460.

DWELLING UNIT is a single unit of residence for a family of one or more persons. Examples of dwelling units covered by this chapter 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.

ELEMENT is an architectural or mechanical component of a building, facility, space or site; for example, a telephone, curb ramp, door, drinking fountain, seating or water closet.

ELEVATOR, PASSENGER is an elevator used primarily to carry passengers.

ENTRANCE means any access point to a building or portion of a building or facility used for the purpose of entering. An entrance includes the approach walk, the vertical access leading to the entrance platform, the entrance platform itself, vestibules if provided, the entry door(s) or gate(s), and the hardware of the entry door(s) or gate(s).

EQUIVALENT FACILITATION is an alternate means of complying with the literal requirements of these standards and specifications that provides access in terms of the purpose of these standards and specifications. See Section 1.9.1.5.

EXIT. See Section 1002.1.

FACILITY (or FACILITIES) is a building, structure, room, site, complex or any portion thereof that is built, altered, improved or developed to serve a particular purpose. Facilities shall include all or any portion of buildings, structures, site developments, complexes, equipment, roads, walks, sidewalks, passageways, parking lots or other real or personal property located on a site.

GRAB BAR is a bar for the purpose of being grasped by the hand for support.

GUARD (or GUARDRAIL). See Section 1002.1.

HANDRAIL. See Section 1002.1.

HEALTH CARE PROVIDER. See “Professional office of a health care provider.”

IF, IF...THEN denotes a specification that applies only when the conditions described are present.

INDEPENDENT ENTITY. See Section 202. Detectable warning products and directional surfaces installed after January 1, 2001, shall be evaluated by an independent entity, selected by the Department of General Services, Division of the State Architect-Access Compliance, for all occupancies, including transportation and other outdoor environments, except that when products and surfaces are for use in residential housing evaluation shall be in consultation with the Department of Housing and Community Development. See Government Code Section 4460.

INTERNATIONAL SYMBOL OF ACCESSIBILITY is that symbol adopted by Rehabilitation International’s 11th World Congress for the purpose of indicating that buildings and facilities are accessible to persons with disabilities. See Figure 11B-6.

KICK PLATE is an abrasion-resistant plate affixed to the bottom portion of a door to prevent a trap condition and protect its surface.

LEVEL AREA is a specified surface that does not have a slope in any direction exceeding one unit vertical in 50 units horizontal (2-percent slope).

LIFT, PLATFORM (WHEELCHAIR). See “Platform (Wheelchair) Lift.”

MARKED CROSSING is a crosswalk or other identified path intended for pedestrian use in crossing a vehicular way.

MAY denotes an option or alternative.

NEWLY CONSTRUCTED. See Chapter 11A, Section 1107A.14-N.

NOSE, NOSING is that portion of a stair tread or landing at the top of a stairway flight projecting beyond the face of the riser immediately below.

OPEN RISER is the space between two adjacent stair treads not closed by a riser.

OPERABLE PART is a part of a piece of equipment or appliance used to insert or withdraw objects, or to activate, deactivate or adjust the equipment or appliance (for example, coin slot, pushbutton, handle).

PASSAGE DOOR is a door other than an exit door through which persons may traverse.

PATH OF TRAVEL is a passage that may consist of walks and sidewalks, curb ramps and pedestrian ramps, lobbies and corridors, elevators, other improved areas or a necessary combination thereof, that provides free and unobstructed access to and egress from a particular area or location for pedestrians and/or wheelchair users. A “path of travel” includes a continuous, unobstructed way of pedestrian passage 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. In existing buildings, when alterations, structural repairs or additions are made, the term “path of travel” also includes the sanitary facilities, telephones, drinking fountains and signs serving the altered area.

PEDESTRIAN is 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 GRADE SEPARATION is a structure erected over or under an obstacle such as a freeway, roadway, street, railroad, stream, etc., and intended primarily for pedestrian use.

PEDESTRIAN RAMP is a walking surface which has a running slope greater than 1:20 intended for pedestrian traffic and as differentiated from a curb ramp.

PEDESTRIAN WAY is a route by which a pedestrian may pass.

PLATFORM. See Section 410.2.

PLATFORM (WHEELCHAIR) LIFT is 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.

POINT-OF-SALE DEVICE means any device used for the purchase of a good or service where a personal identification number (PIN), zip code or signature is required.

PROFESSIONAL OFFICE OF A HEALTH CARE PROVIDER is 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.

PUBLIC USE AREA means interior or exterior rooms or spaces of a building that are made available to the general public and does not include common use areas. Public use areas may be provided at a building that is privately or publicly owned.

PUBLIC WAY. See Section 1002.1.

RAMP is a walking surface which has a running slope greater than one unit vertical in 20 units horizontal (5-percent slope) intended for pedestrian traffic and as differentiated from a curb ramp.

RISER is the upright member between two adjacent stair treads.

RUNNING SLOPE is the slope that is parallel to the direction of travel (as differentiated from cross slope).

SHALL denotes a mandatory specification or requirement.

SHOPPING CENTER (or SHOPPING MALL) is one or more sales or rental establishments or stores. A shopping center may include a series of buildings on a common site, connected by a common pedestrian access route on, above or below the ground floor; that is either under common ownership or common control or developed either as one project or as a series of related projects. For the purposes of this section, “shopping center” or “shopping mall” includes a covered mall building.

SHOULD denotes an advisory specification or recommendation.

SIDEWALK. See Section 202.

SLEEPING ACCOMMODATIONS are rooms in which people may sleep; for example, dormitory and hotel or motel guest rooms or suites.

SPECIFIED PUBLIC TRANSPORTATION is transportation by bus, rail or any other conveyance (other than by aircraft) that provides the general public with general or special service (including charter service) on a regular and continuing basis.

STAGE. See Section 410.2.

STAIR. See Section 1002.1.

STAIRWAY. See Section 1002.1.

STORY means that portion of a building included between the upper surface of any floor and the upper surface of the floor next above, except that the topmost story shall be that portion of a building included between the upper surface of the topmost floor and the ceiling or roof above. If the finished floor level directly above a basement or unused under-floor space is more than 6 feet (1829 mm) above grade for more than 50 percent of the total perimeter or is more than 12 feet (3658 mm) above grade at any point, the basement or unused under-floor space shall be considered as a story. There may be more than one floor level within a story as in the case of a mezzanine or mezzanines.

STORY, FIRST means the lowest story in a building which qualifies as a story and which provides the basic services or functions for which the building is used. A floor level in a building having only one floor level shall be classified as a first story, if the floor level is not more than 4 feet (1219 mm) below grade, for more than 50 percent of the total perimeter, or more than 8 feet (2438 mm) below grade at any point.

STRUCTURAL FRAME is considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and all other members which are essential to the stability of the building as a whole.

TEXT TELEPHONE is 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.

TRANSIENT LODGING is a building, facility or portion thereof, excluding inpatient medical care facilities, that contains one or more dwelling units or sleeping accommodations. Transient lodging may include, but is not limited to, resorts, group homes, hotels, motels and dormitories.

TRANSIT BOARDING PLATFORM is 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.

TREAD is the horizontal member of a step.

VEHICULAR WAY is a route intended for vehicular traffic, such as a street, driveway or parking lot.

WALK is a surfaced pedestrian way not located contiguous to a street used, by the public. (As differentiated from the definition of "Sidewalk" in Section 202.)

WORK STATION is an area defined by equipment and/or work surfaces intended for use by employees only, and generally for one or a small number of employees at a time. Examples include ticket booths; the employee side of grocery store checkstands; the bartender area behind a bar; the employee side of snack bars, sales counters and public counters; guardhouses; toll booths; kiosk vending stands; lifeguard stations; maintenance equipment closets; counter and equipment areas in restaurant kitchens; file rooms; storage areas; etc.

SECTION 1103B BUILDING ACCESSIBILITY

1103B.1 Scope. Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications except as modified or enhanced by this chapter. Occupancy requirements in this chapter may modify general requirements, but never to the exclusion of them. When a building or facility contains more than one use, the occupancy specific accessibility provisions for each portion of the building or facility shall apply.

An accessible route of travel complying with Section 1114B.1.2 shall connect all elements and spaces within a building or facility. Multistory buildings and facilities must provide access to each level, including mezzanines, by ramp or passenger elevator complying with Section 1116B. If more than one elevator is provided, each passenger elevator shall comply with Section 1116B.

Exceptions:

1. Floors or portions of floors not customarily occupied, including, but not limited to, nonoccupiable or employee spaces accessed only by ladders, catwalks, crawl spaces, very narrow passageways or freight (nonpassenger) elevators, and frequented only by service personnel for repair or maintenance purposes, including, but not limited to, elevator pits and elevator penthouses, piping and equipment catwalks, and machinery rooms.
2. The following types of privately funded multistory buildings do not require a ramp or elevator above and below the first floor:
 - 2.1. Multistoried office buildings (other than the professional office of a health care provider) and passenger vehicle service stations less than three stories high or less than 3,000 square feet (279 m²) per story.
 - 2.2. Any other privately funded multistoried building that is not a shopping center, shopping mall or the professional office of a health care provider, or a terminal, depot or other station used for specified public transportation, or an airport passenger terminal and that is less than three stories high or less than 3,000 square feet (279 m²) per story if a reasonable portion of all facilities and accommodations

normally sought and used by the public in such a building are accessible to and usable by persons with disabilities.

The elevator exception set forth in this section does not obviate or limit in any way the obligation to comply with the other accessibility requirements in this code. For example, floors above or below the accessible ground floor must meet the requirements of this section except for elevator service. If toilet or bathing facilities are provided on a level not served by an elevator, then toilet or bathing facilities must be provided on the accessible ground floor.

If a building or facility is eligible for this exception but a passenger elevator is nonetheless planned, that elevator shall meet the requirements of Section 1116B and shall serve each level in the building. A passenger elevator that provides service from a garage to only one level of a building or facility is not required to serve other levels.

In existing buildings, where elevators are required by Section 1134B.2 or 1103B.1, if an escalator or stair is installed where none existed previously and major structural modifications are necessary for such installation, then a means of accessible vertical access via ramp, elevator or lift shall be provided.

1103B.2 Distance to elevators. In new construction of buildings where elevators are required by Section 1103B.1, and which exceed 10,000 square feet (929 m²) on any floor, an accessible means of vertical access via ramp, elevator or lift shall be provided within 200 feet (60 960 mm) of travel of each stair and each escalator. In existing buildings that exceed 10,000 square feet (929 m²) on any floor and in which elevators are required by Sections 1134B.2 and 1103B.1, whenever a newly constructed means of vertical access is provided via stairs or an escalator, an accessible means of vertical access via ramp, elevator or lift shall be provided within 200 feet (60 960 mm) of travel of each new stair or escalator.

Exception: Stairs used solely for emergency egress.

SECTION 1104B ACCESSIBILITY FOR GROUP A OCCUPANCIES

1104B.1 General. All Group A occupancies shall be accessible as provided in this chapter. See also the general requirements in Section 1114B.1.1.

1104B.2 Assistive-listening systems in assembly areas. Assembly areas, conference and meeting rooms shall provide assistive-listening systems for persons with hearing impairments as provided in this section.

Exception: This section does not apply to systems used exclusively for paging, or background music, or a combination of these two uses.

- 1. Number of personal receivers required.** The minimum number of receivers to be provided shall be equal to 4 percent of the total number of seats, but in no case less than two.
- 2. Types of listening systems.** Types of assistive-listening systems include, but are not limited to, audio-induction

loops, radio frequency systems (AM or FM) and infrared transmission.

- 3. Location.** If the assistive-listening system provided is limited to specific areas or seats, then such areas or seats shall be within a 50-foot (15 240 mm) viewing distance of the stage or playing area and shall have a complete view of the stage or playing area.
- 4. Signage.** A sign shall be posted in a prominent place (for example, a customer service counter, ticket booth or assembly area entrance) indicating the availability of assistive-listening devices. The sign complying with Section 1117B.5.1, Items 2 and 3 shall include the International Symbol of Access for Hearing Loss complying with Figure 11B-14C and include wording that states, "Assistive-Listening System Available."
- 5. Fees and charges.** Nothing in this section shall preclude a facility charging for such assistive-listening system its usual fee for audiovisual equipment. However, no surcharge may be placed directly on any particular individual with a disability or any group of individuals with disabilities to cover the costs of such equipment.
- 6. Permanent and portable systems.** Permanently installed assistive-listening systems are required in areas if (1) they accommodate at least 50 persons or if they have audio-amplification systems, and (2) they have fixed seating. If portable assistive-listening systems are used for conference or meeting rooms, the system may serve more than one room. An adequate number of electrical outlets or other supplementary wiring necessary to support a portable assistive-listening system shall be provided.

1104B.3 Auditoriums, assembly halls, theaters and related facilities.

1104B.3.1 Seating. In all assembly places where seating is provided, there shall be spaces for persons using wheelchairs and semi-ambulant persons, as provided in this section.

Exceptions:

- In existing buildings and facilities when the enforcing agency determines that compliance with the seating requirements of this code would create an unreasonable hardship, such requirements shall not apply. When the unreasonable hardship finding is applied, at least 1 percent of the total seating provided shall be accessible to and usable by persons with disabilities who use wheelchairs, and such seating shall comply with the level requirements and the individual space requirements of this code.
- When an existing theater is subdivided into more than one facility having upper levels not accessible by ramp or elevator, and the enforcing agency determines that full compliance with this code would create an unreasonable hardship, such upper levels need not be made accessible, provided all facilities at grade are accessible and any event, showing of motion pictures or other activities

made available to the public in all of the facilities are scheduled to ensure that all such functions are available to the public in the accessible facility.

1104B.3.2 Accessibility to key facilities. Seating for persons with disabilities shall be accessible from the main lobby or from a primary entrance, together with related toilet facilities.

1104B.3.3 Variety of locations. Accessible seating or accommodations in places of public amusement and resort, including theaters, concert halls and stadiums, shall be provided in a variety of locations so as to provide persons with disabilities a choice of admission prices otherwise available to members of the general public.

1104B.3.4 Wheelchair spaces.

1. The number of such spaces is as shown in Table 11B-1.

**TABLE 11B-1
WHEELCHAIR SEATING SPACES**

SEATING CAPACITY	NO. OF WHEELCHAIR SEATING SPACES
4 to 25	1
26 to 50	2
51 to 150	4
151 to 300	5
301 to 500	6
501 to 5,000	6, plus 1 for each 100, or fraction thereof, between 501 through 5,000
5,001 and over	46, plus 1 for each 200, or fraction thereof, over 5,000

2. The ground or floor at spaces shall be level and shall comply with Section 1124B.

1104B.3.5 Placement of wheelchair locations. Wheelchair areas shall be an integral part of any fixed seating plan, and shall be arranged so as to provide persons with disabilities a choice of admission prices and lines of sight comparable to those for members of the general public. Each wheelchair area shall adjoin an accessible route which shall also serve as a means of egress in case of emergency. At least one companion fixed seat shall be provided next to each wheelchair seating area. When the seating capacity exceeds 300, wheelchair spaces shall be provided in more than one location in addition to complying with Section 1104B.3.3.

Exceptions:

1. Accessible viewing positions where seating capacity is less than 300 may be clustered for bleachers, balconies and other areas having sight lines that require slopes of greater than one unit vertical in 20 units horizontal (5-percent slope). Equivalent accessible viewing positions may be located on levels having accessible egress.
2. Where it is determined that dispersing accessible seating throughout an existing assembly area would create an unreasonable hardship, accessible seating areas may be clustered. Each accessible seating area shall have provisions for companion seating and shall be located on an

accessible route that also serves as a means of emergency egress.

1104B.3.6 Size of wheelchair location. Each wheelchair location shall provide minimum clear floor or ground space as shown in Figure 11B-15, and shall adjoin an egress aisle on at least one side.

1104B.3.7 Removable seats. Readily removable seats may be installed in these wheelchair spaces when such spaces are not required to accommodate wheelchair users.

1104B.3.8 Seating for semi-ambulant individuals. In addition to spaces provided for wheelchair users as noted in Sections 1104B.3.4 through 1104B.3.7 above, there shall be provided seating for semi-ambulant individuals. The number of such seating shall be equal to at least 1 percent of the total seating and shall be no fewer than two. Such seats shall provide at least 24 inches (610 mm) clear leg space between the front of the seat to the nearest obstruction or to the back of the seat immediately in front.

1104B.3.9 Designated aisle seats. In addition to the wheelchair spaces required, 5 percent, but not less than one, of all fixed seats, shall be designated aisle seats with no armrests on the aisle side, or with removable or folding armrests on the aisle side. The designated aisle seats shall be those located closest to accessible routes. Each such seat shall be identified by a sign or marker with the International Symbol of Accessibility (see Figure 11B-6). Signage notifying patrons of the availability of such seats shall be posted at the ticket office. Signs and markers shall comply with Section 1117B.5.1 Items 2 and 3, as applicable.

1104B.3.10 Life safety. In determining the location of seating for persons with disabilities, life safety shall be considered, and all seating provided must comply with the fire and panic safety requirements of the State Fire Marshal.

1104B.3.11 Access to performing areas. An accessible route shall connect wheelchair seating locations with performing areas, including stages, arena floors, dressing rooms, locker rooms and other spaces used by performers.

1104B.3.12 Stages, enclosed and unenclosed platforms and orchestra pits. Stages, enclosed and unenclosed platforms and orchestra pits shall be made accessible to persons with disabilities.

Exceptions:

1. When the enforcing agency finds that requiring compliance with this code, for an enclosed or unenclosed platform or depressed area not more than 24 inches (610 mm) above or below an adjacent accessible level, would create an unreasonable hardship, the enclosed and unenclosed platform or depressed area shall be made accessible by a portable ramp with a slope not exceeding one unit vertical in 12 units horizontal (8.33 percent slope).
2. In existing buildings and facilities, all stages, enclosed or unenclosed platforms, and orchestra pits need not be accessible when the enforcing agency determines that compliance with this code would create an unreasonable hardship.

1104B.3.13 Ticket booths. Customer and employee sides of ticket booths and of concession and refreshment sales facilities shall be made accessible to persons with disabilities.

1104B.3.14 Miscellaneous areas. Public toilets and other public areas shall be made accessible to persons with disabilities.

1104B.4 Stadiums, grandstands, bleachers, athletic pavilions, gymnasiums and miscellaneous sport-related facilities.

1104B.4.1 Spectator seating. Spectator seating shall comply with Section 1104B.3.

1104B.4.2 Ticket booth. Ticket booths shall comply with Section 1104B.3.13.

1104B.4.3 Participation areas. Participation areas shall be accessible to persons with disabilities, including the following listed and similar activity areas:

1. Tennis, racquetball and handball courts.
2. Gymnasium floor areas and general exercise rooms.
3. Basketball, volleyball and badminton courts, and bowling lanes.
4. Swimming pool deck areas shall be accessible, and a mechanism to assist persons with disabilities in gaining entry into the pool and in exiting from the pool shall be provided. Such a mechanism may consist of a swimming pool lift device that meets all of the following criteria:
 - 4.1. Have a seat that meets all of the following:
 - 4.1.1. The seat shall be rigid;
 - 4.1.2. The seat shall be not less than 17 inches (423 mm) and not more than 19 inches (483 mm), inclusive of any cushioned surface that might be provided, above the pool deck;
 - 4.1.3. The seat shall have two armrests. The armrest on the side of the seat by which access is gained shall be either removable or fold clear of the seat;
 - 4.1.4. The seat shall have a back support that is at least 12 inches (305 mm) tall;
 - 4.1.5. The seat shall have an occupant restraint for use by the occupant of the seat, and the restraint shall meet the standards for operable controls in compliance with Section 1117B.6, Items 1 through 4.
 - 4.2. Be capable of unassisted operation from both the deck and water levels.
 - 4.3. Be stable and not permit unintended movement when a person is getting into or out of the seat.
 - 4.4. Be designed to have a live-load capacity of not less than 300 pounds (137 kg).
 - 4.5. Be positioned so that, if the pool has water of different depths, it will place the operator into water that is at least 3 feet (914 mm) deep.

4.6. Lower the operator at least 18 inches (457 mm) below the surface of the water.

5. Athletic team rooms and facilities, playing fields and running tracks.

1104B.4.4 Clubrooms. Clubrooms shall be made accessible to persons with disabilities.

1104B.4.5 Sanitary and locker facilities. Where spectator and/or participant sanitary and/or locker facilities are provided, they shall conform with the requirements in Section 1115B.

1104B.5 Dining, banquet and bar facilities.

1. **General.** Dining, banquet and bar facilities shall be made accessible to persons with disabilities as provided in this section. All areas where each type of functional activity occurs shall be made accessible.

Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation is provided.
2. In existing buildings, these regulations shall not apply when legal or physical constraints would not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.
2. **Entrance.** Access to these facilities shall be provided at entrances and exits as required by Section 1133B.1.1.
3. **Raised or sunken areas.** All raised or sunken areas, including dining areas, loggias and outdoor seating areas, shall be accessible. A raised platform where a head table or speaker's lectern is located shall be accessible. Open edges of raised or sunken areas shall be protected as required by Sections 1013 Guards, 1133B.8.1 Warning curbs, or by other means as required by this code. For existing buildings, see Section 1120B, Floors and Levels.
4. **Seating.** Each dining, banquet and bar area shall have one wheelchair seating space for each 20 seats, with at least one minimum wheelchair seating space per functional area. Such seating shall be designed and arranged to permit use by wheelchair occupants, and shall comply with Section 1122B, Fixed or Built-in Seating, Tables and Counters. Access to such seating spaces shall be provided with main aisles not less than 36 inches (914 mm) clear width. In establishments where separate areas are designated for smoking and nonsmoking patrons, the required number of accessible fixed tables (or counters) shall be proportionally distributed between the smoking and nonsmoking areas. Accessible seating spaces shall be integrated with general seating to allow a reasonable selection of seating area and to avoid having one area specifically highlighted as the area for persons with disabilities. The ratio of accessible seating is based on the total number of seats provided. Where food or drink is served at counters exceeding 34 inches (865 mm) in

height for consumption by customers seated or standing at the counter, a portion of the main counter which is 60 inches (1525 mm) in length minimum shall be provided in compliance with Section 1122B.

5. **Food service aisles.** Food service aisles shall be a minimum of 36 inches (914 mm) of clear width with a preferred width of 42 inches (1067 mm) where passage of stopped wheelchairs by pedestrians is desired. Tray slides shall be mounted no higher than 34 inches (864 mm) above the floor as shown in Figure 11B-16. If self-service shelves are provided, at least 50 percent of each type must be within the reach ranges in Sections 1118B.5 and 1118B.6.
6. **Tableware and condiment areas.** Self-service tableware, dishware, condiments, food and beverage display shelves and dispensing devices shall comply with Sections 1118B and 1122B.4. See Figure 11B-17.
7. **Restrooms.** Restrooms and powder rooms shall conform to the requirements in Section 1115B.
8. **Food preparation areas.** Access to food preparation areas shall comply with the provisions for entrance doors and doorways in Section 1008, and aisles in Sections 1017 and 1017.2.

1104B.6 Religious facilities.

1104B.6.1 General. Religious facilities shall be made accessible to persons with disabilities as provided in this section.

Exception: In existing buildings, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation is provided.

1104B.6.2 Sanctuary. Sanctuary areas shall be made accessible to persons with disabilities.

1104B.6.2.1 Wheelchair seating spaces in these areas shall conform to the requirements in Section 1104B.3.1.

1104B.6.2.2 Wheelchair access shall be provided to raised platforms, choir rooms, choir lofts, performing areas and other similar areas.

Exception: In existing buildings, these regulations shall not apply to choir lofts when the enforcing agency determines that such compliance would create an unreasonable hardship.

1104B.6.3 Assembly areas. Assembly areas shall be made accessible to persons with disabilities. Enclosed and unenclosed platforms and stages in assembly areas shall conform to these requirements.

1104B.6.4 Classrooms and offices. Classrooms and offices shall have entry doors that conform to the requirements in Chapter 10.

1104B.6.5 Sanitary facilities. Sanitary facilities shall conform to the requirements in Section 1115B.

SECTION 1105B ACCESSIBILITY FOR GROUP B OCCUPANCIES

Group B occupancies shall be accessible as provided in this chapter. See also the general requirements in Section 1114B.1.1.

Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation is provided.
2. In existing buildings, the provisions of this section shall not apply when legal or physical constraints will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.
3. For floors and levels in new and existing buildings, see Section 1120B.

1105B.1 General. The provisions of this section apply to the specified types of facilities and identify specific requirements of accessibility and usability which shall be provided for each of the listed occupancy uses.

1105B.2 Group B occupancies. Group B occupancies used for assembly purposes shall conform to the requirements as specified in Section 1114B.1.1. For floors and levels in dining, banquet and bar facilities, see Section 1120B.

1105B.3 Office buildings and personal and public service facilities. Office buildings and personal and public service facilities shall conform to the provisions of this section.

1105B.3.1 Facilities covered. Facilities covered in this section are those that are used by the public as customers, clients, visitors or which are potentially places of employment and shall include, but not be limited to, the following requirements:

1. All types of general and specialized business professional offices, including those related to professional medicine or dentistry, insurance, real estate, attorneys, credit bureaus, consultants, counseling and accounting.
2. All types of sales establishments, including outlets for all general and special merchandise and equipment, including personal and household furnishings and supplies, foods, sporting equipment, office supplies, vehicles and related parts and supplies, building materials and pet shops.
3. All personal and public service facilities, including banks, savings and loan companies, credit unions, newspaper and printing establishments, photographic studios, launder mats, cleaning and laundry outlets, veterinarian clinics and hospitals, automobile rental agencies, travel bureaus, public utility facilities, police stations and detention facilities, courtrooms and fire stations.
4. In addition to the requirements of this section, all areas used for business transactions with the public shall comply with Sections 1110B.1, Sales, and

1122B, Fixed or Built-in Seating, Tables, and Counters.

1105B.3.2 Business and professional offices. Areas to be made accessible include the following:

1. Client and visitor areas and office areas, together with related toilet rooms.
2. Conference rooms, counseling rooms or cubicles and similar areas.
3. Employee work areas shall have a minimum of 36 inches (914 mm) clear width access, except as modified in other portions of these regulations. See Sections 1133B.6.1 and 1133B.6.2.
4. Professional medical and dental offices shall be made accessible and shall also comply with Section 1109B.

1105B.3.3 Personal and public service facilities. Areas to be made accessible include the following:

1. Client and visitor areas, office areas and related toilet rooms shall be made accessible.
2. Employee work areas shall have a minimum of 36 inches (914 mm) clear width access, except as modified in other portions of these regulations. See Sections 1133B.6.1 and 1133B.6.2.
3. Automated teller machines used by a financial institution and its customers for the primary purposes of executing financial transactions shall be located on an accessible route of travel complying with Section 1114B.1.2 and shall comply with Section 1117B.7.

1105B.3.4 Public utility facilities. Areas to be made accessible include the following:

1. Office areas, meeting rooms and similar areas together with related toilet rooms shall be made accessible.
2. Public tour areas, to the extent that such public tours are conducted through or about a facility, or where the public is permitted to walk in such areas, shall provide accessibility in those portions of the facility and grounds where this occurs.

Exceptions:

1. Facilities located in operational areas which would not have any reasonable availability to or usage by persons who use wheelchairs for mobility are not subject to the wheelchair accessibility requirements of these regulations.
2. When the enforcing agency determines that compliance with this subsection would create an unreasonable hardship, an exception to such provision shall be granted when equivalent facilitation is provided.
3. Visitor overlook facilities, orientation areas and similar public use areas, and any sanitary facilities that serve these facilities shall be made accessible.
4. Where public parking is provided, spaces shall be provided for persons with disabilities as specified in Sections 1129B and 1130B.

1105B.3.5 Police department, law enforcement, fire department facilities and courtrooms. Areas to be made accessible include the following:

1. Office areas, conference rooms, classrooms, dispatch rooms and similar areas, along with related sanitary facilities, shall be made accessible.
2. Detention area visitor rooms shall be made accessible.
3. At least one detention cell facility with supporting sanitary facilities shall be made accessible.
4. Courtroom areas, including the judge's chambers and bench, counsel tables, jury box, witness stand and public seating area shall be made accessible.

1105B.3.6 Miscellaneous general standards.

1. Circulation aisles and pedestrian ways shall be sized according to functional requirements and in no case shall be less than 36 inches (914 mm) in clear width.
2. **Storage areas.** The doorway providing access to all such areas shall not be less than 32 inches (813 mm) in clear width. Storage areas shall be made accessible in the number and dimensions provided in Section 1125B.

SECTION 1106B ACCESSIBILITY FOR GROUP E OCCUPANCIES

1106B.1 General. Group E occupancies shall be accessible as provided in this chapter. See also the general requirements in Section 1114B.1.1.

Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation is provided.
2. In existing buildings, where the enforcing agency determines that, because of physical constraints, compliance with these regulations or equivalent facilitation would create an unreasonable hardship, these regulations shall not apply. See Section 1.9.1.5.

1106B.2 Laboratory rooms. Laboratory rooms shall have at least one workstation and at least 5 percent of all workstations accessible to and usable by persons with disabilities in compliance with Section 1118B, Space Allowance and Reach Ranges, and Section 1122B, Fixed or Built-in Seating, Tables and Counters.

Exception: Where the enforcing agency determines that it would create an unreasonable hardship to require compliance with these regulations for special use rooms such as laboratory preparation rooms, supply rooms, small research laboratories, and areas containing specialized equipment not readily usable by persons with particular disabilities, such facilities need not comply with these regulations, except that a clear width of 32 inches (813 mm) shall be maintained into such rooms.

1106B.3 Teaching facility cubicles, study carrels, etc. Teaching facility cubicles, study carrels, etc., shall have 5 percent,

but always at least one cubicle or carrel in each group (language, dental, audiovisual, typing, drafting, darkrooms, etc.) made accessible to and usable by persons with disabilities in compliance with Section 1118B, Space Allowance and Reach Ranges, and Section 1122B, Fixed or Built-in Seating, Tables and Counters.

1106B.4 Library general use areas.

1. **General.** Library general use areas such as those housing card files, book stacks, periodicals, reading and study areas, reference areas, information desks, circulation counters, reserve areas, special facilities or collections, etc., shall be made accessible to persons with disabilities.
2. **Open book stacks.** Open book stacks (those available for customer use) shall be on an accessible route complying with Section 1114B.1.2, may be of normal height, and shall have main aisles no less than 44 inches (1118 mm) in clear width and side, range and end aisles no less than 36 inches (914 mm) in clear width.
In existing buildings, multitiered, closed book stacks (those restricted to employee use) are exempt from these accessibility standards.
3. **Height of book shelves.** Unless an attendant is available to assist persons with disabilities, all book shelving shall be located not more than 54 inches (1372 mm) above the floor.
4. **Card catalogs and magazine displays.** Minimum clear aisle space and maximum reach heights at card catalogs and magazine displays shall comply with Sections 1118B.5 and 1118B.6.
5. **Reading and study areas.** At least 5 percent or a minimum of one of each element of fixed seating, tables, study carrels, computers or similar workstations shall be on an accessible route complying with Section 1114B.1.2, and shall comply with Section 1118B, "Space Allowance and Reach Ranges", Section 1122B, "Fixed or Built-in Seating, Tables and Counters" and Section 1133B.6 "Aisles".
6. **Check-out areas.** At least one lane at each check-out area shall be on an accessible route complying with Section 1114B.1.2, and shall have a portion of the counter which is at least 36 inches (914 mm) in length with a maximum height of 34 inches (864 mm) above the finish floor with a 36 inch (914 mm) wide aisle on the customer side. Any traffic control or book security gates or turnstiles shall comply with Section 1133B.2.3.4.

SECTION 1107B FACTORIES AND WAREHOUSES

Factories and warehouses shall conform to the provisions of this section, Sections 1103B.1 and 1103B.1, Exception 2, for multistory buildings. See also the general requirements in Section 1114B.1.1.

Exception: In existing buildings, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship,

an exception shall be granted when equivalent facilitation is provided.

1107B.1 Factories.

1. Major or principal floor areas shall be made accessible.
2. Office areas shall be made accessible.
3. Sanitary facilities serving these areas shall be made accessible.

1107B.2 Warehouses.

1. Miscellaneous warehousing areas which are located on the floor nearest grade and those areas on other floors that are otherwise provided with access by level entry, ramp or elevator shall be made accessible.
2. Office areas shall be made accessible.
3. Sanitary facilities serving these areas shall be made accessible.

SECTION 1108B ACCESSIBILITY FOR GROUP H OCCUPANCIES

1108B.1 General. Group H occupancies shall be accessible as provided in this chapter. See also the general requirements in Section 1114B.1.1.

Exceptions:

1. In existing Group H occupancies, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation and protection are provided.
2. In existing Group H occupancies, the provisions of this section shall not apply when legal or physical constraints prevent compliance with these building standards or the provisions of equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.

1108B.2 Accessible sanitation facilities. Accessible sanitation facilities in all Group H occupancies shall be provided as specified in this chapter.

1108B.3 Accessible routes. Entrances, stairs, ramps, doors, turnstiles, corridors, walks, sidewalks and hazards shall provide accessibility as specified in Section 1133B.

1108B.4 Accessible floors and levels. Accessible floors and levels shall comply with the requirements specified in this chapter.

1108B.5 Employee work areas. Employee work areas shall be accessible by means of a 36-inch (914 mm) minimum aisle width and a 32-inch (813 mm) minimum clear opening door width, as specified in Sections 1133B.6.1 and 1133B.6.2.

1108B.6 Accessible facilities covered in this chapter are those that are used by the public as customers, clients, visitors or which are potential places of employment.

**TABLE 1115B-1
SUGGESTED DIMENSIONS FOR CHILDREN'S USE**

The Division of the State Architect-Access Compliance recommends the following dimensions as adequately serving the needs of children in projects under our jurisdiction. These recommendations are based on the federal "Recommendations for Accessibility for Children in Elementary School" and other recognized publications on access for children:

A = Adult Dimensions (age 12 and over)
E = Elementary Dimensions
K = Kindergarten and Preschool Dimensions

DIMENSION	A (inches)	SUGGESTED	
		E (inches)	K (inches)
Toilet centering from wall	18	15	12
Toilet seat height/Dimensions to top of seat	17-19	15	10-12
Grab bar height (side)	33	27	20-22
Toilet paper in front of toilet	12 max	6 max	6 max
Napkin disposal in front of toilet	12 max	12 max	N/A
Dispenser or mirror height	40 max	36 max	32 max
Lavatory/sink top height	34 max	29 max	24 max
Lavatory/sink knee clearance	27 min	24 min	19 min
Urinal lip height	17 max	15 max	13 min
Urinal flush handle height	44 max	37 max	32 max
Drinking fountain bubbler height	36 max	32 max	30 max
Drinking fountain knee clearance	27 min	24 min	22 min
Ramp/stair handrail height	34-38	27	22

For SI: 1 inch = 25.4 mm.

1115B.3 Toilet facilities.

1115B.3.1 Multiple-accommodation toilet facilities. See Figure 11B-1B. Multiple-accommodation toilet facilities shall have the following:

1. **Wheelchair clearance.** A clear space measured from the floor to a height of 27 inches (686 mm) above the floor, within the sanitary facility room, of sufficient size to inscribe a circle with a diameter not less than 60 inches (1524 mm) in size. Other than the door to the accessible water closet compartment, a door, in any position, may encroach into this space by not more than 12 inches (305 mm).
2. **Clear floor space at fixtures.** Doors shall not swing into the clear floor space required for any fixture. Doors may swing into that portion of maneuvering space which does not overlap the fixture's required clear floor space. See Figures 11B-1E (c) and (e).
3. **Accessible fixtures.** Provide a minimum of one accessible water closet in compliance with Section 1115B.4.1. At least 5 percent of lavatories, but not less than one lavatory, shall be accessible in compliance with Section 1115B.4.3.

4. Accessible water closet compartment. Accessible water closet compartments shall comply with the following:

- 4.1. The compartment shall be a minimum of 60 inches (1524 mm) wide.
- 4.2. If the compartment has a side-opening door, either in-swinging or out-swinging, a minimum 60 inches (1524 mm) wide and 60 inches (1524 mm) deep maneuvering space shall be provided in front of the water closet.
- 4.3. If the compartment has an end-opening door (facing the water closet), either in-swinging or out-swinging, a minimum 60 inches (1524 mm) wide and 48 inches (1219 mm) deep maneuvering space shall be provided in front of the water closet. The door shall be located in front of the clear floor space and diagonal to the water closet, with a maximum stile width of 4 inches (102 mm).
- 4.4. The water closet compartment shall be equipped with a door that has an automatic-closing device, and shall have a clear, unobstructed opening width of 32 inches (813 mm) when located at the end and 34 inches

(864 mm) when located at the side with the door positioned at an angle of 90 degrees from its closed position.

- 4.5. The inside and outside of the compartment door shall be equipped with a loop or U-shaped handle immediately below the latch. The latch shall be flip-over style, sliding or other hardware not requiring the user to grasp or twist. Except for door-opening widths and door swings, a clear, unobstructed access of not less than 44 inches (1118 mm) shall be provided to water closet compartments designed for use by persons with disabilities. Maneuvering space at the compartment door shall comply with Sections 1133B.2.4.2 and 1133B.2.4.3, and in no case shall the space immediately outside of the water closet compartment door be less than 48 inches (1219 mm) as measured perpendicular to the compartment door in its closed position.
5. **Large toilet rooms.** Where six or more compartments are provided within a multiple-accommodation toilet room, in addition to the water closet and compartment required by Items 3 and 4 above, provide at least one ambulatory accessible compartment. The ambulatory accessible compartment shall be 36 inches (914 mm) wide with an outward swinging self-closing door and parallel grab bars complying with Section 1115B.4.1, Item 3.
6. **Interior surfaces.** Toilet room floors shall have a stable, firm, slip resistant surface in compliance with Section 1124B.1.

1115B.3.2 Single-accommodation toilet facilities. Single-accommodation toilet facilities shall have the following:

1. **Wheelchair clearance.** There shall be sufficient space in the toilet room for a wheelchair measuring 30 inches (762 mm) wide by 48 inches (1219 mm) long to enter the room and permit the door to close. There shall be in the room a clear floor space of at least 60 inches (1524 mm) in diameter, or a T-shaped space complying with Figure 11B-12 (a) and (b). No door shall encroach into this space for more than 12 inches (305 mm). See Figure 11B-1A.
2. **Clear floor space at fixtures.** Doors shall not swing into the clear floor space required for any fixture. Doors may swing into that portion of maneuvering space which does not overlap the fixture's required clear floor space. See Figure 11B-1E (a).
3. **Accessible water closet.** Provide one accessible water closet in compliance with Section 1115B.4.1. A minimum 60 inches (1524 mm) wide and 48 inches (1219 mm) deep maneuvering space shall be provided in front of the water closet.
4. **Accessible route.** All doors, fixtures and controls shall be on an accessible route. The minimum clear width of an accessible route shall be 36 inches (914 mm) except at doors (see Section 1133B.2). If a person in a wheelchair must make a turn around an ob-

struction, the minimum clear width of the accessible route shall be as shown in Figure 11B-5E. See also Figure 11B-1A.

5. **Interior surfaces.** Toilet room floors shall have a stable, firm, slip resistant surface in compliance with Section 1124B.1.
6. **Accessible lavatory.** Provide one accessible lavatory in compliance with Section 1115B.4.3.
7. **Privacy latch.** The entrance door shall contain a privacy latch which complies with Section 1117B.6, Controls and operating mechanisms.

For bathrooms serving residential occupancies, see Section 1111B.4.6 and Chapter 11A.

Exception: In an existing building, a single-accommodation toilet facility may have the water closet fixture located in an area which provides a clear space of not less than 36 inches (914 mm) wide by 48 inches (1219 mm) long in front of the water closet.

1115B.4 Accessible fixtures.

1115B.4.1 Accessible water closets. Water closets required to be accessible shall comply with this subsection:

1. The centerline of the water closet fixture shall be 18 inches (457 mm) from the side wall or partition. On the other side of the water closet, provide a minimum of 28 inches (711 mm) wide clear floor space if the water closet is adjacent to a fixture or a minimum of 32 inches (813 mm) wide clear floor space if the water closet is adjacent to a wall or partition. This clear floor space shall extend from the rear wall to the front of the water closet.
2. Provide clear floor space and maneuvering space at accessible water closets in compliance with Section 1115B.4.1, Item 2. Refer to Section 1115B.3.1, Items 4.2 and 4.3 for additionally required maneuvering space at multiple-accommodation toilet facilities. Refer to Section 1115B.3.2, Item 3 for additionally required maneuvering space at single-accommodation toilet facilities.
 - 2.1. Where a water closet is not within a water closet compartment, clear floor space around the water closet shall be 60 inches (1524 mm) minimum measured perpendicular from the side wall closest to the water closet and 56 inches (1422 mm) minimum measured perpendicular from the rear wall. See Figure 11B-1E (a).
 - 2.2. Where a wall mounted water closet is installed within an accessible water closet compartment, clear floor space around the water closet shall be 60 inches (1524 mm) minimum measured perpendicular from the side wall closest to the water closet and 56 inches (1422 mm) minimum measured perpendicular from the rear wall. Where a floor mounted water closet is installed within an accessible water closet compartment, clear floor space around the water closet shall be 60 inches (1524 mm)

(2-percent slope) in any direction. Where drains are provided, grate openings shall be a maximum of $1/4$ inch (6.4 mm) and located flush with the floor surface.

1115B.4.4.8 Shower accessories. Shower accessories shall include:

1. A folding seat mounted 18 inches (457 mm) above the floor, and with a minimum space of 1 inch (25 mm) and maximum space of $1\frac{1}{2}$ inches (38 mm) allowed between the edge of the seat and any wall. When folded, the seat shall not extend more than 6 inches (152 mm) from the mounting wall. The seat dimensions and mounting position shall comply with Figures 11B-2A, 11B-2B, 11B-2C and 11B-2D. The structural strength of seats and their attachments shall comply with Section 1115B.7.2.
2. Grab bars located on walls adjacent to and opposite the seat. Grab bars shall also comply with the diameter, loading and projection requirements of Section 1115B.7. Grab bars shall be mounted between a minimum of 33 inches (838 mm) and a maximum of 36 inches (914 mm) above the shower floor with an L-shaped grab bar mounted on walls opposite and adjacent to the front edge of the seat, but not extended to include that portion of wall over the seat. See Figure 11B-2A, 11B-2B, or 11B-2C.

1115B.4.4.9 Soap dish. When a soap dish is provided, it shall be located on the control wall at a maximum height of 40 inches (1016 mm) above the shower floor, and within reach limits from the seat.

1115B.4.4.10 Enclosures. Enclosures, when provided for shower compartments, shall not obstruct controls or obstruct transfer from wheelchairs onto shower seats.

See Figures 11B-2A, 11B-2B, 11B-2C and 11B-2D.

1115B.4.5 Accessible bathtubs. Bathtubs required to be accessible shall comply with this subsection.

1. **Floor space.** Clear floor space at bathtubs shall be as shown in Figure 11B-8.
2. **Seat.** An in-tub seat or a seat at the head end of the tub shall be provided as shown in Figures 11B-8 and 11B-9. The structural strength of seats and their attachments shall comply with Section 1115B.7.2. Seats shall be mounted securely and shall not slip during use.
3. **Grab bars.** Grab bars complying with Section 1115B.7 shall be provided as shown in Figure 11B-9.
4. **Controls.** Faucets and other controls shall be located as shown in Figure 11B-9. They shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N).
5. **Shower unit.** A shower spray unit with a hose at least 60 inches (1524 mm) long that can be used both as a fixed shower head and as a hand-held shower shall be provided.
6. **Bathtub enclosures.** If provided, enclosures for bathtubs shall not obstruct controls or transfer from wheelchairs onto bathtub seats or into tubs. Enclo-

ures on bathtubs shall not have tracks mounted on their rims.

1115B.5 Passageways. Passageways leading to sanitary facilities shall have a clear access. All doorways leading to such sanitary facilities shall comply with Section 1133B.2, Doors. Doors shall not swing into the clear floor space required for any fixture. Accessible fixtures and controls shall be on an accessible route.

1115B.6 Identification symbols. Doorways leading to sanitary facilities shall be identified by a geometric symbol in compliance with this section. Geometric symbols shall be centered horizontally on the door at a height of 60 inches (1524 mm) above the finish floor or ground surface measured to the center of the symbol. Edges of signs shall be rounded, chamfered or eased. Corners of signs shall have a minimum radius of $1/8$ inch (3.2 mm). See Section 1117B.5.1, Item 1 for additional signage requirements applicable to sanitary facilities.

1115B.6.1 Men's sanitary facilities shall be identified by an equilateral triangle, $1/4$ inch (6.4 mm) thick with edges 12 inches (305 mm) long and a vertex pointing upward. The triangle symbol shall contrast with the door, either light on a dark background or dark on a light background.

1115B.6.2 Women's sanitary facilities shall be identified by a circle, $1/4$ inch (6.4 mm) thick and 12 inches (305 mm) in diameter. The circle symbol shall contrast with the door, either light on a dark background or dark on a light background.

1115B.6.3 Unisex sanitary facilities shall be identified by a circle, $1/4$ inch (6.4 mm) thick and 12 inches (305 mm) in diameter with a $1/4$ inch (6.4 mm) thick triangle superimposed on the circle and within the 12-inch (305 mm) diameter. The triangle symbol shall contrast with the circle symbol, either light on a dark background or dark on a light background. The circle symbol shall contrast with the door, either light on a dark background or dark on a light background.

1115B.7 Grab bars, tub and shower seats. All grab bars, tub and shower seats shall comply with this section.

1115B.7.1 Diameter or width. The diameter or width of the gripping surfaces of a grab bar shall be $1\frac{1}{4}$ inches to $1\frac{1}{2}$ inches (32 mm to 38 mm) or the shape shall provide an equivalent gripping surface. If grab bars are mounted adjacent to a wall, the space between the wall and the grab bars shall be $1\frac{1}{2}$ inches (38 mm). See Figure 11B-1C.

1115B.7.2 Structural strength. The structural strength of grab bars, tub and shower seats, fasteners and mounting devices shall meet the following specifications:

1. Bending stress in a grab bar or seat induced by the maximum bending moment from the application of a 250-pound (1112 N) point load shall be less than the allowable stress for the material of the grab bar or seat.
2. Shear stress induced in a grab bar or seat by the application of a 250-pound (1112 N) point load shall be less than the allowable shear stress for the material of the grab bar or seat, and its mounting bracket or other support is considered to be fully restrained, then direct and torsional shear stresses shall not exceed the allowable shear stress.

3. Shear force induced in a fastener or mounting device from the application of a 250-pound (1112 N) point load shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.
4. Tensile force induced in a fastener by a direct tension force of a 250-pound (1112 N) point load, plus the maximum moment from the application of a 250-pound (1112 N) point load, shall be less than the allowable withdrawal load between the fastener and supporting structure.
5. Grab bars shall not rotate within their fittings.

1115B.7.3 Surface. A grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements. Edges shall have a minimum radius of $1/8$ inch (3.2 mm).

1115B.7.4 Unobstructed use. Adjacent elements, for example water closet flush valves, shall be positioned to provide unobstructed use of grab bars at the specified locations. The space between the grab bar and projecting objects below and at the ends shall be $1\frac{1}{2}$ inches (38 mm) minimum. The space between the grab bar and projecting objects above shall be 12 inches (305 mm) minimum.

Exception: The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be $1\frac{1}{2}$ inches (38 mm) minimum.

1115B.8 Accessories.

1115B.8.1 Mirrors.

1115B.8.1.1 All mirrors located above accessible lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches (1016 mm) maximum above the finish floor or ground.

1115B.8.1.2 When mirrors are provided at locations other than above lavatories or countertops, at least one shall be installed with the bottom edge of the reflecting surface 35 inches (890 mm) maximum above the finish floor or ground.

1115B.8.1.3 Mirrors in fitting and dressing areas shall comply with Section 1117B.8.

1115B.8.2 Medicine cabinets. If medicine cabinets are provided, at least one shall be located with a usable shelf no higher than 44 inches (1118 mm) above the floor. A clear floor space 30 inches by 48 inches (762 mm by 1219 mm) complying with Section 1118B.4 shall be provided in front of a medicine cabinet to allow a forward or parallel approach.

1115B.8.3 Towel, sanitary napkins, waste receptacles, dispensers and controls. Where towel, sanitary napkins, waste receptacles, dispensers, other equipment and controls are provided, at least one of each type shall be located on an accessible route, with all operable parts, including coin slots, within 40 inches (1016 mm) from the finished floor and shall comply with Section 1117B.6, Controls and operating mechanisms.

1115B.8.4 Toilet tissue dispensers. Toilet tissue dispensers shall be located on the wall within 12 inches (305 mm) of the front edge of the toilet seat, mounted below the grab bar, at a minimum height of 19 inches (485 mm), and 36 inches (914

mm) maximum to the far edge from the rear wall. Dispensers that control delivery or that do not permit continuous paper flow shall not be used. See Figure 11B-1A.

1115B.8.5 Lockers. Where lockers are provided for the public, clients, employees, members or participants, at least one locker and not less than 1 percent of all lockers shall be made accessible to persons with disabilities. A path of travel not less than 36 inches (914 mm) in clear width shall be provided to these lockers.

SECTION 1116B ELEVATORS AND PLATFORM (WHEELCHAIR) LIFTS

1116B.1 Elevators. Passenger elevators shall be accessible. Elevators required to be accessible shall be designed and constructed to comply with this section and with ASME A17.1, Safety Code for Elevators and Escalators. Freight elevators shall not be considered as meeting the requirements of this section unless the only elevators provided are used as combination passenger and freight elevators for the public and employees.

1116B.1.1 General. Size of cab and control locations and requirements for accommodation of persons with disabilities.

In buildings two or more stories in height, served by an elevator, or a building served by an elevator required by Chapter 11B, or a building served by an elevator required for accessibility by Section 1.9.1, if more than one passenger elevator is provided, each full passenger elevator shall comply with this chapter.

Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance with any regulation under this section would create an unreasonable hardship, an exception to such regulation shall be granted when equivalent facilitation is provided.
2. In existing buildings, where existing shaft configuration or technical infeasibility prohibits strict compliance with Section 1116B.1.8, the minimum car plan dimensions may be reduced by the minimum amount necessary, but in no case shall the inside car area be smaller than 48 inches (1219 mm) by 48 inches (1219 mm).
3. In existing buildings, equivalent facilitation may be provided with an elevator car of different dimensions where it can be demonstrated that a person using a wheelchair can enter and operate the elevator and when all other elements required to be accessible comply with the applicable provisions of Section 1116B.
4. These provisions shall not apply to existing buildings when legal or physical constraints will not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.

1116B.1.2 Operation and leveling. The elevator shall be automatic and provided with a self-leveling feature that will automatically bring the car to the floor landings within a

tolerance of plus or minus $\frac{1}{2}$ inch (12.7 mm) under normal loading and unloading conditions. This self-leveling shall, within its zone, be entirely automatic and independent of the operating device and shall correct the overtravel or undertravel. The car shall also be maintained approximately level with the landing, irrespective of load.

The clearance between the car platform sill and the edge of the hoistway landing shall be no greater than $1\frac{1}{4}$ inches (32 mm).

1116B.1.3 Door operation. Power-operated horizontally sliding car and hoistway doors opened and closed by automatic means shall be provided.

1116B.1.4 Door size. Minimum clear width for elevator doors shall be 36 inches (914 mm).

1116B.1.5 Door protective and reopening device. Doors closed by automatic means shall be provided with a door-reopening device that will function to stop and reopen a car door and adjacent hoistway door in case the car door is obstructed while closing.

This reopening device shall also be capable of sensing an object or person in the path of a closing door without requiring contact for activation at a nominal 5 inches and 29 inches (127 mm and 737 mm) above the floor.

Door-reopening devices shall remain effective for a period of not less than 20 seconds.

After such an interval, the doors may close in accordance with the requirements of ASME A17.1.

1116B.1.6 Hall call. The minimum acceptable time from notification that a car is answering a call (lantern and audible signal) until the doors of the car start to close shall be calculated by the following equation:

$$T = D / (1.5 \text{ ft/s}) \text{ or } T = D / (455 \text{ mm/s})$$

Where T is the total time in seconds and D is the distance from a point in the lobby or landing area 60 inches (1524 mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door (see Figure 11B-40D). For cars with in-car lanterns, T begins when the lantern is visible from the vicinity of hall call buttons and an audible signal is sounded. The minimum acceptable notification time shall be 5 seconds.

1116B.1.7 Car call. The minimum acceptable time for doors to remain fully open shall not be less than 5 seconds.

1116B.1.8 Car inside. The car inside shall allow for the turning of a wheelchair. The minimum clear distance between walls or between wall and door, excluding return panels, shall not be less than 80 inches by 54 inches (2032 mm by 1372 mm) for center opening doors, and 68 inches by 54 inches (1727 mm by 1372 mm) for side-slide opening doors. See Figure 11B-40A. Minimum distance from wall to return panel shall not be less than 51 inches (1295 mm). Elevator floor surfaces shall comply with Section 1124B — Ground and Floor Surfaces.

The centerline of car control buttons with floor designations shall be located within one of the reach ranges specified in Sections 1118B.5 and 1118B.6. Emergency controls, including the emergency stop and alarm, shall be grouped

in or adjacent to the bottom of the panel and shall be no lower than 2 feet 11 inches (889 mm) from the floor.

For multiple controls only, one set must comply with these height requirements. Floor buttons shall be provided with visual indicators to show when each call is registered. The visual indicators shall be extinguished when each call is answered.

Emergency two-way communication systems between the elevator and a point outside the hoistway shall comply with ASME A17.1. The emergency telephone handset shall be positioned no higher than 4 feet (1219 mm) above the floor, and the handset cord shall be a minimum of 2 feet 5 inches (737 mm) in length. It shall be identified by a raised telephone symbol and corresponding Braille lettering complying with Section 1117B.5.1, Item 1, and located adjacent to the device. If the telephone system is located in a closed compartment, the compartment door hardware shall comply with Section 1117B.6, Item 4. Emergency intercommunication shall not require voice communication.

Controls shall be located on a front wall if cars have center opening doors, and at the side wall or at the front wall next to the door if cars have side opening doors. See Figure 11B-40A.

Exceptions:

1. Where the elevator panel serves more than 16 openings and a parallel approach is provided, buttons with floor designations shall be permitted to be 54 inches (1372 mm) maximum above the finish floor.
2. In existing elevators, car control buttons with floor designations shall be permitted to be located 54 inches (1372 mm) above the finish floor where a parallel approach is provided.

1116B.1.9 Car controls. Identification for the visually impaired shall be as follows:

Passenger elevator car controls shall have a minimum dimension of $\frac{3}{4}$ inch (19.1 mm) and shall be raised $\frac{1}{8}$ inch (3.2 mm) plus or minus $\frac{1}{32}$ inch (0.8 mm) above the surrounding surface.

Control buttons shall be illuminated, shall have square shoulders and shall be activated by a mechanical motion that is detectable.

All control buttons shall be designated by $\frac{5}{8}$ inch (15.9 mm) minimum raised characters and standard raised symbols that conform to Sections 1117B.5.2, 1117B.5.3, 1117B.5.5 and 1117B.5.7 immediately to the left of the control button. Contracted (Grade 2) Braille that conforms to Section 1117B.5.6 shall be located immediately below the character or symbol. A minimum clear space of $\frac{3}{8}$ inch (9.5 mm) or other suitable means of separation shall be provided between rows of control buttons. See Figure 11B-40B.

The raised characters and symbols shall be white on a black background.

Controls and emergency equipment identified by raised symbols shall include, but not be limited to, "door open," "door close," "alarm bell," "emergency stop" and "tele-

phone.” The call button for the main entry floor shall be designated by a raised star at the left of the floor designation.

In elevator cars, a visual car position indicator shall be provided above the car control panel or over the door to show the position of the elevator in the hoistway. As the car passes or stops at a floor served by the elevators, the corresponding numerals shall illuminate, and an audible signal shall sound. Numerals shall be a minimum of $\frac{1}{2}$ inch (13 mm) high. The audible signal shall be no less than 20 decibels with a frequency no higher than 1,500 Hz. An automatic verbal announcement of the floor number at which a car stops or which a car passes may be substituted for the audible signal.

1116B.1.10 Hall call buttons. The centerline of the hall call buttons shall be 42 inches (1067 mm) above the floor. Buttons shall be a minimum of $\frac{3}{4}$ inch (19.1 mm) in size and shall be raised $\frac{1}{8}$ inch (3.2 mm) [plus or minus $\frac{1}{32}$ inch (0.8 mm)] above the surrounding surface. The button designating the up direction shall be on top. Visual indication shall be provided to show each call registered and extinguished when answered. Objects adjacent to, and below, hall call buttons shall not project more than 4 inches (102 mm) from the wall. Hall call buttons shall be internally illuminated with a white light over the entire surface of the button.

1116B.1.11 Handrails. A handrail shall be provided on one wall of the car, preferably the rear. The rails shall be smooth, and the inside surface at least $1\frac{1}{2}$ inches (38 mm) clear of the walls at a nominal height of 32 inches (813 mm) from the floor. Nominal equals ± 1 inch (25 mm). Thirty-two inches (813 mm) is required to reduce interference with car controls where the lowest button is centered at 35 inches (889 mm) above floor.

1116B.1.12 Minimum illumination. The minimum illumination at the car controls threshold and the landing when the car and landing doors are open shall not be less than 5 foot-candles (54 lux).

1116B.1.13 Hall lantern. A visual and audible signal shall be provided at each hoistway entrance indicating to the prospective passenger the car answering the call and its direction of travel as follows:

The visual signal for each direction shall be a minimum of $2\frac{1}{2}$ inches (64 mm) high by $2\frac{1}{2}$ inches (64 mm) wide and visible from the proximity of the hall call button.

The audible signal shall sound once for the “up” direction and twice for the “down” direction or shall have verbal annunciators that say “up” or “down.”

The centerline of the fixture shall be located a minimum of 6 feet (1829 mm) in height from the lobby floor.

The use of in-car lanterns, located in or on the car doorjamb, visible from the proximity of the hall call buttons and conforming to the above requirements, shall be acceptable.

The use of arrow shapes is preferred for visible signals.

1116B.1.14 Doorjamb marking. Passenger elevator landing jamb on all elevator floors shall have the number of the floor on which the jamb is located designated by raised characters that are a minimum of 2 inches (51 mm) in height and conform to Section 1117B.5.5 located 60 inches (1524 mm)

on center above the floor on the jamb panels on both sides of the door so that they are visible from within the elevator. On the main entry level, a raised five-pointed star shall be placed to the left of the raised character. The outside diameter of the star shall be 2 inches (51 mm) and all points shall be of equal length. Raised characters, including the star, shall be white on a black background. Contracted (Grade 2) Braille complying with Section 1117B.5.6 shall be placed below the corresponding raised characters and the star. The Braille translation for the star shall be “MAIN.”

The raised characters shall otherwise comply with Sections 1117B.5.2 and 1117B.5.3. See Figure 11B-40C. Permanently applied plates are acceptable if they are permanently fixed to the jambs.

1116B.1.15 Location. Passenger elevators shall be on an accessible route, located near a major path of travel, and provisions shall be made to ensure that they remain accessible and usable at all times the building is occupied.

1116B.2 Platform (wheelchair) lifts. Platform (wheelchair) lifts shall comply with this section.

Platform (wheelchair) lifts may be provided as part of an accessible route only for the following conditions:

1. To provide an accessible route to a performing area in an assembly occupancy, or to a speaking area or similar place (such as a dais or “head table”) in an assembly or Group B occupancy.
2. To comply with the wheelchair viewing position line-of-sight and dispersion requirements of Section 1104B.3.5.
3. To provide access to incidental occupiable spaces and rooms which are not open to the general public and which house no more than five persons, including, but not limited to, equipment control rooms and projection booths.
4. To provide access where existing site constraints or other constraints make use of a ramp or an elevator infeasible.

Exception: In existing buildings, the installation of platform (wheelchair) lifts as part of an accessible path of travel for additions or alterations is not limited to the four conditions listed in this section.

1116B.2.1 General. When platform (wheelchair) lifts are provided, the vertical distance between landings, as well as the structural design and safeguards, shall be as allowed by ASME A18.1 Safety Standard for Platform Lifts and Stairway Chair Lifts; the Department of Industrial Relations, Division of Occupational Safety and Health; and any applicable safety regulations of other administrative authorities having jurisdiction.

1116B.2.2 Unassisted entry. Platform (wheelchair) lifts shall be designed and constructed to facilitate unassisted entry, operation and exit from the lift and shall comply with the restrictions and enhancements of this section in conjunction with Title 8, of the California Code of Regulations.

1116B.2.3 Landing size. In new construction, the minimum size of landings at platform lifts shall be 60 inches by 60 inches (1524 mm by 1524 mm). Other dimensions may be substituted where it can be demonstrated that a person

1117B.7 Automated teller machines and point of sale machines.

1117B.7.1 General. Where ATMs, self-service fare vending, collection, or adjustment machines and point-of-sale devices are provided for the public they shall comply with Section 1117B.7.

Exceptions:

1. Where the enforcing agency determines that compliance with this regulation would create an unreasonable hardship, an exception may be granted when equivalent facilitation is provided through the use of other methods or materials.
2. In existing buildings, these regulations shall not apply when legal or physical constraints would not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship.
3. Card-reading devices located on fuel pump islands at gasoline service stations and motor vehicle fuel facilities shall comply with the requirements of Chapter 11C.

1117B.7.1.1 Where ATMs or fare machines are provided, they shall be provided in accordance with Section 1117B.7.1.1 for each type provided.

1117B.7.1.1.1 One ATM. Where one ATM or fare machine is provided at a location, it shall comply with Sections 1117B.7.2 through 1117B.7.8.

1117B.7.1.1.2 Two ATMs. Where two ATMs or fare machines are provided at a location, one shall comply with Sections 1117B.7.2 through 1117B.7.8 and one shall comply with Sections 1117B.6 Items 2 and 4, 1117B.7.2, 1117B.7.4, 1117B.7.5, 1117B.7.6, 1117B.7.7.2 and 1117B.7.8.

1117B.7.1.1.3 Three or more ATMs. Where three or more ATMs or fare machines are provided at a location, at least 50 percent shall comply with Sections 1117B.7.2 through 1117B.7.8 and the rest shall comply with Sections 1117B.6 Items 2 and 4, 1117B.7.2, 1117B.7.4, 1117B.7.5, 1117B.7.6, 1117B.7.7.2 and 1117B.7.8.

1117B.7.1.2 Where bins are provided for envelopes, waste paper, or other purposes, at least one of each type shall comply with Sections 1118B.4 and either 1118B.5 or 1118B.6.

1117B.7.1.3 Where point-of-sale devices are provided, all devices at each location shall comply with Sections 1117B.6 Item 4, 1117B.7.3.1, 1117B.7.7.2 and 1117B.7.9. Where a point-of-sale system is changed or modified to include a video touch screen or any other non-tactile keypad, all changed or modified point-of-sale devices at each location shall comply with Sections 1117B.6 Item 4, 1117B.7.3.1, 1117B.7.7.2 and 1117B.7.9. Where point-of-sale devices are provided at accessible check stands, sales or service counters, they shall also comply with Sections 1117B.7.2, 1117B.7.3 and 1117B.7.4.

1117B.7.2 Clear floor or ground space. A clear floor or ground space complying with Section 1118B.4 shall be provided.

Exception: Clear floor or ground space shall not be required at drive-up only ATMs, fare machines and point-of-sale devices.

1117B.7.3 Operable parts. Operable parts shall comply with Section 1117B.6.

Exception: Drive-up only ATMs, fare machines and point-of-sale devices shall not be required to comply with Section 1117B.6 Items 2 and 3.

1117B.7.3.1 Unless a clear or correct key is provided, each operable part shall be able to be differentiated by sound or touch, without activation.

1117B.7.4 Privacy. Machines and devices shall provide the opportunity for the same degree of privacy of input and output available to all individuals.

1117B.7.5 Speech output. Machines shall be speech enabled. Operating instructions and orientation, visible transaction prompts, user input verification, error messages, and all displayed information for full use shall be accessible to and independently usable by individuals with vision impairments. Speech shall be delivered through a mechanism that is readily available to all users, including but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized.

Exceptions:

1. Audible tones shall be permitted instead of speech for visible output that is not displayed for security purposes, including but not limited to, asterisks representing personal identification numbers.
2. Advertisements and other similar information shall not be required to be audible unless they convey information that can be used in the transaction being conducted.
3. Where speech synthesis cannot be supported, dynamic alphabetic output shall not be required to be audible.

1117B.7.5.1 User control. Speech shall be capable of being repeated or interrupted. Volume control shall be provided for the speech function.

Exception: Speech output for any single function shall be permitted to be automatically interrupted when a transaction is selected.

1117B.7.5.2 Receipts. Where receipts are provided, speech output devices shall provide audible balance inquiry information, error messages, and all other information on the printed receipt necessary to complete or verify the transaction.

Exceptions:

1. Machine location, date and time of transaction, customer account number, and the machine identifier shall not be required to be audible.
2. Information on printed receipts that duplicates information available on-screen shall not be required to be presented in the form of an audible receipt.
3. Printed copies of bank statements and checks shall not be required to be audible.

1117B.7.6 Input. Input devices shall comply with Section 1117B.7.6.

1117B.7.6.1 Input controls. At least one tactilely discernible input control shall be provided for each function. Where provided, key surfaces not on active areas of display screens shall be raised above surrounding surfaces. Where membrane keys are the only method of input, each shall be tactilely discernable from surrounding surfaces and adjacent keys.

1117B.7.6.2 Numeric keys. Numeric keys shall be arranged in a 12-key ascending or descending telephone keypad layout. The number five key shall be tactilely distinct from the other keys. See Figure 11B-41.

1117B.7.6.3 Function keys. Function keys shall comply with Section 1117B.7.6.3.

1117B.7.6.3.1 Contrast. Function keys shall contrast visually from background surfaces. Characters and symbols on key surfaces shall contrast visually from key surfaces. Visual contrast shall be either light-on-dark or dark-on-light.

Exception: Tactile symbols required by Section 1117B.7.6.3.2 shall not be required to comply with Section 1117B.7.6.3.1.

1117B.7.6.3.2 Tactile symbols. Function key surfaces shall have tactile symbols as follows: Enter or Proceed key: raised circle; Clear or Correct key: raised left arrow; Cancel key: raised letter ex; Add Value key: raised plus sign; Decrease Value key: raised minus sign.

1117B.7.7 Display Screen. The display screen shall comply with Section 1117B.7.7.

Exception: Drive-up only automatic teller machines and fare machines shall not be required to comply with Section 1117B.7.7.1.

1117B.7.7.1 Visibility. The display screen shall be visible from a point located 40 inches (1016 mm) above the center of the clear floor space in front of the machine.

1117B.7.7.1.1 Vertically mounted display screen. Where display screens are mounted vertically or no more than 30 degrees tipped away from the viewer, the center line of the display screen and other display devices shall be no more than 52 inches (1321 mm) above the floor or ground surface.

1117B.7.7.1.2 Angle-mounted display screen. Where display screens are mounted between 30 degrees and 60 degrees tipped away from the viewer, the center line of the display screen and other display devices shall be no more than 44 inches (1118 mm) above the floor or ground surface.

1117B.7.7.1.3 Horizontally mounted display screen. Where display screens are mounted no less than 60 degrees and no more than 90 degrees (horizontal) tipped away from the viewer, the center line of the display screen and other display devices shall be no more than 34 inches (864 mm) above the floor or ground surface.

1117B.7.7.2 Characters. Characters displayed on the screen shall be in a sans serif font. Characters shall be

$\frac{3}{16}$ inch (4.8 mm) high minimum based on the uppercase letter "I". Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

1117B.7.8 Braille instructions. Braille instructions for initiating the speech mode shall be provided. Braille shall comply with Section 1117B.5.6.

1117B.7.9 Point-of-sale devices. Point-of-sale systems that include a video touch screen or any other non-tactile keypad shall be equipped with either of the following:

1117B.7.9.1 A tactilely discernible numerical keypad similar to a telephone keypad containing a raised dot with a dot base diameter between 1.5 mm and 1.6 mm and a height between 0.6 mm and 0.9 mm on the number 5 key that enables a visually impaired person to enter his or her own personal identification number or any other personal information necessary to process the transaction in a manner that provides the opportunity for the same degree of privacy input and output available to all individuals.

1117B.7.9.2 Other technology, such as a radio frequency identification device, fingerprint biometrics, or some other mechanism that enables a visually impaired person to access the video touch screen device with his or her personal identifier and to process his or her transaction in a manner that provides the opportunity for the same degree of privacy input and output available to all individuals. Where a video screen overlay is provided it shall be equipped with a tactilely discernible numerical keypad complying with Section 1117B.7.9.1.

1117B.8 Fitting and dressing rooms. Where fitting or dressing rooms are provided for male or female customers, patients, employees or the general public, 5 percent, but never less than one, of dressings rooms for each type of use in each cluster of dressing rooms shall be accessible and located on an accessible route complying with Section 1114B.1.2. Examples of types of dressing rooms are those serving different genders or distinct and different functions as in different treatment or examination facilities. Where only unisex dressing rooms are provided, accessible unisex dressing rooms may be used to fulfill this requirement.

Entry doors shall conform to the requirements of Section 1133B.2 and aisles leading to such doors shall conform to Sections 1133B.6.1 and 1133B.6.2.

The bottom of mirrors provided for use by persons with disabilities shall not be greater than 20 inches (508 mm) from the floor. Mirrors to be used by persons with disabilities shall be full length, measuring at least 18 inches (457 mm) wide by 54 inches (1372 mm) high, and shall be mounted in a position affording a view to a person on the bench as well as to a person in a standing position.

Clothing hooks shall be located not greater than 48 inches (1219 mm) from the floor:

Every accessible dressing room shall have a 24-inch by 48-inch (610 mm by 1219 mm) bench fixed to the wall along the longer dimension. The bench shall be mounted 17 to 19 inches (432 to 483 mm) above the finish floor. Clear floor space shall be provided alongside the bench to allow a person using a wheelchair to make a parallel transfer onto the bench. The structural strength of the bench and attachments shall comply with Section 1115B.7.2. Where installed in conjunction with showers, swimming pools or

other wet locations, water shall not accumulate upon the surface of the bench and the bench shall have a slip-resistant surface.

The minimum clear space within the room shall be 60 inches (1524 mm) in width and length. No door shall encroach into the required space.

1117B.9 Accessible sinks. Sinks required to be accessible shall comply with this subsection.

1. A clear floor space at least 30 inches by 48 inches (762 mm by 1219 mm) complying with Section 1118B.4 shall be provided in front of a sink to allow forward approach. The clear floor space shall be on an accessible route and shall extend a maximum of 19 inches (485 mm) underneath the sink (see Figure 11B-1D).
2. Each accessible sink shall be a maximum of 6½ inches (165 mm) deep. Sinks shall be mounted with the counter or rim no higher than 34 inches (865 mm) above the finish floor. Knee clearance that is at least 27 inches (685 mm) high, 30 inches (762 mm) wide and 19 inches (485 mm) deep shall be provided underneath sinks. Hot water and drain pipes exposed under sinks shall be insulated or otherwise configured so as to protect against contact. There shall be no sharp or abrasive surfaces under sinks.
3. Faucet controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be not greater than 5 lbf (22.2 N). Lever-operated, push-type and electronically controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.

SECTION 1118B SPACE ALLOWANCE AND REACH RANGES

1118B.1 Wheelchair passage width. The minimum clear width for single wheelchair passage shall be 32 inches (813 mm) at a point and 36 inches (914 mm) continuously. See Figure 11B-10. In addition, wheelchair passage widths shall comply with Figure 11B-5E(a) and (b) for circulation around obstructions.

1118B.2 Width for wheelchair passing. The minimum width for two wheelchairs to pass is 60 inches (1524 mm). See Figure 11B-11.

1118B.3 Wheelchair turning space. The space required for a wheelchair to make a 180-degree turn is a clear space of 60 inches (1524 mm) diameter [see Figure 11B-12 (a)] or a T-shaped space. See Figure 11B-12 (b).

1118B.4 Clear floor or ground space for wheelchairs.

1. **Size and approach.** The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 inches by 48 inches (762 mm by 1219 mm). The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object. Clear floor or ground space for wheelchairs may be part of the knee space required under some objects. See Figure 11B-5A.
2. **Relationship of maneuvering clearances to wheelchair spaces.** One full unobstructed side of the clear floor or

ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or a part of three sides, additional maneuvering clearances shall be provided as shown in Figure 11B-5A(b).

3. **Surfaces for wheelchair spaces.** Clear floor or ground spaces for wheelchairs shall comply with Section 1124B Ground and Floor Surfaces.

1118B.5 Forward reach.

1118B.5.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1219 mm) maximum and the low forward reach shall be 15 inches (381 mm) minimum above the finish floor or ground. See Figure 11B-5C (a).

1118B.5.2 Obstructed high reach. Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1219 mm) maximum where the reach depth is 20 inches (508 mm) maximum. Where the reach depth exceeds 20 inches (508 mm), the high forward reach shall be 44 inches (1118 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum. See Figure 11B-5C (b) and (c).

1118B.6 Side reach.

1118B.6.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches (1219 mm) maximum and the low side reach shall be 15 inches (381 mm) minimum above the finish floor or ground. See Figure 11B-5D (a).

Exception: An obstruction shall be permitted between the clear floor or ground space and the element where the depth of the obstruction is 10 inches (254 mm) maximum.

1118B.6.2 Obstructed high reach. Where a clear floor or ground space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (864 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1219 mm) maximum for a reach depth of 10 inches (254 mm) maximum. Where the reach depth exceeds 10 inches (254 mm), the high side reach shall be 46 inches (1168 mm) maximum for a reach depth of 24 inches (610 mm) maximum. See Figure 11B-5D (b) and (c).

Exception: The top of washing machines and clothes dryers shall be permitted to be 36 inches (914 mm) maximum above the finish floor.

SECTION 1119B SPECIAL STANDARDS OF ACCESSIBILITY FOR BUILDINGS WITH HISTORICAL SIGNIFICANCE

See Section 1135B.

SECTION 1120B FLOOR AND LEVELS

1120B.1 Floors within each story. In buildings and facilities, floors of a given story shall be a common level throughout, or

shall be connected by pedestrian ramps, passenger elevators or platform (wheelchair) lifts.

Exceptions:

1. In existing buildings, other than dining banquet and bar facilities, when the enforcing agency determines that compliance with this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation is provided.
2. In existing dining, banquet and bar facilities, when the enforcing agency determines that compliance with this section would create an unreasonable hardship, an exception shall be granted, provided that a minimum of 75 percent of the dining, banquet and bar area shall be a common level throughout or shall be connected by pedestrian ramps, passenger elevators or special lifts and provided that the same services and décor are provided in an accessible space usable by the general public and are not restricted to use by people with disabilities.
3. In existing buildings, this section shall not apply when legal or physical constraints would not allow compliance with this section or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.
4. Where specifically exempted in other portions of this code.

1120B.2 Floor surface. The surface of floors shall be slip resistant and shall comply with Section 1124B.

SECTION 1121B TRANSPORTATION FACILITIES

1121B.1 General. Every station, bus stop, bus stop pad, terminal, building or other transportation facility shall incorporate the accessibility requirements of this code as modified by this chapter. The exceptions for elevators in Section 1103B do not apply to a terminal, depot or other station used for specified public transportation, or an airport passenger terminal, or facilities subject to Title II of the Americans with Disabilities Act. In such a facility, any area housing passenger services, including boarding and debarking, loading and unloading, baggage claim, dining facilities, and other common areas open to the public must be on an accessible route from an accessible entrance.

1121B.2 Bus stops and terminals.

1121B.2.1 New construction. Where provided, bus stop pads shall have a firm, stable surface with a minimum clear length of 96 inches (2438 mm) (measured from the curb or vehicle roadway edge) and a minimum clear width of 60 inches (1524 mm) (measured parallel to the vehicle roadway) to the maximum extent allowed by legal or site constraints. Bus stop pads shall connect to streets, sidewalks or pedestrian paths as part of an accessible route complying with Section 1114B.1.2. Newly constructed bus stop pads must provide a square curb surface between the pad and road or other detectable warning in accordance with Section 1133B.8.5.

Bus stop pads shall be at the same slope as the roadway in the direction parallel to roadway, and maximum one unit vertical in 50 units horizontal (2-percent slope) perpendicular to roadway.

Where provided, bus stop shelters shall be installed so as to permit a wheelchair user to enter the shelter from the public way and access a clear floor area of 30 inches by 48

inches (762 mm by 1219 mm) complying with Section 1118B.4, completely within the shelter. Such shelters shall be connected by an accessible route to the boarding area. Where provided, all bus route identification signs shall comply with Section 1117B.5.1, Item 2.

Only approved DSA-AC detectable warning products and directional surfaces shall be installed as provided in the California Code of Regulations (CCR), Title 24, Part 1, Articles 2, 3 and 4. Refer to CCR Title 24, Part 12, Chapters 12-11A and B, for building and facility access specifications for product approval for detectable warning products and directional surfaces.

Detectable warning products and directional surfaces installed after January 1, 2001, shall be evaluated by an independent entity, selected by the Department of General Services, Division of the State Architect-Access Compliance, for all occupancies, including transportation and other outdoor environments, except that when products and surfaces are for use in residential housing, evaluation shall be in consultation with the Department of Housing and Community Development. See Government Code Section 4460.

1121B.2.2 Bus stop siting and alterations.

1. Bus stop sites shall be chosen such that the areas where lifts or ramps are to be deployed comply with Section 1121B.2.1.
2. When new bus route identification signs are installed or old signs are replaced, they shall comply with the requirements of Section 1121B.2.1.

1121B.3 Fixed facilities and stations.

1121B.3.1 New construction. New stations in rapid rail, light rail, commuter rail, intercity bus, intercity rail, high speed rail and other fixed guideway systems (for example, automated guideway transit, monorails, etc.) shall comply with the following provisions, as applicable:

1. Elements such as ramps, elevators or other circulation devices, fare vending or other ticketing areas, and fare collection areas shall be placed to minimize the distance which wheelchair users and other persons who cannot negotiate steps may have to travel compared to the general public. The circulation paths, each including an accessible entrance and an accessible route, for persons with disabilities shall, to the maximum extent practicable, coincide with the circulation path for the general public. Where a circulation path is different, signage complying with Section 1117B.5.1, Items 2 and 3, shall be provided to indicate direction to and identify the accessible entrance and accessible route.
2. If different entrances to a station serve different transportation fixed routes or groups of fixed routes, entrances serving each group or route shall comply with Section 1133B.1.
3. Direct connections to commercial, retail or residential facilities shall have an accessible route complying with Section 1114B.1.2 from the point of connection to boarding platforms and all transportation system elements used by the public. Any elements provided to facilitate future direct connections shall be on an accessible route connect-

lator treads shall be marked by a strip of clearly contrasting color; 2 inches (51 mm) in width, placed parallel to and on the nose of each step. The strip shall be of a material that is at least as slip resistant as the remainder of the tread. The edge of the tread shall be apparent from both ascending and descending directions.

17. Where provided, elevators shall be glazed or have transparent panels to allow an unobstructed view both into and out of the car. Elevators shall comply with Section 1116B.

Exception: Elevator cars with a clear floor area in which a 60-inch-diameter (1524 mm) circle can be inscribed may be substituted for the minimum car dimensions of Section 1116B and Figure 11B-40A.

18. Where provided, ticketing areas shall comply with Section 1122B.5, and the customer side of the baggage check-in area shall be accessible.
19. Where provided, baggage check-in and retrieval systems shall be on an accessible route complying with Section 1114B.1.2 and shall have space immediately adjacent complying with Section 1118B.

If unattended security barriers are provided, at least one gate shall comply with Sections 1133B.1 and 1133B.2. Passageways containing security barriers shall comply with Section 1133B.2.3.4.

Gates which must be pushed open by wheelchair or mobility aid users shall have a smooth continuous surface extending from 2 inches (51 mm) above the floor to 27 inches (686 mm) above the floor.

1121B.3.2 Existing facilities—alterations. Alterations of transportation facilities shall comply with Section 1134B.

1121B.4 Airports.

1121B.4.1 New construction.

1. Elements such as ramps, elevators or other vertical circulation devices, ticketing areas, security checkpoints or passenger waiting areas shall be placed to provide equitable travel distances for wheelchair users and other persons who cannot negotiate steps compared to the route for the general public.
2. The circulation paths, each including an accessible entrance and an accessible route, for persons with disabilities shall, to the maximum extent practicable, coincide with the circulation path for the general public. Where a circulation path is different, signage complying with Section 1117B.5.1, Items 2 and 3, shall be provided to indicate direction to and identify the accessible entrance and accessible route.
3. Where provided, ticketing areas shall comply with Section 1122B.5, and the customer side of the baggage check-in area shall be accessible.
4. Where public pay telephones are provided, and at least one is at an interior location, a public text telephone shall be provided in compliance with Sections 1117B.2.9.2 and 1117B.2.9.3. Additionally, if four or more public pay telephones are located in any of the following locations, at least one public text telephone

shall also be provided in that location: (a) a main terminal outside the security areas; (b) a concourse within the security areas; or (c) a baggage claim area in a terminal.

5. Where provided, baggage check-in and retrieval systems shall be on an accessible route complying with Section 1114B.1.2 and shall have space immediately adjacent complying with Section 1118B.

If unattended security barriers are provided, at least one gate shall comply with Sections 1133B.1 and 1133B.2. Passageways containing security barriers shall comply with Section 1133B.2.3.4.

Gates which must be pushed open by wheelchair or mobility aid users shall have a smooth continuous surface extending from 2 inches (51 mm) above the floor to 27 inches (686 mm) above the floor.

6. Terminal information systems which broadcast information to the general public through a public address system shall provide a means to provide the same or equivalent information to persons with a hearing loss or who are deaf. Such methods may include, but are not limited to, visual paging systems using video monitors and computer technology. For persons with certain types of hearing loss such methods may include, but are not limited to, an assistive listening system complying with Section 1104B.2.
7. Where clocks are provided for use by the general public the clock face shall be uncluttered so that its elements are clearly visible. Hands, numerals and/or digits shall contrast with their background either light-on-dark or dark-on-light. Where clocks are mounted overhead, numerals and/or digits shall comply with Section 1117B.5.4. Clocks shall be placed in uniform locations throughout the facility.

SECTION 1122B FIXED OR BUILT-IN SEATING, TABLES AND COUNTERS

1122B.1 Minimum number. Where fixed or built-in seating, tables or counters are provided in accessible public use or common use areas, 5 percent, but never less than one, must be accessible as provided in this section. An accessible route of travel complying with Section 1114B.1.2 shall lead to and through such fixed or built-in seating areas or tables.

1122B.2 Seating. If seating spaces for persons in wheelchairs are provided at fixed tables or counters, clear floor space complying with Section 1118B.4 shall be provided. Such clear floor space shall not overlap knee space by more than 19 inches (483 mm) (see Figure 11B-13).

1122B.3 Knee clearance. If seating for persons in wheelchairs is provided at fixed tables or counters, knee spaces at least 27 inches (686 mm) high, 30 inches (762 mm) wide and 19 inches (483 mm) deep shall be provided (see Figure 11B-13).

Exception: Knee clearance is not required at checkout counters or service counters.

1122B.4 Height of work surfaces. The tops of tables and counters shall be 28 inches to 34 inches (711 mm to 864 mm) from the floor or ground.

Where a single counter contains more than one transaction station, such as (but not limited to) a bank counter with multiple teller windows or a retail sales counter with multiple cash register stations, at least 5 percent, but never less than one, of each type of station shall be located at a section of counter that is at least 36 inches (914 mm) long and no more than 28 to 34 inches (711 to 864 mm) high.

1122B.5 Sales and service counters, teller windows and information counters. In department stores and miscellaneous retail stores where counters have cash registers and are provided for sales or distribution of goods or services to the public, at least one of each type shall have a portion of the counter which is at least 36 inches (915 mm) in length with a maximum height of 34 inches (864 mm) above the finish floor and located on an accessible route complying with Section 1114B.1.2.

At ticketing counters, teller stations in a bank, registration counters in hotels and motels, box office ticket counters and other counters that may not have a cash register but at which goods or services are sold or distributed, a portion of the main counter which is a minimum of 36 inches (915 mm) in length shall be provided with a maximum height of 34 inches (864 mm).

Exception: In existing buildings where it is determined that providing an accessible counter would create an unreasonable hardship, equivalent facilitation may consist of one of the following:

1. An auxiliary counter, in close proximity to the main counter, meeting these requirements may be provided.
2. Provision of a folding shelf attached to the main counter on which an individual with disabilities can write.

SECTION 1123B ACCESS TO EMPLOYEE AREAS

1123B.1 General. Employee areas shall comply with the accessibility requirements of this chapter.

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

Exception: Accessibility is not required to (1) observation galleries used primarily for security purposes; or (2) in nonoccupiable spaces accessed only by ladders, catwalks, crawl spaces, very narrow passageways or freight (nonpassenger) elevators, and frequented only by service personnel for repair purposes; such spaces include, but are not limited to, elevator pits, elevator penthouses, mechanical rooms, piping or equipment catwalks.

SECTION 1124B GROUND AND FLOOR SURFACES

1124B.1 General. Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs and curb ramps, shall be stable, firm, slip resistant and shall comply with this section.

1124B.2 Changes in level. Changes in level up to $\frac{1}{4}$ inch (6.4 mm) may be vertical and without edge treatment [see Figure 11B-5E(c)]. Changes in level between $\frac{1}{4}$ inch (6.4 mm) and $\frac{1}{2}$ inch (12.7 mm) shall be beveled with a slope no greater than one unit vertical in 2 units horizontal (50-percent slope) [see Figure 11B-5E(d)]. Changes in level greater than $\frac{1}{2}$ inch (12.7 mm) shall be accomplished by means of a curb ramp, ramp, elevator or platform lift that complies with Section 1127B.5, 1133B.5, 1116B.1 or 1116B.2, respectively.

1124B.3 Carpet. If carpet or carpet tile is used on a ground or floor surface, then it shall be securely attached; have a firm cushion, pad or backing or no cushion or pad; and have a level loop, textured loop, level-cut pile or level-cut/uncut pile texture. The maximum pile height shall be $\frac{1}{2}$ inch (12.7 mm). See Figure 11B-7E(b). Exposed edges of carpet shall be fastened to floor surfaces and have trim along the entire length of the exposed edge. Carpet edge trim shall comply with Section 1124B.2.

1124B.4 Gratings. If gratings are located in walking surfaces, then they shall have spaces no greater than $\frac{1}{2}$ inch (12.7 mm) wide in one direction (see Figure 11B-7E). If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel (see Figure 11B-7E).

SECTION 1125B STORAGE

1125B.1 General. If fixed storage facilities such as cabinets, shelves, closets or drawers are provided where access is required by Section 1.9.1, at least one of each type shall comply with this section. Additional storage may be provided outside of the reach ranges shown in Figure 11B-5D.

1125B.2 Clear floor space. A clear floor space at least 30 inches by 48 inches (762 mm by 1219 mm) complying with Section 1118B.4 that allows either a forward or parallel approach by a person using a wheelchair shall be provided at accessible storage facilities.

1125B.3 Height. Accessible storage spaces, including closets with a clothes rod or shelf, shall be within at least one of the reach ranges specified in Sections 1118B.5 and 1118B.6.

1125B.4 Hardware. Hardware for accessible storage facilities shall comply with Section 1117B.6. Touch latches and U-shaped pulls are acceptable.

SECTION 1126B VENDING MACHINES AND OTHER EQUIPMENT

Spaces for vending machines and other equipment shall comply with Section 1118B and shall be located on an accessible route complying with Section 1114B.1.2. Controls for vending machines and other equipment shall comply with Section 1117B.6, Controls and operating mechanisms.

1129B.2 Medical care outpatient facilities. At facilities providing medical care and other services for persons with mobility impairments, parking spaces complying with this section shall be provided in accordance with Table 11B-6 except as follows:

1. **Outpatient units and facilities.** Ten percent of the total number of parking spaces provided shall serve each such outpatient unit or facility.
2. **Units and facilities that specialize in treatment or services for persons with mobility impairments.** Twenty percent of the total number of parking spaces provided shall serve each such unit or facility.

**TABLE 11B-6
SPACES REQUIRED**

Establishes the number of accessible parking spaces required.

TOTAL NUMBER OF PARKING SPACES IN LOT OR GARAGE	MINIMUM REQUIRED NUMBER OF SPACES
1-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6
201-300	7
301-400	8
401-500	9
501-1,000	*
1,001 and over	**

* Two percent of total.

** Twenty plus one for each 100, or fraction thereof, over 1,000.

1129B.3 Parking space size. Accessible parking spaces shall be located as near as practical to a primary entrance and shall be sized as follows:

1. **Dimensions.** Where single spaces are provided, they shall be 14 feet (4267 mm) wide and lined to provide a 9-foot (2743 mm) parking area and a 5-foot (1524 mm) loading and unloading access aisle on the passenger side of the vehicle. When more than one space is provided in lieu of providing a 14-foot-wide (4267 mm) space for each parking space, two spaces can be provided within a 23-foot-wide (7010 mm) area lined to provide a 9-foot (2743 mm) parking area on each side of a 5-foot (1524 mm) loading and unloading access aisle in the center. The loading and unloading access aisle shall be marked by a border painted blue. Within the blue border, hatched lines a maximum of 36 inches (914 mm) on center shall be painted a color contrasting with the parking surface, preferably blue or white. See Figure 11B-18A. Parking access aisles shall be part of an accessible route of travel (complying with Section 1114B.1.2) to the building or facility entrance. Parked vehicle overhangs shall not reduce the clear width of an accessible route. The minimum length of each parking space, shall be 18 feet (5486 mm). The words "NO PARKING" shall be painted on the

ground within each 5-foot (1524 mm) loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches (305 mm) high and located so that it is visible to traffic enforcement officials. See Figures 11B-18A, 11B-18B and 11B-18C.

2. **Van space(s).** One in every eight accessible spaces, but not less than one, shall be served by a loading and unloading access aisle 96 inches (2438 mm) wide minimum placed on the side opposite the driver's side when the vehicle is going forward into the parking space and shall be designated van accessible as required by Section 1129B.4. All such spaces may be grouped on one level of a parking structure. The loading and unloading access aisle shall be marked by a border painted blue. Within the blue border, hatched lines a maximum of 36 inches (914 mm) on center shall be painted a color contrasting with the parking surface, preferably blue or white. The words "NO PARKING" shall be painted on the ground within each 8-foot (2438 mm) loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches (305 mm) high and located so that it is visible to traffic enforcement officials. See Figures 11B-18A, 11B-18B and 11B-18C.
3. **Arrangement of parking space.** In each parking area, a bumper or curb shall be provided if required to prevent encroachment of cars over the required width of walkways. Also, the space shall be located so a person with a disability is not compelled to wheel or walk behind parking spaces other than that person's own accessible parking space. Pedestrian ways which are accessible to persons with disabilities shall be provided from each such parking space to related facilities, including curb cuts or ramps as needed. Ramps shall not encroach into any accessible parking space or the adjacent access aisle. See Figures 11B-18A through 11B-18C.

Exceptions:

1. Where the enforcing agency determines that compliance with any regulation of this section would create an unreasonable hardship, a variance or waiver may be granted when equivalent facilitation is provided.
2. Parking spaces may be provided which would require a person with a disability to wheel or walk behind a parking space other than that person's own accessible parking space when the enforcing agency determines that compliance with these regulations or providing equivalent facilitation would create an unreasonable hardship. See Section 1.9.1.5.
4. **Slope of parking space and access aisle.** Surface slopes of accessible parking spaces and access aisles shall be the minimum possible and shall not exceed one unit vertical in 50 units horizontal (2-percent slope) in any direction.
5. **Vertical clearance.** Provide minimum vertical clearance of 98 inches (2489 mm) at accessible parking spaces and along at least one vehicle access route to such spaces from site entrances and exits.

1129B.4 Identification of parking spaces for off-street parking facilities. Each parking space reserved for persons with disabilities shall be identified by a reflectorized sign permanently posted immediately adjacent to and visible from each stall or space, consisting of the International Symbol of Accessibility in white on a dark blue background. The sign shall not be smaller than 70 square inches (4516 mm²) in area and, when in a path of travel, shall be posted at a minimum height of 80 inches (2032 mm) from the bottom of the sign to the parking space finished grade. Signs may also be centered on the wall at the interior end of the parking space. An additional sign or additional language below the symbol of accessibility shall state “Minimum Fine \$250.”

Van accessible spaces complying with Section 1129B.3, Item 2 shall have an additional sign or additional language stating “Van Accessible” below the symbol of accessibility. Signs identifying accessible parking spaces shall be located so they cannot be obscured by a vehicle parked in the space.

An additional sign shall also be posted in a conspicuous place at each entrance to off-street parking facilities, or immediately adjacent to and visible from each accessible stall or space. The sign shall not be less than 17 inches by 22 inches (432 mm by 559 mm) in size with 1 inch (25 mm) high minimum lettering which clearly and conspicuously states the following:

“Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or special license plates issued for persons with disabilities will be towed away at the owner’s expense. Towed vehicles may be reclaimed at _____ or by telephoning _____.”

Blank spaces are to be filled in with appropriate information as a permanent part of the sign.

In addition to the above requirements, the surface of each accessible parking space or stall shall have a surface identification duplicating either of the following schemes:

1. By outlining or painting the stall or space in blue and outlining an International Symbol of Accessibility on the ground in the stall or space in white or contrasting color; or
2. By outlining an International Symbol of Accessibility on the ground in the stall or space in white on blue background.

The International Symbol of Accessibility shall be a minimum 36 inches high by 36 inches wide (914 mm by 914 mm) and shall be aligned with the end of the stall or space adjacent to the traffic aisle so that it is visible to a traffic enforcement officer when a vehicle is properly parked in the space. See Figures 11B-18A, 11B-18B and 11B-18C.

SECTION 1130B PARKING STRUCTURES

1130B.1 All entrances to and vertical clearances within parking structures shall comply with Section 1129B.3, Item 5 where required for accessibility to accessible parking spaces.

Exceptions:

1. Where the enforcing agency determines that compliance with Section 1130B.1 would create an unreasonable hardship, an exception may be granted when equivalent facilitation is provided.
2. This section shall not apply to existing buildings where the enforcing agency determines that, due to legal or physical constraints, compliance with these regulations or equivalent facilitation would create an unreasonable hardship. See Section 1.9.1.5.

1130B.2 When direct access is provided for pedestrians from a parking garage to a building, each direct entrance from the garage to the building must be accessible.

SECTION 1131B PASSENGER DROP-OFF AND LOADING ZONES

1131B.1 Location. When provided, passenger drop-off and loading zones shall be located on an accessible route of travel (complying with Section 1114B.1.2) and shall comply with 1131B.2.

1131B.2 Passenger loading zones.

1. **General.** Where provided, one passenger drop-off and loading zone shall provide an access aisle at least 60 inches (1524 mm) wide and 20 feet (6096 mm) long adjacent and parallel to the vehicle pull-up space. Vehicle standing spaces and access aisles shall be level with surface slopes not exceeding one unit vertical in 50 units horizontal (2-percent slope) in all directions. If there are curbs between the access aisle and the vehicle pull-up space, a curb ramp shall be provided. Each passenger drop-off and loading zone designed for persons with disabilities shall be identified by a reflectorized sign, complying with Section 1117B.5.1, Items 2 and 3, permanently posted immediately adjacent to and visible from the passenger drop-off or loading zone stating “Passenger Loading Zone Only” and including the International Symbol of Accessibility, in white on a dark blue background.
2. **Vertical clearance.** Provide minimum vertical clearance of 114 inches (2896 mm) at accessible passenger loading zones and along at least one vehicle access route to such areas from site entrances and exits.

1131B.3 Valet parking. Valet parking facilities shall provide a passenger loading zone complying with Section 1131B.2 above and shall be located on an accessible route of travel (complying with Section 1114B.1.2) to the entrance of the facility. The parking space requirements of Sections 1129B through 1130B apply to facilities with valet parking.

1131B.4 Bus stop pads and shelters. See Section 1121B.2.1.

SECTION 1132B OUTDOOR OCCUPANCIES

1132B.1 General. Outdoor occupancies shall be accessible as required in this chapter. See also the general requirements in Section 1114B.1.1.

1132B.2 Parks and recreational areas. The following parks and recreational areas shall comply with these regulations.

Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance would create an unreasonable hardship, a variance shall be granted when equivalent facilitation is provided.
 2. Where the enforcing agency finds that, in specific areas, the natural environment would be materially damaged by compliance with these regulations, such areas shall be subject to these regulations only to the extent that such material damage would not occur.
 3. Automobile access shall not be provided or paths of travel shall not be made accessible when the enforcing agency determines that compliance with these regulations would create an unreasonable hardship.
1. **Campsites.** Campsites, a minimum of two and no fewer than three for each 100 campsites provided, shall be accessible by a level path or ramp and shall have travel routes with slopes not exceeding one unit vertical in 12 units horizontal (8.33-percent slope) to sanitary facilities. Permanent sanitary facilities serving campgrounds shall be accessible to wheelchair occupants.
 2. **Beaches, picnic areas.** Beaches, picnic areas, day-use areas, vista points and similar areas shall be accessible.
 3. **Sanitary facilities.** Sanitary facilities, to the extent that such facilities are provided, each public use area that is accessible to wheelchair occupants by automobile, walks or other paths of travel.

4. **Boat docks.** Boat docks, fishing piers, etc., shall be accessible.
5. **Parking lots.** Parking lots shall be provided with accessible parking spaces and with curb cuts leading to all adjacent walks, paths or trails.
6. **Trails and paths.** Trails, paths and nature walk areas, or portions of these, shall be constructed with gradients which will permit at least partial use by wheelchair occupants. Hard surface paths or walks shall be provided to serve buildings and other functional areas.
7. **Nature trails.** Nature trails and similar educational and informational areas shall be accessible to the blind by the provision of rope guidelines, raised Arabic numerals and symbols for identification, information signs and related guide and assistance devices.

For museums, orientation buildings, visitor centers, office buildings, retail stores, restaurants, etc., and sanitary facilities serving these uses, see Sections 1104B through 1111B and sections listed in Section 1114B.1.1.

1132B.3 Highway rest areas. The specific standards of accessibility for highway rest areas and similar facilities shall be as follows in Section 1132B.3.1, subject to other provisions in these regulations.

1132B.3.1 Permanent facilities. At least one kind of permanent functional area or facility, as applicable, shall be accessible to persons with disabilities, including:

1. A sanitary facility for each sex.
2. At least one picnic table and one additional table for each 20 tables, or fraction thereof provided.
3. Information and display areas.
4. Drinking fountains.
5. At least one parking space.
6. Curb ramps conforming to Section 1127B.5 shall be provided at pedestrian ways where appropriate.

Division III—ACCESSIBILITY FOR ENTRANCES, EXITS AND PATHS OF TRAVEL

This division includes additional requirements which supersede less restrictive requirements in Chapter 10 where access is required.

**SECTION 1133B
GENERAL ACCESSIBILITY FOR ENTRANCES,
EXITS AND PATHS OF TRAVEL**

1133B.1 Building accessibility. See this chapter.

1133B.1.1 Entrances.

1133B.1.1.1 Entrances and exterior ground floor exit doors.

1133B.1.1.1.1 All entrances and exterior ground-floor exit doors to buildings and facilities shall be made accessible to persons with disabilities. Such entrances shall be connected by an accessible route (complying with Section 1114B.1.2) to public transportation stops, to accessible parking and passenger loading zones and to public streets or sidewalks, if available. Entrances shall be connected by an accessible route to all accessible spaces or elements within the building or facility. Doorways shall have a minimum clear opening of 32 inches (813 mm) with the door open 90 degrees, measured between the face of the door and the opposite stop (see Figure 11B-5B). Openings more than 24 inches (610 mm) in depth shall comply with Section 1118B.1.

Exceptions:

1. Exterior ground-floor exits serving smoke-proof enclosures, stairwells and exit doors servicing stairs only need not be made accessible.
2. Exits in excess of those required by Chapter 10, and which are more than 24 inches (610 mm) above grade are not required to be accessible. Such doors shall have signs warning that they are not accessible. Warning signs shall comply with Section 1117B.5.1, Item 2.
3. In existing buildings where the enforcing agency determines that compliance with the building standards of this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation is provided. Equivalent facilitation would require at least one entrance to be accessible to and usable by persons with disabilities.
4. These building standards shall not apply to existing buildings when legal or physical constraints will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable

hardship. See Section 1.9.1.5, Special Conditions for Persons with Disabilities Requiring Appeals Action Ratification.

1133B.1.1.1.2 Temporary restrictions. During periods of partial or restricted use of a building or facility, the entrances used for primary access shall be accessible to and usable by persons with disabilities.

1133B.1.1.1.3 Recessed doormats. Recessed doormats shall be adequately anchored to prevent interference with wheelchair traffic.

1133B.1.1.1.4 Gates. All gates, including ticket gates, shall meet all applicable specifications for doors.

1133B.1.1.1.5 Service entrances. In existing buildings and facilities, a service entrance shall not be the sole accessible entrance unless it is the only entrance to a building or facility (for example, in a factory or garage).

1133B.2 Doors.

1133B.2.1 Type of lock or latch. See Chapter 10, Section 1008.1.8.

1133B.2.2 Width and height. Every required exit doorway shall be of a size as to permit the installation of a door not less than 3 feet (914 mm) in width and not less than 6 feet 8 inches (2032 mm) in height.

When installed in exit doorways, exit doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the exitway is not less than 32 inches (813 mm) measured between the face of the door and the opposite stop (see Figure 11B-5B). In computing the exit width the net dimension of the exitway shall be used.

Exception: Doors not requiring full user passage, such as shallow closets, may have the clear opening reduced to 20 inches (510 mm) minimum.

1133B.2.3 Hinged doors. For hinged doors, the opening width shall be measured with the door positioned at an angle of 90 degrees from its closed position.

1133B.2.3.1 Pair of doors. Where a pair of doors is utilized, at least one of the doors shall provide a clear, unobstructed opening width of 32 inches (813 mm) with the leaf positioned at an angle of 90 degrees from its closed position. See Figure 11B-5B(b). ||

1133B.2.3.2 Automatic and power-assisted doors. If an automatic door is used, then it shall comply with BHMA A156.10. Slowly opening, low-powered, automatic doors shall comply with BHMA A156.19. Such doors shall not open to back check faster than 3 seconds and shall require no more than 15 lbf (66.72 N) to stop door movement. If a power-assisted door is used, its door-opening force shall comply with Section 1133B.2.5 and its closing shall conform to the requirements in BHMA A156.19. When an automatic door operator is utilized to operate a pair of doors, at least one of the doors shall provide a clear, unobstructed opening width ||

of 32 inches (813 mm) with the door positioned at an angle of 90 degrees from its closed position.

Exceptions:

1. In existing buildings, where the occupant load is less than 10, except Group I, Division 1 occupancies, or where the occupant load is greater than 10 and it is determined that compliance with Section 1133B.2.3 would create an unreasonable hardship, a projection of $\frac{5}{8}$ inch (16 mm) maximum will be permitted for the latch side stop.
2. In existing buildings, the provisions of this section shall not apply when legal or physical constraints will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.

1133B.2.3.3 Revolving doors. Revolving doors shall not be used as a required entrance for persons with disabilities.

1133B.2.3.4 Turnstiles, rails and pedestrian controls.

Where turnstiles and crowd control barriers are utilized in a facility for the purpose of providing fully controlled access, such as where an admission price is charged, a door or gate that is accessible to persons with disabilities shall be provided adjacent to each turnstile exit or entrance. This alternate passageway shall be maintained in an unlocked condition during business hours and the door or gate shall not activate a publicly audible alarm system. The door or gate may be latched where all gates are restricted and controlled by an attendant and a sign is posted stating, "All gates are restricted and controlled by an attendant." The accessible door or gate shall provide the same use pattern. Where posts, rails or other pedestrian controls are utilized to create crowd control aisles or lanes, a minimum of one lane shall be accessible and shall provide a minimum aisle width no less than indicated in Figures 11B-5E(a) and (b) with 32 inches (813 mm) of clear opening.

Exception: In existing buildings, Section 1133B.2.3 shall not apply when physical constraints or equivalent facilitation will not allow compliance with these building standards without creating an unreasonable hardship. See Section 1.9.1.5.

1133B.2.4 Floor level at doors. Regardless of the occupant load, there shall be a floor or landing on each side of a door.

1133B.2.4.1 Thresholds. The floor or landing shall not be more than $\frac{1}{2}$ inch (12.7 mm) lower than the threshold of the doorway. Change in level between $\frac{1}{4}$ inch (6 mm) and $\frac{1}{2}$ inch (12.7 mm) shall be beveled with a slope no greater than one unit vertical in 2 units horizontal (50-percent slope). Change in level greater than $\frac{1}{2}$ inch (12.7 mm) shall be accomplished by means of a ramp. See Section 1133B.5.1.

1133B.2.4.2 Maneuvering clearances at doors. Minimum maneuvering clearances at doors shall be as shown in Figures 11B-26A, 11B-26B and 11B-26C. The floor or ground area within the required clearances shall be level and clear.

The level area shall have a length in the direction of door swing of at least 60 inches (1524 mm) and the length opposite the direction of door swing of 48 inches (1219 mm) as measured at right angles to the plane of the door in its closed position.

Exception: The length opposite the direction of door swing shall be a minimum of 44 inches (1118 mm) where the door has no closer and approach to the door by a person in a wheelchair can be made from the latch side, or if the door has neither latch nor closer and approach can be made from the hinge side. See Figures 11B-26A and 11B-26B.

1133B.2.4.3 The width of the level area on the side to which the door swings shall extend 24 inches (610 mm) past the strike edge of the door for exterior doors and 18 inches (457 mm) past the strike edge for interior doors.

Twenty-four inches (610 mm) is preferred for strike-side clearance.

1133B.2.4.4 The space between two consecutive door openings in a vestibule, serving other than a required exit stairway shall provide a minimum of 48 inches (1219 mm) of clear space from any door opening into such vestibule when the door is positioned at an angle of 90 degrees from its closed position. Doors in a series shall swing either in the same direction or away from the space between the doors. See Figures 11B-30 and 11B-31.

1133B.2.4.5 Recessed doors. Where a door required to be accessible by Section 1133B.1.1.1 is located in a recess or alcove where the distance from the face of the wall to the face of the door is greater than 8 inches (203 mm), strike side clearances as prescribed in Section 1133B.2.4.3 shall be provided. See Figure 11B-33(a).

1133B.2.5 Door opening force. The maximum force required to push or pull open a door shall comply with this section. Push or pull force for a hinged door shall be measured perpendicular to the door face at the door opening hardware or 30 inches (762 mm) from the hinged side, whichever is farther from the hinge. Push or pull force for a sliding or folding door shall be measured parallel to the door at the door pull or latch. Compensating devices or automatic door operators complying with Section 1133B.2.3.2 may be used to meet the maximum force limits.

1. Required fire doors shall have the minimum opening force allowable by the appropriate administrative authority, not to exceed 15 lbf (66.7 N).
2. Other than required fire doors, interior doors shall have a maximum opening force of 5 lbf (22.2 N).

3. Other than required fire doors, exterior doors shall have a maximum opening force of 5 lb (22.2 N).

Exceptions:

1. Exterior doors to machinery spaces including, but not limited to, elevator pits or elevator penthouses; mechanical, electrical or communications equipment rooms; piping or equipment catwalks; electric substations and transformer vaults; and highway and tunnel utility facilities.
2. When, at a single location, one of every 8 exterior door leafs, or fraction of 8, is a powered door, other exterior doors at the same location, serving the same interior space, may have a maximum opening force of 8.5 lbf (37.8 N). The powered leaf(s) shall be located closest to the accessible route.
 - a. Powered doors shall comply with Section 1133B.2.3.2. Powered doors shall be fully automatic doors complying with Builders Hardware Manufacturers' Association (BHMA) A156.10 or low energy operated doors complying with BHMA A156.19.
 - b. Powered doors serving a building or facility with an occupancy of 150 or more shall be provided with a back-up battery or back-up generator. The back-up power source shall be able to cycle the door a minimum of 100 cycles.
 - c. Powered doors shall be controlled on both the interior and exterior sides of the doors by sensing devices, push plates, vertical actuation bars or other similar operating devices complying with Section 1117B.6.

At each location where push plates are provided there shall be two push plates; the centerline of one push plate shall be 7 inches (178 mm) minimum and 8 inches (203 mm) maximum above the floor or ground surface and the centerline of the second push plate shall be 30 inches (762 mm) minimum and 44 inches (1219 mm) maximum above the floor or ground surface. Each push plate shall be a minimum of 4 inches (102 mm) diameter or a minimum of 4 inches by 4 inches (102 mm by 102 mm) square and shall display the International Symbol of Accessibility complying with Section 1117B.5.8.1.

At each location where vertical actuation bars are provided the operable portion shall be located so the bottom is 5 inches (127 mm) maximum above the floor or ground surface and the top is 35 inches (889 mm) minimum above the floor or ground surface. The operable portion of each vertical actuation bar shall be a minimum of 2 inches (51 mm) wide and shall display the International Symbol of Accessibility complying with Section 1117B.5.8.1.

Where push plates, vertical actuation bars or other similar operating devices are provided, they shall be placed in a conspicuous location. A level and clear floor or ground space for forward or parallel approach complying with Sections 1118B.4 and 1124B.1 shall be provided, centered on the operating device. Doors shall not swing into the required clear floor or ground space.

- d. Signage identifying the accessible entrance required by Section 1127B.3 shall be placed on, or immediately adjacent to, each powered door. Signage shall be provided in compliance with BHMA A156.10 or BHMA 156.19, as applicable.
- e. In addition to the requirements of Item d, where a powered door is provided in buildings or facilities containing assembly occupancies of 300 or more, a sign displaying the International Symbol of Accessibility measuring 6 inches by 6 inches (152 mm by 152 mm), complying with Section 1117B.5.8.1, shall be provided above the door on both the interior and exterior sides of each powered door.

1133B.2.5.1 Door closer. If the door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

1133B.2.5.2 Hand-activated door opening hardware, handles, pulls, latches, locks and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching or twisting of the wrist to operate. Hardware shall be centered between 30 inches (762 mm) and 44 inches (1118 mm) above the floor. Latching and locking doors that are hand-activated and which are in a path of travel shall be operable by lever-type hardware, panic bars, push-pull activating bars, U-shaped handles or other hardware designed to provide passage. Locked exit doors shall operate as above in egress direction.

1133B.2.6 Smooth surface. The bottom 10 inches (254 mm) of all doors except automatic and sliding shall have a smooth, uninterrupted surface to allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10-inch (254 mm) high smooth panel shall be installed on the push side of the door, which will allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. See Figure 11B-29.

1133B.3 Corridors, hallways and exterior exit balconies.

1133B.3.1 Corridor and hallway widths. Every corridor and hallway serving an occupant load of 10 or more shall not be less than 44 inches (1118 mm) in width. Corridors and hallways serving an occupant load of less than 10 shall not be less than 36 inches (914 mm) in width.

1133B.3.2 Corridors and hallways over 200 feet (60 960 mm). Corridors and hallways that are located on an accessible route and exceed 200 feet (60 960 mm) in length shall have a minimum clear width of 60 inches (1524 mm). If an accessible route has less than 60 inches (1524 mm) clear width, then passing spaces at least 60 inches by 60 inches (1524 mm by 1524 mm) shall be located at intervals of 200 feet (60 960 mm) maximum. A "T" intersection of two corridors or walks is an acceptable passing place. See Figure 11B-34.

Exceptions:

1. In existing buildings, when the enforcing agency determines that compliance with any building standard under this section would create an unreasonable hardship, an exception to such building standard shall be granted when equivalent facilitation is provided.
2. In existing buildings, the provisions of this section shall not apply when legal or physical constraints will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.

1133B.4 Stairways. Stairways shall conform to the provisions of this section.

1133B.4.1 Handrails.

1133B.4.1.1 Required handrails. Stairways shall have handrails on each side. Handrails shall be continuous along both sides of a stairway. Intermediate handrails shall be provided as required in Section 1012.8.

1133B.4.2 Handrail configuration.

1133B.4.2.1 The top of handrail gripping surface shall be mounted between 34 to 38 inches (864 to 965 mm) above the nosing of the treads. See Figure 11B-35.

1133B.4.2.2 Handrails shall extend a minimum of 12 inches (305 mm) beyond the top nosing and 12 inches (305 mm), plus the tread width, beyond the bottom nosing. At the top, the extension shall be parallel with the floor or ground surface. At the bottom, the handrail shall continue to slope for a distance of the width of one tread from the bottom riser; the remainder of the extension shall be horizontal. The extensions of handrails shall be in the same direction of the stair flights. See Figures 11B-35 and 11B-37.

Exceptions:

1. In new construction, the inside handrail on switchback or dogleg stairs shall always be continuous.
2. In existing buildings and facilities, full extension of handrails at stairs shall not be required in alterations where such extensions would be hazardous or impossible due to plan configuration.

1133B.4.2.3 Ends shall be returned smoothly to floor, wall or post.

1133B.4.2.4 The orientation of at least one handrail shall be in the direction of the run of the stair and perpendicular to the direction of the stair nosing, and shall not reduce the minimum required width of the stairs.

1133B.4.2.5 Handrails projecting from a wall shall have a space of 1½ inches (38 mm) between the wall and the handrail.

Handrails may be located in a recess if the recess is a maximum of 3 inches (76 mm) deep and extends at least 18 inches (457 mm) above the top of the rail. Handrails shall not rotate in their fittings. See Figure 11B-36(b).

1133B.4.2.6 Handgrips. The handgrip portion of handrails shall be not less than 1¼ inches (32 mm) or more than 1½ inches (38 mm) in cross-sectional nominal dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Gripping surfaces (top or sides) shall be uninterrupted by newel posts, other construction elements or obstructions. Adjacent elements shall be positioned to provide unobstructed use of handrails. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. Edges shall have a minimum radius of ⅛ inch (3.2 mm). See Figure 11B-36.

Exceptions:

1. In existing buildings when the enforcing agency determines that compliance with any requirement under Section 1133B.4.2 would create an unreasonable hardship, an exception to the requirement for persons with disabilities may be granted when equivalent facilitation is provided.
2. These regulations shall not apply in existing buildings where legal or physical constraints will not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.

1133B.4.3 Tactile floor identification signs in stairways. Tactile floor identification signs that comply with Section 1117B.5, Item 1, shall be located at each floor level landing in all enclosed stairways in buildings two or more stories in height to identify the floor level. At exit discharge level, the sign shall include a raised five-pointed star located to the left of the identifying floor level. The outside diameter of the star shall be the same as the height of the raised characters.

1133B.4.4 Striping for the visually impaired. Interior stairs shall have the upper approach and lower tread marked by a stripe providing clear visual contrast. Exterior stairs shall have the upper approach and all treads marked by a stripe providing clear visual contrast. See Figure 11B-35.

The stripe shall be a minimum of 2 inches (50.8 mm) wide to a maximum of 4 inches (101.6 mm) wide placed parallel to, and not more than 1 inch (25.4 mm) from, the nose of the step or upper approach. The stripe shall extend the full width of the step or upper approach and shall be of material that is at least as slip resistant as the other treads of the stair. A painted stripe shall be acceptable.

1133B.4.5 Stair treads, risers and nosing. Stair treads shall be no less than 11 inches (279 mm) deep, measured from riser to riser. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. On any given

flight of stairs, all steps shall have uniform riser height and uniform tread widths.

1133B.4.5.1 Treads. All tread surfaces shall be slip resistant. Weather-exposed stairs and their approaches shall be designed so that water will not accumulate on the walking surfaces. Treads shall have smooth, rounded or beveled exposed edges. See Figure 11B-35.

1133B.4.5.2 Risers. Risers shall be solid and shall be vertical [see Figure 11B-35(a)] or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees (0.52 rad) from the vertical [see Figure 11B-35(b)]. Open risers are not permitted.

Exceptions:

1. On exterior stairways, an opening of not more than 1/2 inch (12.7 mm) may be permitted between the base of the riser and the tread.
2. On exterior stairways, risers constructed of grating containing openings of not more than 1/2 inch (12.7 mm) may be permitted.

1133B.4.5.3 Nosing. The radius of curvature at the leading edge (nosing) of the tread shall be no greater than 1/2 inch (12.7 mm). Beveling of nosings shall not exceed 1/2 inch (12.7 mm). Nosings shall not project more than 1/4 inches (31.8 mm) past the face of the riser below. Nosings that project beyond risers shall have the underside of the leading edge beveled at an angle not more than 30 degrees (0.52 rad) from the vertical (see Figure 11B-35(c)). The transition from the nosing to the riser shall be free of abrupt edges. All projections shall be of uniform size, including nosings at landings.

Exceptions:

1. In existing buildings there is no requirement to retroactively alter existing nosing projections of 1 1/2 inches (38.1 mm) which were constructed in compliance with the building code in effect at the time of original construction.
2. In existing buildings, when the enforcing agency determines that compliance with any requirement under this section would create an unreasonable hardship, an exception to person with disabilities requirements may be granted when equivalent facilitation is provided.
3. These regulations shall not apply to existing buildings when legal or physical constraints will not allow compliance with these regulations or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.

1133B.5 Ramps.

1133B.5.1 General. Ramps shall conform to the provisions of this section. Any accessible route of travel shall be considered a ramp if its slope is greater than 1 unit vertical in 20 units horizontal (5-percent slope).

1133B.5.2 Width. Ramps shall have a minimum clear width of 48 inches (1219 mm), unless required to be wider by some other provision of this code. Ramps serving entrances to

buildings where the ramp is the only exit discharge path and serves an occupant load of 300 or more shall have a minimum clear width of 60 inches (1524 mm). Ramps serving Group R occupancies may be 36 inches (914 mm) clear width when the occupant load is 50 or less.

1133B.5.3 Slope. The least possible slope shall be used for any ramp. The maximum slope of a ramp shall be one unit vertical in 12 units horizontal (8.33-percent slope). The maximum rise for any run shall be 30 inches (762 mm). Examples of ramp dimensions are as follows:

SLOPE	MAXIMUM RISE	MAXIMUM LENGTH
1:12	30 inches (762 mm)	30 feet (9144 mm)
1:13	30 inches (762 mm)	32.5 feet (9906 mm)
1:14	30 inches (762 mm)	35 feet (10668 mm)
1:15	30 inches (762 mm)	37.5 feet (11430 mm)
1:16	30 inches (762 mm)	40 feet (12192 mm)
1:17	30 inches (762 mm)	42.5 feet (12954 mm)
1:18	30 inches (762 mm)	45 feet (13716 mm)
1:19	30 inches (762 mm)	47.5 feet (14478 mm)

1133B.5.3.1 The cross slope of ramp surfaces shall be no greater than one unit vertical in 50 units horizontal (2-percent slope).

1133B.5.4 Landings. Level ramp landings shall be installed as follows:

1133B.5.4.1 Location of landings. Level ramp landings shall be provided at the top and bottom of each ramp. Intermediate landings shall be provided at intervals not exceeding 30 inches (762 mm) of vertical rise and at each change of direction. Landings are not considered in determining the maximum horizontal distance of each ramp. Landings shall be level as specified in the definition of "Level area" in Section 1102B.

1133B.5.4.2 Size of top and bottom landings. Top landings shall be not less than 60 inches (1524 mm) wide and shall have a length of not less than 60 inches (1524 mm) in the direction of ramp run. Landings at the bottom of ramps shall have a dimension in the direction of ramp run of not less than 72 inches (1829 mm).

1133B.5.4.3 Doors at ramp landings. Doors at ramp landings shall comply with the maneuvering clearance requirements of Section 1133B.2.4.2, and the requirements of Section 1133B.5.4.4.

1133B.5.4.4 Encroachment of doors at ramp landings. Doors in any position shall not reduce the minimum dimension of the ramp landing to less than 42 inches (1067 mm) and shall not reduce the required width by more than 3 inches (76 mm) when fully open. See Figure 11B-39(b).

1133B.5.4.5 Landing width. At bottom and intermediate landings, the width shall be at least the same as required for the ramps.

> **1133B.5.4.6 Change of direction.** Intermediate and bottom landings at a change of direction shall have a dimension in the direction of ramp run of not less than 72 inches (1829 mm) to accommodate the handrail extension.

1133B.5.4.7 Other intermediate landings. Other intermediate landings shall have a dimension in the direction of ramp run of not less than 60 inches (1524 mm).

1133B.5.4.8 For existing ramps or ramps not covered by Section 1133B.5.4.1, landings shall be provided as set forth in Section 1133B.5.4.1.

1133B.5.4.9 Hazards. Required ramps shall have a curb at least 2 inches (51 mm) high, or a wheel guide rail 2 to 4 inches (51 to 102 mm) high on each side of the ramp landing that has a vertical drop exceeding 4 inches (102 mm) and that is not bounded by a wall or fence.

1133B.5.5 Handrails for ramps.

> **1133B.5.5.1** Handrails are required on ramps that provide access if the slope exceeds one unit vertical in 20 units horizontal (5-percent slope). Handrails shall be placed on each side of each ramp, shall be continuous the full length of each ramp run, shall be 34 to 38 inches (864 to 965 mm) above the ramp surface to the top of the handrails, shall extend a minimum of 1 foot (305 mm) beyond the top and bottom of the ramp and shall be parallel with the floor or ground surface. The extensions of handrails shall be in the same direction of the ramp runs. The inside handrail on switchback or dogleg ramps shall always be continuous. Handrails may project into the required clear width a distance of 3 1/2 inches (89 mm) maximum from each side of a ramp at the handrail height. The ends of handrails shall be either rounded or returned smoothly to floor, wall or post. Handrails projecting from a wall shall have a space of 1 1/2 inches (38 mm) between the wall and the handrail. Handrails may be located in a recess if the recess is a maximum of 3 inches (76 mm) deep and extends at least 18 inches (457 mm) above the top of the rail. The grip portion shall not be less than 1 1/4 inches (32 mm) nor more than 1 1/2 inches (38 mm) in cross-sectional nominal dimension or the shape shall provide an equivalent gripping surface, and all surfaces shall be smooth with no sharp corners. Adjacent elements shall be positioned to provide unobstructed use of handrails at the specified locations. Handrails shall not rotate within their fittings. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements. Edges shall have a minimum radius of 1/8 inch (3 mm). See Figure 11B-27.

Exceptions:

1. Handrails at ramps immediately adjacent to fixed seating in assembly areas are not required.
2. Curb ramps do not require handrails.
3. At door landings, handrails are not required on ramp runs less than 6 inches (152 mm) in rise or 72 inches (1829 mm) in length.

1133B.5.5.1.1 Ramp handrails. In existing buildings or facilities, where the extension of the handrail in the direction of the ramp run would create a hazard, the

extension on the handrail may be turned 90 degrees to the run of the ramp.

1133B.5.6 Guide curbs and wheel guide rails. Where the ramp surface is not bounded by a wall, guide curbs in compliance with Section 1133B.5.6.1 or wheel guide rails in compliance with Section 1133B.5.6.2, shall be provided.

Where handrails or guards are attached to the ramp surface with posts or similar elements, provide guide curbs in compliance with Section 1133B.5.6.1 or wheel guide rails in compliance with Section 1133B.5.6.2.

To prevent wheel entrapment, guide curbs or wheel guide rails shall provide a continuous and uninterrupted barrier along the length of the ramp.

1133B.5.6.1 A guide curb a minimum of 2 inches (51 mm) in height above the ramp surface.

1133B.5.6.2 A wheel guide rail centered 3 inches (76 mm) plus or minus 1 inch (25 mm) above the ramp surface.

1133B.5.7 Guards. Ramps more than 30 inches (762 mm) above the adjacent ground shall be provided with guards that comply with Section 1013. Such guards shall be continuous from the top of the ramp to the bottom of the ramp.

1133B.5.8 Outdoor ramps. Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces.

1133B.6 Aisles.

1133B.6.1 General. Every portion of every building in which are installed seats, tables, merchandise, equipment or similar materials shall be provided with aisles leading to an exit.

1133B.6.2 Width. Every aisle shall not be less than 36 inches (914 mm) wide if serving only one side, and not less than 44 inches (1118 mm) wide if serving both sides. In addition, aisles shall comply with Figure 11B5E(a) and (b) for circulation around obstructions.

1133B.7 Walks and sidewalks.

1133B.7.1 Continuous surface. Walks and sidewalks subject to these regulations shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding 1/2 inch (12.7 mm) (see Section 1133B.7.4), and shall be a minimum of 48 inches (1219 mm) in width. If a walk or sidewalk has less than 60 inch (1525 mm) clear width, then passing spaces at least 60 inches by 60 inches (1525 mm by 1525 mm) shall be located at reasonable intervals not to exceed 200 feet (61 m). A T-intersection is an acceptable passing place. Surfaces shall be slip resistant as follows:

Exception: When, because of right-of-way restrictions, natural barriers or other existing conditions, the enforcing agency determines that compliance with the 48-inch (1219 mm) clear sidewalk width would create an unreasonable hardship, the clear width may be reduced to 36 inches (914 mm).

1133B.7.1.1 Slopes less than 6 percent. Surfaces with a slope of less than 6-percent slope shall be at least as slip resistant as that described as a medium salted finish.

1133B.7.1.2 Slopes 6 percent or greater. Surfaces with a slope of 6-percent slope shall be slip-resistant.

1133B.7.1.3 Surface cross slopes. Surface cross slopes shall not exceed one unit vertical in 50 units horizontal (2-percent slope).

1133B.7.2 Gratings. Walks, sidewalks and pedestrian ways shall be free of gratings whenever possible. For gratings located in the surface of any of these areas, grid openings in gratings shall be limited to 1/2 inch (12.7 mm) in the direction of traffic flow.

Exceptions:

1. Where the enforcing agency determines that compliance with this section would create an unreasonable hardship, an exception may be granted when equivalent facilitation is provided.
2. This section shall not apply in those conditions where, due to legal or physical constraints, the site of the project will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable hardship. See Section 1.9.1.5.

1133B.7.3 Five-percent gradient. When the slope in the direction of travel of any walk exceeds one unit vertical in 20 units horizontal (5-percent gradient), it shall comply with the provisions of Section 1133B.5.

1133B.7.4 Changes in level. Changes in level shall comply with Section 1124B.2.

1133B.7.5 Level areas. All walks with continuous gradients shall have level areas at least 5 feet (1524 mm) in length at intervals of 400 feet (121 920 mm) maximum.

1133B.8 Hazards.

1133B.8.1 Warning curbs. Abrupt changes in level, except between a walk or sidewalk and an adjacent street or driveway, exceeding 4 inches (102 mm) in a vertical dimension, such as at planters or fountains located in or adjacent to walks, sidewalks or other pedestrian ways, shall be identified by curbs projecting at least 6 inches (152 mm) in height above the walk or sidewalk surface to warn the blind of a potential drop off.

When a guard or handrail is provided, no curb is required when a guide rail is provided centered 3 inches (76 mm) plus or minus 1 inch (25 mm) above the surface of the walk or sidewalk, the walk is 5 percent or less gradient or no adjacent hazard exists.

1133B.8.2 Overhanging obstructions. Any obstruction that overhangs a pedestrian way shall be a minimum of 80 inches (2032 mm) above the walking surface as measured from the bottom of the obstruction. Where a guy support is used parallel to a path of travel, including, but not limited to sidewalks, a guy brace, sidewalk guy or similar device shall be used to prevent an overhanging obstruction as defined (see Figure 11B-28).

Hazards such as drop-offs adjacent to walkways or overhanging obstructions can be dangerous to persons with sight problems. This section addresses these situations.

1133B.8.3 Detectable warnings at transit boarding platforms. See Section 1121B.3.1, Item 8(a).

1133B.8.4 Detectable directional texture at boarding platforms. See Section 1121B.3.1, Item 8(b).

1133B.8.5 Detectable warnings at hazardous vehicular areas. If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36 inches (914 mm) wide, complying with Section 1121B.3.1, Item 8(a).

Only approved DSA-AC detectable warning products and directional surfaces shall be installed as provided in the California Code of Regulations (CCR), Title 24, Part 1, Articles 2, 3 and 4. Refer to CCR Title 24, Part 12, Chapters 12-11A and B, for building and facility access specifications for product approval for detectable warning products and directional surfaces.

Detectable warning products and directional surfaces installed after January 1, 2001, shall be evaluated by an independent entity, selected by the Department of General Services, Division of the State Architect-Access Compliance, for all occupancies, including transportation and other outdoor environments, except that when products and surfaces are for use in residential housing, evaluation shall be in consultation with the Department of Housing and Community Development. See Government Code Section 4460.

1133B.8.6 Protruding objects.

1133B.8.6.1 General. Objects projecting from walls (for example, telephones), with their leading edges between 27 inches (686 mm) and 80 inches (2032 mm) above the finished floor, shall protrude no more than 4 inches (102 mm) into walks, halls, corridors, passageways or aisles. Objects mounted with their leading edges at or below 27 inches (686 mm) above the finished floor may protrude any amount. Free-standing objects mounted on posts or pylons may overhang 12 inches (305 mm) maximum from 27 inches (686 mm) to 80 inches (2032 mm) above the ground or finished floor. Protruding objects shall not reduce the clear width of an accessible route or maneuvering space. See Figure 11B-7A.

1133B.8.6.2 Head room. Walks, halls, corridors, passageways, aisles or other circulation spaces shall have 80 inches (2032 mm) minimum clear head room. If vertical clearance of an area adjoining an accessible route is reduced to less than 80 inches (nominal dimension), a barrier to warn blind or visually impaired persons shall be provided. See Figures 11B-7A and 11B-7C.

1133B.8.6.3 Free-standing signs. Wherever signs mounted on posts or pylons protrude from the posts or pylons and the bottom edge of the sign is at less than 80 inches (2032 mm) above the finished floor or ground level, the edges of such signs shall be rounded or eased and the corners shall have a minimum radius of 0.125 inches (3.2 mm).

1133B.8.7 Detectable warnings at reflecting pools. The edges of reflecting pools shall be protected by railings, walls, warning curbs or detectable warnings complying with Section 1121B.3.1, Item 8(a).

Division IV—ACCESSIBILITY FOR EXISTING BUILDINGS

**SECTION 1134B
ACCESSIBILITY FOR EXISTING BUILDINGS**

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

No renovation, structural repair, alteration or addition shall be undertaken which decreases or has the effect of decreasing accessibility or usability of a building or facility below the requirements for new construction at the time of renovation, structural repair, alteration or addition.

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

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

Exceptions:

1. *When the total construction cost of alterations, structural repairs or additions does not exceed a valuation threshold of \$50,000, based on January 1981, “ENR US20 Cities” Average Construction Cost Index of 3372.02 (Engineering News Record, McGraw Hill Publishing Company), and the enforcing agency finds that compliance with this code creates an unreasonable hardship, compliance shall be limited to the actual work of the project. The enforcing agency shall annually update the valuation threshold to a current amount based on the increase in the index since the last figure used. (For example, the January 2011 amount is \$132,536.28.) For purposes of this exception, an unreasonable hardship exists where the cost of providing an accessible entrance, path of travel, sanitary facilities, public phones and drinking fountains is disproportionate to the cost of the project; that is, where it exceeds 20 percent of the cost of the project without these features. Where the cost of alterations necessary to make these features fully accessible is disproportionate, access shall be provided to the extent that it can be without incurring disproportionate cost. In choosing which accessible elements to provide, priority should be given to those elements that will provide the greatest access in the following order:*

- 1.1. *An accessible entrance;*
- 1.2. *An accessible route to the altered area;*

- 1.3. *At least one accessible restroom for each sex;*
- 1.4. *Accessible telephones;*
- 1.5. *Accessible drinking fountains; and*
- 1.6. *When possible, additional accessible elements such as parking, storage and alarms.*

The obligation to provide access may not be evaded by performing a series of small alterations to the area served by a single path of travel if those alterations could have been performed as a single undertaking. If an area has been altered without providing an accessible path of travel to that area, and subsequent alterations of that area or a different area on the same path of travel are undertaken within three years of the original alteration, the total cost of alterations to the areas on that path of travel during the preceding three-year period shall be considered in determining whether the cost of making that path of travel accessible is disproportionate. Only alterations undertaken after January 26, 1992, shall be considered in determining if the cost of providing an accessible path of travel is disproportionate to the overall cost of the alterations.

2. *Certain types of privately funded, multistory buildings and facilities were formerly exempt from accessibility requirements above and below the first floor under this code, but as of the effective date of this regulation are no longer exempt due to more restrictive provisions in the federal Americans with Disabilities Act. In alteration projects involving buildings and facilities previously approved and built without elevators, areas above and below the ground floor are subject to the 20-percent disproportionality provisions described in Exception 1, above, even if the value of the project exceeds the valuation threshold in Exception 1. The types of buildings and facilities are:*

- 2.1. *Office buildings and passenger vehicle service stations of three stories or more and 3,000 or more square feet (279 m²) per floor.*
- 2.2. *Offices of physicians and surgeons.*
- 2.3. *Shopping centers.*
- 2.4. *Other buildings and facilities three stories or more and 3,000 or more square feet (279 m²) per floor if a reasonable portion of services sought and used by the public is available on the accessible level.*

For the general privately funded multistory building exception applicable to new construction and alterations, see Section 1103B.1, Exception 2.

The elevator exception set forth in this section does not obviate or limit in any way the obligation to comply with the other accessibility requirements in this code. For example, floors above or below

the accessible ground floor must meet the requirements of this section except for elevator service. If toilet or bathing facilities are provided on a level not served by an elevator, then toilet or bathing facilities must be provided on the accessible ground floor.

3. Alterations, structural repairs or additions consisting of one or more of the following shall be limited to the actual work of the project:

3.1. Altering one building entrance to meet accessibility requirements.

3.2. Altering one existing toilet facility to meet accessibility requirements.

3.3. Altering existing elevators to meet accessibility requirements.

3.4. Altering existing steps to meet accessibility requirements.

3.5. Altering existing handrails to meet accessibility requirements.

3.6. Alteration solely for the purpose of barrier removal undertaken pursuant to the requirements of the Americans with Disabilities Act (Public Law 101-336, 28 C.F.R., Section 36.304) or the accessibility requirements of this code as those requirements or regulations now exist or are hereafter amended, including the following:

3.6.1. Installing ramps.

3.6.2. Making curb cuts in sidewalks and entrance.

3.6.3. Repositioning shelves.

3.6.4. Rearranging tables, chairs, vending machines, display racks, and other furniture.

3.6.5. Repositioning telephones.

3.6.6. Adding raised markings on elevator control buttons.

3.6.7. Installing flashing alarm lights.

3.6.8. Widening doors.

3.6.9. Installing offset hinges to widen doorways.

3.6.10. Eliminating a turnstile or providing an alternative accessible path.

3.6.11. Installing accessible door hardware.

3.6.12. Installing grab bars in toilet stalls.

3.6.13. Rearranging toilet partitions to increase maneuvering space.

3.6.14. Insulating lavatory pipes under sinks to prevent burns.

3.6.15. Installing a raised toilet seat.

3.6.16. Installing a full-length bathroom mirror.

3.6.17. Repositioning the paper towel dispenser in a bathroom.

3.6.18. Creating designated accessible parking spaces.

3.6.19. Installing an accessible paper cup dispenser at an existing inaccessible water fountain.

3.6.20. Removing high-pile, low-density carpeting.

3.6.21. Installing vehicle hand controls.

3.7. Altering existing parking lots by resurfacing and/or restriping.

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

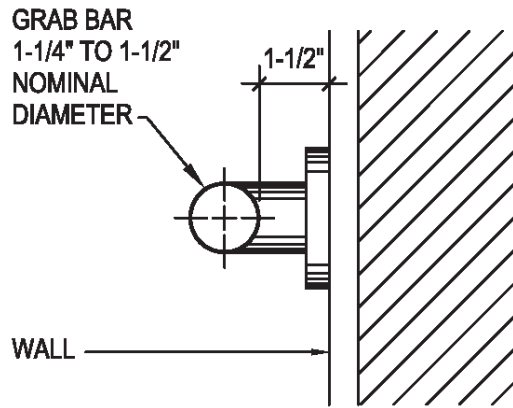
The only purpose of this exception is to exclude projects from activating the provisions of this section. The exceptions are not intended to relieve projects from complying with other applicable provisions of this code (e.g., replacement of carpet does not activate the provisions of this section; however,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

1134B.2.2 Where it is technically infeasible in the area of an alteration to make existing toilet facilities code compliant and to install separate toilet facilities for each sex, then the installation of at least one unisex toilet/facility per floor being altered, located in the same area as existing toilet facilities, will be permitted. Such a facility shall meet the requirements of Section 1115B.3.2.

1134B.2.3 If alterations of single elements, when considered together, amount to an alteration of a room or space in a building or facility, the entire room or space shall be made accessible.

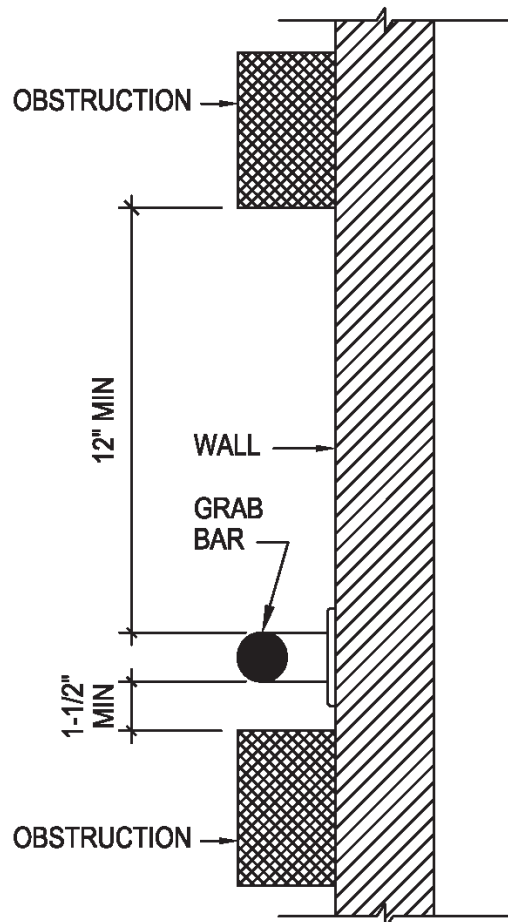
**SECTION 1135B
HISTORIC PRESERVATION—SPECIAL
STANDARDS OF ACCESSIBILITY FOR BUILDINGS
WITH HISTORICAL SIGNIFICANCE**

1135B.1 General. Qualified historical buildings shall comply with the State Historical Building Code, Part 8, Title 24, of the California Code of Regulations.



(a) TYPICAL GRAB BAR SECTION

THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION



(b) OBSTRUCTIONS AT GRAB BARS

FIGURE 11B-1C—CLEARANCES FOR GRAB BARS

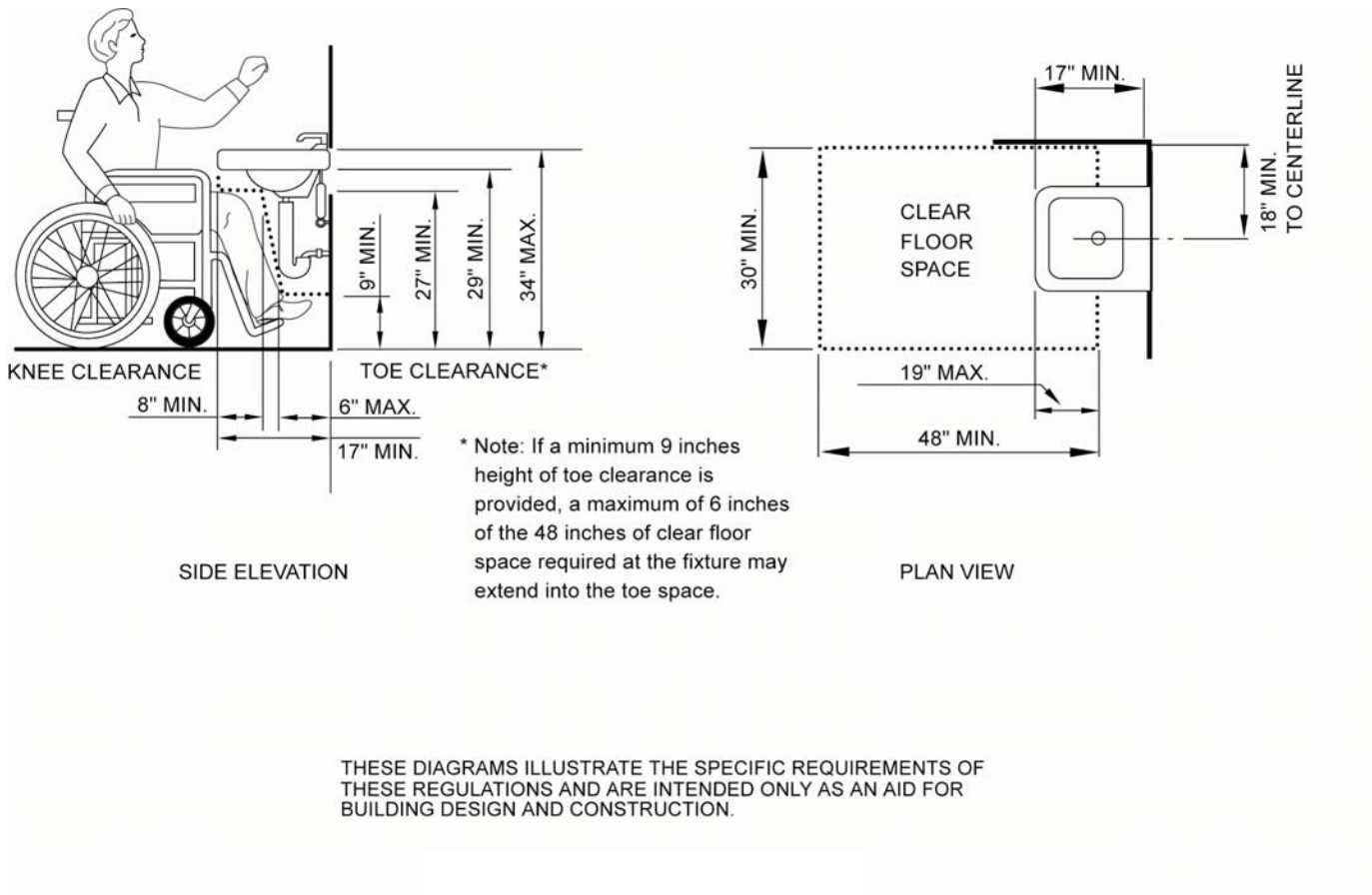
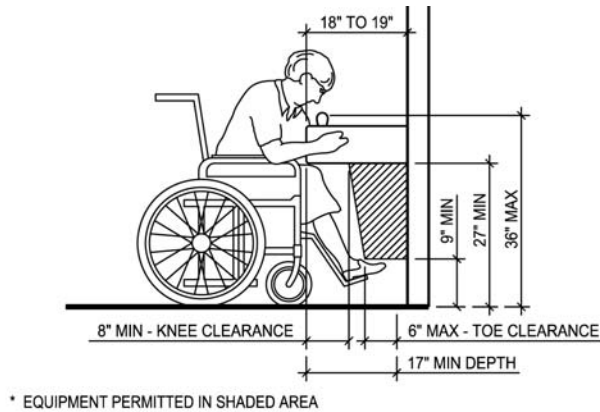
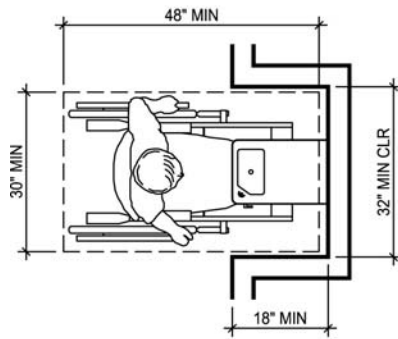


FIGURE 11B-1D—KNEE CLEARANCE



SPOUT HEIGHT AND KNEE CLEARANCE AT DRINKING FOUNTAINS

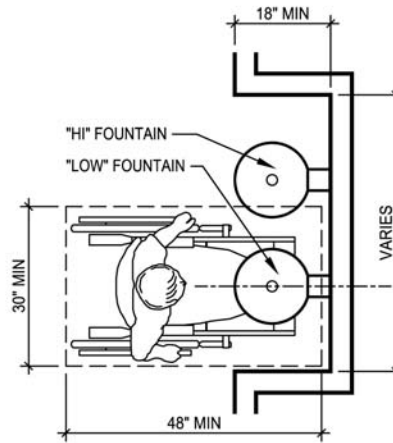


CLEAR FLOOR SPACE AT DRINKING FOUNTAIN ALCOVES

NOTES:

AT ALCOVES DEEPER THAN 24" ADDITIONAL 6" MANEUVERING CLEARANCE IS REQUIRED. SEE CBC 1118B.4, ITEM 2.

AT "HI-LOW" TYPE FOUNTAINS, CENTER THE 30" BY 48" CLEAR FLOOR SPACE ON THE "LOW" FOUNTAIN FIXTURE



CLEAR FLOOR SPACE AT "HI-LOW" DRINKING FOUNTAIN ALCOVES

FIGURE 11B-3B—DRINKING FOUNTAINS—continued

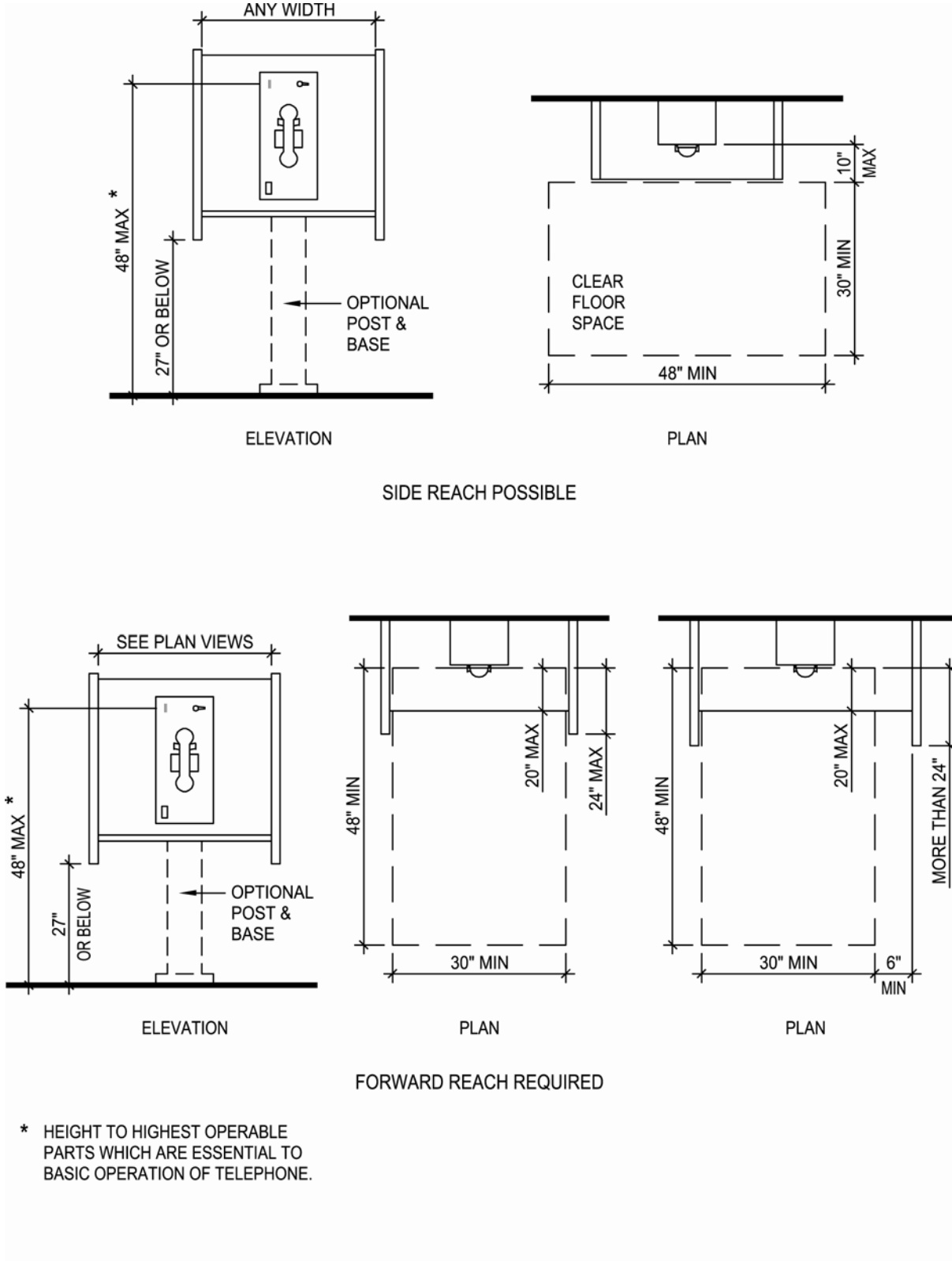
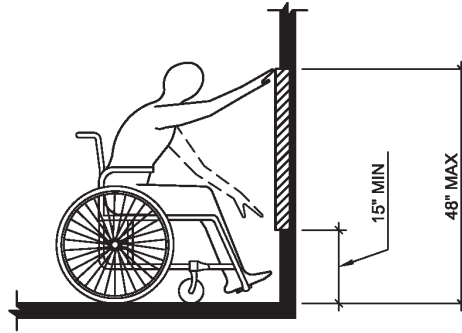
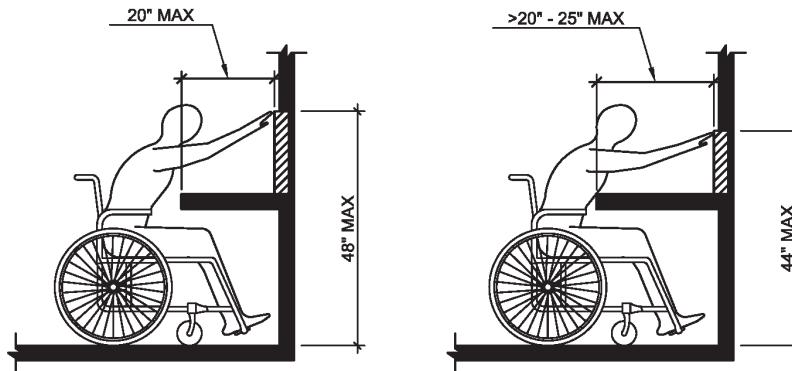


FIGURE 11B-4—MOUNTING HEIGHTS AND CLEARANCES FOR TELEPHONES



(a)

UNOBSTRUCTED FORWARD REACH

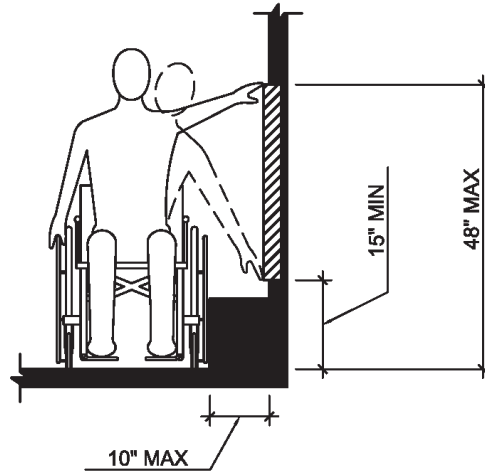


(b)

(c)

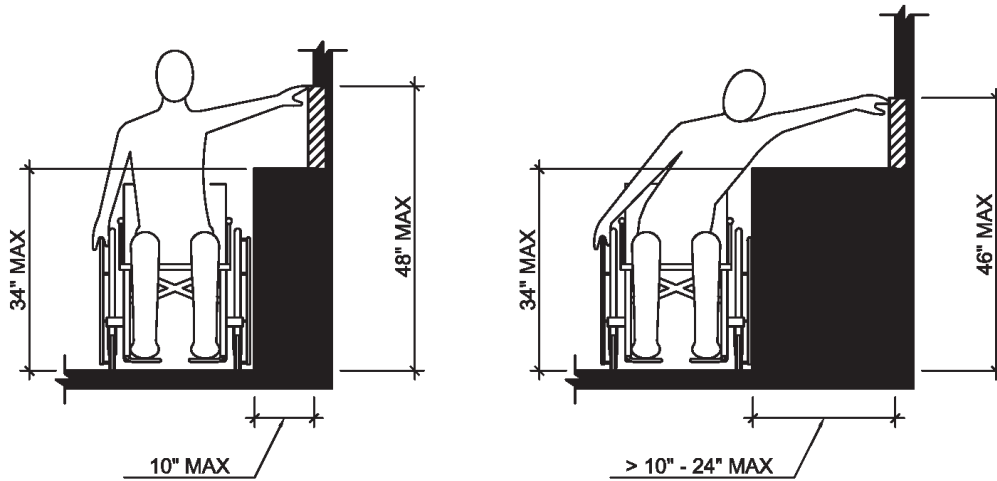
OBSTRUCTED HIGH FORWARD REACH

FIGURE 11B-5C—FORWARD REACH



(a)

UNOBSTRUCTED SIDE REACH



(b)

(c)

OBSTRUCTED HIGH SIDE REACH

FIGURE 11B-5D—SIDE REACH

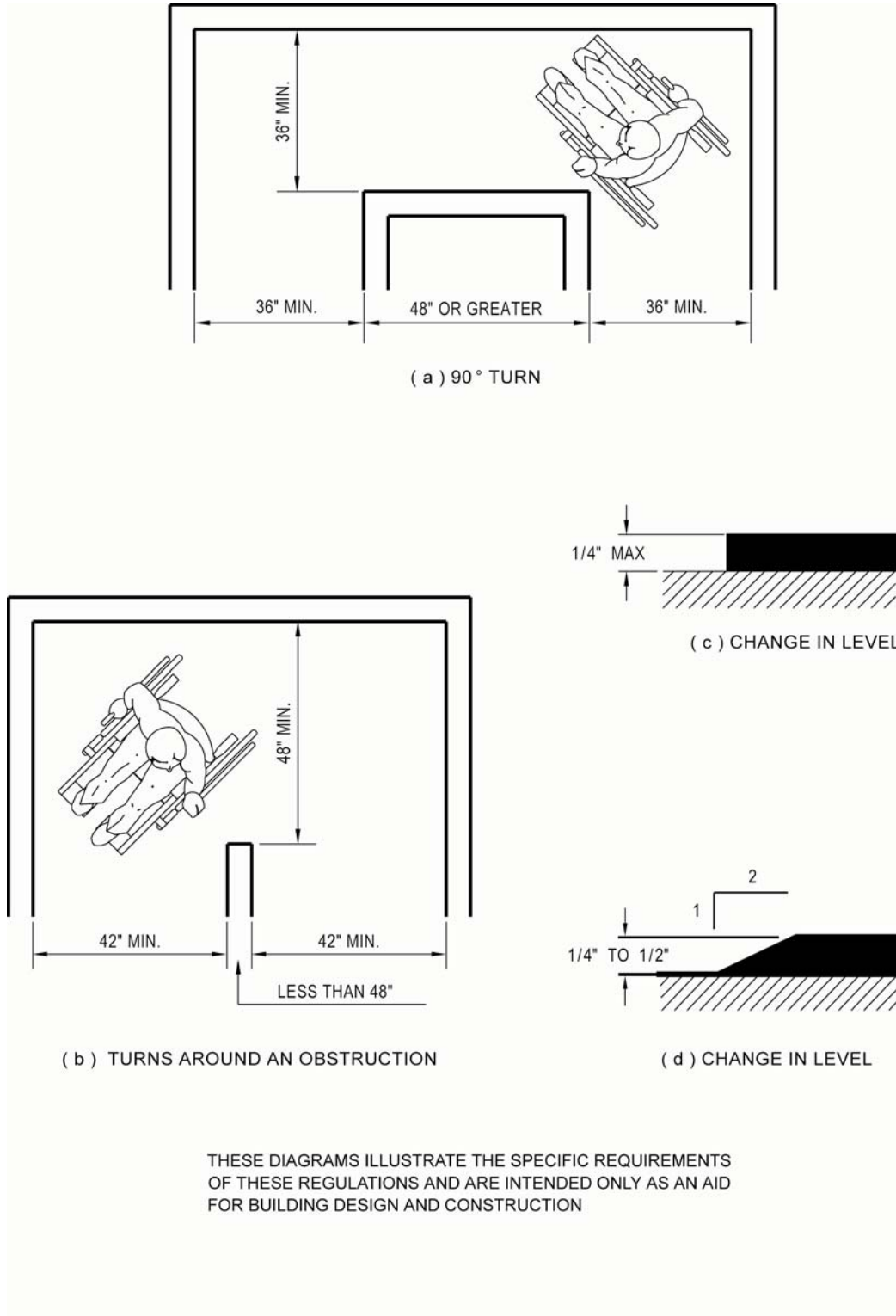


FIGURE 11B-5E—WIDTH OF ACCESSIBLE ROUTE

FIGURE 11B-5F—ATM REACH RANGE LIMITS
Deleted

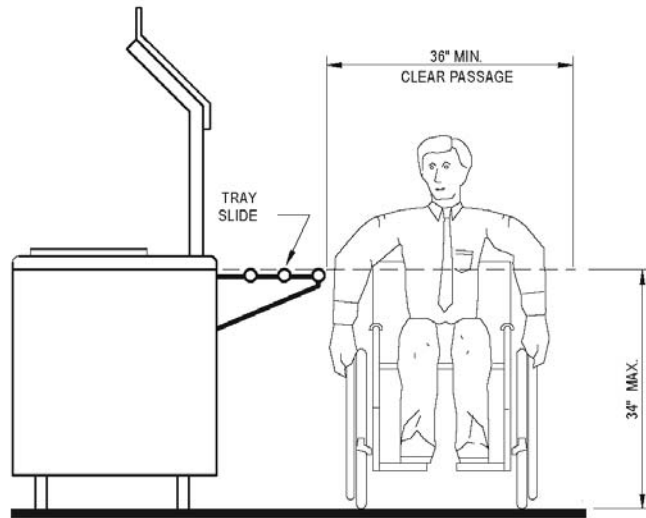
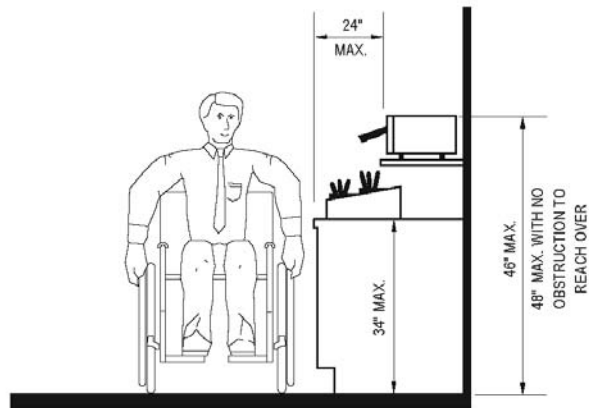


FIGURE 11B-16—FOOD SERVICE LINES



THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11B-17—TABLEWARE AREAS

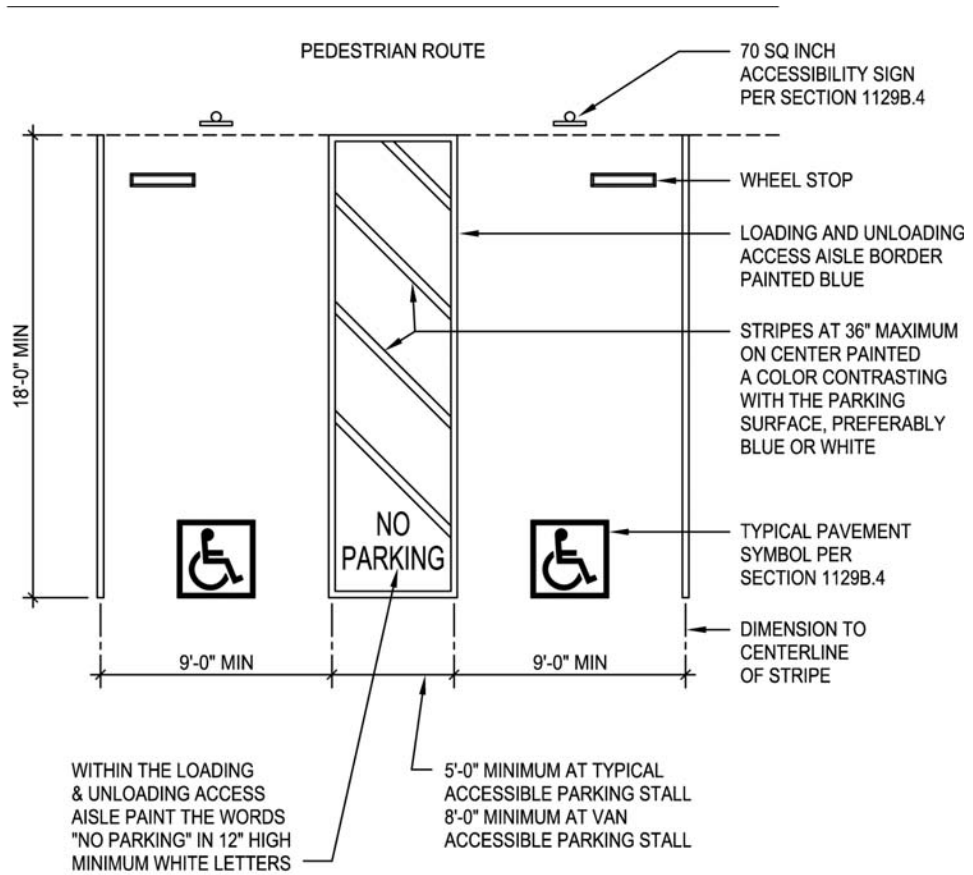


FIGURE 11B-18A—DOUBLE PARKING STALLS

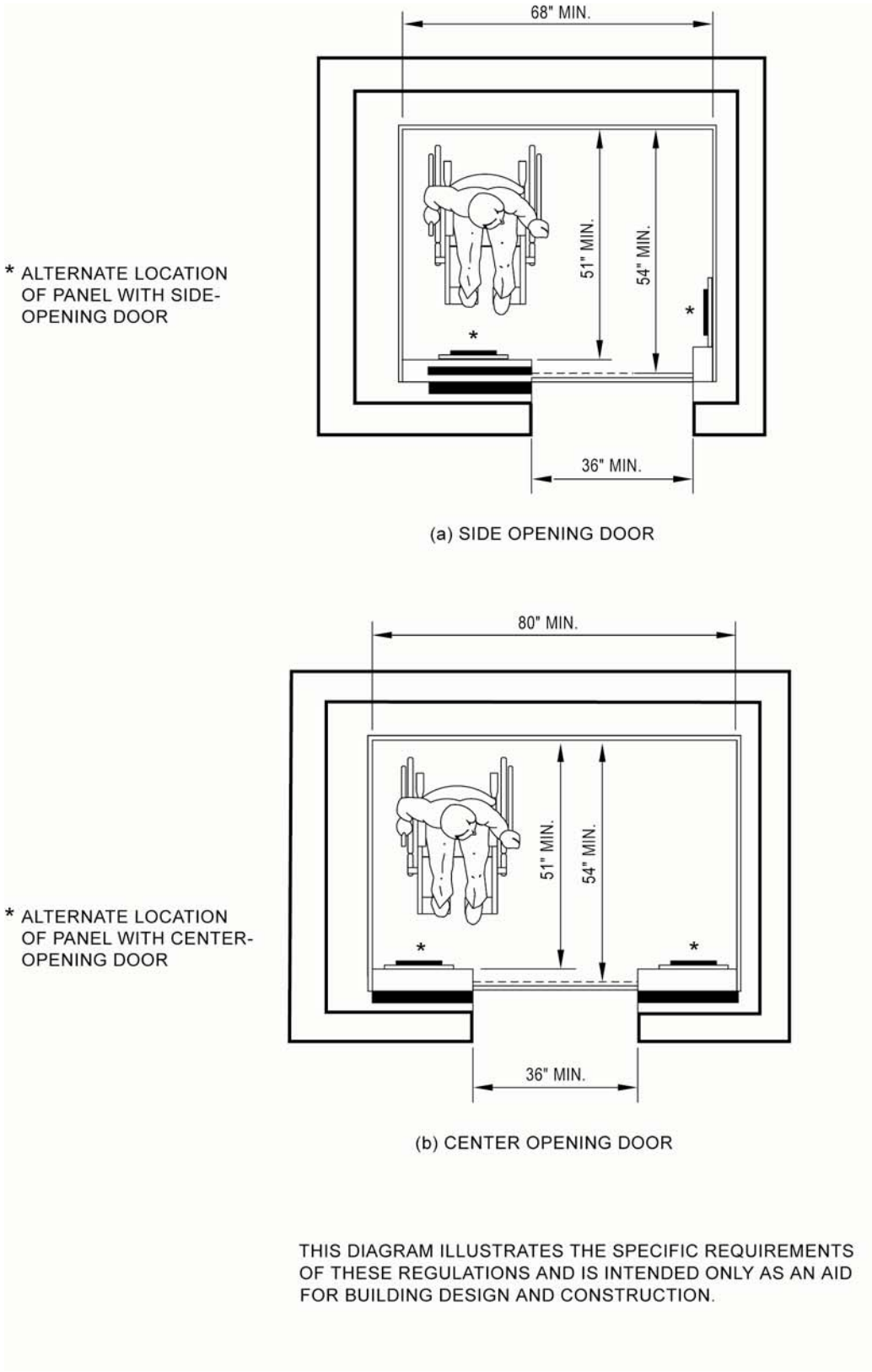
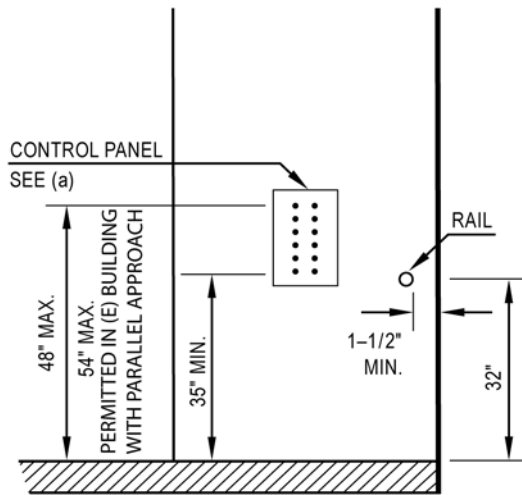
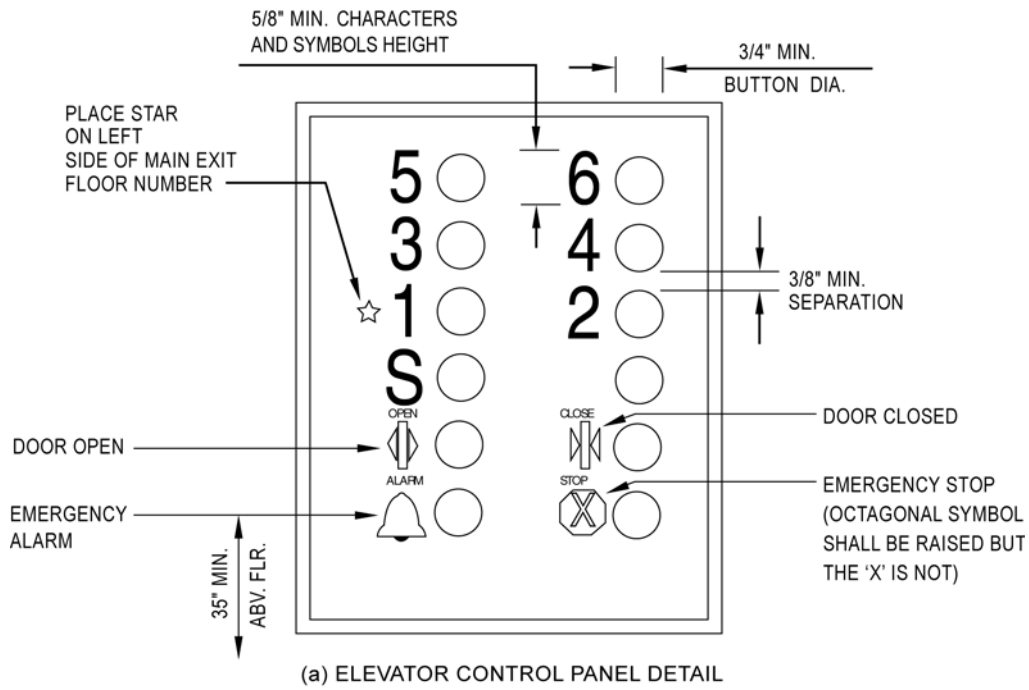
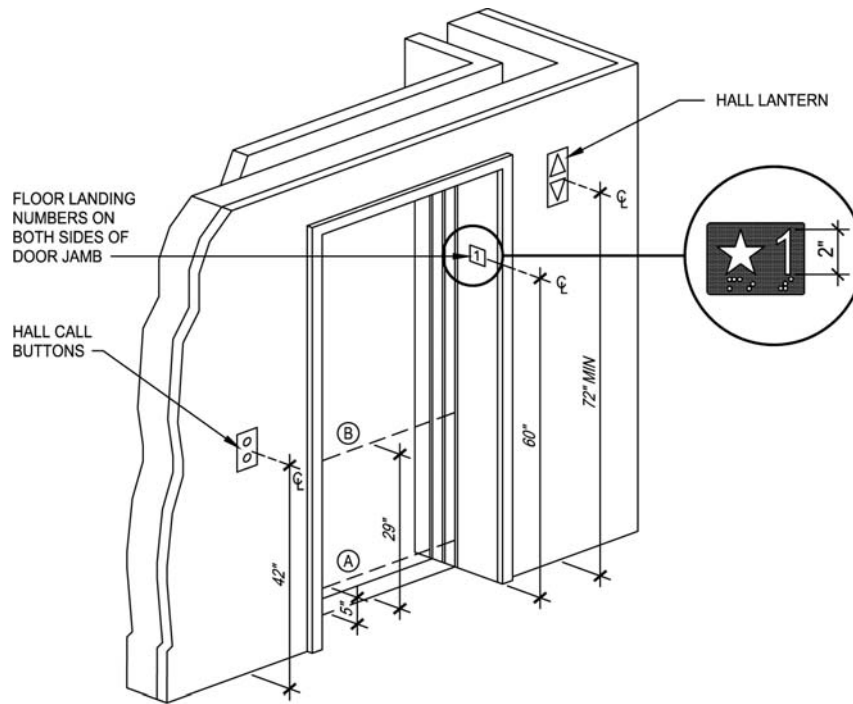


FIGURE 11B-40A—MINIMUM DIMENSIONS OF ELEVATOR CARS



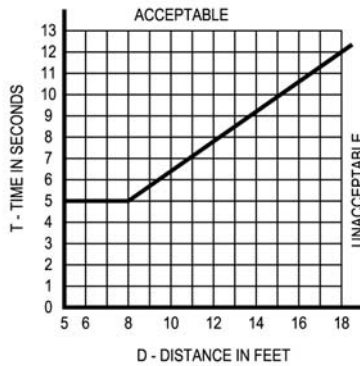
THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11B-40B—ELEVATOR CONTROL PANEL



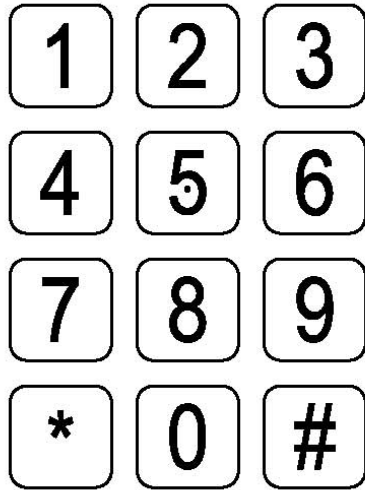
NOTE:
 THE AUTOMATIC DOOR REOPENING DEVICE IS ACTIVATED IF AN OBJECT PASSES THROUGH EITHER LINE A OR LINE B. LINE A AND LINE B REPRESENT THE VERTICAL LOCATION OF THE DOOR REOPENING DEVICE NOT REQUIRING CONTACT.

FIGURE 11B-40C—HOISTWAY AND ELEVATOR ENTRANCES



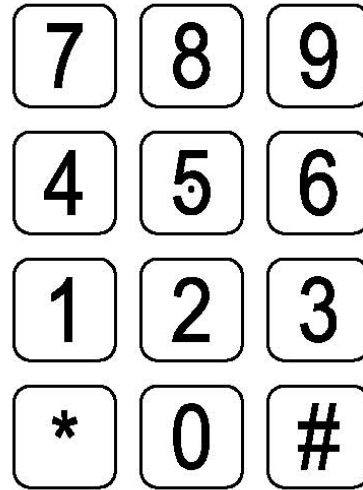
THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION

FIGURE 11B-40D—GRAPH OF TIMING EQUATION



(a)

12-KEY
ASCENDING



(b)

12-KEY
DESCENDING

FIGURE 11B-41—NUMERIC KEY LAYOUT

CALIFORNIA BUILDING CODE-MATRIX ADOPTION TABLE CHAPTER 12 – INTERIOR ENVIRONMENT

Adopting agency	BSC	SFM	HCD			DSA			OSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	SS/CC	1	2	3	4								
Adopt entire chapter							X	X												
Adopt entire chapter as amended (amended sections listed below)	X		X	X					X	X	X	X								
Adopt only those sections that are listed below		X																X		
Chapter/Section																				
1203.1									X	X	X	X								
1203.2	X																			
1203.3.1.1																			X	
1203.3.2																			X	
1203.3.2 Item 4																			X	
1203.3.2 Exc/ 6																				
1203.4			X	X																
1203.4.2.1			X	X																
1203.5		X	X	X																
1204.1																				
1204.1 w/Excs/			X						X	X	X	X								
1205.1			X																	
1205.6	X																			
1206		X																		
1207			X	X																
1208		X																		
1208.1			X																	
1208.2									X	X	X	X								
1208.2.1									X	X	X	X								
1208.4			X																	
1209		X																		
1209.1.1																				
1210.2			X	X																
1211			X	X																
1224									X											
1225										X										
1226											X									
1227												X								

The Office of the State Fire Marshal's adoption of this chapter or individual sections is applicable to structures regulated by other state agencies pursuant to Section 1.11.

CHAPTER 12

INTERIOR ENVIRONMENT

SECTION 1201 GENERAL

1201.1 Scope. The provisions of this chapter shall govern ventilation, temperature control, lighting, yards and courts, sound transmission, room dimensions, surrounding materials and rodent proofing associated with the interior spaces of buildings.

SECTION 1202 DEFINITIONS

1202.1 General. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

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.

THERMAL ISOLATION. A separation of conditioned spaces, between a sunroom addition and a dwelling unit, consisting of existing or new wall(s), doors and/or windows.

SECTION 1203 VENTILATION

1203.1 General. Buildings shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the *California Mechanical Code*.

Exception: [OSHPD 1, 2, 3 & 4] For restrictions on natural ventilation, see California Mechanical Code.

1203.2 Attic spaces. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. A minimum of 1 inch (25 mm) of airspace shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than $1/300$ of the area of the space ventilated, with 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

[BSC] Exception: Attic ventilation shall not be required when determined not necessary by the building official due to atmospheric or climatic conditions.

1203.2.1 Openings into attic. Exterior openings into the attic space of any building intended for human occupancy shall be protected to prevent the entry of birds, squirrels, rodents, snakes and other similar creatures. Openings for ventilation having a least dimension of $1/16$ inch (1.6 mm) minimum and $1/4$ inch (6.4 mm) maximum shall be permitted. Openings for ventilation having a least dimension larger than $1/4$ inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, perforated vinyl or similar material with

openings having a least dimension of $1/16$ inch (1.6 mm) minimum and $1/4$ inch (6.4 mm) maximum. Where combustion air is obtained from an attic area, it shall be in accordance with Chapter 7 of the *California Mechanical Code*.

1203.3 Under-floor ventilation. The space between the bottom of the floor joists and the earth under any building except spaces occupied by basements or cellars shall be provided with ventilation openings through foundation walls or exterior walls. Such openings shall be placed so as to provide cross ventilation of the under-floor space.

1203.3.1 Openings for under-floor ventilation. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet (0.67 m² for each 100 m²) of crawl-space area. Ventilation openings shall be covered for their height and width with any of the following materials, provided that the least dimension of the covering shall not exceed $1/4$ inch (6 mm):

1. Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.
2. Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.
3. Cast-iron grilles or gratings.
4. Extruded load-bearing vents.
5. Hardware cloth of 0.035 inch (0.89 mm) wire or heavier.
6. Corrosion-resistant wire mesh, with the least dimension not exceeding $1/8$ inch (3.2 mm).

1203.3.1.1 [SPCB] Openings for under-floor ventilation shall be not less than 1 1/2 square feet (0.135 m²) for each 25 linear feet (7620 linear mm) of exterior wall. They shall be covered with corrosion-resistant wire mesh with mesh openings not less than 1/4 inch (6.4 mm) nor more than 1/2 inch (13 mm) in any dimension.

1203.3.2 Exceptions. The following are exceptions to Sections 1203.3 and 1203.3.1:

1. Where warranted by climatic conditions, ventilation openings to the outdoors are not required if ventilation openings to the interior are provided.
2. The total area of ventilation openings is permitted to be reduced to $1/1,500$ of the under-floor area where the ground surface is covered with a Class I vapor retarder material and the required openings are placed so as to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited.
3. Ventilation openings are not required where continuously operated mechanical ventilation is provided at a rate of 1.0 cubic foot per minute (cfm) for each 50 square feet (1.02 L/s for each 10 m²) of crawl space floor area and the ground surface is covered with a Class I vapor retarder.

4. Ventilation openings are not required when the ground surface is covered with a Class I vapor retarder, the perimeter walls are insulated and the space is conditioned in accordance with the *California Energy Code*.
5. For buildings in flood hazard areas as established in Section 1612.3, the openings for under-floor ventilation shall be deemed as meeting the flood opening requirements of ASCE 24 provided that the ventilation openings are designed and installed in accordance with ASCE 24.
6. *[SPCB] For purposes of structural pest control inspections, ventilation shall be considered inadequate when the lack thereof has contributed to the growth of wood-destroying pests or organisms.*

1203.4 Natural ventilation. Natural ventilation of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants.

[HCD 1] In employee housing, all openable windows in rooms used for living, dining, cooking or sleeping purposes, and toilet and bath buildings, shall be provided and maintained with insect screening.

[HCD 1] Door openings of rooms used for dining, cooking, toilet and bathing facilities in employee housing shall be provided and maintained with insect screening or with solid doors equipped with self-closing devices in lieu thereof, when approved by the enforcement agency.

[HCD 1] The windows, doors, louvers or other approved closeable openings not required by Section 1029 may open into a passive solar energy collector for ventilation required by this section. The area of ventilation openings to the outside of the passive solar energy collector shall be increased to compensate for the openings required by the interior space.

1203.4.1 Ventilation area required. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated.

1203.4.1.1 Adjoining spaces. Where rooms and spaces without openings to the outdoors are ventilated through an adjoining room, the opening to the adjoining room shall be unobstructed and shall have an area of not less than 8 percent of the floor area of the interior room or space, but not less than 25 square feet (2.3 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.

Exception: Exterior openings required for ventilation shall be permitted to open into a *thermally isolated* sunroom addition or patio cover provided that the openable area between the sunroom addition or patio cover and the interior room shall have an area of not less than 8 percent of the floor area of the interior room or space, but not less than 20 square feet (1.86 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.

1203.4.1.2 Openings below grade. Where openings below grade provide required natural ventilation, the outside horizontal clear space measured perpendicular to the opening shall be one and one-half times the depth of the opening. The depth of the opening shall be measured from the average adjoining ground level to the bottom of the opening.

1203.4.2 Contaminants exhausted. Contaminant sources in naturally ventilated spaces shall be removed in accordance with the *California Mechanical Code* and the *California Fire Code*.

1203.4.2.1 Bathrooms. Rooms containing bathtubs, showers, spas and similar bathing fixtures shall be mechanically ventilated in accordance with the *California Mechanical Code*. *The minimum ventilation or exhaust rate shall not be less than that established by Table 4-4 "Minimum Exhaust Rates." See California Mechanical Code for additional provisions related to environmental air ducts.*

1203.4.3 Openings on yards or courts. Where natural ventilation is to be provided by openings onto yards or courts, such yards or courts shall comply with Section 1206.

1203.5 Other ventilation and exhaust systems. Ventilation and exhaust systems for occupancies and operations involving flammable or combustible hazards or other contaminant sources as covered in the *California Mechanical Code* or the *California Fire Code* shall be provided as required by both codes.

SECTION 1204 TEMPERATURE CONTROL

1204.1 Equipment and systems. Interior spaces intended for human occupancy shall be provided with active or passive space-heating systems capable of maintaining a minimum indoor temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor on the design heating day.

Exceptions:

1. Interior spaces where the primary purpose is not associated with human comfort.
2. *[HCD 1] For limited-density owner-built rural dwellings, a heating facility or appliance shall be installed in each dwelling subject to the provisions of Subchapter 1, Chapter 1, Title 25, California Code of Regulations, commencing with Section 74; however, there shall be no specified requirement for heating capacity or temperature maintenance. The use of solid-fuel or 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. *[OSHPD 1, 2, 3 & 4] 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*

ard to health and safety exists. Facilities for which preliminary drawings have been submitted to the enforcing agency prior to the effective date of this change shall not be required to comply with such new requirements, provided working drawings are submitted within one year of the effective date of such new requirements.

2. The provisions of this section do not prohibit the use of alternate space utilization, new concepts of design, treatment techniques, equipment and alternate finish materials provided the intent of this section is accommodated and written approval for such alternative is granted by the enforcing agency. Written substantiating evidence in support of the alternate and a written request for consideration shall be submitted to the enforcing agency.
3. Nothing in this section shall prohibit the provisions of required services from a centralized service facility serving two or more licensed facilities when approved in writing by the licensing agency. Buildings and required spaces for services provided in a separate centralized services facility shall comply with all applicable provisions of these regulations and applicable local codes and ordinances for the services so provided.
4. Acute psychiatric hospitals and general acute-care hospitals providing only acute medical rehabilitation center services may provide for surgical and anesthesia services to be provided by an outside licensed facility when approved by the licensing agency.
5. When the Corrections Standards Authority, the Department of Corrections or the Department of Youth Authority determines that a particular requirement for hospitals located in a correctional facility may compromise the safety, security or protection of staff, inmates or property, the enforcement agency shall consider an alternate design.

1224.3 Definitions. For the purpose of this section, the following terms shall have the meaning indicated:

AIR CONDITIONING. The process or system by which simultaneously the temperature, humidity, air motion and quality are maintained within required limits.

AIRBORNE INFECTION ISOLATION ROOM. A single-occupancy patient room where environmental factors are controlled in an effort to minimize the transmission of those infectious agents usually spread from person to person by droplet nuclei associated with coughing and inhalation.

AMBULATORY CARE. A defined health care encounter(s) of less than 24 hours in duration that requires direct professional health care support within a specific facility.

AMBULATORY SURGICAL FACILITY. Any surgical facility organized for the purpose of providing procedural, invasive surgical care to patients with the expectation that they will be recovered sufficiently to be discharged in less than a 24-hour period.

BASIC SERVICES. Those essential services required for licensure as a hospital, including medical, nursing, surgical,

anesthesia, laboratory, radiology, pharmacy, dietary services and support services. See "SUPPLEMENTAL SERVICES."

BIOTERRORISM. The use, or threat of use, of biological agents to intimidate a political entity or population group.

CENTRAL AIR-HANDLING SYSTEMS. Any units requiring ductwork on the supply or inlet side and serving more than one room.

COURT. An open exterior space bounded on three or more sides by the walls of a structure.

ENVIRONMENT OF CARE. Those features in a built health care entity that are created, structured, and maintained to support quality health care.

EXAM ROOM. A room with a bed, stretcher, or examination table and capability for periodic monitoring (e.g., measurement of blood pressure or pulse oximetry) in which procedures that do not require a specialized suite can be performed (e.g., pelvic examination, blood transfusion).

FLOOR AREA, CLEAR. The actual occupied area exclusive of fixed or wall-mounted cabinets, built-in shelves, toilet rooms, closets, lockers, wardrobes, alcoves, anterooms or vestibules.

GENERAL ACUTE-CARE HOSPITAL. A hospital, licensed by the Department of Health Services, having a duly constituted governing body with overall administrative and professional responsibility and an organized medical staff which provides 24-hour inpatient care, including the basic services.

GOOSENECK SPOUT. A deck or fixture-mounted spout shaped so the discharge point is at least 5 inches (127 mm) above the fixture rim.

HANDWASHING FIXTURE. A special application sink having a water supply spout mounted so the discharge point is at least 5 inches (127 mm) above the fixture rim and equipped with hot and cold supply controls not requiring direct contact of the hands for operation. The fixture cannot be equipped with an aerator and wrist or elbow blade handles, but may be equipped with a nonaerating laminar flow device. Sensor operated fixtures may be used, provided they are either battery operated or connected to the essential electrical system.

HOSPITAL. A general acute-care hospital, including those providing only acute medical rehabilitation center services and acute psychiatric hospitals.

HOUSEKEEPING. Services anywhere within a health care facility that include general cleaning and tidying and the provision and positioning of identified materials, e.g., soaps, towels, etc. (While routine disinfection protocols can be included in such a definition, the definition is not intended to include complex, nonroutine disinfection procedures nor the nonroutine disposition of hazardous materials such as potentially toxic drugs or other chemicals and radioactive wastes.)

LDR. Labor, Delivery, Recovery (an unlicensed patient bed)

LDRP. Labor, Delivery, Recovery, Postpartum (a licensed patient bed)

LICENSING AGENCY. The Department of Public Health, Licensing and Certification.

NURSING UNIT. A designated patient care area of the hospital which is planned, organized, operated and maintained to function as a unit. It includes patient rooms with adequate support facilities, services and personnel providing nursing care and necessary management of patients.

OPERATING ROOM. A room specifically designed for the performance of surgical procedures. (In common understanding, this means most types of surgical procedures, especially those involving the administration of anesthesia, multiple personnel, recovery room access, and a fully controlled environment.)

OUTPATIENT SERVICE. An organizational unit of the hospital, which provides nonemergency healthcare services to patients.

PATIENT ROOM. Licensed patient bed rooms.

PERIOPERATIVE. Patient care and other related supportive activities before, during or after the operative event.

PROTECTIVE ENVIRONMENT. A bedded unit or patient room where severely immunosuppressed patients are cared for.

SCRUB SINK. A sink used to wash and scrub the hands and arms during the aseptic preparation for surgery, and equipped with a supply spout and controls as required for a handwashing fixture.

SERVICE SINK. A sink located in a housekeeping room and designed for the purpose of cleaning mops and the disposal of waste water.

SUB-ACUTE CARE. A segment within a continuum of levels of care determined by patient acuity, clinical stability, and resource needs.

SUPPLEMENTAL SERVICE. An inpatient or outpatient service which is not required to be provided by law or regulation for licensure. A supplemental service, when provided, must accommodate the provisions of this section.

Note: See "BASIC SERVICES."

SURGICAL SERVICE SPACE. A space that includes the operating room(s) and service areas.

1224.4 GENERAL CONSTRUCTION.

1224.4.1 Services/systems and utilities. See Section 3416A or 3424 for single-story light frame skilled nursing facilities and intermediate care facilities.

1224.4.2 Service spaces. Spaces for dietary, laundry, morgue, ambulance entrance, receiving areas, power plants, mechanical equipment, incinerator, garbage can cleaning, automobile parking and storage areas for garbage, trash and medical gases shall be located and constructed to minimize noise, steam, odors, hazards and unsightliness in patient-care areas and bedrooms.

1224.4.3 Treatment spaces. Radiology, laboratory, pharmacy, physical therapy and service spaces serving only outpatients and similar outpatient service departments shall not be located in nursing units, surgical units, perinatal

units, nursery areas, central sterilization rooms, food-service areas, power plants, mechanical equipment rooms, maintenance shops, general storage, laundry, employees' dressing or housekeeping facilities.

Exception: Physical and occupational therapy spaces of a rehabilitation service may serve both outpatients and inpatients.

1224.4.4 Examination or treatment room. Unless specified elsewhere, if a treatment room or an exam room is provided, it shall have a minimum clear floor area of 80 square feet (7.4 m²), the least dimension of which shall be 8 feet (2438 mm). The room shall contain a handwashing fixture.

1224.4.5 Outpatient waiting rooms. Waiting rooms for outpatients shall provide a seating area and space for wheelchairs and have public corridor access to, or provisions for, public toilet, drinking fountain and telephone.

Note: One waiting area may serve more than one department or service.

1224.4.5.1 Outpatient access. If x-ray examinations are to be performed on outpatients, outpatient access to the radiological spaces shall not traverse a nursing unit.

Exception: Satellite radiology, laboratory, pharmacy, and physical and occupational therapy space serving inpatients may be located in nursing units and inpatient treatment areas.

1224.4.6 Miscellaneous requirements.

1224.4.6.1 Station outlets. Station outlets for oxygen, vacuum, and medical air shall comply with Table 1224.4.6.1.

1224.4.6.2 Gas and vacuum systems. The design, installation and testing of medical gas and vacuum systems shall conform to NFPA 99.

1224.4.6.3 Hyperbaric facilities. The design and construction of hyperbaric facilities shall conform to NFPA 99.

1224.4.6.4 Laboratories. The design and construction of hospital laboratories shall conform to NFPA 99.

1224.4.6.5 Nurse call systems. The location of nurse call devices shall comply with Table 1224.4.6.5. The design of call systems shall comply with the California Electrical Code, Part 3 of Title 24.

1224.4.7 Corridors.

1224.4.7.1 Width. The minimum width of corridors and hallways shall be 8 feet (2438 mm).

Exception: Patient-care corridors and hallways in hospitals for psychiatric care of patients who are not bedridden shall have a minimum clear and unobstructed width of 6 feet (1829 mm). For the purposes of this section, bedridden patients shall be defined as patients confined to beds who would be transported or evacuated in beds or litters.

**TABLE 1224.4.6.1
STATION OUTLETS FOR OXYGEN, VACUUM (SUCTION), AND MEDICAL AIR^{1,6}**

	LOCATION	OXYGEN	VACUUM	MEDICAL AIR
1	Patient rooms (medical and surgical)	1/bed	1/bed	-
2	Examination or treatment (medical, surgical, and postpartum care)	1/room	1/room	-
3	Airborne infection isolation or protective environment rooms (medical and surgical)	1/bed	1/bed	-
4	Seclusion room (medical, surgical, and postpartum)	1/bed	1/bed	-
5	Intensive care (general)	3/bed	3/bed	1/bed
6	Airborne infection isolation	3/bed	3/bed	1/bed
7	Coronary-care service space	3/bed	2/bed	1/bed
8	Pediatric intensive care	3/bed	3/bed	1/bed
9	Newborn intensive care	3/bassinets	3/bassinets	3/bassinets
10	Newborn nursery (full term)	1/4 bassinets ²	1/4 bassinets ²	1/4 bassinets ²
11	Pediatric and adolescent	1/bed	1/bed	1/bed
12	Pediatric nursery	1/bassinets	1/bassinets	1/bassinets
13	Psychiatric patient room	-	-	-
14	Seclusion treatment room	-	-	-
15	General operating room	2/room	3/room	-
16	Cardio, ortho, neurological	2/room	3/room	-
17	Orthopedic surgery	2/room	3/room	-
18	Surgical cysto and endo	1/room	3/room	-
19	Post-anesthesia care unit	1/bed	3/bed	1/bed
20	Anesthesia workroom	1 per workstation	-	1 per workstation
21	Not used	-	-	-
22	Postpartum bedroom	1/bed	1/bed	-
23	Cesarean operating/delivery room	2/room	3/room	1/room
24	Infant resuscitation space ⁴	1/bassinets	1/bassinets	1/bassinets
25	Labor room	1/room	1/room	1/room
26	OB recovery room	1/bed	3/bed	1/room
27	Labor/delivery/recovery (LDR) ⁵	1/bed	1/bed	-
28	Labor/deliver/recovery/postpartum (LDRP) ⁵	1/bed	1/bed	-
29	Initial emergency management	1/bed	1/bed	-
30	Triage area (definitive emergency care)	1/station	1/station	-
31	Definitive emergency care examination or treatment rooms	1/bed	1/bed	1/bed
32	Definitive emergency care observation unit	1/bed	1/bed	-
33	Trauma/cardiac room(s)	2/bed	3/bed	1/bed
34	Orthopedic and cast room	1/room	1/room	-
35	Cardiac catheterization lab	2/bed	2/bed	2/bed
36	Autopsy room	-	1 per workstation	-
37	MRI	1/room	1/room	1/room

1. For any area or room not described above, the facility clinical staff shall determine outlet requirements after consultation with the enforcing agency.
2. Four bassinets may share one outlet that is accessible to each bassinet.
3. Not used.
4. When infant resuscitation takes place in a room such as cesarean section/delivery or LDRP, then the infant resuscitation services must be provided in that room in addition to the minimum service required for the mother.
5. Two outlets for mother and two for one bassinet.
6. Renovation projects of existing spaces where the existing function is not changed, are not required to comply with the requirements of this table.

**TABLE 1224.4.6.5
[OSHPD 1, 2, 3 &4] LOCATION OF NURSE CALL DEVICES**

KEY: • Required

AREA DESIGNATION	PATIENT STATION	BATH STATION	STAFF EMERGENCY STATION	CODE CALL STATION	NURSE MASTER STATION	DUTY STATION	NOTE
Nursing Units							
Inpatient bed location	•	•					1, 2, 3, 4
Patient toilets, showers, and baths		•					2
Nurse/control station					•		
Clean workroom						•	
Soiled workroom						•	
Medication preparation room						•	
Examination/treatment room			•			•	
Staff lounge						•	
Other Clinical Areas							
Operating and cesarean delivery rooms			•				2
Procedure rooms			•				2
LDR/LDRP rooms	•		•	•			1, 2, 3, 4
Recovery—PACU			•	•			2, 4
Emergency exam, treatment, triage rooms	•		•	•			1, 2, 4
Patient preparation and holding areas	•		•				1, 2
Critical care bed locations, including NICU	•		•	•			1, 2, 4, 5
Newborn and special care nurseries			•				
Cardiac catheterization, interventional radiology, angiography			•	•			
MRI, CT, stress testing areas			•	•			2, 4
Psychiatric seclusion ante/exam rooms			•				

Notes:

1. One device shall be permitted to accommodate both patient station and emergency staff assistance station functionality.
2. A visible signal shall be activated in the corridor at the patient's door, at the nurse/control station, and at all duty stations. In multicorridor nursing units, additional visible signals shall be installed at corridor intersections.
3. Two-way voice communication shall be provided with the nurse/control station.
4. One device shall be permitted to accommodate both emergency staff assistance and code call station functionality.
5. A patient station shall not be required in the NICU.

1224.4.7.2 Light traffic. Service corridors and hallways with anticipated light traffic volume for nonpatient use may be reduced to a width of 5 feet (1524 mm) if approved by the enforcing agency.

Exception: Corridors and hallways in administrative and business areas may be reduced to a width of 44 inches (1118 mm).

1224.4.7.3 Outpatient services. Outpatient clinics or outpatient departments which contain facilities for outpatient use only, such as laboratory, x-ray, physical therapy or occupational therapy, shall have a minimum corridor or hallway width of 5 feet (1524 mm). Outpatient clinics and outpatient departments consisting only of waiting rooms, business offices, doctor's offices, and examining rooms, where there is no traffic through such

area to other services or to exits from the building, shall have a minimum corridor or hallway width of 44 inches (1118 mm).

1224.4.7.4 Handrails. Corridors for patient traffic in areas providing skilled nursing, intermediate care or rehabilitation services shall be furnished with a handrail on both sides at a height not less than 30 inches (762 mm) or greater than 36 inches (914 mm).

1224.4.7.5 Connections. Corridor systems shall connect all patient rooms and basic services.

Exception: Covered pedestrian walkways connecting separate buildings are permitted for ambulatory, psychiatric or chemical dependency patients.

1224.4.8 Doors and door openings.

1224.4.8.1 Toilet room doors. Doors to toilet rooms shall have an opening of not less than 32 inches (813 mm) clear in width and shall be equipped with hardware which will permit the door to swing outward or in a manner to negate the need to push against a patient who may have collapsed within the toilet room.

1224.4.8.2 Pocket doors. Pocket sliding doors are not permitted.

Exception: Administration and business areas.

1224.4.9 Windows and screens.

1224.4.9.1 Windows. Rooms approved for the housing of patients shall be provided with natural light by means of exterior glazed openings excluding clerestory window, obscure glass and skylights, with an area not less than one tenth of the total floor area.

Exception: Newborn intensive-care units shall comply with Section 1224.29.2.12 Daylight.

1224.4.9.2 Operation and sills. Patient room windows shall have sills not more than 36 inches (914 mm) above the floor. If operable windows are provided that require the use of tools or keys for operation, the tools or keys shall be located at the nurses' station.

Exception: Window sills in intensive-care units may be 60 inches (1524 mm) above the floor.

1224.4.9.2.1 Airborne infection isolation or protective environment rooms. If operable windows are provided in airborne infection isolation or protective environment rooms, they shall only be operable by the use of tools or keys which shall be located at the nurses' station.

1224.4.9.3 Psychiatric unit windows. Safety glass or plastic glazing materials shall be used in windows in psychiatric patient areas.

1224.4.9.4 Screens. Windows which may be frequently left in an open position shall be provided with insect screens of 16 meshes to the inch.

1224.4.9.5 Light and ventilation. All portions of a building used by patients, personnel or other persons shall be provided with artificial light and a mechanically operated ventilating system as specified in the California Electrical Code and the California Mechanical Code.

1224.4.10 Ceiling heights.

1224.4.10.1 Minimum height. The minimum height of ceilings shall be 8 feet (2438 mm).

Exception: Closet, toilet room and bathroom minimum ceiling heights shall not be less than 7 feet (2134 mm).

1224.4.10.2 Minimum height with fixed ceiling equipment. Operating rooms, emergency rooms, delivery rooms, radiographic rooms and other rooms containing ceiling-mounted, major fixed equipment or ceiling-mounted surgical light fixtures shall have ceiling

heights to accommodate the equipment or fixtures and their normal movement.

1224.4.11 Interior finishes.

1224.4.11.1 Floor finishes. Floor finishes shall be smooth, waterproof, and durable.

Exceptions:

1. Upon written appropriate documented request, the licensing agency may grant approval of the installation of carpet. See Table 1224.4.11.
2. Wall and ceiling finish requirements of Section 1224.4.11 do not apply to boiler rooms, mechanical equipment rooms, administration departments, other offices, enclosed stairways, maintenance shops, and similar spaces.

1224.4.11.1.1 Coved base. Resilient flooring, if used in toilet and bathing rooms, shall be continuous and extend upward onto the walls at least 5 inches (127 mm).

1224.4.11.2 Wall bases.

1224.4.11.2.1 Material. The material and textures of bases and the installation thereof shall be such as to minimize dust-catching surfaces, moisture, infiltration, and the harboring of vermin.

Exception: In locations where carpet is permitted as a floor finish material, the use of carpeted base (coved or strip base) up to a maximum height of 5 inches (127 mm), is also permissible.

1224.4.11.2.2 Wet cleaning. Wall bases in kitchens, operating rooms, delivery rooms, emergency operating rooms, cast rooms, special procedure rooms and other areas which are subject to wet cleaning methods, shall be made integral and coved with the floor, and constructed without voids at the intersection of floor and wall surfaces.

1224.4.11.3 Walls. Interior wall finishes shall be smooth, washable, and durable.

1224.4.11.4 Ceilings. Ceiling finishes shall comply with Table 1224.4.11.

1224.4.12 Courts. Where one or more walls of a court contain a door or window of one or more patients' bedrooms, the least dimension of the court shall be 20 feet (6096 mm) between facing structures.

1224.4.13 Elevators.

1224.4.13.1 Patient. Patient elevators shall have minimum inside platform dimensions of 5 feet by 8 feet (1524 mm by 2438 mm), and a minimum clear door opening of 4 feet 0 inches (1219 mm).

1224.4.13.2 Passenger. Passenger elevators shall have minimum inside platform dimensions of 4 feet 8 inches by 7 feet 4 inches (1422 mm by 2236 mm).

**TABLE 1224.4.11
ACCEPTABLE CEILING AND CARPET LOCATIONS**

AREAS/ROOMS	GENERAL ACUTE HOSPITAL CEILING/CARPET		ACUTE PSYCHIATRIC HOSPITAL CEILING/CARPET		SKILLED NURSING AND INTERMEDIATE-CARE FACILITIES CEILING/CARPET		SURGICAL CLINICS AND OTHERS CEILING/CARPET	
Patient bedrooms	3	*	3	*	3	*	-	-
Patient corridors/hallways	3	*	3	*	3	*	3	*
Airborne infection isolation or Protective environment rooms	1	N	1	N	1	N	1	N
Nurses' or administration station	3	Y	3	Y	3	Y	3	Y
Utility rooms	2	N	2	N	2	N	2	-
Surgical units (Note 2)	2	N	-	-	-	-	2	N
Operation rooms	1	N	-	-	-	-	1	N
Surgical corridors/hallways	3	Y	-	-	-	-	3	N
Recovery	3	N	-	-	-	-	3	*
Radiological unit (Note 2)	3	*	3	*	-	-	3	-
X-ray rooms (Note 1)	3	N	3	N	-	-	3	N
Treatment rooms (Note 2)	2	N	3	N	2	N	2	N
Examination rooms	3	*	3	*	3	*	3	*
Administration	4	Y	4	Y	4	Y	4	Y
Central sterile supply	2	N	2	N	2	N	2	-
Clinical laboratories	3	N	3	N	-	-	3	*
Pharmacy	3	*	3	*	3	*	3	*
Morgue and autopsy	3	N	-	-	-	-	-	-
General storage rooms	3	N	3	N	3	N	3	-
Housekeeping rooms	2	N	2	N	2	N	2	-
Laundry	3	N	3	N	3	N	3	-
Soiled linen	2	N	3	N	3	N	3	-
Clean linen	3	N	3	N	3	N	3	-
Kitchens	1	N	1	N	1	N	1	N
Dining rooms	3	*	3	*	3	*	3	*
Diswasher rooms	2	N	2	N	2	N	2	
Dietary day storage	2	N	2	N	2	N	3	-
Catheterization laboratory	1	N	-	-	-	-	-	-
Chronic dialysis	3	*	-	-	-	-	3	*
Coronary care	3	*	-	-	-	-	-	-
Dental	3	*	-	-	-	-	3	*
Hydrotherapy	2	N	2	N	2	N	-	-
Intensive-care nursery	3	*	-	-	-	-	-	-

(continued)

**TABLE 1224.4.11—continued
ACCEPTABLE CEILING AND CARPET LOCATIONS**

AREAS/ROOMS	GENERAL ACUTE HOSPITAL CEILING/CARPET		ACUTE PSYCHIATRIC HOSPITAL CEILING/CARPET		SKILLED NURSING AND INTERMEDIATE-CARE FACILITIES CEILING/CARPET		SURGICAL CLINICS AND OTHERS CEILING/CARPET	
Intensive care	3	*	-	-	-	-	-	-
Occupational therapy	3	*	3	*	3	*	3	*
Obstetrical unit (Note 2)	3	*	-	-	-	-	-	-
Delivery rooms	1	N	-	-	-	-	-	-
Labor rooms, LDRP and LDR	3	N	-	-	-	-	-	-
Nurseries	3	N	-	-	-	-	-	-
Physical therapy	3	*	3	*	3	*	3	*
Radiation therapy	3	*	-	-	-	-	-	-
Speech pathology and audiology	3	Y	3	Y	3	Y	3	Y

Ceilings: Carpets:

- 1 - Continuous surface equal in smoothness to enamel plaster. Yes = Y
- 2 - Smooth and easily cleanable without perforations or fissures. No = N
- 3 - Pin perforated, fine fissured or lightly textured.
- 4 - Any finish meeting code requirements.

Notes:

- 1. Carpet permitted in mammography.
 - 2. Except those rooms specified otherwise.
 - * Upon approval by the licensing agency with adequate maintenance procedure. However, should the carpet not be maintained adequately, the licensing agency has the right to have it removed and replaced with another acceptable material.
- For rooms not listed, contact the Office of Statewide Health Planning and Development (OSHPD).
For surgery and dialysis clinics, only patient-care areas are applicable.
Table applies to new construction, additions, remodels, and conversions. The patching and replacement of existing materials will be permitted.

> **1224.4.13.3 Patient services.** Buildings over one story in height with accommodations or services for patients on floors without grade-level entrance shall provide at least one patient elevator.

1224.4.13.4 Low patient capacity. If bed patients are accommodated on one or more floors, other than the main entrance floor or where operating rooms or delivery rooms are above or below the main entrance floor, at least one patient elevator shall be provided.

1224.4.13.5 Medium patient capacity. At least one patient elevator and one service elevator shall be provided in hospitals with a capacity of from 60 to 149 beds on floors other than the main entrance floor.

1224.4.13.6 High patient capacity. At least one patient elevator, one passenger elevator and one service elevator shall be provided in hospitals with a capacity of 150 or more beds on floors other than the main entrance floor.

1224.4.14 Garbage, solid waste and trash storage. Rooms or screening enclosures shall be provided for the washing and cleaning of garbage containers and for the storage of garbage, trash and other solid wastes. Such rooms or screening enclosures shall include the following:

- 1. A concrete floor with a curb and with a drain connected to the sewer.
- 2. Steam or hot-water and cold-water supply.
- 3. A minimum floor area of 1/2 square foot (0.046 m²) per bed, but not less than 25 square feet (2.3 m²), the least dimension of which shall be 4 feet (1219 mm).
- 4. A method of limiting access to the material except by authorized persons.

1224.4.15 Housekeeping room. This room shall be a minimum floor area of 15 square feet (1.4 m²). It shall contain a service sink or floor receptor and provisions for storage of supplies and housekeeping equipment.

1224.4.16 Laundry and trash chutes. Gravity-type laundry and trash chutes shall have a minimum diameter of 2 feet (610 mm) and shall be designed to prevent distribution of airborne contaminating elements to all floors served.

1224.4.17 Telephone. Each floor accommodating patients shall have a telephone installed for patient use. Such telephones shall be readily accessible to patients who are limited to wheel chairs and stretchers. This may not be required in separate buildings having six or fewer beds which are restricted to occupancy by ambulatory patients.

1224.4.18 Grab bars. Each toilet, bathtub and shower serving patients shall be provided with grab bars and shall comply with Section 1115B.7.

Exception: Excluding facilities designed for use by persons with disabilities, grab bars may be deleted from those facilities serving chemical dependency recovery and psychiatric patients.

1224.5 NOISE CONTROL.

1224.5.1 Impact noises. Recreation rooms, exercise rooms, equipment rooms and similar spaces where impact noises may be generated, shall not be located directly over patient bed areas or delivery and operating suites, unless special provisions are made to minimize such noise.

1224.5.2 Noise reduction. The noise reduction criteria shown in Table 1224.5 shall apply to partitions, floors, and ceiling construction in patient areas.

1224.6 Reserved

1224.7 Reserved

1224.8 Reserved

1224.9 Reserved

1224.10 Reserved

1224.11 Reserved

1224.12 Reserved

1224.13 Reserved

BASIC SERVICES

1224.14 NURSING SERVICE SPACE.

1224.14.1 Patient rooms.

1224.14.1.1 Capacity. No patient room shall be designed to accommodate more than eight beds.

1224.14.1.2 Space requirements. In new construction, patient rooms shall have a minimum of 100 square feet (9.29 m²) of clear floor area per bed in multiple-bed rooms and 120 square feet (11.15 m²) of clear floor area for single-bed rooms. The dimensions and arrangement of rooms shall be such that there is a minimum of 3 feet (914 mm) between the sides and foot of the bed and any wall or any other fixed obstruction. In multiple-bed rooms, a clearance of 4 feet (1219 mm) shall be available at the foot of each bed to permit the passage of equipment and beds.

Exceptions:

1. Where renovation of existing patient rooms is undertaken in facilities built under the 2001 or prior California Building Code, patient rooms shall have no less than 80 square feet (7.43 m²) of clear floor area per bed in multiple-bed rooms and 110 square feet (10.22 m²) of clear floor area in single-bed rooms.
2. For shelled spaces built under the 2001 or prior California Building Code, patient rooms shall have no less than 80 square feet (7.43 m²) of clear floor area per bed in multiple-bed rooms and 110 square feet (10.22 m²) of clear floor area in single-bed rooms.

**TABLE 1224.5
SOUND TRANSMISSION LIMITATIONS IN ACUTE CARE GENERAL HOSPITALS**

NEW CONSTRUCTION	AIRBORNE SOUND TRANSMISSION CLASS (STC) ¹	
	Partitions	Floors
Patient room to patient room	45	40
Public space to patient room ³	55	40
Service areas to patient room ⁴	65	45
Patient room access corridor ⁵	45	45
Exam room to exam room	45	-
Exam room to public space	45	-
Toilet room to public space	45	-
Consultation rooms/conference rooms to public space	45	-
Consultation rooms/conference rooms to patient rooms	45	-
Staff lounges to patient rooms	45	-

1. Sound Transmission Class (STC) shall be determined by tests in accordance with methods set forth in ASTM 90 and ASTM 413. Where partitions do not extend to the structure above, sound transmission through ceilings and composite STC performance shall be considered.
2. Treatment rooms shall be treated the same as patient rooms.
3. Public space includes corridors (except patient room access corridors), lobbies, dining rooms, recreation rooms, and similar space.
4. Service areas for the purposes of this table include kitchens, elevators, elevator machine rooms, laundries, garages, maintenance rooms, boiler and mechanical equipment rooms, and similar spaces of high noise. Mechanical equipment located on the same floor or above patient rooms, offices, nurses stations, and similar occupied space shall be effectively isolated from the floor.
5. Patient room access corridors contain composite walls with doors/windows and have direct access to patient rooms.
6. Renovation projects of existing spaces where the existing function is not changed, are not required to comply with the requirements of Table 1224.5.

1224.14.1.3 Windows. Each patient room shall have a window in accordance with Section 1224.4.9.

1224.14.1.4 Arrangement. Patient rooms shall not be designed to permit the placement of beds more than three deep from the exterior window, but shall be of such shape and dimensions to allow for the performance of routine functions, including the easy transfer of patients to and from bed to wheelchair or wheeled gurney.

1224.14.1.5 Outside exposure. All patient bedrooms shall have an outside exposure and shall not be below ground level.

1224.14.1.6 Handwashing fixtures. A handwashing fixture shall be provided in the patient room. In multiple-bed rooms the handwashing fixture shall be located outside of the patient's cubicle curtain so that it is accessible to staff. Where renovation of patient rooms is undertaken a handwashing fixture shall be located in the toilet room or patient room.

1224.14.1.7 Toilet room. Each patient shall have access to a toilet room without having to enter the general corridor area. One toilet room shall serve no more than four beds and no more than two patient rooms. The toilet room shall contain a water closet and a lavatory and the door shall swing outward or be double acting.

1224.14.1.8 Patient storage. Each patient shall have within his or her room a separate wardrobe, locker, or closet suitable for hanging full-length garments and for storing personal effects.

1224.14.1.9 Privacy. In multiple-bed rooms, visual privacy from casual observation by other patients and visitors shall be provided for each patient. The design for privacy shall not restrict patient access to the entrance, lavatory, or toilet room.

1224.14.1.10 Grab bars. Grab bars shall be installed in accordance with Section 1224.4.18.

1224.14.2 Service areas. Unless otherwise indicated, provision for the services listed below shall be in or readily available to each nursing unit. The size and location of each service area will depend upon the numbers and types of beds served. Identifiable spaces are required for each of the indicated functions. Each service area may be arranged and located to serve more than one nursing unit but, unless noted otherwise, at least one such service area shall be provided on each nursing floor. Where the words "room" or "offices" are used, a separate, enclosed space for the one named function is intended; otherwise, the described area may be specific space in another room or common area.

1224.14.2.1 Administrative center(s) or nurse station(s). This area shall have space for counters and storage and shall have convenient access to handwashing fixtures. It may be combined with or include centers for reception, charting and communication.

1224.14.2.2 Nurse or supervisor office.

1224.14.2.3 Toilet room(s) conveniently located for staff use.

1224.14.2.4 Multipurpose room(s) for staff, patients, patients' families for patient conferences, reports, education, training sessions, and consultation. These rooms must be accessible to each nursing unit. They may be on other floors if convenient for regular use. One such room may serve several nursing units and/or departments.

1224.14.2.5 Examination or treatment room(s). Examination or treatment rooms are optional. If provided, provision shall be made to preserve patient privacy from observation from outside the exam room through an open door.

1224.14.2.6 Clean utility room. If the room is used for preparing patient care items, it shall contain a work counter, a handwashing fixture, and storage facilities for clean and sterile supplies. If the room is used only for storage and holding as part of a system for distribution of clean and sterile materials, the work counter and handwashing fixture may be omitted. Soiled and clean utility or holding rooms shall be separated and have no direct connection.

1224.14.2.7 Soiled workroom or soiled holding room. This room shall be separate from the clean utility room. The soiled workroom utilities room shall contain a clinical sink (or equivalent flushing-rim fixture). The room shall contain a handwashing fixture. The above fixtures shall both have a hot and cold mixing faucet. The room shall have a work counter and space for separate covered containers for soiled linen and waste. Rooms used only for temporary holding of soiled material may omit the clinical sink and work counter. If the flushing-rim clinical sink is eliminated, facilities for cleaning bedpans shall be provided elsewhere.

1224.14.2.8 Medication station. Provision shall be made for distribution of medications. This shall be done from a medicine preparation room or from a self-contained medicine dispensing unit.

1224.14.2.8.1 Medicine preparation room. If provided, this room shall be directly accessible from the nursing station. It shall contain a work counter, handwashing fixture, refrigerator, and locked storage for controlled drugs. When a medicine preparation room is to be used to store one or more self-contained medicine dispensing units, the room shall be designed with adequate space to prepare medicines with the self-contained medicine dispensing unit(s) present.

1224.14.2.8.2 Self-contained medicine dispensing unit. If provided, a self-contained medicine dispensing unit shall be located at the nurses' station, in the clean utility room, or in an alcove.

1224.14.2.9 Clean linen storage. Each nursing unit shall contain a designated area for clean linen storage. This may be within the clean utility room or a separate closet.

1224.14.2.10 Nourishment area. There shall be a nourishment area with sink, work counter, refrigerator, storage cabinets, and equipment for hot and cold nourishment between scheduled meals. The nourishment area shall include space for trays and dishes used for nonscheduled meal service. Provisions and space shall be included for separate temporary storage of unused and soiled dietary trays not picked up at mealtime. Handwashing fixtures separate from the nourishment sink shall be in or adjacent to the nourishment area.

1224.14.2.11 Ice machine. Each nursing unit shall have equipment to provide ice for treatments and nourishment. Ice making equipment may be in the clean utility room/holding room or at the nourishment station. Ice intended for human consumption shall be from self-dispensing icemakers.

1224.14.2.12 Equipment storage room. Appropriate room(s) shall be provided for storage of equipment necessary for patient care. Each unit shall provide not less than 10 square feet (0.93 m²) per patient bed.

1224.14.2.13 Gurneys and wheelchairs. Provide a storage room or alcove for gurneys and wheelchairs which shall be a minimum of 15 square feet (1.39 m²).

1224.14.2.14 Showers and bathtubs. When individual bathing facilities are not provided in patient rooms, there shall be at least one shower and/or bathtub for each 12 beds without such facilities. Each bathtub or shower shall be in an individual room or enclosure that provides privacy for bathing, drying, and dressing. Special bathing facilities, including space for attendant, shall be provided for patients on gurneys, carts, and wheelchairs at the ratio of one per 100 beds or a fraction thereof. This may be on a separate floor if convenient for use.

1224.14.2.15 Patient toilet room(s), in addition to those serving bed areas, shall be conveniently located to multi-purpose room(s) and within or directly accessible to each central bathing facility.

1224.14.2.16 Emergency equipment storage. Space shall be provided for emergency equipment that is under direct control of the nursing staff, such as a cardiopulmonary resuscitation (CPR) cart. This space shall be directly accessible from the nursing station, but out of normal traffic.

1224.14.2.17 Housekeeping room.

1224.14.2.18 Grab bars. Grab bars shall be installed in accordance with Section 1224.4.18.

1224.14.3 Airborne infection isolation rooms.

1224.14.3.1 General. Single rooms shall be provided for the isolation of patients with airborne communicable disease at a ratio of one room for each 35 licensed beds, or major fraction thereof. At least one airborne infection isolation room shall be provided. Airborne infection isolation rooms shall be labeled with the words "Airborne

Infection Room" on or adjacent to the anteroom side of the door between the isolation room and the anteroom.

Exceptions:

1. Acute psychiatric hospitals shall provide airborne infection isolation rooms at the ratio of one room for each 50 beds, or major fraction thereof.
2. Airborne infection isolation rooms are not required for chemical dependency recovery services.

1224.14.3.2 Anteroom doors. Airborne infection isolation room(s) shall have self-closing and latching devices on all anteroom doors.

1224.14.3.3 Anteroom. A separate anteroom shall be provided between the airborne infection isolation room and the corridor, which shall constitute the primary entrance to the airborne infection isolation room. This anteroom shall have a handwashing fixture, work counter at least 3 feet (914 mm) long, cabinets and space to gown and to store clean and soiled materials. There shall be a view window from the anteroom to the isolation room and means to allow for airflow from the anteroom into the airborne infection isolation room. Doors shall be aligned to allow large equipment to be wheeled into the airborne infection isolation room unless a secondary door complying with Section 1224.14.3.2 is provided. One anteroom may serve no more than two airborne infection isolation rooms.

1224.14.3.4 Secondary entry. When a secondary entry is provided, the secondary doors shall be provided with locking devices which are readily operable from the room side and which are readily operable by the facility staff on the other side. When key locks are used on isolation rooms, keys shall be located at the nurses' station in a prominent readily accessible location.

1224.14.3.5 Sealed-tight room. Airborne infection isolation room perimeter walls, ceilings, floors, doors, and penetrations shall be sealed tightly to minimize air infiltration from the outside or from other spaces.

1224.14.3.6 Adjoining toilet room. Each isolation room shall have its own adjoining toilet room with an emergency nurse call system, a lavatory, a shower providing a seat or a space for a shower chair and a toilet equipped with a bedpan flushing attachment with a vacuum breaker.

1224.14.4 Protective environment room(s).

1224.14.4.1 General. Protective environment rooms for the protection of certain immunosuppressed patients may be provided by the facility. Protective environment rooms shall be labeled "Protective Environment Room" on or adjacent to the anteroom side of the door between the isolation room and the anteroom. Protective environment rooms shall contain only one bed.

1224.14.4.2 Anteroom doors. Protective environment room (s) shall have self-closing and latching devices on all anteroom doors.

1224.14.4.3 Anteroom. A separate anteroom shall be provided between the protective environment room and the corridor, hallway or adjoining space which shall constitute the only entrance to the protective environment room. This anteroom shall have a handwashing fixture, work counter at least 3 feet (914 mm) long, cabinets and space to gown and to store clean and soiled materials. There shall be a view window from the anteroom to the protective environment room. There shall be means to allow for airflow from the protective environment room into the anteroom. Anteroom doors shall be aligned so that large equipment can be wheeled into the protective environment room. One anteroom may serve no more than one protective environment room.

Exception: Alternate designs for protective environment rooms, without individual anterooms, may be approved by the enforcement agency when it can be demonstrated that the alternate design meets the requirements of the California Mechanical Code and does not compromise or alter any health or fire protection component, assembly or system.

1224.14.4.4 Adjoining toilet room. Room shall meet the requirements of Section 1224.14.3.6.

1224.14.4.5 Sealed-tight room. Protective environment room perimeter walls, ceiling, floors, doors, and penetrations shall be sealed tightly to minimize air infiltration from the outside or from other spaces.

1224.14.5 Seclusion room(s). If provided, the hospital shall provide one or more single bedrooms for patients needing close supervision for medical and/or psychiatric care. This may be part of the psychiatric unit described in Section 1224.31. If the single bedroom(s) is part of the acute-care nursing unit, the provisions of Section 1224.14.1 shall apply, with the following exceptions: each room shall be for single occupancy; each shall be located to permit staff observation of the entrance, preferably adjacent to the nurses' station; and each shall be designed to minimize the potential for escape, hiding, injury, or suicide. If vision panels are used for observation of patients, the arrangement shall insure patient privacy and prevent casual observation by visitors and other patients.

1224.15 Surgical service space. A minimum of one operating room and one recovery bed is required. The surgical service space shall be located and arranged to prevent nonrelated traffic through the service space.

An operating room suite design with a sterile core shall provide for no cross traffic of staff and supplies from the decontaminated/soiled areas to the sterile/clean areas. The use of facilities outside the operating room for soiled/decontaminated processing and clean assembly and sterile processing shall be designed to move the flow of goods and personnel from dirty to clean/sterile without compromising universal precautions or aseptic techniques in both departments.

Exception: Surgical service space is not required in a rural general acute care hospital, if the hospital maintains written transfer agreements with one or more general acute care hospitals that provide surgical and anesthesia services. Written transfer agreements shall be approved by the Department of Public Health, Licensing and Certification.

1224.15.1 Surgery.

1224.15.1.1 General operating room(s). In new construction, each room shall have a minimum clear floor area of 400 square feet (37.16 m²) with a minimum of 20 feet (6096 mm) clear dimension between fixed cabinets and built-in shelves; and a system for emergency communication with the surgical service space control station. X-ray or imaging viewing capabilities shall be provided.

Exception:

1. Where renovation of existing operating rooms is undertaken in facilities built under the 2001 or prior California Building Code, each operating room shall have a minimum clear floor area of 324 square feet (30.10 m²) with a minimum of 18 feet (5486 mm) clear dimension between fixed cabinets and built-in shelves.
2. For shelled floor spaces built under the 2001 or prior California Building Code, each existing operating room shall have a minimum clear floor area of 324 square feet (30.10 m²) with a minimum of 18 feet (5486 mm) clear dimension between fixed cabinets and built-in shelves.

1224.15.1.2 Surgical cystoscopic and other endo-urologic procedures. In new construction each room shall have a minimum clear floor area of 250 square feet (23.23 m²) with a minimum of 15 feet (4572 mm) clear dimension between fixed cabinets and built-in shelves. X-ray viewing capability shall be provided.

Exception:

1. Where renovation of operating rooms is undertaken in facilities built under the 2001 or prior California Building Code rooms for surgical cystoscopy shall have a minimum clear floor area of 180 square feet (16.72 m²). Cast rooms for open reductions, if provided, shall have a minimum clear floor area of 180 square feet (16.72 m²), no dimension of which shall be less than 11 feet (3353 mm).
2. For shelled spaces built under the 2001 or prior California Building Code, each surgical cystoscopy shall have a minimum clear floor area of 180 square feet (16.72 m²). Cast rooms for open reductions, if provided, shall have a minimum floor area of 180 square feet (16.72 m²), no dimension of which shall be less than 11 feet (3353 mm).

1224.15.2 Preoperative patient holding area(s). In facilities with two or more operating rooms, area(s) shall be provided to accommodate gurney patients or sitting space for ambulatory patients not requiring gurneys. These area(s) shall be under the direct visual control of the nursing staff and may be part of the recovery service space. Each gurney station shall be a minimum clear floor area of 80 square feet (7.43 m²) and shall have a minimum clearance of 3 feet (914 mm) on the sides of the gurneys and the foot of the gurney. Provisions for patient privacy such as cubicle curtains shall be made.

1224.15.3 Service areas. Services, except for the enclosed soiled workroom referenced in Section 1224.15.3.7 and the housekeeping room referenced in Section 1224.15.3.12. Housekeeping room may be shared with the obstetrical facilities. Service areas, when shared with delivery rooms, shall be designed to avoid the passing of patients or staff between the operating room and the delivery room areas.

1224.15.3.1 Control station. Control stations shall be located to permit visual observation of all traffic into the surgical service space.

1224.15.3.2 Supervisor's office or station.

1224.15.3.3 Sub sterile areas. If provided, a sub sterile area(s) shall be equipped with a flash sterilizer, warming cabinet, and handwashing fixture. If a sterilizing facility(ies) with high-speed sterilizer(s) or other sterilizing equipment for immediate or emergency use are provided, they shall be grouped to service several operating rooms for convenient, efficient use; and a work space and handwashing fixture shall be included. Other facilities for processing and sterilizing reusable instruments, etc., may be located in another hospital department such as central services.

1224.15.3.4 Medication station. Shall be provided in accordance with Section 1224.14.2.8.

1224.15.3.5 Scrub facilities. Scrub sinks shall be located outside of sterile areas. A minimum of two scrub sinks shall be provided in a surgical unit containing one operating room. Four scrub sinks shall be provided in surgical units containing two operating rooms. One additional scrub sink shall be provided for each additional operating room. Scrub sinks shall have water supply controls not requiring direct contact of the hands for operation.

1224.15.3.6 Clock. A direct-wired or battery-operated clock or other equivalent timing device shall be visible from the scrub-up sinks.

1224.15.3.7 Soiled workroom. An enclosed soiled workroom (or soiled holding room that is part of a system for the collection and disposal of soiled material) for the exclusive use of the surgical service space shall be provided. The soiled workroom shall contain a flushing-rim clinical sink or equivalent flushing-rim fixture, a handwashing fixture, a work counter, and space for waste receptacles and soiled linen receptacles. Rooms used only for temporary holding of soiled material may omit the flushing-rim clinical sink and work counters.

However, if the flushing-rim clinical sink is omitted, other provisions for disposal of liquid waste shall be provided. The room shall not have direct connection with operating rooms. Soiled and clean utility room or holding rooms shall be separated. The soiled workroom shall provide 24 square feet (2.23 m²) per operating room up to eight operating rooms and shall have a minimum area of 48 square feet (4.46 m²), with no dimension less than 6 feet (1829 mm).

1224.15.3.8 Clean utility room. This room shall not be used for food preparation.

1. A clean utility room is required when clean materials are assembled within the surgical service space prior to use or following the decontamination cycle. It shall contain a work counter, a handwashing fixture, storage facilities for clean supplies, and a space to package reusable items. The storage for sterile supplies must be separated from this space. If the room is used only for storage and holding as part of a system for distribution of clean supply materials, the work counter and handwashing fixture may be omitted. Soiled and clean utility rooms or holding rooms shall be separated.

1224.15.3.9 Anesthesia workroom. Provide an anesthesia workroom for cleaning, testing, and storing anesthesia equipment. This room shall contain work counter(s) and sink(s) and racks for cylinders.

1224.15.3.10 Equipment storage room(s) for equipment and supplies used in surgical service space. Each surgical service space shall provide sufficient storage area to keep its required corridor width free of equipment and supplies, but not less than 150 square feet (13.94 m²) or 50 square feet (4.65 m²) per operating room, whichever is greater.

1224.15.3.11 Staff clothing change areas. Appropriate areas shall be provided for male and female personnel (orderlies, technicians, nurses, and doctors) working within the surgical service space. The areas shall contain lockers, showers, toilets, lavatories equipped for handwashing, and space for donning surgical attire. These areas shall be arranged to encourage a one-way traffic pattern so that personnel entering from outside the surgical service space can change and move directly into the surgical service space.

1224.15.3.12 Housekeeping room. Shall be provided for the exclusive use of the surgical service space. It shall be directly accessible from the service space.

1224.16 ANESTHESIA SERVICE SPACE.

1224.16.1 Post-anesthetic care units (PACUs). Each PACU shall contain a medication station in accordance with Section 1224.14.2.8; handwashing fixtures; nurse control with charting facilities; clinical sink, refrigerator; provisions for bedpan cleaning; and storage space for gurneys, supplies, and equipment. Additionally, the design shall provide a minimum of 80 square feet (7.43 m²) for each patient station with clearance of at least 5 feet (1524 mm) between patient gurneys and 4 feet (1218 mm) between patient gurneys and

adjacent walls. Provisions for patient privacy such as cubicle curtains shall be made. In new construction, at least one door to the recovery room shall access directly from the surgical service space without crossing public corridors. Handwashing fixtures shall be provided with at least one for every four gurneys uniformly distributed to provide equal access from each patient gurney.

Exception: In a rural general acute care hospital, when the surgical service space is not provided, the anesthesia service space is not required. The hospital must maintain written transfer agreements with one or more general acute care hospitals that provide surgical and anesthesia services. Written transfer agreements shall be approved by the Department of Public Health, Licensing and Certification.

1224.17 CLINICAL LABORATORY SERVICE SPACE.

1224.17.1 General requirements. All hospitals shall provide space and equipment to perform urinalysis, complete blood counts, hemoglobin blood typing and cross matching. If laboratory facilities for bacteriological, serological, pathological and additional hematological procedures are not available in the community, then space, equipment and supplies for such procedures shall be provided. The following physical facilities shall be provided:

1. Laboratory work space.
2. Refrigerated blood storage facilities for transfusions shall be provided. Blood storage refrigerator shall be equipped with temperature-monitoring and alarm signals that are monitored continuously.
3. Handwashing fixture.

1224.18 RADIOLOGICAL/IMAGING SERVICE SPACE.

1224.18.1 Minimum requirements. Hospital shall provide a minimum of:

1. One fluoroscopy room, which can also provide x-ray examination services.
2. Space for processing images.
3. A toilet room adjoining each fluoroscopy room, in addition to other toilet room facilities located adjacent to or in the immediate vicinity.
4. An office or other suitable area for viewing and reporting radiographic examination.
5. Storage spaces for all image equipment, supplies and copies of reports.
6. Handwashing fixtures located within the unit.
7. Dressing room facilities.

1224.18.1.1 Radiation protection. A certified physicist or other qualified expert shall specify the type, location, and amount of radiation protection to be installed in accordance with the final approved department layout and equipment selections. Where protected alcoves with view windows are required, a minimum of 1'-6" (0.45 meter) between the view window and the outside partition edge shall be provided. Radiation protection requirements shall be incorporated into the construction documents and comply with Chapter 31C and the

requirements of California Radiation Control Regulations, California Code of Regulations, Title 17, Division 1, Chapter 5, and Subchapter 4.

1224.18.2 Angiography. If provided, angiography space shall accommodate the following:

1. A control room with a view window to permit full view of the patient.
2. A scrub sink located outside the staff entry to the procedure room.
3. Patient holding area shall accommodate at least one patient gurney with a minimum of 3-foot (1524 mm) clearance on the long side.
4. Storage for portable equipment and catheters shall be provided.

1224.18.2.1 Surgery. If surgery is to be performed in the angiography room, the room must comply with general operating room requirements in Section 1224.15.1.1.

1224.18.3 Computerized tomography (CT) scanning. If provided, CT space shall accommodate the following:

1224.18.3.1 Spaces required. If provided, CT scan spaces shall accommodate the equipment with a minimum of 3 feet (1524 mm) on all sides of the equipment, together with the following:

1. A control room shall be provided that is designed to accommodate the computer and other controls for the equipment. A view window shall be provided to permit view of the patient.
2. A patient toilet room convenient to the procedure room.

1224.18.4 Magnetic Resonance Imaging (MRI). If provided, the MRI room shall accommodate the equipment with a minimum of 3 feet (1524 mm) on all sides of the equipment, together with the following:

1. A control room shall be provided with full view of the patient in the MRI scanner. The control console shall be positioned so the operator has a full view of the approach and entrance to the MRI scanner room.
2. An anteroom or area visible from the control room shall be located outside the MRI scanner room so that patients, health care personnel, and other employees must pass through it before entering the scanning area and control room. The room or area shall be outside the restricted areas of the MRI's magnetic field.
3. A computer room shall be provided.

1224.18.4.1 Hand-washing station. Hand-washing station(s) shall be provided convenient to the MRI scanner room, but need not be within the room.

1224.18.4.2 Wall, floor, and ceiling assemblies. Wall, floor, and ceiling assemblies shall accommodate the installation of required radio frequency (RF)-shielded assemblies. All doors, windows, and penetrations into the RF-shielded enclosure shall be RF-shielded. As well as RF shielding, individual sites may also require magnetic shielding on some or all surfaces to contain portions of the magnetic field not contained by the RF shield.

1224.18.4.3 Lighted sign. MRI rooms shall be clearly marked with a red light and lighted sign stating, “The Magnet Is On”. This light and sign are to be lighted at all times and have a backup energy source to remain illuminated for at least 24 hours in the event of a loss of power.

1224.18.4.4 Magnetic field strength identification. Facilities shall use finishes or markings to identify the critical values of the magnetic field surrounding the MRI scanner, including the 5-gauss exclusion zone or other magnetic field strength values that may impair the operation of equipment.

1224.18.4.5 Special ventilation requirements. Where superconducting MRI scanners are installed, an insulated cryogen quench exhaust pipe as well as room exhaust and pressure equalization shall be provided to protect occupants in the event of a cryogen breach.

1224.18.5 Ultrasound. If ultrasound is provided, a patient toilet room, accessible from the procedure room, shall be provided.

1224.18.6 Support spaces. The following spaces are common to the imaging service area and are minimum requirements unless stated otherwise:

1224.18.6.1 Patient’s toilet room(s). In service spaces with procedure rooms that do not have dedicated patient toilets, provide a minimum of one patient toilet room within the service space.

1224.18.6.2 Patient dressing rooms. Dressing rooms shall be provided convenient to the imaging rooms.

1224.18.6.3 Staff facilities. In service space of three or more procedure rooms, staff toilet room(s) internal to the service space shall be provided.

1224.18.6.4 Film storage (active). If film systems are used provide the following:

1. A room with cabinet or shelves for filing patient film for immediate retrieval shall be provided.
2. Storage facilities for unexposed film which shall include protection of film against exposure or damage.

1224.18.6.5 Locked storage. Provision shall be made for locked storage of medications and drugs.

1224.32.5.2 Space requirements. Each newborn nursery room shall contain no more than 16 infant stations. Nurseries shall provide a minimum of 25 square feet (2.32 m²) of floor area per bassinets, with at least 3 feet (914 mm) between bassinets and at least 6 inches (152 mm) from a wall.

1224.33 EMERGENCY SERVICE.

1224.33.1 Definition. Levels of emergency care range from initial emergency management to definitive emergency care.

1224.33.2 Standby emergency medical service. If provided, initial emergency management shall include:

1224.33.2.1 Exterior entrance. A well-marked, illuminated and covered entrance, at grade level. The emergency vehicle entry cover shall provide shelter for both the patient and the emergency medical crew during transfer from an emergency vehicle into the building. This exterior entrance shall not be substituted for the required accessible entrance protected from the weather by canopy or roof overhang assigned for passengers loading zone. Reception, triage and control station shall be located to permit staff observation and control of access to treatment area, pedestrian and ambulance entrances, and public waiting area.

1224.33.2.2 Treatment room. The area shall not be less than 120 square feet (11.15 m²) of clear floor area, exclusive of toilet room(s), waiting area and storage. Each treatment room shall contain an examination light, work counter, handwashing fixtures, medical equipment, cabinets, medication storage and counter space for writing. The treatment room may have additional space and provisions for several patients with cubicle curtains for privacy. Multiple-bed treatment rooms shall provide a minimum of 80 square feet (7.43 m²) per patient gurney, with a minimum 8 foot width (2438 mm) and 3 feet (914 mm) at foot of bed.

Exceptions:

1. Where renovation of existing treatment rooms is undertaken in facilities built under the 2001 or prior California Building Code, treatment rooms shall have no less than 80 square feet (7.43 m²) of clear floor area.
2. For shelled spaces built under the 2001 or prior California Building Code, treatment rooms shall have no less than 80 square feet (7.43 m²) of clear floor area per bed.

1224.33.2.3 Storage. Shall be sized for general medical/surgical emergency supplies, medications and equipment such as ventilator, defibrillator, splints, etc.

1224.33.2.4 Lobby. Provisions for reception, control, and public waiting, including a public toilet room(s) with handwashing fixture(s), and public telephone.

1224.33.2.5 Toilet room(s). Patient toilet room(s) with handwashing fixture(s) convenient to the treatment room(s).

1224.33.2.6 Communication. A communication hookup to the Poison Control Center and local EMS system.

1224.33.2.7 Airborne infection isolation room. Shall comply with the requirements of Section 1224.29.1.13 except for separate toilet room, bathtubs, or shower.

1224.33.3 Basic emergency medical service. When 24-hour emergency service is to be provided, at a minimum, the following shall be provided:

1224.33.3.1 Exterior entrance. Grade-level well-marked, illuminated, and covered entrance with direct access from public roads for ambulance and vehicle traffic conforming with the requirements of the local authorities having jurisdiction. Entrance and driveway shall be clearly marked. If a raised platform is used for ambulance discharge, provide a ramp for pedestrian and wheelchair access.

1224.33.3.2 Patient access. Paved emergency access to permit discharge of patients from automobiles and ambulances, and temporary parking convenient to the entrance.

1224.33.3.3 Reception, triage, and control station(s). This area shall be located to permit staff observation and control of access to treatment area, pedestrian and ambulance entrances, and public waiting area.

1224.33.3.4 Wheelchair and gurney storage. Shall be located with convenient access from emergency entrances.

1224.33.3.5 Public waiting area with toilet room facilities, drinking fountains, and telephone.

1224.33.3.6 Examination or treatment room(s). Shall have a minimum clear floor area of 120 square feet (11.15 m²). The room shall contain work counter(s); cabinets; handwashing fixtures; and a vision panel adjacent to and/or in the door. When treatment cubicles are in open multi-bed areas, each cubicle shall have a minimum of 80 square feet (7.43 m²) of clear floor space with a minimum 8 foot (2438 mm) width and 3 feet (914 mm) at foot of bed and shall be separated from adjoining cubicles by curtains. Handwashing fixtures shall be provided for each four treatment cubicles or major fraction thereof in multiple-bed areas.

Exceptions:

1. Where renovation of existing examination or treatment room(s) is undertaken in facilities built under the 2001 or prior California Building Code, patient rooms shall have no less than 80 square feet (7.43 m²) of clear floor area per examination or treatment room(s).
2. For shelled spaces built under the 2001 or prior California Building Code, examination or treatment room(s) shall have no less than 80 square feet (7.43 m²) of clear floor area.

1224.33.3.7 Trauma/cardiac rooms. These rooms are for emergency procedures, including emergency surgery, and shall have at least 250 square feet (23.23 m²) of clear floor space. Each room shall have cabinets and

emergency supply shelves, image viewing capability, examination lights, and counter space for writing. Additional space with cubicle curtains for privacy may be provided to accommodate more than one patient at a time in the trauma room. There shall be storage provided for immediate access to attire used for universal precautions. Doors leading from the ambulance entrance to the cardiac trauma room shall have an opening with a minimum width of 5 feet (1524 mm).

1224.33.3.8 Orthopedic and cast work. Provisions may be made in separate room(s) or in the trauma room. They shall include storage for splints and other orthopedic supplies, traction hooks, image viewing capability, and examination lights. If a sink is used for the disposal of plaster of paris, a plaster trap shall be provided. The clear floor space for this area shall be a minimum of 180 square feet (16.7 m²)

1224.33.3.9 Poison Control Center and EMS communications center. May be a part of the staff work and charting area.

1224.33.3.10 Emergency equipment storage space.

1224.33.3.11 Patients' toilet room. Where there are more than eight treatment areas, a minimum of two toilet rooms, with a lavatory in each toilet room, shall be required.

1224.33.3.12 Storage. Provide rooms for clean, soiled or used supplies.

1224.33.3.12.1 Soiled workroom or soiled holding room. See Section 1224.14.2.7. This room is for the exclusive use of the emergency service.

1224.33.3.12.2 Clean utility room. See Section 1224.14.2.6.

1224.33.3.13 Administrative center or nurses' station for staff work and charting. These areas shall have space for counters, cabinets, and medication storage, and shall have convenient access to handwashing fixtures. They may be combined with or include centers for reception and communication.

1224.33.3.14 Staff lounge.

1224.33.3.15 Housekeeping room. A housekeeping room shall be directly accessible from the unit.

1224.33.3.16 Airborne infection isolation room. If provided shall comply with the requirements of Section 1224.29.1.13 except for separate toilet room, bathtubs or shower.

1224.33.3.17 Secured holding room. If provided, shall have at least one holding/seclusion room of 120 square feet (11.15 m²). This room shall allow for security, patient and staff safety, patient observation and sound-proofing.

1224.33.4 Other space considerations

1224.33.4.1 Observation units. If provided shall have the following:

1. Handwashing fixtures shall be provided for each four treatment cubicles or major fraction thereof.

Handwashing fixtures shall be convenient to nurse stations and patient bed areas.

2. Each patient bed area shall have space at each bedside for visitors and provision for visual privacy from casual observation by other patients and visitors.
3. One toilet room shall be provided for each eight treatment cubicles or major fraction thereof.
4. A sink, work counter, refrigerator, storage cabinets.

1224.34 NUCLEAR MEDICINE

1224.34.1 General. If nuclear medicine is provided, the following shall be provided:

1224.34.1.1 Radiation protection. A certified physicist shall specify the type, location and amount of radiation protection to be installed in accordance with final approved department layout and equipment selection. Radiation protection requirements shall be incorporated into the construction documents and comply with Chapter 31C and the requirements of California Radiation Control Regulations, California Code of Regulations, Title 17, Division 1, Chapter 5, and Subchapter 4.

1224.34.1.2 Nuclear medicine room. Sized to accommodate the equipment and a gurney. Provide a handwashing fixture.

1224.34.1.3 Radiopharmacy. If radiopharmaceutical preparation is performed, an area adequate to house a radiopharmacy shall be provided with appropriate shielding. This area shall include adequate space for storage of radionuclides, chemicals for preparation, dose calibrators, and record keeping. If preprepared materials are used, storage and calculation area may be considerably smaller than that for on-site preparation. Space shall provide adequately for dose calibration, quality assurance, and record keeping. The area may still require shielding from other portions of the facilities.

1224.34.2 Support areas for nuclear medicine services. Nuclear medicine area when operated separately from the imaging department shall provide the following:

1224.34.2.1 Entrance. Space shall be adequate to permit entry of gurneys, beds, and able to accommodate imaging equipment, electronic consoles, and if present, computer terminals.

1224.34.2.2 Cleanup. Provisions for cleanup shall be located within the service space for convenient access and use. It shall include service sink or floor receptacle as well as storage space for equipment and supplies.

1224.34.2.3 Consultation. A consultation area may be provided.

1224.34.2.4 Waiting. Waiting areas shall be provided out of traffic, under staff control. If the department is routinely used for outpatients and inpatients at the same time, separate waiting areas shall be provided with screening or visual privacy between the waiting areas.

1224.34.2.5 Dose administration area. Provide and locate near the preparation area. Since as much as sev-

1224.36.2.2 Nurses' station(s). Shall be located within the dialysis treatment area and designed to provide visual observation of all patient stations.

1224.36.2.3 Individual patient treatment areas. Shall contain at least 80 square feet (7.44 m²). There shall be at least a 4-foot (1219 mm) space around and between beds and/or lounge chairs.

1224.36.2.4 Handwashing fixtures. Shall be located convenient to the nurses' station and patient treatment areas. There shall be at least one handwashing fixture serving no more than four stations. These shall be uniformly distributed to provide equal access from each patient station.

1224.36.2.5 Privacy. The open unit shall be designed to provide privacy for each patient.

1224.36.2.6 Bloodborne infection isolation room. A minimum of one bloodborne infection isolation room of at least 120 square feet (11.15 m²) of clear floor space shall be provided for patients. This room shall contain a counter and handwashing fixture.

1224.36.2.7 Medication dispensing. If provided, there shall be a medication dispensing station for the dialysis center. A work counter and handwashing fixtures shall be included in this area. Provisions shall be made for the controlled storage, preparation, distribution and refrigeration of medications.

1224.36.2.8 Home training. If provided in the unit, a private treatment area of at least 120 square feet (11.15 m²) shall be provided for patients who are being trained to use dialysis equipment at home. This room shall contain counter, handwashing fixtures, and a separate drain for fluid disposal.

1224.36.2.9 Examination room. An examination room with a handwashing fixture shall be provided with at least 100 square feet (9.29 m²).

1224.36.2.10 Clean utility room. A clean utility room shall be provided. If the room is used for preparing patient care items, it shall contain a work counter, a handwashing fixture, and storage facilities for clean and sterile supplies. If the room is used only for storage and holding as part of a system for distribution of clean and sterile materials, the work counter and handwashing fixture may be omitted. Soiled and clean utility rooms or holding rooms shall be separated and have no direct connection.

1224.36.2.11 Soiled utility room. A soiled workroom shall be provided and contain a sink, handwashing fixture, work counter, storage cabinets, waste receptacles and a soiled linen receptacle.

1224.36.2.12 Reprocessing room. If dialyzers are reused, a reprocessing room is required and sized to perform the functions required and include one-way flow of materials from soiled to clean with provisions for a refrigerator (temporary storage or dialyzer), decontami-

nation/cleaning areas, sinks, processors, computer processors and label printers, packaging area and dialyzer storage and disinfectants cabinets.

1224.36.2.13 Nourishment station. If a nourishment station for the dialysis service is provided, the nourishment station shall contain a sink, a work counter, a refrigerator, storage cabinets and equipment for serving nourishments as required.

1224.36.2.14 Housekeeping room. Provide adjacent to and for the exclusive use of the unit.

1224.36.2.15 Repair room. If required, an equipment repair and breakdown room shall be equipped with a handwashing fixture, deep service sink, work counter and storage cabinet. Needs water supply and drain connection for testing machines.

1224.36.2.16 Supplies. Supply areas or supply carts shall be provided.

1224.36.2.17 Storage. Storage space shall be available for wheelchairs and gurneys, if gurneys are provided, out of direct line of traffic.

1224.36.2.18 Clean linen storage A clean linen storage area shall be provided. This may be within the clean utility room, a separate closet, or an approved distribution system. If a closed cart system is used, storage may be in an alcove. It must be out of the path of normal traffic and under staff control.

1224.36.2.19 Mixing room. Each facility using a central batch delivery system shall provide, either on the premises or through written arrangements, individual delivery systems for the treatment of any patient requiring special dialysis solutions. The mixing room shall also include a sink, storage space and holding tanks.

1224.36.2.20 Water treatment room. The water treatment equipment shall be located in an enclosed room.

1224.36.2.21 Patient toilet. A patient toilet room with a lavatory shall be provided.

1224.36.3 Ancillary facilities.

1224.36.3.1 Staff lounge, lockers and toilet(s). Space shall be available for male and female personnel for staff clothing change area and lounge. The areas shall contain lockers, shower, toilet(s), and handwashing fixtures.

1224.36.3.2 Patient storage. Storage for patients' belongings shall be provided.

1224.36.3.3 Waiting room. A waiting room, toilet room(s) with handwashing fixtures, drinking fountain, public telephone, and seating accommodations for waiting periods shall be available or accessible to the dialysis unit.

1224.36.3.4 Administrative services. Provide office and clinical work space.

1224.37 RESPIRATORY THERAPY SERVICE SPACE. If respiratory service is provided, the following elements shall be included:

1. **Storage for equipment and supplies.**
2. **Space and utilities for cleaning and disinfecting equipment.** Provide physical separation of the space for receiving and cleaning soiled materials from the space for storage of clean equipment and supplies. Appropriate local exhaust ventilation shall be provided if gluteraldehyde or other noxious disinfectants are used in the cleaning process. This space may be co-located with other reprocessing functions within the hospital.
3. **Additional facilities.** If respiratory services such as testing and demonstration for outpatients are part of the program, additional facilities and equipment shall be provided including but not limited to:
 - 3.1. Patient waiting.
 - 3.2. A reception and control station.

1224.38 INTERMEDIATE-CARE SERVICE SPACE. An intermediate-care service unit shall be housed in a separate and distinct nursing unit and shall comply with the applicable requirements of Section 1225.

1224.39 OUTPATIENT SERVICE SPACE.

1224.39.1 Waiting area(s). Provide with access to public toilet room facilities, a public telephone and a drinking fountain. These facilities may be shared with other services.

1224.39.2 Outpatient surgery. If outpatient surgery is performed in the out patient service area, the following shall be provided:

1. An operating room(s) with a minimum clear floor area of 270 square feet (25.08 m²), no dimension of which shall be less than 15 feet (4572 mm).
2. Preoperative patient holding shall be provided in accordance with Section 1224.15.2.
3. A postanesthesia recovery area which meets the requirements of Section 1224.16.
4. Each surgical unit shall provide a separate cleanup room separated from any surgical sterilizing facilities. The cleanup room shall provide 24 square feet (2.2 m²) per operating room up to eight operating rooms and shall have the minimum area of 48 square feet (4.5 m²), with no dimension less than 6 feet (1829 mm).
5. Scrub sinks which meet the requirements of Section 1224.15.3.5.
6. Service areas which meet the requirements of Section 1224.15.3.
7. A housekeeping room shall be provided for the exclusive use of outpatient surgery. It shall be directly accessible from the service area.

1224.39.3 Gastrointestinal endoscopy. If gastrointestinal endoscopy is performed in the outpatient service area, the endoscopy suite shall be divided into a minimum of three major functional areas: the procedure room(s), instrument

processing room(s), and patient holding/preparation and recovery room or area and the following shall be provided:

1224.39.3.1 Procedure room(s).

1224.39.3.1.1 Space requirements. Procedure room shall have a minimum clear floor area of 200 square feet (18.6 m²). Room arrangement shall permit a minimum clearance of 3 feet, 6 inches (1067 mm) at each side, head, and foot of the gurney/table.

1224.39.3.1.2 Handwashing fixture. A separate dedicated handwashing station with hands-free controls shall be available in the procedure room.

1224.39.3.2 Processing room.

1224.39.3.2.1 Dedicated processing room(s) for cleaning and decontaminating instruments shall be provided. The cleaning area shall allow for flow of instruments from the contaminated area to the clean assembly area and then to storage.

1224.39.3.2.2 The decontamination area shall be equipped with the following:

1. Utility sink(s) shall be provided as appropriate to the method of decontamination used.
2. One freestanding handwashing station.
3. Work counter space(s).

1224.39.3.3 Pre-operative patient holding. A pre-operative patient holding area shall be provided in accordance with Section 1224.15.2.

1224.39.3.4 Post-anesthesia recovery area. A post-anesthesia recovery area shall meet the requirements of Section 1224.16.

1224.39.3.5 Communication system. A system for emergency communication shall be provided.

1224.39.4 CANCER TREATMENT/INFUSION THERAPY SERVICE SPACE.

1224.39.4.1 General. If provided, cancer treatment/infusion therapy service shall comply with the following:

1224.39.4.2 Treatment area.

1224.39.4.2.1 Location. The treatment area may be an open area and shall be separated from administrative and waiting areas.

1224.39.4.2.2 Nurses' station(s). Shall be located within the cancer treatment/infusion therapy area and designed to provide visual observation of all patient stations.

1224.39.4.2.3 Individual patient treatment areas. Shall contain at least 80 square feet (7.4 m²).

There shall be at least a 4-foot (1219 mm) space around and between beds and/or lounge chairs used for chemotherapy treatment/infusion.

1224.39.4.2.4 Handwashing fixtures. Shall be located convenient to the nurses' station and patient treatment areas. There shall be at least one handwashing fixture serving no more than four

patient stations. These shall be uniformly distributed to provide equal access from each patient station.

1224.39.4.2.5 Privacy. The open unit shall be designed to provide privacy for each patient.

1224.39.4.2.6 Medication dispensing. If provided, there shall be a medication dispensing station for the cancer treatment/infusion therapy area. A work counter and handwashing fixture(s) shall be included in the area. Provisions shall be made for the controlled storage, preparation, distribution and refrigeration of medications.

1224.39.4.2.7 Examination room. An examination room with a handwashing fixture shall be provided with at least 100 square feet (9.29 m²).

1224.39.4.2.8 Clean utility room. A clean utility room shall be provided. If the room is used for preparing patient care items, it shall contain a work counter, a handwashing fixture, and storage facilities for clean and sterile supplies. If the room is used for storage and holding as part of a system for distribution of clean and sterile materials, the work counter and handwashing fixture may be omitted. Soiled and clean utility rooms or holding rooms shall be separated and have no direct connection.

1224.39.4.2.9 Soiled utility room. A soiled workroom shall be provided and contain a sink, handwashing fixture, work counter, storage cabinets, waste receptacles and a soiled linen receptacle.

1224.39.4.2.10 Nourishment station. If nourishment station for the cancer treatment/infusion therapy service is provided, the nourishment station shall contain a sink, a work counter, a refrigerator, storage cabinets and equipment for serving nourishment as required.

1224.39.4.2.11 Housekeeping room. Adjacent to and for the exclusive use of the unit.

1224.39.4.2.12 Supplies. Supply areas or supply carts shall be provided.

1224.39.4.2.13 Storage. Storage space shall be available for wheelchairs and gurneys. If gurneys are provided, they shall be out of the direct line of traffic.

1224.39.4.2.14 Clean linen storage. A clean linen storage area shall be provided. This may be within the clean utility room, a separate closet, or an approved distribution system. If a closed cart system is used, storage may be in an alcove. It must be out of the path of normal traffic and under staff control.

1224.39.4.2.15 Patient toilet. A patient toilet room with a lavatory shall be provided.

1224.39.4.3 Ancillary facilities.

1224.39.4.3.1 Staff lounge, lockers and toilet(s). Space shall be available for male and female personnel for staff clothing change area and lounge. The areas shall contain lockers, toilet(s), and handwashing fixtures.

1224.39.4.3.2 Patient storage. Storage for patients' belongings shall be provided.

1224.39.4.3.3 Administrative services. Office and clinical work space shall be provided.

1224.39.4.3.4 Special design elements. Decorative water features and fish tanks shall not be located inside cancer treatment/infusion therapy unit.

1224.40 SKILLED NURSING SERVICE SPACE. If provided a skilled nursing service unit shall be housed in a separate and distinct nursing unit and shall comply with the applicable requirements of Section 1225.

1224.41 SOCIAL SERVICE SPACE. If provided, the social service space shall include office or other space for privacy in interviewing, telephoning and conducting conferences.

**SECTION 1225 [OSHPD 2]
SKILLED NURSING AND
INTERMEDIATE-CARE FACILITIES**

1225.1 Scope. The provisions of this section shall apply to skilled nursing and intermediate-care facilities, including distinct part skilled nursing and intermediate-care services on a general acute-care or acute psychiatric hospital license, provided either is in a separate unit or a freestanding building. Skilled nursing facilities and intermediate-care facilities shall provide all common elements and support services. The required services for skilled nursing and intermediate-care facility licensure: dietary, pharmacy services, and activity program shall be provided. At the option of the provider, the medical model or the household model may be used.

1225.2 Application. New buildings and additions, alterations or repairs to existing buildings subject to licensure shall comply with applicable provisions of the California Electrical Code, California Mechanical Code, California Plumbing Code, California Fire Code (Parts 3, 4, 5 and 9 of Title 24), and this section.

Exception: See Section 1224.2.

1225.3 Definitions. Refer to Section 1224.3.

1225.4 COMMON ELEMENTS.

1225.4.1 NURSING SERVICE SPACE.

1225.4.1.1 Nurses' station. A nurses' station in free-standing skilled nursing and intermediate-care facilities shall be provided within each nursing unit. Nurses' stations shall be designed to serve no more than 60 beds.

1225.4.1.1.1 Components. Nurses' stations shall be provided with a cabinet, a desk, space for records, a bulletin board, a telephone, a specifically designated, lockable and illuminated medicine storage compartment, and a handwashing fixture. If a separate medicine room is provided, it shall have a lockable door and a sink. This sink cannot replace the required nurses' station handwashing fixture.

1225.4.1.1.2 Size. Nurses' stations serving 25 or less beds shall have a minimum floor area of 100 square feet (9.29 m²). Nurses' stations servicing more than 25

beds shall have a minimum floor area of 125 square feet (11.6 m²). The minimum dimension of any nurses' station shall not be less than 8 feet (2438 mm).

1225.4.1.1.3 Distance. In free-standing skilled nursing and intermediate-care facilities, the distance between the nurses station entrance and the center of the doorway of the most remote patient bedroom shall not exceed 150 linear feet (45,720 mm).

Exception: The 150-foot (45,720 mm) limit does not apply to distinct part skilled nursing and intermediate-care services provided as a separate unit in a general acute-care hospital or acute psychiatric hospital.

1225.4.1.2 Room identification. Each patient room shall be labeled with an identification number, letter, or combination of the two.

1225.4.1.3 Utility rooms. Utility rooms shall be provided in each nursing unit. Clean utility rooms shall contain a work counter, handwashing fixture, and storage facilities, unless the room is used only for storage and holding as part of a system for distribution of clean and sterile supplies, in which case the work counter and handwashing fixture may be omitted. Soiled utility rooms shall contain a handwashing fixture, work counter, space for waste receptacles, and space for linen hampers, unless the room is used only for the temporary holding of soiled materials, in which case the handwashing fixture and work counter may be omitted.

1225.4.1.3.1 Size. Utility rooms shall be designed for the separation of clean and soiled areas and provide not less than 100 square feet (9.29 m²). Alternatively, separate clean and soiled utility rooms of not less than 50 square feet (4.64 m²) each may be provided. If utility rooms also include linen and supply storage space, provide the following:

1. **Linen.** Separate and enclosed facilities for clean and soiled linen in each nursing unit. The clean linen storage space shall have a minimum area of 10 square feet (9.29 m²) and may be within the clean utility room. The soiled linen collection space shall have an area of no less than 10 square feet (9.29 m²), except where linen chutes are provided, and may be within the soiled utility room.
2. **Supply.** One supply storage space having a minimum area of 15 square feet (1.39 m²) shall be provided in each nursing unit. Supply storage may be within the clean utility room used only as part of a system for distributing clean and sterile supplies.

1225.4.1.3.2 Aisle widths. Minimum aisle widths in utility rooms shall be 4 feet (1219 mm).

1225.4.1.4 Visual privacy. A method of assuring visual privacy for each patient shall be provided in patient rooms and in tub, shower and toilet rooms.

1225.4.1.5 Treatment or exam room. The treatment or exam room shall comply with all of the requirements of Section 1224.4.4.

1225.4.1.6 Toilet room and bath facilities. Separate toilet room facilities shall be provided for the use of patients and personnel.

1225.4.1.6.1 Grab bars. Each toilet, bathtub and shower serving patients shall be provided with conveniently located grab bars.

1225.4.1.6.2 Bathroom facilities. Bathroom facilities shall be provided for patients in convenient locations in at least the following ratios:

Bathtubs or showers 1:20 patients or major fraction thereof.

(Minimum one bathtub on each floor)

Lavatories 1:8 patients

(Fixtures shall be equipped with gooseneck spouts without aerators and may have conventional controls.)

Toilets 1:6 patients

Fixtures serving individual patient rooms shall not be considered as meeting the required ratios for bedrooms not served by individual adjoining toilet room or bathrooms. Changes in these ratios for wards or units in which bed patients only are to be cared for, may be permitted by the enforcing agency.

1225.4.1.7 Patient/nurse call system. A patient/nurse call system complying with Section 517-123, California Electrical Code, shall be provided.

1225.4.1.8 Special-purpose rooms. Special-purpose rooms for the purpose of single-patient occupancy shall be provided at a ratio of one room for every 35 patients or fraction thereof. Airborne infection isolation rooms may be included in determining the number of special-purpose rooms required for the facilities.

1225.4.1.9 Airborne infection isolation rooms. If provided, the airborne infection isolation room shall comply with all of the requirements of Section 1224.14.3.

1225.4.1.10 Protective environment room(s). If provided, the protective environment room shall comply with all of the requirements of Section 1224.14.4.

1225.4.2 DIETETIC SERVICE SPACE.

1225.4.2.1 General. Food service facilities and equipment shall conform with these standards, the standards of the National Sanitation Foundation, and the requirements of the local public health agency.

1225.4.2.1.1 Distribution. Provision(s) shall be made for transport of hot and cold foods as required, appropriate for the type of food service selected.

1225.4.2.1.2 Dining space. Separate dining spaces shall be provided for patients and staff. These spaces shall be separate from the food preparation and distribution areas.

1225.4.2.1.3 Location. The design and location of dining facilities shall encourage patient use.

1225.4.2.1.4 Food service. Facilities shall be furnished to provide nourishment and snacks between scheduled meal service.

1225.4.2.2 Functional elements. The following facilities, in the size and number appropriate for the type of food service selected, shall be provided:

1225.4.2.2.1 Location. Food-service areas shall be directly accessible to the entry for food supply deliveries and for the removal of kitchen wastes.

1225.4.2.2.2 Receiving/control stations. A control station shall be provided for the receiving and control of incoming dietary supplies.

1225.4.2.2.3 Food preparation facilities. Food preparation facilities shall be provided to accommodate the method of food preparation required.

1. Conventional food preparation systems require space and equipment for preparing, cooking, and baking.
2. Convenience food service systems using frozen prepared meals, bulk packaged entrees, individual packaged portions, or those using contractual commissary services require space and equipment for thawing, portioning, cooking, and baking.

1225.4.2.2.4 Handwashing station(s). Handwashing station(s) shall be located in the food preparation area.

1225.4.2.2.5 Ice-making facilities. Ice-making facilities may be located in the food preparation area or in a separate room. They shall be easily cleanable and convenient to the dietary function.

1225.4.2.2.6 Assembly and distribution. A patient tray assembly area shall be provided and shall be located within close proximity to the food preparation and distribution areas.

1. If food service carts are utilized, a cart distribution system shall accommodate spaces for storage, loading, distribution, receiving, and sanitizing of the food service carts. Cart circulation shall not be through food preparation areas.

1225.4.2.2.7 Ware-washing facilities. Ware-washing space shall be provided in a room separate from the food preparation and serving area. It shall be designed to prevent contamination of clean wares with soiled wares through cross-traffic. The clean wares shall be transferred for storage or use in the dining area without having to pass through food preparation areas.

1. Commercial-type ware-washing equipment shall be provided.
2. Space shall be provided for receiving, scraping, sorting, and stacking soiled tableware, and

for transferring clean tableware to the using areas.

3. Convenient handwashing stations shall be provided in the ware-washing space.

1225.4.2.2.8 Pot-washing facilities. Pot-washing facilities shall include multi-compartmented sinks.

1225.4.2.2.9 Office space. Office or other space shall be provided for the dietician or dietetic service supervisor.

1225.4.2.2.10 Storage.

1. Food storage space, including cold storage, shall be provided for a supply of food of at least a 7 day staple, 2 day frozen, 2 day perishable, and an emergency food and water supply. All food shall be stored clear of the floor. The lowest shelf shall be not less than 12 inches (305 mm) above the floor or shall be closed in and sealed tight, for ease of cleaning.

As a minimum, dietary storage space shall be provided in accordance with the following schedule:

Licensed Bed Capacity	Storage Space
1 to 99 beds	2 square feet (0.19 m ²) per bed
100 to 199 beds	200 square feet (18.58 m ²) plus 1 square foot (0.0929 m ²) per bed in excess of 100 beds
200 beds and over	300 square feet (27.99 m ²), plus 1/2 square foot (0.0465 m ²) per bed in excess of 200 beds

Space to allow refrigeration for the storage of frozen and chilled foods shall be provided at a minimum of 2 cubic feet (0.057 m³) of usable space per bed.

2. Additional storage space for dietetic service supplies, such as paper products, equipment, tray delivery carts, etc. shall be provided.
3. Storage areas and sanitizing facilities for cans, carts, and mobile-tray conveyors shall be provided.
4. Waste, storage, and recycling facilities (per local requirements) shall be located in a separate room easily accessible to the outside for direct pickup or disposal.

1225.4.2.2.11 Toilet rooms. Toilet rooms shall be provided for the exclusive use of the dietary staff. They shall not open directly into the food preparation areas, but shall be in close proximity.

1225.4.2.2.12 Lockers. An enclosed, separate area shall be provided for dietetic service employees' clothing and personal belongings.

1225.4.2.2.13 Housekeeping room. A housekeeping room meeting the requirements of Section 1224.4.15 shall be located within the dietary department for the exclusive use of the dietary department.

1225.4.2.3 Outside service. On approval of the Licensing Agency, when food is provided by an outside food service, the facility shall maintain adequate space, equipment, and food supplies to accommodate required functional elements listed in Section 1225.4.2.2, as required to provide patient food service in the event that the outside food service is interrupted.

SUPPORT SERVICES

1225.4.3 ADMINISTRATION SPACE.

1225.4.3.1 Administration and public spaces. An administration area shall be provided which shall include space for business, administration, admitting, public toilet room(s), lobby, and public telephone.

1225.4.3.2 Medical record storage. Space shall be provided for the storage of medical records.

1225.4.3.3 Office. An office for the director of nurses shall be provided.

1225.4.4 STERILE SUPPLIES.

1225.4.4.1 Storage. Each facility shall provide space for the storage of disposable sterile supplies or provide space for sterilization and disinfection equipment.

Exception: Facilities with contractual arrangements for outside autoclaving and sterilizing services.

1225.4.4.2 Central sterile supply. If provided, shall accommodate the following:

1225.4.4.2.1 Minimum requirements. A central supply and sterilizing area shall be provided. Rooms and spaces shall accommodate the following services and equipment:

1. Soiled work area. A receiving and gross cleaning area which shall contain work space and equipment for cleaning medical and surgical equipment and for disposal of or processing of soiled material.
2. Clean work area. A clean work area which shall contain work space and equipment for sterilizing medical and surgical equipment and supplies.
3. Sterilizing space.
4. Storage. Space for sterile supplies and unsterile supplies.

1225.4.4.2.2 Sterilizers. All sterilizers and autoclaves which emit steam exhaust shall be vented to the outside of the building. Such vents shall be independent from the plumbing vent system.

Exception: Small instrument sterilizers.

1225.4.5 STORAGE.

1225.4.5.1 Required areas. Facilities shall provide combined general and specialized storage in accordance with the following schedule:

Licensed Bed Capacity	Storage Area
1 to 10 beds	120 square feet (11.15 m ²) minimum
11 to 100 beds	12 square feet (1.11 m ²) per bed
Over 100 beds	1,200 square feet (111.48 m ²) plus 5 square feet (0.46 m ²) per bed for each bed over 100

1225.4.5.2 Specialized storage. Shall include those spaces identified in the dietetic food storage of Section 1225.4.2.2.10 and as follows:

1225.4.5.2.1 Linen. Separate and enclosed facilities for clean and soiled linen in each nursing unit. The clean linen storage space shall have a minimum area of 10 square feet (0.93 m²) and may be within the clean utility room. The soiled linen collection space shall have an area of no less than 10 square feet (0.93 m²), except where linen chutes are provided, and may be within the soiled utility room.

1225.4.5.2.2 Supply. One supply storage space having a minimum area of 15 square feet (1.39 m²) shall be provided in each nursing unit. Supply storage may be within the clean utility room used only as part of a system for distributing clean and sterile supplies.

1225.4.5.2.3 Wheelchairs. A room or space shall be provided in each nursing unit for wheelchairs and stretchers. The wheelchair and stretcher space shall have a minimum area of 15 square feet (1.39 m²).

1225.4.5.2.4 Separate supplies. Sterile and unsterile supplies shall be stored separately.

1225.4.5.2.5 Location. All storage spaces shall be directly accessible on the site of the licensed facility.

1225.4.6 HOUSEKEEPING ROOMS. Housekeeping rooms shall be provided to serve each department and nursing unit, and may be shared by compatible departments, except when specifically required by other sections.

1225.4.7 LAUNDRY. If a laundry is to be provided, the following is required in addition to the laundry room:

1. A separate soiled linen receiving, holding and sorting room with handwashing fixture.
2. A separate clean linen storage, issuing and holding room.
3. Storage for laundry supplies.

1225.4.7.1 Outside service. If linen is processed off site, the following shall be provided within the facility:

1. A soiled linen holding room.
2. A separate clean linen receiving and storage room.

1225.4.8 EMPLOYEE DRESSING ROOMS AND LOCKERS. Separate dressing rooms with toilet(s), lavatories, and lockers for male and female personnel shall be provided.

1225.5 SKILLED NURSING UNIT MODELS. The requirements of the Medical Model or the Household Model shall apply to the Nursing Unit(s) in its entirety.

1225.5.1 MEDICAL MODEL.

1225.5.1.1 General construction. Skilled nursing and intermediate-care facilities shall comply with Sections 1224.4 through 1224.13 whenever applicable.

1225.5.1.2 NURSING SERVICE SPACE.

1225.5.1.2.1 Patient bedrooms. Patients shall be accommodated only in rooms with the following minimum floor area, exclusive of toilet rooms, wardrobes, entrance vestibules, and fixed furnishings or equipment.

- 1. Single-patient rooms: 110 square feet (10.21 m²).
- 1. Multi-patient rooms: 80 square feet (7.43 m²) per bed.

1225.5.1.2.2 Bed clearance. A minimum distance of 3 feet (914 mm) shall be provided between beds and 4 feet (1219 mm) between the foot of beds and walls or fixed objects in multi-patient rooms, and 3 feet (914 mm) in single-patient rooms.

1225.5.1.2.3 Patient room beds. Patient rooms shall not be designed to permit the placement of beds more than three deep from the exterior window, but shall be of such shape and dimensions to allow for the performance of routine functions, including the easy transfer of patients to and from bed to wheelchair or wheeled stretcher. No patient room shall be designed to accommodate more than four beds.

1225.5.1.2.4 Outside exposure. All patient bedrooms shall have an outside exposure and shall not be below ground level.

1225.5.1.2.5 Patient storage. Each patient room shall be provided with wardrobe or locker spaces for clothing, toilet articles, or other personal belongings for each patient.

Exception: Pediatric and psychiatric patient rooms.

1225.5.1.3 PHARMACEUTICAL SERVICE SPACE.

1225.5.1.3.1 Drug space and storage. Adequate space shall be provided at each nursing station for the storage of drugs and preparation of medication doses.

1225.5.1.3.2 Drug access. All spaces and areas used for the storage of drugs shall be lockable and accessible to authorized personnel only.

1225.5.1.3.3 Narcotics. Specific space shall be designed for safe storage of narcotics and other dangerous drugs.

1225.5.1.3.4 Drug refrigeration. Facilities shall provide for storage of drugs requiring refrigeration.

1225.5.1.3.5 Pharmacy. The pharmacy shall not serve the general public unless a separate public entrance or a separate public serving window is utilized.

1225.5.1.4 ACTIVITY PROGRAMMING SPACE. Designated activity areas appropriate to independent and group needs of patients shall be provided as follows:

1225.5.1.4.1 Skilled nursing facilities.

- 1. Recreation room. Each floor of each building accommodating six or more patients shall be provided with a recreation room with a minimum of 100 square feet (9.29 m²).
- 2. Recreation and dining. A minimum of 100 square feet (9.29 m²) plus 12 square feet (1.11 m²) per bed shall be provided for recreation and dining activities.

1225.5.1.4.2 Intermediate-care facilities.

- 1. Recreation room. Each floor of each building accommodating five or more patients shall be provided with a recreation room with a minimum of 150 square feet (13.94 m²).
- 2. Recreation and dining. A minimum of 30 square feet (2.79 m²) per bed for recreation and dining activities.
- 3. Outdoor space for activities and recreation.

1225.5.1.4.3 Equipment and supplies. Recreation and dining spaces shall be provided with space to store equipment and supplies.

1225.5.2 HOUSEHOLD MODEL.

1225.5.2.1 General construction. Skilled nursing and intermediate-care facilities shall comply with Sections 1224.4 through 1224.13 whenever applicable, and the following sections:

1225.5.2.1.1 Door thresholds. Door thresholds, except where required at exterior doors and expansion joint covers, shall be designed to facilitate use of wheelchairs and carts and to prevent tripping, and shall provide a smooth and level transition from surface-to-surface.

1225.5.2.1.2 Seating area. A seating area(s) located out of the required egress width shall be provided along the access corridor that is used by patients.

1225.5.2.1.3 Towel bars. Towel bars shall be provided at each bathing facility.

1225.5.2.1.4 Hardware. All patient use plumbing fixtures and door operating hardware shall be equipped with lever type hardware for easy gripping and turning.

1225.5.2.1.5 Drinking fountain. A minimum of one drinking fountain shall be provided per resident floor, unless drinking water is available from the resident dietary area.

1225.5.2.2 Cluster/household unit and resident unit.

1225.5.2.2.1 Design. Each resident unit shall consist of the resident rooms, resident support areas, and resident living areas. The unit shall be designed as a cluster/household resident unit or as a resident unit with double or single loaded access corridors. If the cluster/household unit design is utilized, it shall be designed around resident support and living areas with a maximum of 20 patients per cluster/household unit. If the double or single loaded corridor resident unit design is utilized, the access corridor shall be designed so that travel distance from the entrance of the resident unit to the furthest resident room door is no more than 60 feet (18.29 m) without a change of corridor direction or a node for a resident sitting area.

1225.5.2.2.2 Arrangement. Each resident unit shall be arranged to avoid unnecessary and unrelated travel through the unit.

1225.5.2.2.3 Distinct parts or neighborhoods. Both the cluster/household unit and resident unit designs may be grouped into distinct parts or neighborhoods to a maximum of 60 patients. These distinct parts or neighborhoods composed of the resident unit(s) as described in Section 1225.5.2.2.1 may share the functional requirements of the resident support areas as described in Sections 1225.5.2.4 and 1225.5.2.5 of this code.

1225.5.2.3 Resident room.

1225.5.2.3.1 Capacity. In new construction and additions, the maximum room capacity shall be two patients. Resident sleeping areas in all double resident room designs shall be visually separated from each other by a full height wall or a permanently installed sliding or folding door or partition, and shall provide each patient direct use of and direct access to an exterior window at all times. Walls, doors, or partitions used to separate resident beds shall provide visual and acoustical separation. A door leading to each resident bed area in addition to the corridor door is not required. Other resident room arrangements where a permanent partition or door is not used to separate the resident sleeping areas may be utilized if adequate visual separation such as a cubicle curtain(s) and an exterior window for each individual resident sleeping area is provided. In this case individual thermostats for the resident bed areas shall not be required.

1225.5.2.3.2 Renovation. Where renovation work is undertaken of the resident room that alters the physical configuration of the resident room and the present capacity is more than two patients, the maximum room capacity shall be no more than two patients at the conclusion of the renovation.

1225.5.2.3.3 Space requirements. Rooms shall have a minimum of 100 square feet (9.29 m²) of clear floor area per bed in double resident rooms and 120 square

feet (11.15 m²) of clear floor area in single resident rooms, exclusive of the space consumed by toilet rooms, closets, lockers, wardrobes, lavatories, alcoves, and door swings into the room or entrance vestibules, whichever is greater. For the purpose of minimum clear floor area, the entrance vestibule is defined as that floor area located between the room entrance door and the room floor area containing the resident bed(s).

1225.5.2.3.4 Arrangement. Dimensions and arrangement of resident rooms shall be designed to accommodate at least two bed positions to provide patient choice of bed placement. All such bed positions shall be designed so that the bed will not obstruct access to the supporting utilities serving the bed, such as the nurse call station, and the required electrical outlets that provide service for that bed. Only one bed position design shall be required for a bed that is equipped with a piped medical gas headwall unit, unless special requirements such as providing care for bariatric patients does permit the design of two bed positions in the room.

1225.5.2.3.5 Clearance. A 3 feet (0.91 m) wide clear access to each bed shall be provided along at least 75 percent of the length of one side of the bed and shall be designed to allow access for the use of a wheelchair and other portable equipment. For beds equipped with a piped-in medical gas headwall unit, there shall be a minimum of 3 feet (0.91 m) between the sides and foot of the bed and any wall or any other fixed obstruction. For planning purposes, a full-size bed is assumed to be 3 feet 6 inches (1.07 m) wide by 8 feet (2.43 m) long.

1225.5.2.3.6 Renovations. For renovations that alter the physical configuration of the resident room but have existing structural limitations that require two resident beds to be located in a shared resident sleeping area, there shall be a minimum of 3 feet (0.91 m) between the sides and foot of the bed and the adjacent bed. If one bed must be located to the side of the other bed, there shall be a clearance of 4 feet (1.22 m) to any fixed obstruction available at the foot of this bed to permit the passage of equipment and bed without moving the resident's bed located nearest to the room door.

1225.5.2.3.7 Resident toilet or bath room. Each patient shall have access to a toilet room without having to enter the general corridor area or the resident bed area in a shared resident room. One toilet room shall serve no more than two patients and no more than two resident rooms. The door to the toilet room shall be side hinged and either swing out from the toilet room, or be equipped with emergency release hardware. Sliding doors equipped with sliding door hardware located on the resident room side of the wall and not equipped with a bottom door track shall be permitted. If a sliding door is used in a resident toilet or bath room, a D-shaped handle at least 4 inches (10.16 cm) long shall be provided to open the door.

The sliding door shall permit access, and negate the need to push against a patient who may have collapsed within the toilet room. Unless otherwise required by this code, this door shall be at least 36 inches (914.4 mm) wide. A lavatory shall be provided in each resident toilet room.

1225.5.2.3.8 Wardrobe closet. Each resident room shall be provided with a wardrobe or closet for each patient. Each wardrobe or closet shall have minimum inside dimensions of 2 feet (0.61 m) in depth by 1 foot 8 inches (0.51 m) in width. Each shall be accessible to the patient at all times and shall have adjustable shelf(s) and an adjustable clothes rod that is adjustable in at most 4 inches (10.16 cm) increments from 4 feet (1.22 m) to 5 feet 8 inches (1.73 m) above finished floor or higher as closet size permits. When the wardrobe or closet is designed to meet the requirements for accessibility per Chapter 11 of this code, it shall include additional accessible storage area(s) for full-length garments. The shelf may be omitted if the clothing unit provides at least two drawers. Locked storage for personal items shall be provided within the resident sleeping room or area.

1225.5.2.4 Resident support area.

1225.5.2.4.1 Features and arrangement. Size and features of each resident support area will depend upon the number and type of patients served. The resident support area may be arranged and located to serve more than one resident unit, but at least one such support area shall be provided on each resident floor. The following resident support areas shall be located in or be readily accessible to each resident unit.

1225.5.2.4.2 Staff work area. A centralized staff work area shall be provided. It shall have space for supervisory administrative work activities, charting, and storage. In each resident unit, the functions of administrative work, charting and storage may be located among several separate direct care staff work areas. In this case, a centralized staff work area is not required.

1225.5.2.4.3 Clean utility. A clean utility or clean holding room for storage and distribution of clean supply materials shall be provided. If the room is used for preparing patient care items, it shall contain a work counter, a handwashing fixture, and storage facilities for clean and sterile supplies. If the room is used only for storage and holding as a part of a system for distribution of clean and sterile supply materials, the work counter and handwashing fixture requirements may be omitted. The minimum size of the room shall be 15 square feet (1.39 m²) with 1 square foot (0.092 m²) of additional space provided per patient for over 15 patients and may be allocated among several clean utility or clean holding rooms or closets.

1225.5.2.4.4 Soiled utility. A soiled utility or soiled holding room(s) shall be provided. The soiled utility function shall be comprised of a flushing rim clinical

service sink or other appropriate flushing fixture, with bedpan rinsing device, soiled linen receptacles, waste receptacles and a work counter with a usable minimum work surface area of 6 square feet (0.56 m²). The total minimum size of the room shall be 20 square feet (1.86 m²) with 1.5 square feet (0.140 m²) of additional space provided per patient for over 15 patients and may be allocated among several soiled utility or soiled holding rooms. Rooms used only for the holding of soiled materials need contain only a handwashing fixture.

1225.5.2.4.5 Medicine preparation. A medicine preparation room or a self contained medicine dispensing unit shall be provided for the provision of medication distribution. The self-contained medicine dispensing unit shall be under the visual control of the staff. If a medicine preparation room is utilized, it shall be equipped with a lockable door, have a minimum area of 50 square feet (4.65 m²) and shall contain a refrigerator, locked storage for controlled drugs, a handwashing fixture, and a work counter with a minimum of 6 square feet (0.56 m²) of work surface. If a self-contained medicine dispensing unit is utilized, it may be located at the nurses' station, in the clean utility room, in an alcove, or in other spaces convenient for staff control provided the area occupied by the unit does not encroach upon required minimum areas. The dispensing unit may be used in a medicine preparation room as locked storage for controlled drugs within the minimum area of 50 square feet (4.65 m²), however, the standard "cup sinks" provided in many self-contained units shall not be a substitute for the required handwashing fixture. If there is no linen storage in the clean utility room, medicine preparation may be part of the clean utility room in which case an additional 20 square feet (1.8 m²) dedicated for this purpose shall be required. A refrigerator shall also be required if medicine preparation is included in this room. Non-controlled prescription drugs may be stored inside the resident's sleeping room or toilet room if they are secured inside of an automatic closing and automatic locking dispensing unit that is secured in place.

1225.5.2.4.6 Equipment storage. An equipment storage room(s) shall be provided for storage of resident unit equipment. The minimum area required shall be equal to 2 square feet (0.19 m²) for each patient with no room being less than 20 square feet (1.86 m²) in area.

1225.5.2.4.7 Housekeeping room. A housekeeping room(s) shall be provided for storage and use of housekeeping supplies and equipment.

1225.5.2.4.8 Clean linen room. A clean linen storage room, closet, or area shall be provided. This area may be located within the clean utility or clean holding room and shall be large enough to accommodate the storage of linen carts.

1225.5.2.4.9 Nourishment room. A nourishment room or area for serving nourishments between meals shall be provided and shall contain a work counter, refrigerator, storage cabinets, and sink. Ice for patients' consumption shall be provided by an icemaker unit that may serve more than one nourishment station if the nourishment stations are in close proximity to each other. Where the icemaker unit is accessible to patients or the public, it shall be a self-dispensing type. The nourishment room shall include space for trays and dishes used for nonscheduled meal service. A handwashing fixture shall be in or immediately accessible from the nourishment room.

1225.5.2.4.10 Storage alcove. A storage alcove space for a wheelchair(s) shall be provided in an area located out of the required means of exit access.

1225.5.2.4.11 Resident bathing facilities. Resident bathing facilities shall be provided with a minimum of one bathtub or one hydro tub per resident unit, or one shower for every 20 patients or fraction thereof not otherwise served by bathing facilities in resident rooms. When centralized bathing is provided, patients shall have access to at least one bathing room per floor or unit sized to permit assisted bathing in a tub or shower in that resident unit. The bathtub in this room shall be accessible to patients in wheelchairs and the shower shall accommodate a shower chair. Other tubs or showers shall be in individual rooms or curtained enclosures with space for private use of the bathing fixture, for drying and dressing, and access to a grooming location containing a sink, mirror, and counter or shelf. A separate private toilet shall be provided that is directly accessible to each multi-bathing fixture central bathing area without requiring entry into the general corridor. This toilet may also serve as a toilet training facility. This centralized bathing area shall comply with Chapter 11B of this code.

1225.5.2.4.12 Private bathing. All showers located in bathrooms connected directly to the resident room shall be designed so that a shower chair can be easily rolled over the threshold. Resident rooms and associated toilet rooms, required to be accessible, shall comply with Chapter 11B of this code.

1225.5.2.5 Resident living area.

1225.5.2.5.1 Dining. Dining, lounges, and recreation and social areas for patients shall be provided in each resident unit. The total area of these spaces shall be a minimum of 35 square feet (3.25 m²) per patient with a minimum total area of 225 square feet (20.90 m²). At least 20 square feet (1.86 m²) per patient shall be available for dining. Storage for supplies and equipment shall be provided in the recreation area.

1225.5.2.5.2 Outdoor area. Outdoor area(s) shall be provided for the use of all patients and shall include walking paths of durable materials, benches, shaded areas, and visual focusing element(s) such as landscaping, sculpture(s), or fountain(s). Security fencing

if used shall be of a residential design and provide some visual connection to the exterior of the secured area. If an exterior visual connection is not possible or desirable, then the interior of the outside area shall be landscaped to be visually interesting.

1225.5.2.5.3 Storage. Storage for supplies, patient needs, and recreation shall be provided. The minimum required area shall be 5 square feet (0.46 m²) per bed up to 600 square feet (55.74 m²).

1225.5.2.5.4 Dietary area. A resident dietary area shall be provided in the resident unit for the use of staff, patients, and family. The resident dietary area may include cooking equipment, counter tops, kitchen sink, and storage areas. This dietary area is in addition to the dietetic service space requirements in Section 1225.4.2.

1225.5.2.5.5 Therapy unit. If provided, physical, speech, and occupational therapy units shall comply with Sections 1225.6.2 through 1225.6.4.

1225.5.2.5.6 Barber/beauty room. If provided, the barber/beauty room shall be a minimum of 120 square feet (11.15 m²) with the least dimension of 10 feet (3.05 m).

1225.5.2.5.7 Resident laundry facilities. If provided, resident laundry facilities including washing and drying equipment may be provided for staff, family, or individual patient use for the laundering of patient's personal items. If provided they shall be readily accessible from each resident unit without requiring the user to enter another resident unit or floor, and may be shared between two resident units. These resident laundry facilities may utilize residential laundry equipment. Each resident laundry area shall contain a handwashing fixture.

1225.5.2.6 STAFF SUPPORT AREA.

1225.5.2.6.1 Staff lounge. Staff lounge area(s) shall be provided. It may be shared by multiple resident units if the lounge is located so it is accessible without requiring the user to enter into or through any other resident unit.

1225.5.2.6.2 Storage. Lockable closets, drawers, or compartments shall be provided on the resident unit for staff and may be located in the lounge for safe-keeping of staff's personal effects.

1225.5.2.6.3 Staff toilet room. Staff toilet room shall be provided conveniently located to each resident unit.

1225.5.2.6.4 Multipurpose room. At least one multipurpose room per skilled nursing facility shall be provided for conferences, meetings, and health education purposes, and shall accommodate the use of visual aids. This room shall have a minimum area of 120 square feet (11.15 m²).

1225.5.2.6.5 Conference room. Conference or consultation room for patient and family use shall be pro-

vided and may be shared by more than two resident units if it is centrally located to each.

1225.6 OPTIONAL SERVICES.

1225.6.1 General. Waiting areas and access to optional services for outpatients shall accommodate the following:

1225.6.1.1 Outpatient waiting rooms. Waiting rooms for outpatients shall provide a seating area and space for wheelchairs, and have public corridor access to, or provisions for, public toilet room(s), drinking fountain, and telephone.

Note: One waiting area may serve more than one department or service.

1225.6.1.2 Circulation. If x-ray examinations are to be performed on outpatients, outpatient access to the radiological spaces shall not traverse a nursing unit.

Exception: Satellite radiology, laboratory, pharmacy, and physical and occupational therapy space serving inpatients may be located in nursing units and inpatient treatment areas.

1225.6.2 PHYSICAL THERAPY SERVICE.

1225.6.2.1 Area. The minimum floor area for a physical therapy service shall be 300 square feet (27.87 m²), with no dimensions less than 12 feet (3658 mm).

1225.6.2.2 Toilet room(s). Toilet room facilities shall be directly accessible and allow for patient transfer activities.

1225.6.2.3 Equipment space. See Title 22 for required equipment.

1225.6.2.4 Handwashing fixture. A minimum of one handwashing fixture shall be provided.

1225.6.3 OCCUPATIONAL THERAPY SERVICE. An occupational therapy service shall accommodate the requirements of Sections 1225.6.2.1, 1225.6.2.2 and 1225.6.2.4.

Storage space shall be provided.

Note: See Title 22 for required equipment, supplies, and adaptive devices.

1225.6.4 SPEECH PATHOLOGY AND/OR AUDIOLOGY SERVICE. At least one space free of ambient noise shall be provided. A handwashing fixture shall be provided.

1225.6.5 SOCIAL WORK SERVICE. Office space for privacy in interviewing, telephoning, and conferences shall be provided.

1225.6.6 SPECIAL TREATMENT PROGRAM SERVICE.

1225.6.6.1 Location. A special treatment program service providing therapeutic services to an identified mentally disordered population group shall be located in a distinct separate unit of the facility.

1225.6.6.2 Nursing service. The nursing service space shall comply with Section 1225.4.1.

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- 11 **1225.6.6.3 Activity program.** *The activity program space shall provide a minimum of 25 square feet (2.3 m²) of dining and recreation space per bed.*
- 11 **1225.6.6.4 Indoor and outdoor space.** *Shall be designated for the special treatment program.*

**SECTION 1226 [OSHPD 3]
CLINICS**

1226.1 Scope. *The provisions of this section shall apply to primary-care clinics, specialty clinics and psychology clinics. Primary-care clinics include free clinics, community clinics, employee clinics and optometric clinics. Specialty clinics include alternative birth centers (ABCs), surgical clinics, chronic end-stage renal dialysis clinics and rehabilitation clinics.*

1226.2 Application. *All new buildings and additions, alterations or repairs to existing buildings subject to licensure shall comply with applicable provisions of the California Electrical Code, California Mechanical Code, California Plumbing Code, California Fire Code, (Parts 3, 4, 5, and 9 of Title 24) and this section.*

Exception: *See Section 1224.2.*

1226.2.1 Outpatient clinical services. *Hospitals providing outpatient clinical services and clinics licensed under Health and Safety Code Section 1200 that are not covered by this section shall meet the applicable requirements in Section 1224.*

1226.3 Definitions. *See Section 1224.3.*

1226.4 GENERAL CONSTRUCTION. *Clinics shall comply with Sections 1224.4.2 through 1224.4.6 wherever applicable.*

1226.5 CORRIDORS AND HALLWAYS.

1226.5.1 Connections. *Corridor systems shall connect all essential services.*

1226.5.2 Corridors. *Rehabilitation clinics shall have corridors of at least 5 feet (1524 mm) in width, with handrails on both sides.*

1226.6 DOORS AND DOOR OPENINGS.

1226.6.1 Doors. *Doors for patient use shall not be less than 3 feet (914 mm) in width. Where patients are transported by wheeled stretchers, doors shall provide a minimum opening of 44 inches (1118 mm).*

1226.6.2 Pocket doors. *Except for administrative areas, pocket sliding doors are not permitted.*

1226.7 WINDOWS AND SCREENS. *Where necessary to protect against entrance of insects, screens of 16 meshes per inch shall be installed on windows which may be left in an open position.*

1226.8 CEILING HEIGHTS.

1226.8.1 Minimum height. *The minimum height of ceilings shall be 8 feet (2438 mm), except in closets, toilet rooms and bathrooms where the minimum ceiling height shall not be less than 7 feet (2134 mm).*

1226.8.2 Minimum height with fixed ceiling equipment. *Operating rooms, radiographic rooms and other rooms containing ceiling-mounted major fixed equipment or ceiling-mounted surgical light fixtures shall have ceiling heights to accommodate the equipment or fixtures and their normal movement.*

1226.9 INTERIOR FINISHES—FLOORS AND BASES.

1226.9.1 Floor finishes. *Shall be smooth, water resistant and durable. Upon written, appropriately documented request, the enforcing agency may grant approval of the installation of carpet.*

1226.9.2 Bases. *The materials and textures of bases and the installation thereof shall be so as to minimize moisture infiltration. Wood bases are prohibited except in waiting areas and administration departments.*

1226.9.3 Bases/wet cleaning. *Wall bases in operating rooms, cast rooms and other areas which are frequently subject to wet-cleaning methods shall be made integral and coved with the floor. Construction shall be without voids at the intersection of floor and wall surfaces.*

1226.10 WALL AND CEILINGS. *For wall and ceiling finish requirements, refer to Section 1224.4.11 and Table 1224.1.*

1226.11 ELEVATORS.

1226.11.1 Cab requirements. *Buildings over one story in height with accommodations or services for patients on floors without grade-level entrance shall provide at least one elevator in compliance with Section 3002.4.*

1226.11.2 Dimensions. *Elevators used for the routine transport of wheeled stretchers shall have minimum inside platform dimensions of 5 feet by 8 feet (1524 mm by 2438 mm) and a minimum clear door opening of 3 feet 8 inches (1118 mm).*

1226.12 GARBAGE-SOLID WASTES AND TRASH STORAGE.

1226.12.1 Enclosure. *A lockable room or screened enclosure of at least 25 square feet (2.32 m²) shall be provided for the washing and cleaning of garbage containers and for the storage of garbage, trash and other solid wastes. Such room or screened enclosure shall include the following:*

1226.12.1.1 Floor and curb. *A concrete floor with a curb and with a drain connected to the sewer.*

1226.12.1.2 Water. *Steam or hot water and cold water supplies in accordance with the California Plumbing Code.*

1226.12.1.3 Size. *A minimum floor area of not less than 25 square feet (2.32 m²), the least dimension of which shall be 4 feet (1219 mm). This amount of space may not be required by the enforcing agency if there is proposed a method of handling, storage, or cleaning of containers which requires a lesser amount of space. Additional space may be required by the enforcing agency when special operations or collection and disposal methods result in greater than usual accumulation of solid wastes.*

1226.12.2 Compactors. Trash compactor systems shall meet the drainage and wash-down requirements under Section 1226.12.1, Items 1 and 2.

Exception: If a dumpster system is proposed, operational procedures for handling and storage must be specifically approved by the local health officials.

1226.13 LAUNDRY AND TRASH CHUTES. Gravity-type laundry and trash chutes shall conform with Section 1224.4.16.

PRIMARY CARE CLINICS

1226.14 ABORTION SERVICES. Clinics with abortion services shall provide, in addition to the basic clinic facilities:

1226.14.1 Postabortion recovery area. Shall have a minimum area of 60 square feet (5.57 m²) per recovery bed, with cubicle curtains for patient privacy.

1226.14.2 Storage. Space for the storage of patient clothing and personal items.

1226.14.3 Counseling. A room or private area of at least 60 square feet (5.57 m²) for preabortion and postabortion counseling.

1226.15 CLINICAL FACILITIES. Clinical facilities shall include the following:

1226.15.1 Examination room. Shall have a minimum area of 70 square feet (6.50 m²), the least dimension of which shall be 7 feet (2134 mm), excluding such spaces as vestibule, toilet room and work counter.

1226.15.2 Treatment room. If provided, shall have a minimum area of 120 square feet (11.15 m²), the least dimension of which shall be 10 feet (3048 mm), excluding such spaces as vestibules and work counters.

Exception: Treatment rooms used for aspiration abortion may be, as a minimum, sized as examination rooms.

1226.15.3 Handwashing fixtures. Examination and treatment rooms, including those used for abortion, shall be equipped with handwashing fixtures.

Exception: Examination and treatment rooms used for routine examinations or where surgical procedures are not performed may be equipped with fixtures having wrist or elbow controls.

1226.15.4 Records. Space shall be designed for charting and storage of clinical records.

1226.15.5 Drug distribution. A lockable drug distribution station with space for a refrigerator.

1226.15.6 Utility room. A utility room which contains storage, sinks, work counter, and separate clean and soiled linen hampers. The room shall be designed for the separation of clean and dirty work areas. Separate clean and soiled utility rooms may be designated.

BIRTHING CLINICS

1226.16 BIRTHING CLINICS. Birthing clinics shall accommodate the provisions of Sections 1226.17.4, 1226.17.5 and 1226.17.6, as well as the following:

1. A birthing room shall provide not less than 156 square feet (14.49 m²), with a minimum dimension of 12 feet (3658 mm) of usable floor space.
2. An adjoining toilet room with a nurses' call system and a lavatory.
3. Direct access to a patient shower.
4. A handwashing fixture located within or directly outside the room. If the fixture is located within the room, the fixture may be screened or within openable casework.
5. A nurses' call system which will alert the nearest continually staffed nurses' station.
6. Lighting capable of 1076 lux (100 footcandles) at working surfaces. Dimmer switches may be used.
7. Oxygen and suction capabilities, portable or piped.
8. Space for a crash cart.
9. Space for supplies and equipment, as well as separate spaces for clean and soiled linen.

SPECIALTY CLINICS

1226.17 SURGICAL CLINICS.

1226.17.1 Operating rooms. Shall have a minimum floor dimension of 15 feet (4572 mm) and shall contain not less than 270 square feet (25.08 m²) of floor area and have provisions for the following:

1. Clock and elapsed timer.
2. X-ray film illuminator.

1226.17.2 Cast rooms, fracture rooms and cystoscopic rooms. If provided, shall have minimum floor area of 180 square feet (16.72 m²), no dimension of which shall be less than 11 feet (3353 mm).

1226.17.3 Scrub sinks. A minimum of two scrub sinks shall be provided in a surgical unit containing one operating room. Four scrub sinks shall be provided in surgical units containing two operating rooms. One additional scrub sink shall be provided for each additional operating room.

1226.17.3.1 Clock. A direct-wired or battery-operated clock or other equivalent timing device shall be visible from the scrub-up sinks.

1226.17.4 Clean-up room. Each surgical unit shall provide a clean-up room with a handwashing fixture and work space which is separate from any surgical sterilizing facilities. The clean-up room shall provide 24 square feet (2.23 m²) per operating room up to eight operating rooms, with no dimensions less than 6 feet (1829 mm). The clean-up room may be the soiled work area of the central sterile supply.

1226.17.5 Cart storage. Space for clean and soiled cart storage shall be provided if a case cart supply system is proposed.

1226.17.6 Housekeeping room. See Section 1224.4.15. The housekeeping room shall serve no other areas.

1226.17.7 Lockers. Separate dressing rooms with lockers, showers, lavatories and toilet(s) shall be provided for male and female staff.

1231.2.2 Temporary holding cell or room. A temporary holding cell or room shall:

1. Contain a minimum of 10 square feet (0.93 m²) of floor area per inmate;
2. Be limited to no more than 16 inmates;
3. Be no smaller than 40 square feet (3.7 m²) and have a clear ceiling height of 8 feet (2438 mm) or more;
4. Contain seating to accommodate all inmates as required in Section 1231.3;
5. Contain a toilet, wash basin and drinking fountain as specified in Section 1231.3;
6. Maximize visual supervision of inmates by staff; and
7. When located in a temporary holding facility, the cell or room shall be equipped with a bunk if inmates are to be held longer than 12 hours.

1231.2.3 Temporary staging cell or room. A temporary staging cell or room shall:

1. Be constructed for the purpose of holding inmates who have been classified and segregated in accordance with Sections 1050 and 1053 of Title 15, Division 1, California Code of Regulations.
2. Be limited to holding inmates up to four hours.
3. Be limited to no more than 80 inmates.
4. Contain a minimum of 10 square feet (0.93 m²) of floor area per inmate and a clear ceiling height of 8 feet (2438 mm) or more.
5. Be no smaller than 160 square feet (14.9 m²).
6. Contain seating to accommodate all inmates as required in Section 1231.3.
7. Contain toilet, wash basin and drinking fountain as specified in Section 1231.3.
8. Maximize visual supervision of inmates by staff.

1231.2.4 Sobering cell. A sobering cell shall:

1. Contain a minimum of 20 square feet (1.9 m²) of floor area per inmate;
2. Be limited to eight inmates;
3. Be no smaller than 60 square feet (5.6 m²) and have a clear ceiling height of 8 feet (2438 mm) or more;
4. Contain a toilet, wash basin and drinking fountain as specified in Section 1231.3;
5. Have padded partitions located next to toilet fixture in such a manner that they provide support to the user;
6. Maximize visual supervision of inmates by staff;
7. Be padded on the floor as specified in Section 1231.3; and,
8. Have accessible a shower in the secure portion of the facility.

1231.2.5 Safety cell. A safety cell shall:

1. Contain a minimum of 48 square feet (4.5 m²) of floor area with no one floor dimension being less than 6

feet (1829 mm) and a clear ceiling height of 8 feet (2438 mm) or more;

2. Be limited to one inmate;
3. Contain a flushing ring toilet, capable of accepting solid waste, mounted flush with the floor, the controls for which must be located outside of the cell;
4. Be padded as specified in Section 1231.3;
5. Be equipped with a variable intensity, security-type lighting fixture which is inaccessible to the inmate occupant, control of which is located outside of the cell;
6. Provide one or more vertical view panels not more than 4 inches (102 mm) wide nor less than 24 inches (610 mm) long which shall provide a view of the entire room;
7. Provide a food pass with lockable shutter, no more than 4 inches (102 mm) high, and located between 26 inches (660 mm) and 32 inches (813 mm) as measured from the bottom of the food pass to the floor; and
8. Any wall or ceiling mounted devices must be inaccessible to the inmate occupant.

1231.2.6 Single-occupancy cells. Single-occupancy cells shall:

1. Have a maximum capacity of one inmate;
2. Contain a minimum of 60 square feet (5.6 m²) of floor area in Type I facilities and 70 square feet (6.5 m²) of floor area in Type II and Type III facilities;
3. Have a minimum clear ceiling height of 8 feet (2438 mm) and a minimum width of 6 feet (1829 mm);
4. Contain a toilet, wash basin and drinking fountain as specified in Section 1231.3; and
5. Contain a bunk, desk and seat as specified in Section 1231.3.

Exception: A Type I facility does not require a desk and seat.

1231.2.7 Double-occupancy cells. Double-occupancy cells shall:

1. Have a maximum capacity of two inmates;
2. Contain a minimum of 60 square feet (5.6 m²) of floor area in Type I facilities and 70 square feet (6.5 m²) of floor area in Type II and Type III facilities;
3. Have a minimum clear ceiling height of 8 feet (2438 mm) and a minimum width of 6 feet (1829 mm);
4. Contain a toilet, wash basin and drinking fountain as specified in Section 1231.3; and
5. Contain two bunks, and at least one desk and seat as specified in Section 1231.3.

Exception: A Type I facility does not require a desk and seat.

1231.2.8 Dormitories. Dormitories shall:

1. Contain a minimum of 50 square feet (4.7 m²) of floor area per inmate for a single-bed unit; a minimum of

70 square feet (7 m²) for a double-bed unit; and a minimum of 90 square feet (9.3 m²) for triple-bed unit and have a minimum ceiling height of 8 feet (2438 mm);

2. Be designed for no more than 64 inmates and no fewer than four inmates;
3. Provide access to water closets separate from the wash basin and drinking fountains as specified in Section 1231.3; and
4. In other than Type I facilities, provide storage space for personal items and clothing for each occupant.

1231.2.9 Dayrooms. Dayrooms or dayroom space shall:

1. Contain 35 square feet (3.3 m²) of floor area per inmate in width in front of cells/rooms;
2. Contain tables and seating to accommodate the maximum number of inmates;
3. Provide access to water closets, wash basins and drinking fountains as specified in Section 1231.3;
4. Provide access to a shower or showers as specified in Section 1231.3; and
5. Be provided to all inmates in Type II and Type III facilities (except those housed in special-use cells) and to inmate workers in Type I facilities.

Dayroom space as described in this section may be a part of a single occupancy cell used for administrative segregation or a dormitory, in which case the floor area of the cell or a dormitory must be increased by the square footage required for the dayroom.

1231.2.10 Exercise area. An outdoor exercise area or areas must be provided in every Type II and Type III facility. The minimum clear height must be 15 feet (4572 mm) and the minimum number of square feet of surface area will be computed by multiplying 80 percent of maximum rated population by 50 square feet (4.7 m²) and dividing the result by the number of one-hour exercise periods per day.

The exercise area must contain or provide free access to a toilet, wash basin, and drinking fountain as provided in Section 1231.3.

There must be at least one exercise area of not less than 600 square feet (55.7 m²). The design shall facilitate security and supervision appropriate to the level of custody.

Type IV facilities shall have an outdoor recreation area or access to community recreation facilities.

1231.2.11 Correctional program/multipurpose space. An area for correctional programming must be provided in every Type II and Type III facility. The program area and furnishings shall be designed to meet the needs specified by the facility's program statement.

Type IV facilities shall have multipurpose space for games and activities, dining, visiting, TV meetings and quiet space for study and reading, such that activities do not conflict with each other.

1231.2.12 Medical examination room. There must be a minimum of one suitably equipped medical examination room in every facility which provides on-site health care. The examination room shall be designed in consultation with the responsible physician/health authority. Such a medical examination room shall:

1. Be located within the security area and provide for privacy of the inmates;
2. Provide not less than 100 square feet (9.3 m²) of floor space with no single dimension less than 7 feet (2134 mm);
3. Provide hot and cold running water;
4. Provide lockable storage for medical supplies; and
5. Any room where medical procedures are provided must be equipped with hot and cold running water.

1231.2.13 Pharmaceutical storage space. Provide lockable storage space for medical supplies and pharmaceutical preparations as referenced by Title 15, California Code of Regulations, Section 1216.

1231.2.14 Medical care housing. There shall be some means to provide medical care and housing of ill and/or infirm inmates. When the program statement for a Type II or Type III facility indicates that medical care housing is needed, such housing must provide lockable storage space for medical instruments and must be located within the security area of the facility accessible to both female and male inmates, but not in the living area of either. The medical care housing unit shall be designed in consultation with the health authority. Medical/mental health areas may contain other than single occupancy cells.

If negative pressure isolation rooms are being planned, they shall be designed to recognized industry standards.

1231.2.15 Reserved.

1231.2.16 Commissary. In all Type II, III and IV facilities, except where community access is available, there shall be provisions made for inmates to purchase items (such as candy, toilet articles, stationery supplies, books, newspapers and magazines, etc.). An area shall be provided for the secure storage of the stock for such inmate canteen items.

1231.2.17 Dining facilities. In all Type II, III and IV facilities which serve meals, dining areas shall be provided which will allow groups of inmates to dine together. Such dining areas shall not contain toilets, wash basins or showers in the same room without appropriate visual barrier. Wherever the facility contains a central dining room or rooms, it shall contain a minimum of 15 square feet (1.4 m²) of floor space and sufficient tables and seating for each inmate being fed.

1231.2.18 Visiting space. Space shall be provided in all Types I, II, III and IV facilities for visiting.

1231.2.19 Safety equipment storage. A secure area shall be provided for the storage of safety equipment such as fire extinguishers, self-contained breathing apparatus, wire and barcutters, emergency lights, etc.

1231.2.20 Janitors' closet. In Type II facilities, at least one securely lockable janitors' closet with sufficient area for the storage of cleaning implements and supplies must be provided within the security areas of the facility. A mop sink shall also be available within the security area of the facility. In court holding, temporary holding, Types I, III and IV facilities, the closet need not be in the security area.

1231.2.21 Storage rooms. One or more storage rooms shall be provided to accommodate a minimum of 80 cubic feet (2.3 m³) of storage area per inmate for inmate clothing and personal property, institutional clothing, bedding and supplies. Court holding, temporary holding and Type I facilities may be excluded from the storage space requirement for personal and institutional clothing unless clothing is issued.

1231.2.22 Audio monitoring system. In court holding, temporary holding, Type I, Type II, and Type II facilities there shall be an inmate- or sound-actuated audio monitoring system in temporary holding cells or rooms, temporary staging cells or rooms, sobering cells, safety cells, single and double occupancy cells, dormitories, dayrooms, exercise areas, and correctional program/multipurpose space, which is capable of alerting personnel who can respond immediately.

1231.2.23 Laundry facilities. In Type IV facilities, provision shall be made for washing and drying personal clothing by machines, either in the facility or in the community, if access is permitted for same.

1231.2.24 Emergency power. There shall be a source of emergency power in all detention facilities capable of providing minimal lighting in all housing units, activities areas, corridors, stairs and central control points, and to maintain fire and life safety, security, communications and alarm systems. Such an emergency power source shall conform to the requirements specified in Title 24, Part 3, Article 700, California Electrical Code, California Code of Regulations.

1231.2.25 Confidential interview rooms. There must be a minimum of one suitably furnished interview room for confidential interviews in every facility which provides on-site health care. The interview room shall be designed in consultation with responsible custodial staff and health care staff. Such an interview room shall:

1. Be located within the security area accessible to both female and male inmates; and
2. Provide not less than 70 square feet (6.5 m²) of floor space with no single dimension less than 6 feet (1829 mm).

1231.2.26 Attorney interview space. All facilities except Type IV facilities shall include attorney interview areas which provide for confidential consultation with inmates.

Exception: The design of court holding and temporary holding facilities shall include the following required spaces from Sections 1231.2.2, 1231.2.19, 1231.2.20, 1231.2.21, 1231.2.22, 1231.2.24 and 1231.2.26.

1231.3 Design criteria for furnishings and equipment. Furnishings and equipment shall be as follows:

1231.3.1 Toilets/urinals.

1. Toilets/urinals must be provided in single-occupancy cells and double-occupancy cells.
2. In dormitories, toilets/urinals must be provided in a ratio to inmates of 1:10.
3. Toilets/urinals must be accessible to the occupants of day-rooms and exercise areas.
4. In temporary holding cells and temporary staging cells toilets/urinals must be provided in a ratio to inmates of 1:16.
5. In sobering cells toilets/urinals must be provided in a ratio to inmates of 1:8.
6. One urinal or 2 feet (610 mm) of urinal trough may be substituted for each toilet up to one third of the total number of toilets required, except in those facilities or portions thereof used for females.

Note: Toilet areas shall provide modesty for inmates with staff being able to visually supervise.

1231.3.2 Wash basins.

1. Wash basins must be provided in single occupancy cells and double occupancy cells.
2. In dormitories, wash basins must be provided in a ratio to inmates of 1:10.
3. Wash basins must be accessible to the occupants of day-rooms and exercise areas.
4. In temporary holding cells and temporary staging cells, wash basins must be provided in a ratio to inmates of 1:16.
5. In sobering cells, wash basins must be provided in a ratio to inmates of 1:8.
6. Wash basins must be provided with hot and cold or tempered water.
7. Two feet (610 mm) of wash basin trough may be substituted for each basin required.

1231.3.3 Drinking fountains. There must be a minimum of one drinking fountain in every single-occupancy cell, double-occupancy cell, dormitory, temporary holding cell, temporary staging cell, sobering cell, and be accessible to the occupants of day rooms and exercise areas. Additional drinking fountains shall be located in other areas of the facility so that drinking water will be available to inmates and staff. Such drinking fountains must meet the following minimum health requirements:

1. The drinking fountain bubbler shall be on an angle which prevents waste water from flowing over the drinking fountain bubbler.
2. Water flow shall be actuated by mechanical means.

1231.3.4 Showers must be available to all inmates on a ratio of at least one shower to every 20 inmates or fraction thereof and must provide hot and cold water or tempered water. Shower stalls/shower areas must be designed and constructed of materials which are impervious to water and soap so they may be easily cleaned.

Note: Shower areas shall provide modesty for inmates with staff being able to visually supervise.

1231.3.5 Beds must be elevated off the floor, have a solid bottom, and a sleeping surface of at least 30 inches (762 mm) wide and 76 inches (1930 mm) long. Multiple beds must have a minimum of 21 inches (533 mm) between bed pans. Except in minimum security areas, beds must be securely fastened to the floor or the wall.

1231.3.6 Lighting. Lighting in housing units, dayrooms and activity areas must be sufficient to permit easy reading by a person with normal vision, and shall not be less than 20 footcandles (215.2 lux) at desk level and in the grooming area. Lighting shall be centrally controlled and/or occupant controlled in housing cells or rooms. Night lighting in these areas shall be sufficient to give good visibility for purposes of supervision. In minimum-security areas, lighting may be supplied by ordinary lighting fixtures, and in areas of higher security, light fixtures must be of secure design.

1231.3.7 Windows. In housing areas of higher than minimum security, windows which are constantly accessible to inmates for escape must be designed and constructed so that if broken out, the net area accessible for escape is no greater than 5 inches (127 mm) in one dimension.

1231.3.8 Cell padding. In sobering cells, the floor and partition shall be padded. In safety cells, padding must cover the entire floor, doors, and walls and everything on them to a clear height of 8 feet (2438 mm).

All such padded cells must be equipped with a tamper-resistant fire sprinkler as approved by the State Fire Marshal. All padding must be:

1. Approved for use by the State Fire Marshal;
2. Nonporous to facilitate cleaning;
3. At least 1/2-inch (12.7 mm) thick;
4. Of a unitary or laminated construction to prevent its destruction by teeth, hand tearing or small metal objects;
5. Firmly bonded to all padded surfaces to prevent tearing or ripping; and
6. Without any exposed seams susceptible to tearing or ripping.

1231.3.9 Mirrors. A mirror of a material appropriate to the level of security must be provided near each wash basin specified in these regulations.

1231.3.10 Seating. In temporary holding and temporary staging cells, seating must be securely fixed to the floor and/or wall. When bench seating is used, 18 inches (457 mm) of bench is seating for one person.

1231.3.11 Table/seat. In single- and double-occupancy cells, a table and seat for the purpose of writing and dining shall be provided.

Exception: A Type I facility does not require a table and a seat.

1231.3.12 Weapons locker. A secure weapons locker shall be located outside the security perimeter of the facility. Such weapons lockers shall be equipped with individual compartments, each with an individual locking device. Weapons

lockers are required in temporary and court holding facilities and in all facilities of higher than minimum security.

Exception: The design of court holding and temporary holding facilities shall include the design criteria for furnishings and equipment from Sections 1231.3.1, 1231.3.2, 1231.3.3, 1231.3.6, 1231.3.10 and 1231.3.12.

1231.4 Enclosure of vertical openings. Elevator shafts, vent shafts and other vertical openings shall be enclosed, and the enclosure shall be as set forth in Chapter 7.

1231.5 Fire-extinguishing systems. Automatic fire-extinguishing systems, standpipes and basement pipe inlets shall be installed when and as required by Chapter 9.

1231.6 Existing Group I occupancies. Existing buildings housing existing protective social-care homes or facilities established prior to the effective date of these regulations may have their use continued if they conform, or are made to conform, to the following provisions.

1231.6.1 Use of floors. The use of floor levels in buildings of Type III, IV or V nonfire-rated construction may be as follows:

Nonambulatory—first floor only;

Ambulatory—not higher than the third-floor level, provided walls and partitions are constructed of materials equal in fire-resistive quality to that of wood lath and plaster in good repair and all walls are firestopped at each floor level.

1231.6.2 Enclosure of exits and vertical openings. Except for two-story structures housing ambulatory guests, all interior stairs shall be enclosed in accordance with Chapter 10. In lieu of stairway enclosures, floor separations or smoke barriers may be provided in such a manner that fire and smoke will not spread rapidly to floors above or otherwise impair exit facilities. In these instances, floor separations or smoke barriers shall have a fire resistance equal to not less than 1/2-inch (12.7 mm) gypsum wall board on each side of wood studs with openings protected by not less than a 1 3/4-inch (44 mm) solid bonded wood-core door of the self-closing type. All other vertical openings shall be enclosed in accordance with the provisions of Chapter 7.

1231.6.3 Exit access. Each floor or portion thereof of buildings used for the housing of existing protective social-care homes or facilities shall have access to not less than two exits in such a manner as to furnish egress from the building or structure in the event of an emergency substantially equivalent to the provisions of Chapter 10.

1231.6.4 Corridor openings. Openings from rooms to interior corridors shall be protected by not less than 1 3/4-inch (44 mm) solid-bonded wood-core doors. Transoms and other similar openings shall be sealed with materials equivalent to existing corridor wall construction.

1231.6.5 Interior wall and ceiling finishes shall conform to the requirements for a Group R, Division 1 occupancy as specified in Chapter 8.

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HISTORY NOTE APPENDIX

California Building Code (Title 24, Part 2, California Code of Regulations)

For prior history, see the History Note Appendix to the *California Building Code* (CBC), 2010 Triennial Edition, effective January 1, 2011.

1. For prior code history, see the History Note Appendix to the California Building Code 2007 Triennial Edition, effective January 1, 2008.
2. BSC 02/09, SFM 03/09, OSHPD 05/09 & 07/09, DSA-SS 02/09, HCD 01/09, DWR 01/09, CSLC 01/08 — Adoption of the 2009 edition of the International Building Code published by the International Code Council, for incorporation into the 2010 *California Building Code*, CCR Title 24, Part 2 with amendments for State regulated occupancies effective on January 1, 2011.
3. Errata to correct editorial errors in preface and Chapters 1-4, 6-12, 14-19, 21-24, 26, 30, 31, 34 and 35.
4. SFM EF 01/10 & EF 01/11 – Emergency regulations for antifreeze in residential fire sprinkler systems and for exceptions for interconnected residential smoke detectors, respectively. Effective on April 28, 2011 and approved as permanent on July 20, 2011.
5. HCD EF 01/11 – Emergency regulations for exceptions for interconnected residential carbon monoxide detectors, effective on July 21, 2011 and approved as permanent on July 20, 2011.
6. BSC 01/10; DPH 01/10; DSA-AC 01/10; HCD 02/10 & 03/10; OSHPD 02/10 & 03/10; SFM 01/10 – Repeal and amend provisions of the 2010 *California Building Code*, CCR Title 24, Part 2 for State regulated occupancies, effective on July 1, 2012.
7. CSA 01/10 – Update minimum standards for the design and construction of local detention facilities of the 2010 *California Building Code*, CCR Title 24, Part 2, effective on July 1, 2012.

