INITIAL EXPRESS TERMS FOR PROPOSED BUILDING STANDARDS OF THE OFFICE OF THE STATE FIRE MARSHAL

REGARDING PROPOSED CHANGES TO CALIFORNIA BUILDING CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2 2018 TRIENNIAL RULEMAKING CYCLE

(The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific. (PART 1 – ADMINISTRATIVE CODE)

LEGEND FOR EXPRESS TERMS

- 1. Existing California amendments or code language being modified are in italics when they appear in the model code text: All such language appears in *italics*, modified language is underlined.
- 2. New California amendments: All such language appears underlined and in italics.
- 3. Repealed text: All such language appears in strikeout.

PART 1

INITIAL EXPRESS TERMS

[The SFM is proposing to maintain the adoption of those existing California provisions contained Sections 1.1 Through 1.1.12 and Sections 1.11 through 1.11.10 with modification.]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

Item 1. California editorial updates and errata by chapter

[Chapter 1]

[The SFM proposes to adopt Chapter 1 with the following amendments, editorial updates and errata.]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

SCOPE AND ADMINISTRATION

DIVISION I CALIFORNIA ADMINISTRATION

> SECTION 1.1 GENERAL

1.1.1 Title. These regulations shall be known as the California Building Code, may be cited as such and will be referred to herein as "this code." The California Building Code is Part 2 of twelve parts of the official compilation and publication

of the adoption, amendment, and repeal of building regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the 2015-2018 International Building Code of the International Code Council with necessary California amendments.

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1.11.1 SFM—**Office of The State Fire Marshal.** Specific scope of application of the agency responsible for enforcement, the enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

Application:

Institutional, educational or any similar occupancy. Any building or structure used or intended for use as an asylum, jail, <u>prison</u>, mental hospital, hospital, sanitarium, home for the <u>aged elderly</u>, children's nursery, children's home <u>or institution</u>, school or any similar occupancy of any capacity.

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1.11.6 Certificate of Occupancy. A Certificate of Occupancy shall be issued as specified in Section 111.

Exception: Group R<u>-3</u>, Division 3 and Group U occupancies.

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DIVISION II SCOPE AND ADMINISTRATION

[The SFM proposes to only adopt Sections 105.2.1, 105.3 – 105.3.1, 105.4, 105.6 – 105.7, 106.1 – 106.3, 107.1 – 107.3, 107.4, 108.1 – 108.3, 110.1 – 110.3, 110.3.4 – 110.3.7, 110.3.9 – 110.3.11, 110.4 – 110.6, 111.1 – 111.4, 112, 114.1 – 114.2, 115 and 116 contained in the 2018 IBC Chapter 1.]

[IBC Chapter 1 Administrative provisions - Sections 101 through 116 relocated to Division II of Chapter 1.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Chapter 2]

[The SFM proposes to adopt Chapter 2 with the following amendments and California regulations]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

DEFINITIONS

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

- 1. Assistance in dressing, grooming, bathing and other personal hygiene.
- 2. Assistance with taking medication.

- 3. Central storing and/or distribution of medications.
- 4. Arrangement of and assistance with medical and dental care.
- 5. Maintenance of house rules for the protection of clients.
- 6. Supervision of client schedules and activities.
- <u>7.</u> Maintenance and/or supervision of client cash resources or property.
- 8. Monitoring food intake or special diets.
- 9. Providing basic services required by applicable law and regulation to be provided by the licensee in order to obtain and maintain a community-care facility license.

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CLIMATE ZONE. A geographical region that has been assigned climatic criteria as specified in Chapters 3CE and 3RE <u>Subchapter 1</u> of the *California Energy Code*.

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COMMON USE [DSA-AC] Interior or exterior circulation paths...

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

- 1. Residential facility
- 2. Adult day program
- 3. Therapeutic day services facility

Foster family agency

Foster family home

Small family home

- 4. Social rehabilitation facility
- Community treatment facility
- 6. Full-service adoption agency

Noncustodial adoption agency

- 7. Transitional shelter care facility
- 8. Transitional housing placement facility

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

- (1) A residential home with a capacity, except as provided in paragraph (3) (4), of no more than 42 18 beds, that provides inpatient care, including the following basic services: medical supervision, 24-hour skilled nursing and supportive care, pharmacy, dietary, social, recreational, and at least one type of service specified in paragraph (1) (2). The primary need of congregate living health facility residents shall be for availability of skilled nursing care on a recurring, intermittent, extended, or continuous basis. This care is generally less intense than that provided in general acute care hospitals but more intense than that provided in skilled nursing facilities.
- (1) (2) Congregate living health facilities shall provide one of the following services:
 - (A) Services for persons who are mentally alert, persons with physical disabilities, who may be ventilator dependent.
 - (B) Services for persons who have a diagnosis of terminal illness, a diagnosis of a life-threatening illness, or both. Terminal illness means the individual has a life expectancy of six months or less as stated in writing by his or her attending physician and surgeon. A "life-threatening illness" means the individual has an illness that can lead to a possibility of a termination of life within five years or less as stated in writing by his or her attending physician and surgeon.
 - (C) Services for persons who are catastrophically and severely disabled. A person who is catastrophically and severely disabled means a person whose origin of disability was acquired through trauma or nondegenerative neurologic illness, for whom it has been determined that active rehabilitation would be beneficial and to whom these services are being provided. Services offered by a congregate living health facility to a person who is catastrophically disabled shall include, but not be limited to, speech, physical, and occupational therapy.
- (2) (3) A congregate living health facility license shall specify which of the types of persons described in paragraph (1) (2) to whom a facility is licensed to provide services.
- (3) (4) (A) A facility operated by a city and county for the purposes of delivering services under this section may have a capacity of 59 beds.
 - (B) A congregate living health facility not operated by a city and county servicing persons who are terminally ill, persons who have been diagnosed with a life-threatening illness, or both, that is located in a county with a population of 500,000 or more persons, or located in a county of the 16th class pursuant to Section 28020 of the Government Code, may have not more than 25 beds for the purpose of serving persons who are terminally ill.
 - (C) A congregate living health facility not operated by a city and county serving persons who are catastrophically and severely disabled, as defined in subparagraph (C) of paragraph (1) that is located in a county of 500,000 or more persons may have not more than 12 beds for the purpose of serving persons who are catastrophically and severely disabled.
- (5) A congregate living health facility shall have a non-institutional, homelike environment.

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[BG] CONGREGATE LIVING FACILITIES. A building or part thereof that contains sleeping units where residents share bathroom or kitchen facilities, or both.

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FIREWORKS. Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, deflagration or detonation that meets the definition of 1.4G fireworks or 1.3G fireworks.

Fireworks, 1.3G. Large fireworks devices, which are explosive materials, intended for use in fireworks displays and designed to produce audible or visible effects by combustion, *deflagration* or *detonation*. Such 1.3G fireworks include, but are not limited to, firecrackers containing more than 130 milligrams (2 grains) of explosive composition, aerial shells containing more than 40 grams of pyrotechnic composition, and other display pieces which exceed the limits for classification as 1.4G fireworks. Such 1.3G fireworks are also described as fireworks, UN0335 by the DOTn.

Fireworks, 1.4G. Small fireworks devices containing restricted amounts of pyrotechnic composition designed primarily to produce visible or audible effects by combustion or deflagration that complies with the construction, chemical composition and labeling regulations of the DOTn for fireworks, UN0336, and the U.S. Consumer Product Safety Commission (CPSC) as set forth in CPSC 16 CFR: Parts 1500 and 1507.

Note: Fireworks shall have the same meaning as defined in Health and Safety Code Section 12511 <u>and 12512</u> which has been reprinted as follows:

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FOSTER CARE FACILITIES. See Foster family home.

FOSTER FAMILY HOME. Foster family home means any residential facility providing 24-hour care for six or fewer foster children that is owned, leased, or rented and is the residence of the foster parent or parents, including their family, in whose care the foster children have been placed. The placement may be by a public or private child placement agency or by a court order, or by voluntary placement by a parent, parents, or guardian. It also means a foster family home described in Section 1505.2.

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HEAVY TIMBER [SFM] (See Chapter 7A, Section 702A for defined term)

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HIGH-RISE BUILDING. In other than Group I-2 occupancies "high-rise buildings" As used in this code:

EXISTING HIGH-RISE STRUCTURE. A high-rise structure, the construction of which is commenced or completed prior to July 1, 1974.

HIGH-RISE STRUCTURE. Every building, the construction of which is commenced on or after July 1, 1974, of any type of construction or occupancy having floors used for human occupancy located more than 75 feet above the lowest floor level having building access (see Section 403.1.2), except buildings used as hospitals as defined in Health and Safety Code Section 1250.

NEW HIGH-RISE BUILDING. A high-rise structure, the construction of which is commenced on or after July 1, 1974. For the purpose of this section, construction shall be deemed to have commenced when plans and specifications are more than 50 percent complete and have been presented to the local jurisdiction prior to July 1, 1974. Unless all provisions of this section have been met, the construction of such buildings shall commence on or before January 1, 1976.

NEW HIGH-RISE STRUCTURE. A high-rise structure, the construction of which is commenced on or after July 1, 1974.

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[F] LABORATORY SUITE. A fire-rated, enclosed laboratory area providing one or more laboratory spaces within a Group B educational occupancy that includes ancillary uses such as offices, bathrooms and corridors that are contiquous with the laboratory area, and are constructed in accordance with Section 428.

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MOTION PICTURE AND TELEVISION PRODUCTION STUDIO SOUND STAGES, APPROVED PRODUCTION FACILITIES AND PRODUCTION LOCATIONS. See Chapter 46 48, California Fire Code.

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ORGANIZED CAMPS. See Section 450, Group C Occupancy.

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RESIDENTIAL CARE FACILITY FOR THE ELDERLY (RCFE). As defined in Health and Safety Code Section 1569.2, shall mean a facility with a housing arrangement chosen voluntarily by persons 60 years of age or over, or their authorized representative, where varying levels and intensities of care and supervision, protective supervision or personal care are provided, based on their varying needs, as determined in order to be admitted and to remain in the facility. Persons under 60 years of age with compatible needs, as determined by the Department of Social Services in regulations, may be allowed to be admitted or retained in a residential-care facility for the elderly.

Pursuant to Health and Safety Code Section 13133, regulations of The State Fire Marshal pertaining to Group R-2.1, Division 2 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.

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SMALL MANAGEMENT YARD. An exterior exercise yard within a Group I-3 prison used for inmate exercise for a maximum of 2 hours per day, constructed in accordance with Section 408.1.2.3. 408.15.

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WILDLAND URBAN INTERFACE AREA (WUI). [SFM] (See Chapter 7A, Section 702A for defined term)

[Chapter 3]

[The SFM proposes to adopt Chapter 3 with the following amendments and California regulations.]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

Occupancy Classification and Use

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302.1 Occupancy classification. Occupancy classification is the formal designation of the primary purpose of the building, structure or portion thereof. Structures shall be classified into one or more of the occupancy groups listed in this section based on the nature of the hazards and risks to building occupants generally associated with the intended purpose of the building or structure. An area, room or space that is intended to be occupied at different times for different purposes shall comply with all applicable requirements associated with such potential multipurpose. Structures containing multiple occupancy groups shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically listed in this section, such structure shall be classified in the occupancy it most nearly resembles based on the fire safety and relative hazard. Occupied roofs shall be classified in

the group that the occupancy most nearly resembles, according to the fire safety and relative hazard, and shall comply with Section 503.1.4.

- 1. Assembly (see Section 303): Groups A-1, A-2, A-3, A-4 and A-5.
- 2. Business (see Section 304): Group B.
- 3. [SFM] Organized Camps (see Section 450): Group C.
- 3 4. Educational (see Section 305): Group E.
- 4 <u>5.</u> Factory and Industrial (see Section 306): Groups F-1 and F-2.
- 5 6. High Hazard (see Section 307): Groups H-1, H-2, H-3, H-4 and H-5.
- 6.7. Institutional (see Section 308): Groups I-1, I-2, I-3 and I-4.
- 8. Laboratory (see Section 202): Group B, unless classified as Group L (see Section 453) or Group H (see Section 307).
- 9. [SFM] Research Laboratories Laboratory Suites (see Section 453): Group L.
- 9.10. Mercantile (see Section 309): Group M.
- 40.11. Residential (see Section 310): Groups R-1, R-2, R-2.1, R-3, R-3.1 and R-4.
- 9. 12. Storage (see Section 311): Groups S-1 and S-2.
- 10.13. Utility and Miscellaneous (see Section 312): Group U.
- 14. [SFM] Existing buildings housing existing protective social care homes or facilities established prior to 1972 see California Fire Code Chapter 11 and California Existing Building Code.

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304.1 Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Airport traffic control towers

Ambulatory care facilities serving five or fewer patients (see Section 308.4.2 308.3.3, I-2.1 for facilities serving more than five patients)

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- **307.1.1 Uses other than Group H.** An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.
 - 1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 and the *International California Fire Code*.
 - 2.
 - 17. Group B higher education laboratory occupancies complying with Section 428 and Chapter 38 of the International Fire Code.
 - 45 17. [SFM] Group L occupancies defined in Section 453.1

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308.1 Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which care or supervision is provided to persons who are or are not capable of self-preservation without physical assistance or in which persons are detained for penal or correctional purposes or in

which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-2.1, I-3 or I-4. Restraint shall not be permitted in any building except in Group I-2 occupancies constructed for such use in accordance with Section 407.1.1 and Group I-3 occupancies constructed for such use, in accordance with Section 408.1.2.

Where occupancies house both ambulatory and non-ambulatory persons, the more restrictive requirements shall apply.

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308.3 Institutional Group I-2. Institutional Group I-2 occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are incapable of self-preservation *or classified as non-ambulatory or bedridden*. This group shall include, but not be limited to, the following:

Foster care facilities
Detoxification facilities
Hospitals
Nursing homes
Psychiatric hospitals

308.3.1 Occupancy conditions. Buildings of Group I-2 shall be classified as one of the occupancy conditions specified in Section 308.3.1.1 or 308.3.1.2.

308.3.1.1 Condition 1. This occupancy condition shall include facilities that provide nursing and medical care but do not provide emergency care, surgery, obstetrics or in-patient stabilization units for psychiatric or detoxification, including but not limited to nursing homes and foster care facilities.

308.3.1.2 Condition 2. This occupancy condition shall include facilities that provide nursing and medical care and could provide emergency care, surgery, obstetrics or in-patient stabilization units for psychiatric or detoxification, including but not limited to hospitals.

308.3.21 Five or fewer persons receiving medical care. A facility with five or fewer persons receiving medical care shall be classified as Group R-3.1 or shall comply with the *International California Residential Code* provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 R313 of the *International California Residential Code*.

308.4.2 308.3.3 Institutional Group I-2.1 Ambulatory Health Care Facility. A healthcare facility that receives persons for outpatient medical care that may render the patient incapable of unassisted self-preservation and where each tenant space accommodates more than five such patients.

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308.4.6 Condition 6. This occupancy condition shall include buildings containing only one temporary holding facility with five or less persons under restraint or security where the building is protected throughout with a monitored automatic sprinkler system installed in accordance with Section 903.3.1.1 and where the temporary holding facility is protected throughout with an automatic fire alarm system with notification appliances. A Condition 6 building shall be is permitted to be classified as a Group B occupancy.

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- **308.5.2 Within a place of religious worship.** Rooms and spaces within places of religious worship providing such care during religious functions shall be classified as part of the primary occupancy.
- **308.5.3 Five or fewer persons receiving care.** A facility having five or fewer persons receiving custodial care shall be classified as part of the primary occupancy.

308.5.4 Five or fewer persons receiving care in a dwelling unit. A facility such as the above within a dwelling unit and having five or fewer persons receiving custodial care shall be classified as a Group R-3.1 occupancy or shall comply with the *International California Residential Code*.

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310.4 Residential Group R-3. Residential Group R-3 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.

Care Facilities that provide accommodations for five or fewer persons receiving care

Boarding houses (non-transient) with 16 or fewer occupants

Boarding houses (transient) with 10 or fewer occupants

Congregate living facilities Congregate residences (non-transient) with 16 or fewer occupants.

Congregate living facilities Congregate residences (transient) with 10 or fewer occupants.

Lodging houses with five or fewer guest rooms

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 Adult Day Programs.

Alcoholism or drug abuse recovery homes (ambulatory only)

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 III Children,

Infant Care Center,

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.

Foster family homes (ambulatory only)

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

310.4.1 Care facilities within a dwelling. Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the International Residential Code.

310.4.1 Residential Group R-3.1 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, non-ambulatory 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 435 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 Chapter 2

Residential care facilities for the elderly (RCFEs)

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 non-ambulatory clients shall not be subject to regulations found in Section 435.

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.

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310.5 Residential Group R-4. Residential Group R-4 occupancy shall include buildings, structures or portions thereof for more than *six ambulatory clients*, but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive custodial care. Buildings of Group R-4 shall be classified as one of the occupancy conditions specified in Section 310.5.1 or 310.5.2. *The persons receiving care are capable of self-preservation.* This group shall include, but not be limited to, the following:

This occupancy classification may include a maximum six non-ambulatory or bedridden clients (see Section 435 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:

Alcohol and drug centers
Assisted living facilities
Congregate care facilities
Group homes
Halfway houses
Residential board and care facilities
Social rehabilitation facilities

Assisted living facilities such as:

Residential care facilities, Residential care facilities for the elderly (RCFE), 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. Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code.

310.5.1 Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

310.5.2 Condition 2. This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.

[Chapter 4]

[The SFM proposes to adopt Chapter 4 with the following amendments and California regulations.]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

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SECTION 403

HIGH-RISE BUILDINGS AND GROUP I-2 OCCUPANCIES HAVING AN OCCUPIED FLOORS LOCATED MORE THAN AT OR ABOVE 75 FEET ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT VEHICLE ACCESS

403.1 Applicability. New high-rise buildings <u>having occupied floors located more than 75 feet above the lowest floor level having building access</u> and new Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access shall comply with Sections 403.2 through 403.7.

Exception: The provisions of Sections 403.2 through 403.67 shall not apply to the following buildings and structures:

- 1. Airport traffic control towers in accordance with Section 412.2.
- 2. Open parking garages in accordance with Section 406.5.
- 3. The portion of a building containing a Group A-5 occupancy in accordance with Section 303.6.
- 4. Special industrial occupancies in accordance with Section 503.1.1.
- 5. Buildings containing any one of the following:
 - 5.1. A Group H-1 occupancy.
 - 5.2. A Group H-2 occupancy in accordance with Section 415.8, 415.9.2, 415.9.3 or 426.1.
 - 5.3. A Group H-3 occupancy in accordance with Section 415.8.
- 6. 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 and for existing Group R occupancies, see California Fire Code Chapter 11 and California Existing Building Code.

For the purposes 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.

[Definition moved to Chapter 2]

403.1.1 Definitions. The following terms are defined in Chapter 2.

HIGH-RISE BUILDING. HIGH-RISE BUILDING ACCESS. NEW HIGH-RISE BUILDING. ...

- **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 columns supporting floors the primary structural frame shall not be permitted to be reduced.

2. In other than Group F-1, H-2, H-3, H-5, 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 primary 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.

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403.3.2 Water supply to required fire pumps. In buildings *having an occupied floor* that are more than *120* feet (*36 576 mm*) in *building height above the lowest level of fire department vehicle access*, required fire pumps shall be supplied by connections to no fewer than 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.

Exceptions: 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 no fewer than one of the connections.

- **403.3.2.1 Fire Pumps:** Redundant fire pump systems shall be required for high-rise buildings having an occupied floor more than 200 feet <u>in building height</u>, above the lowest level of fire department vehicle access. Each fire pump system shall be capable of automatically supplying the required demand for the automatic sprinkler and standpipe systems.
- **403.3.3 Secondary water supply.** An automatic secondary on-site water supply having a *usable* capacity of not less than the hydraulically calculated sprinkler demand, including the hose stream requirement, shall be provided for highrise buildings and <u>applicable</u> Group I-2 occupancies (see 403.1) having occupied floors located more than 75 ft above the lowest level of fire department vehicle access assigned to Seismic Design Category C, D, E or F as determined by Section 1613. An additional fire pump shall not be required for the secondary water supply unless needed to provide the minimum design intake pressure at the suction side of the fire pump supplying the automatic sprinkler system. The secondary water supply shall have a *useable 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 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 shall the secondary on-site water supply be less than 15,000 gallons.*

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406.6.2 Ventilation. ...

Exception: Mechanical ventilation shall not be required for enclosed parking garages that serve are accessory to *Group R-3* one- and two-family dwellings.

- **407.2.6 Nursing home cooking facilities.** In Group I-2, Condition 1 occupancies, rooms or spaces that contain a cooking facility with domestic cooking appliances shall be permitted to be open to the corridor in fully sprinklered buildings where all of the following criteria are met:
 - 1. The number of care recipients housed in the smoke compartment is not greater than 30.
 - 2. The number of care recipients served by the cooking facility is not greater than 30.
 - 3. Not more than Only one cooking facility area is permitted in a smoke compartment.
 - 4. The types of domestic cooking appliances permitted shall be limited to ovens, cooktops, ranges, warmers and microwaves.
 - 5. The corridor shall be a clearly identified space delineated by construction or floor pattern, material or color.
 - 6 5. The space containing the domestic cooking facility shall be arranged so as not to obstruct access to the required exit.
 - 76. A domestic cooking hoods installed and constructed in accordance with Section 505 of the California Mechanical Code shall be provided over the cooktops and ranges.
 - §7. Cooktops and ranges shall be protected in accordance with Section 904.13.
 - 98. A shut-off for the fuel and electrical power supply to the cooking equipment shall be provided in a location that is accessible only to staff.
 - 409. A timer shall be provided that automatically deactivates the cooking appliances within a period of not more than 120 minutes.
 - 44.10. A portable fire extinguisher shall be provided. Installation shall be in accordance with Section 906, and the extinguisher shall be located within a 30-foot (9144 mm) distance of travel from each domestic cooking appliance.

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407.5.1 Smoke compartment size. Stories shall be divided into smoke compartments with an area of not more than 22,500 square feet (2092 m2) in Group I-2 occupancies.

Exceptions:

- 1. A smoke compartment in Group I-2, Condition 2 is permitted to have an area of not more than 40,000 square feet (3716 m2) provided that all patient sleeping rooms within that smoke compartment are configured for single patient occupancy and any suite within the smoke compartment complies with Section 407.4.4.
- 2. A smoke compartment in Group I-2, Condition 2 without patient sleeping rooms is permitted to have an area of not more than 40,000 square feet (3716 m2).
- **407.5.2 Exit access travel distance.** The distance of travel from any point in a smoke compartment to a smoke barrier door shall be not greater than 200 feet (60 960 mm).

407.5.13 Refuge area. ...

[Deleting 407.5.2 adopting Model code language 407.5.4]

407.5.2 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.

407.5.4 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. Smoke compartments that do not contain an exit shall be provided with direct access to not less than two adjacent smoke compartments.

407.5.35 Horizontal assemblies. ...

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[Definitions moved to chapter 2]

408.1.1 Definitions. The following terms are defined in Chapter 2: **CELL COMPLEX. CELL TIERS.** CENTRAL CONTROL BUILDING. COURTROOM DOCK. **COURTHOUSE HOLDING FACILITY.** DAY ROOM. **DETENTION ELEVATOR. DETENTION TREATMENT ROOM.** DORMITORY. **HOLDING FACILITY. HOUSING UNIT.** RESTRAINT. SALLYPORT. **SMALL MANAGEMENT YARD.** SECURE INTERVIEW ROOMS. TEMPORARY HOLDING CELL, ROOM OR AREA. TEMPORARY HOLDING FACILITY.

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408.1.2.2 Intervening spaces. Common rooms and spaces within Group I-3 occupancies can be considered an intervening space in accordance with Section <u>1014.2</u> <u>1016.2</u>, and not considered a corridor, when they meet any of the following:

- 1. Within prisons and local detention facilities of Type I Construction, the exit access within a housing unit, may be a non-rated corridor provided the required exit occupant load from any dayroom does not exceed 64 persons.
- 2. Within prison, jails, and courthouses: temporary holding areas of noncombustible construction and an occupant load less than 100.
- 3. Within prisons and local detention facilities, correctional medical or mental health housing suites, of noncombustible construction- and an occupant load less than 100.
- 3. Within prisons and local detention facilities: detention program areas of noncombustible construction and an occupant load less than 100.

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408.3.6 Exit discharge. Exits are permitted to discharge into a fenced or walled courtyard. Enclosed yards or courts

shall be of a size to accommodate all occupants, be located not less than 50 feet (15 240 mm) from the building and have an area of not less than 45 3 square feet (1.4 m2) per person. A gate shall be provided from the safe dispersal area to allow for the necessary relocation of occupants.

408.3.6 Exit discharge.

- **408.3.6.1** Exits are permitted to discharge into a fenced or walled courtyard. Enclosed yards or courts shall be of a size to accommodate all occupants, a minimum of 50 feet (15 240 mm) from the building with a net area of 3 square feet (0.28 m2) per person. A gate shall be provided from the safe dispersal area to allow for the necessary relocation of occupants.
- **408.3.6.21** Exterior fenced enclosures and fenced enclosures utilized for recreational or activity purposes, used for exit termination for more than 20 persons, and which do not provide a safe dispersal area, shall have not less than two exits.
- **408.3.6.32** Fenced enclosure utilized for recreational or activity purposes only, for more than 49 people, and which do not provide a safe dispersal area, shall be provided with not less than two exits.
- **408.3.6.43** Fenced enclosures located on roofs of buildings one or more stories in height shall be provided with not less than two exits regardless of occupant load.
- **408.3.6.54** Fenced enclosures utilized for central control buildings not normally occupied and not accessed by inmates or the general public are permitted to have only one exit from the fenced enclosure. These fenced enclosures shall only be occupied during emergency response conditions by not more than 29 prison staff occupants. Access to the fenced area shall be controlled remotely or at the gate with a key.

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408.9.1 Smoke venting. The housing portions of windowless buildings containing use conditions 3, 4 or 5 shall be provided with an engineered smoke control system in accordance with Section 909, windows or doors, smoke vents, or equivalent means to provide a tenable environment for exiting from the smoke compartment in the area of fire origin. A tenable environment for egress shall be as defined in NFPA 92. If windows, smoke vents or doors are used to meet this section, at least two windows, smoke vents or doors to the exterior must be provided at or above the highest occupied level in each smoke compartment, and the windows or doors must be operable or readily breakable and arranged to manually vent smoke.

Exceptions:

- 1. Windowless buildings or portions of a building that meet all of the following requirements:
 - 1.1. Are Type IA or IB construction
 - 1.2. Are protected with sprinklers throughout in accordance with Section 903.3.1.1
 - 1.3. Include a fire alarm system with smoke detection in accordance with NFPA 72 in the dayroom and/or corridor serving as exit access from the cells, reporting to a 24-hour central control at the institution
 - 1.4. Include at least one exit from each housing unit direct to the exterior where smoke will not accumulate or to the exterior through a 1 hour rated corridor serving only that unit.
 - 1.5. The building is divided into at least two smoke compartments per Section 408.6.1
 - 1.6. As approved by the enforcing agency, an egress analysis shows that inmates can be evacuated within 6 minutes from the smoke compartment of origin 24 hours per day or when inmates are present, or the facility is provided with gang or electric locks.
- 2. No venting or smoke control is required when an engineering analysis shows an acceptable safe egress time compared to the onset of untenable conditions within a windowless building or portion of a windowless building and approved by the enforcing agency. (See Section 909.4)

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415.5.4 Emergency alarm systems. Emergency alarm systems required by Section 415.5.1 or 415.5.2 shall be provided with emergency or standby power in accordance with Section 2702.2.8 and 2702.2.14.

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[Adopt model code language from 415.11.7 through 415.11.7.2]

- **415.11.7 Gas detection systems.** A gas detection system complying with Section 916 A gas detection system complying with Section 916 shall be provided for HPM gases where the physiological warning threshold level of the gas is at a higher level than the accepted permissible exposure limit (PEL) for the gas and for flammable gases in accordance with Sections 415.11.7.1 through 415.11.7.2.
 - **415.11.7.1 Where required.** A gas detection system shall be provided in the areas identified in Sections 415.11.7.1.1 through 415.11.7.1.4.
 - **415.11.7.1.1 Fabrication areas.** A gas detection system shall be provided in fabrication areas where HPM gas is used in the fabrication area.
 - **415.11.7.1.2 HPM rooms.** A continuous gas detection system shall be provided in HPM rooms where HPM gas is used in the room.
 - **415.11.7.1.3 Gas cabinets, exhausted enclosures and gas rooms.** A gas detection system shall be provided in gas cabinets and exhausted enclosures for HPM gas. A gas detection system shall be provided in gas rooms where HPM gases are not located in gas cabinets or exhausted enclosures.
 - **415.11.7.1.4 Corridors.** Where HPM gases are transported in piping placed within the space defined by the walls of a corridor and the floor or roof above the corridor, a gas detection system shall be provided where piping is located and in the *corridor*.
 - **Exception:** A gas detection system is not required for occasional transverse crossings of the corridors by supply piping that is enclosed in a ferrous pipe or tube for the width of the corridor.
 - **415.11.7.2 Gas detection system operation.** The gas detection system shall be capable of monitoring the room, area or equipment in which the HPM gas is located at or below all the following gas concentrations:
 - 1. Immediately dangerous to life and health (IDLH) values where the monitoring point is within an exhausted enclosure, ventilated enclosure or gas cabinet.
 - 2. Permissible exposure limit (PEL) levels when the monitoring point is in an area outside an exhausted enclosure, ventilated enclosure or gas cabinet.
 - 3. For flammable gases, the monitoring detection threshold level shall be vapor concentrations in excess of 25 percent of the lower flammable limit (LFL) where the monitoring is within or outside an exhausted enclosure, ventilated enclosure or gas cabinet.
 - 4. Except as noted in this section, monitoring for highly toxic and toxic gases shall also comply with Chapter 60 of the *California Fire Code*.

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- 415.12 Group H occupancies located above the 10th story on the 11th story and above.
 - **415.12.1 Fire smoke barrier.** Any story containing a Group H occupancy above the 10th story on the $11^{\underline{th}}$ story and above shall be subdivided by a fire-smoke barrier constructed as a fire barrier having a fire resistance rating of not less than 2 hours and shall also comply with the smoke barrier requirements of Section 710. The 2-hour fire-smoke barrier shall be in accordance with Sections 415.4112.1.1 through 415.4112.1.5.
 - 415.12.1.1 The 2-hour fire-smoke barrier shall be continuous from exterior wall to exterior wall.
 - **415.12.1.2** The fire-smoke barrier shall divide the story so that the square footage on each side of the 2-hour fire-smoke barrier is not less than 30 percent of the total floor area.

- **415.12.1.3** A minimum of one door opening shall be provided in the 2-hour fire-smoke barrier for emergency access.
- **415.12.1.4** Each side of the 2-hour fire-smoke barrier shall be designed as a separate smoke zone designed in accordance with Section 909.65.
- **415.12.1.5** The area on each side of the 2-hour fire-smoke barrier shall be served by a minimum of one exit enclosure in accordance with Section 1022.
- **415.13 Elevators and elevator lobbies above the 10th story** on the 11th story and above. Any story containing a Group H occupancy above the 10th story on the 11th story and above shall be provided with elevators and elevator lobbies in accordance with Sections 415.13.1 through 415.13.3.
 - **415.13.1** An elevator that serves every story of the building shall be provided on each side of the 2-hour firesmoke barrier.
 - **415.13.2** An elevator lobby shall be provided on each side of the 2-hour fire-smoke barrier at each floor in accordance with Section 708.14.1. 708.4 Exceptions to 708.14.1 708.4 shall not apply.
 - **415.13.3** The elevator and its associated elevator lobbies and elevator machine rooms shall be pressurized in accordance with Section 909.6<u>5</u>.
- **420.7 Group I-1 assisted living housing units.** In Group I-1 occupancies, where a fire-resistance corridor is provided in areas where assisted living residents are housed, shared living spaces, group meeting or multipurpose therapeutic spaces open to the corridor shall be in accordance with all of the following criteria:
 - 1. The walls and ceilings of the space are constructed as required for corridors.
 - 2. The spaces are not occupied as resident sleeping rooms, treatment rooms, incidental uses in accordance with Section 509, or hazardous uses.
 - 3. The open space is protected by an automatic fire detection system installed in accordance with Section 907.
 - 4. In Group I-1, Condition 1, the corridors onto which the spaces open are protected by an automatic fire detection system installed in accordance with Section 907, or the spaces are equipped throughout with quick response sprinklers in accordance with Section 903.3.2.
 - 5. In Group I-1, Condition 2, the corridors onto which the spaces open, in the same smoke compartment, are protected by an automatic fire detection system installed in accordance with Section 907, or the smoke compartment in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
 - 6. The space is arranged so as not to obstruct access to the required exits.
- **420.8 Group I-1 cooking facilities.** In Group I-1 occupancies, rooms or spaces that contain cooking facilities with domestic cooking appliances shall be in accordance with all of the following criteria:
 - 1. In Group I-1, Condition 1 occupancies, the number of care recipients served by one cooking facility shall not be greater than 30.
 - 2. In Group I-1, Condition 2 occupancies, the number of care recipients served by one cooking facility and within the same smoke compartment shall not be greater than 30.
 - 3. The types of domestic cooking appliances permitted shall be limited to evens, cooktops, ranges, warmers and microwaves.
 - 4. The space containing the domestic cooking facilities shall be arranged so as not to obstruct access to the

required exit.

- 5. Domestic cooking hoods installed and constructed in accordance with Section 505 of the *International Mechanical Code* shall be provided over cooktops or ranges.
- Cooktops and ranges shall be protected in accordance with Section 904.13.
- 7. A shutoff for the fuel and electrical supply to the cooking equipment shall be provided in a location that is accessible only to staff.
- 8. A timer shall be provided that automatically deactivates the cooking appliances within a period of not more than 120 minutes.
- 9. A portable fire extinguisher shall be provided. Installation shall be in accordance with Section 906 and the extinguisher shall be located within a 30-foot (9144 mm) distance of travel from each domestic cooking appliance.
- **420.8.1 Cooking facilities open to the corridor.** Cooking facilities located in a room or space open to a corridor, aisle or common space shall comply with Section 420.8.
- **420.9 Group R cooking facilities.** In Group R occupancies, cooking appliances used for domestic cooking operations shall be in accordance with Section 917.2 of the *International California Mechanical Code*.
- **420.10 Group R-2 dormitory cooking facilities.** Domestic cooking appliances for use by residents of Group R-2 college dormitories shall be in accordance with Sections 420.10.1 and 420.10.2.
 - **420.10.1 Cooking appliances.** Where located in Group R-2 college dormitories, domestic cooking appliances for use by residents shall be in compliance with all of the following:
 - 1. The types of domestic cooking appliances shall be limited to ovens, cooktops, ranges, warmers, coffee makers and microwaves.
 - 2. Domestic cooking appliances shall be limited to approved locations.
 - 3. Cooktops and ranges shall be protected in accordance with Section 904.13.
 - 4. Cooktops and ranges shall be provided with a domestic cooking hood installed and constructed in accordance with Section 505 of the International California Mechanical Code.
 - **420.10.2 Cooking appliances in sleeping rooms.** Cooktops, ranges and ovens shall not be installed or used in sleeping rooms.

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SECTION 421 HYDROGEN FUEL GAS ROOMS

[Editorial Note: Remove existing amendments to Section 421.1 through 421.7. Model code now matches old CA amendments.]

421.1 General. When required by the *California* Fire Code, hydrogen fuel gas rooms shall be designed and constructed in accordance with Sections 421.1 through 421.7.

421.2 Definitions. The following terms are defined in Chapter 2: GASEOUS HYDROGEN SYSTEM HYDROGEN FUEL GAS ROOM.

- **421.2 Location.** Hydrogen fuel gas rooms shall not be located below grade.
- **421.3 Design and construction**. Hydrogen fuel gas rooms not classified as Group H shall be separated from other areas of the building in accordance with Section 509.1.

- **421.3.1 Pressure control**. Hydrogen fuel gas rooms shall be provided with a ventilation system designed to maintain the room at a negative pressure in relation to surrounding rooms and spaces.
- **421.3.2 Windows.** Operable windows in interior walls shall not be permitted. Fixed windows shall be permitted where in accordance with Section 716.
- **421.4 Exhaust ventilation.** Hydrogen fuel gas rooms shall be provided with mechanical exhaust ventilation in accordance with the applicable provisions of Section 502.16.1 of the California Mechanical Code.
- **421.5 Gas detection system.** Hydrogen fuel gas rooms shall be provided with a gas detection system that complies with Sections 421.5.1 through 421.5.2 and 916.
 - 421.5.1 System activation. Activation of the gas detection alarm shall result in both of the following:
 - 1. Initiation of distinct audible and visible alarm signals both inside and outside of the hydrogen fuel gas room.
 - 2. Automatic activation of the mechanical exhaust ventilation system.
 - **421.5.2 Failure of the gas detection system.** Failure of the gas detection system shall automatically activate the mechanical exhaust ventilation system, stop hydrogen generation, and cause a trouble signal to sound at an approved location.
- **421.6 Explosion control**. Explosion control shall be provided where required by Section 414.5.1.
- **421.7 Standby power.** Mechanical ventilation and gas detection systems shall be provided with a standby power system in accordance with Section 2702.

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- **435.3.3 Limitations seven or more clients.** Group R-4 occupancies where non-ambulatory 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 <u>not</u> more than 16 clients above the first story shall be constructed of not less than one-hour fire-resistance-rated construction throughout.
- <u>435.3.4 Ambulatory and Non-ambulatory elderly clients</u>. Group R-4 occupancies housing non-ambulatory elderly clients shall be of not less than one-hour fire-resistance-rated construction throughout.

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435.8.7 Floor separation. Group R-3.1 occupancies with non-ambulatory clients housed above the first floor shall be provided with a non-fire resistance constructed floor separation at stairs which will prevent smoke migration between floors. Such floor separation shall have equivalent construction of 0.5-inch (12.7 mm) gypsum wallboard on one side of wall framing.

Exceptions:

- 1. Occupancies with at least one exterior exit from floors occupied by clients.
- 2. Occupancies provided with automatic fire sprinkler systems complying with Chapter 9.

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- **450.5.1 Special buildings.** In addition to the provisions of Section 450.7, special buildings conforming to the limitations specified in Section 450.4.1 shall conform to the following:
 - 1. The flame-spread end-point rating of all interior finish materials shall not exceed 200.
 - 2. Every room or area housing more than eight persons shall be provided with not less than two approved exits, each of which shall be direct to the exterior and 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).

Exception: This section shall not apply to existing buildings and structures of existing Group C Occupancies.

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435.3.3 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 <u>not</u> more than 16 clients above the first story shall be constructed of not less than one-hour fire-resistance-rated construction throughout.

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455.8 Exiting. See Section 1015.7 1006.2.2.7.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 9]

[The SFM proposes to adopt Chapter 9 with the following amendments and California regulations.]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

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TABLE 903.2.11.6
ADDITIONAL REQUIRED SUPPRESSION SYSTEMS

SECTION	SUBJECT
402.5, 402.6.2	Covered and open mall buildings
403.3	High rise buildings
403.3	High-rise buildings and Applicable Group I-2 occupancies (see 403.1) having occupied floors located more than 75 feet above the lowest level of fire department vehicle access
404.3	Atriums
405.3	Underground structures
407.6	Group I-2
410.7	Stages
411.4	Special amusement buildings
412.3.6	Airport traffic control towers
412.4.6, 412.4.6.1, 412.6.5	Aircraft hangars
415.11.11	Group H-5 HPM exhaust ducts
416.5	Flammable finishes
417.4	Drying rooms
419.5	Live/work units
424.3	Children's play structures
440	Horse Racing Stables
441	Pet Kennels
449	Public Libraries
507	Unlimited area buildings
509.4	Incidental use areas
1029.6.2.3	Smoke-protected assembly seating
CFC	Sprinkler system requirements as set forth in Section 903.2.11.6 of the California Fire Code

For SI: 1 cubic foot = 0.023 m3.

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903.4.3 Floor control valves. Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor in high-rise buildings and <u>applicable</u> Group I-2 occupancies. having occupied floors located more than 75 feet above the lowest level of fire department vehicle access.

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- **905.3.1 Height.** In other than Group R-3 and R-3.1 occupancies, class III standpipe systems shall be installed throughout at each floor where any of the following occur:
 - 2 1. Buildings that are four or more stories in height
 - 4 <u>2</u>. Buildings where the floor level of the highest story is located more than 30 feet (9144 mm) above the lowest level of fire department vehicle access.
 - 3. Buildings where the floor level of the lowest story is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.
 - 4. Buildings that are two or more stories below grade plane. the highest level of fire department vehicle access.

Exceptions:

- 1. Class I standpipes are allowed in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
- 2. Class I standpipes are allowed in Group B and E occupancies.
- 3. Class I manual standpipes are allowed in open parking garages where the highest floor is located not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access.
- 4. Class I manual dry standpipes are allowed in open parking garages that are subject to freezing temperatures, provided that the hose connections are located as required for Class II standpipes in accordance with Section 905.5.
- 5. Class I standpipes are allowed in basements equipped throughout with an automatic sprinkler system.
- 6. Class I standpipes are allowed in buildings where occupant-use hose lines will not be utilized by trained personnel or the fire department.
- 7. In determining the lowest level of fire department vehicle access, it shall not be required to consider either of the following:
 - 7.1. Recessed loading docks for four vehicles or less.
 - 7.2. Conditions where topography makes access from the fire department vehicle to the building impractical or impossible.

907.2.1312 High-rise buildings and applicable Group I-2 occupancies (see 403.1) having occupied floors located more than 75 feet above the lowest level of fire department vehicle access. High-rise buildings and applicable Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access shall be provided with an automatic smoke detection system in accordance with Section 907.2.12.1, a fire department communication system in accordance with Section 907.2.12.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

Exceptions:

- 1. Airport traffic control towers in accordance with Sections 412 and 907.2.21.
- 2. Open parking garages in accordance with Section 406.5.
- 3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1.
- 4 3. Low-hazard special occupancies in accordance with Section 503.1.1.
- 4. Buildings with an occupancy in H-1, H-2 or H-3 in accordance with Section 415.
- 5. In Group I-2, *I-2.1* and *R-2.1* occupancies, the alarm shall sound at a constantly attended location and occupant notification shall be broadcast by the emergency voice/alarm communication system.

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907.2.1312.1 Automatic smoke detection. Automatic smoke detection in high-rise buildings and <u>applicable</u> Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access shall be in accordance with Sections 907.2.1312.1.1 and 907.2.1312.1.2.

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- **907.5.2.2 Emergency voice/alarm communication systems.** Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404 of the <u>California_Fire Code</u>. In high-rise buildings and <u>applicable</u> Group I-2 occupancies (see 403.1) having occupied floors located more than 75 feet above the lowest level of fire department vehicle access, the system shall operate on at least the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:
 - 1. Elevator groups.
 - 2. Interior exit stairways.
 - 3. Each floor.
 - 4. Areas of refuge as defined in Chapter 2.

Exception: In Group I-2, *I-2.1 and R-2.1* occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

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- **907.6.4.2 High-rise buildings.** In high-rise buildings and <u>applicable</u> Group *I-2* occupancies <u>(see 403.1)</u> having occupied floors located more than 75 feet above the lowest level of fire department vehicle access, a separate zone by floor shall be provided for each of the following types of alarm-initiating devices where provided:
 - 1. Smoke detectors
 - 2. Sprinkler waterflow devices
 - 3. Manual fire alarm boxes
 - 4. Other approved types of automatic fire detection devices or suppression systems

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911.1 General. Where required by other sections of this code and in buildings classified as high-rise buildings by this code and <u>applicable</u> Group I-2 occupancies (see 403.1) 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 911.1.6.

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- **904.12 Commercial cooking systems.** Commercial cooking equipment that produces grease laden vapors shall be provided with a Type I Hood, in accordance with the California Mechanical Code, and an automatic fire extinguishing system that is listed and labeled for its intended use as follows:
 - 1. Wet chemical extinguishing system, complying with UL 300.
 - Carbon dioxide extinguishing systems.
 - 3. Automatic fire sprinkler systems.

All existing dry chemical and wet chemical extinguishing systems shall comply with UL 300.

Exception:

Public schools kitchens, without deep-fat fryers, shall be upgraded to a UL 300 compliant system during state funded modernization projects that are under the jurisdiction of the Division of the State Architect.

All systems shall be installed in accordance with the California Mechanical Code, appropriate adopted standards, their listing and the manufacturer's installation instructions.

Exception: Factory-built commercial cooking recirculating systems that are tested, *listed, labeled and installed* in accordance with UL 710B and the *California Mechanical Code*.

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- **904.13 Domestic cooking systems.** Cooktops and ranges installed in the following occupancies shall be protected in accordance with Section 904.13.1:
 - 1. In Group I-1 <u>R-2.1</u> occupancies where domestic cooking facilities are installed in accordance with Section 420.8.
 - 2. In Group I-2 <u>and I-2.1</u>, Condition 1 occupancies where domestic cooking facilities are installed in accordance with Section 407.2.6.
 - 3. In Group R-2 college dormitories where domestic cooking facilities are installed in accordance with Section 420.10.

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907.2.5.1 Group H occupancies located above the 10th story on the 11th story and above. 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 on the 11th story and above.

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[OFSM is proposing to delete the CA amendments and adopt the model text of 916] SECTION 916 GAS DETECTION SYSTEMS

- 916.1 General. Gas detection systems required by this code shall comply with Sections 916.2 through 916.11.
- 916.2 Construction documents. Documentation of the gas detection system design and equipment to be used that is adequate to demonstrate compliance with the requirements of this code shall be provided with the application for permit.
- 916.3 Equipment. Gas detection system equipment shall be designed for use with the gases being detected and shall be installed in accordance with manufacturers' instructions.
- 916.4 Power connections. Gas detection systems shall be permanently connected to the building electrical power supply or shall be permitted to be cord connected to an unswitched receptacle using an approved restraining means that secures the plug to the receptacle.
- **916.5 Emergency and standby power.** Where standby or emergency power is not required elsewhere by this code, standby or emergency power shall be provided or the gas detection system shall initiate a trouble signal at an approved location if the power supply is interrupted.
- 916.6 Sensor locations. Where a specific location for sensors is not specified elsewhere by this code, sensors shall be installed in approved locations where loaking gases are expected to accumulate.
- 916.7 Gas sampling. Gas sampling shall be performed continuously. Sample analysis shall be processed immediately after sampling, except as follows:
 - 1. For HPM gases, sample analysis shall be performed at intervals not exceeding 30 minutes.
 - 2. For toxic gases that are not HPM, sample analysis shall be performed at intervals not exceeding 5 minutes in accordance with Section 6004.2.2.7 of the International Fire Code.
 - 3. Where a less frequent or delayed sampling interval is approved.
- 916.8 System activation. A gas detection alarm shall be initiated where any sensor detects a concentration of gas exceeding the following thresholds:

- 1. For flammable gases, a gas concentration exceeding 25 percent of the lower flammable limit (LFL).
- 2. For non-flammable gases, a gas concentration exceeding the threshold specified by the section of this code requiring a gas detection system.

Upon activation of a gas detection alarm, alarm signals or other required responses shall be as specified by the section of this code or the International Fire Code requiring a gas detection system. Audible and visible alarm signals associated with a gas detection alarm shall be distinctive from fire alarm and carbon monoxide alarm signals.

916.9 Signage. Signs shall be provided adjacent to gas detection system alarm signaling devices that advise occupants of the nature of the signals and actions to take in response to the signal.

916.10 Fire alarm system connections. Gas sensors and gas detection systems shall not be connected to fire alarm systems unless approved and connected in accordance with the fire alarm equipment manufacturer's instructions.

916.11 Inspection, testing and sensor calibration. Gas detection systems and sensors shall be inspected, tested and calibrated in accordance with the International Fire Code.

. . .

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

[Chapter 10]

- 1. Exit access stairways and ramps that serve or atmospherically communicate between only two stories. Such interconnected stories shall not be open to other stories.
- 2. In Group R-1, R-2, *R-2.1*, or R-3 or *R-3.1* occupancies, exit access stairways and ramps connecting four stories or less serving and contained within an individual dwelling unit or sleeping unit or live/work unit.
- 3. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.
- 4. Exit access stairways and ramps in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the stairway or ramp and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

[Chapter 27]

[The SFM proposes to adopt Chapter 27 with the following amendments and California regulations.]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

. . .

2702.2.911 High-rise buildings and <u>applicable</u> Group I-2 occupancies (see 403.1) having occupied floors located more than 75 feet above the lowest level of fire department vehicle access. Emergency and standby power shall be provided in high-rise buildings and <u>applicable</u> Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access as required in Section 403.4.8.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

[Chapter 30.]

[The SFM proposes to adopt Chapter 30 with the following amendments and California regulations.]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

..

3001.3 Referenced standards. Except as otherwise provided for in this code, the design, construction, installation, alteration, repair and maintenance of elevators and conveying systems and their components shall conform to the applicable standard specified in Table 3001.3, *California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders*, ASME A90.1, ASME B20.1, ALI ALCTV, and ASCE 24 for construction in flood hazard areas established in Section 1612.3.

..

TABLE 3001.3 ELEVATORS AND CONVEYING SYSTEMS AND COMPONENTS

Automotive lifts	ALI ALCTV
Belt man lifts	ASME A90.1
Conveyors and related equipment	ASME B20.1
Elevators, escalators, dumbwaiters, moving walks, material lifts	ASME A17.1/CSA B44, ASME A17.7/CSA B44.7
Industrial scissor lifts	ANSI MH29.1
Platform lifts, stairway chairlifts, wheelchair lifts	ASME A18.1

. . .

3001.56 Elevators utilized to transport hazardous materials. Elevators utilized to transport hazardous materials shall also comply with the California Fire Code Section 2703.10.4 5003.10.2.2.

..

3005.4.1 Automatic sprinkler system. Automatic sprinklers shall not be required to be installed in the elevator hoistway, elevator machine room, elevator machinery space, elevator control space, and elevator control room where all the following are met:

- 1. Approved smoke detectors shall be installed and connected to the building fire alarm system in accordance with Section 907 in the area where the installation of fire sprinklers was exempted per this section.
- 2. Activation of any smoke detector located in the elevator hoist-way, elevator machine room, elevator machinery space, elevator control space, and elevator control room shall cause the actuation of the building fire alarm notification appliances in accordance with Section 907.
- 3. Activation of any smoke detector located in the elevator hoist-way, elevator machine room, elevator machinery space, elevator control space, and elevator control room shall cause all elevators having any equipment located in that elevator hoist-way, elevator machine room, elevator machinery space, elevator control space, and elevator control room to recall nonstop to the appropriate designated floor in accordance with CCR Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders.
- 4. The elevator machine room, elevator machinery space, elevator control space, and elevator control room shall be enclosed with fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 712 711, or both. The fire-resistance rating shall not be less than the required rating of the hoist-way enclosure served by the machinery. Openings in the fire barriers shall be protected with assemblies having a fire protection rating not less than that required for the hoistway enclosure doors. The exceptions to Section 3005.4 shall not apply.
- 5. The building fire alarm system shall be monitored by an approved supervising station in accordance with Section 907.
- 6. <u>No materials unrelated to the elevator equipment are permitted to be stored in the elevator machine rooms, machinery spaces, control rooms, control spaces, or elevators hoist-ways.</u> An approved sign shall be permanently displayed in the area where the installation of fire sprinklers was exempted per this section in a conspicuous location with a minimum of 1½ inch letters on a contrasting background, stating:

NO COMBUSTIBLE STORAGE PERMITTED IN THIS ROOM By Order of the Fire Marshal [or name of fire authority]

. . .

3006.2 Hoist-way opening protection required. Elevator hoist-way door openings shall be protected in accordance with Section 3006.3 where an elevator hoist-way connects more than *two stories in Group A, E, H, I, L, R-1, R-2 and R-2.1 occupancies, high-rise buildings, and other applications listed in Section 1.11 regulated by the Office of the State Fire Marshal, and more than three stories for all other occupancies.* Hoist-way opening protection is required to be enclosed within a shaft enclosure in accordance with Section 712.1.1 when any of the following conditions apply:

1. The building is not protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

3006.3 Hoist-way opening protection. Where Section 3006.2 requires protection of the elevator hoist-way door opening, the protection shall be provided by one of the following:

- 1. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoist-way shaft enclosure doors from each floor by fire partitions in accordance with Section 708. In addition, doors protecting openings in the elevator lobby enclosure walls shall comply with Section 716.2.2.1 as required for corridor walls. Penetrations of the enclosed elevator lobby by ducts and air transfer openings shall be protected as required for corridors in accordance with Section 717.5.4.1.
- 2. An enclosed elevator lobby shall be provided at each floor to separate the elevator hoist-way shaft enclosure doors from each floor by smoke partitions in accordance with Section 710 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, doors protecting openings in the smoke partitions shall comply with Sections 710.5.2.2, 710.5.2.3 and 716.2.6.1. Penetrations of the enclosed elevator lobby by ducts and air transfer openings shall be protected as required for corridors in accordance with Section 717.5.4.1.
- 3. Additional doors shall be provided at each elevator hoist-way door opening in accordance with Section 3002.6. Such door shall comply with the smoke and draft control door assembly requirements in Section 716.2.2.1.1 when tested in accordance with UL 1784 without an artificial bottom seal.
- 4. The elevator hoist-way shall be pressurized in accordance with Section 909.21.
- 4<u>5</u>. The [SFM] When approved, in other than Group I-2 occupancies elevator hoist-way shall be pressurized in accordance with Section 909.21.
- 56. [SFM] Enclosed elevator lobbies are not required where the hoist-way door has a fire-protection rating as required by Section 708.7 and the hoist-way door opening is also protected by a listed and labeled smoke containment system complying with ICC ES AC 77.

..

3008.1.4 Operation. The occupant evacuation elevators shall be used for occupant self-evacuation in accordance with the occupant evacuation operation requirements in ASME A17.1/CSA B44 California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders and the building's fire safety and evacuation plan.

. . .

3008.2.1 Prohibited locations. Automatic sprinklers shall not be installed in elevator machine rooms, machinery spaces, control rooms, control spaces and elevator hoist-ways of occupant evacuation elevators <u>in accordance with</u> this Section and 3005.4.1.

...

3008.7.1 Elevator recall. The fire command center or an alternate location approved by the fire department shall be provided with the means to manually initiate a Phase I Emergency Recall of the occupant evacuation elevators in accordance with ASME A17.1/CSA B44 <u>California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders.</u>

[Chapter 31.]

[The SFM proposes to adopt Chapter 31 with the following amendments and California regulations.]

(Note: See Part 2 of this document for existing California amendments brought forward from the 2016 California Building Code for adoption into the 2019 California Building Code without change.)

[Editorial Note: Remove existing amendments to Section 3111. Replace with Model code.]

...

SECTION 3111 PHOTOVOLTAIC PANELS AND MODULES

3111.1 General. Photovoltaic panels and modules shall comply with the requirements of this code and the California Fire Code.

3111.1.1 Rooftop-mounted photovoltaic panels and modules. Photovoltaic panels and modules installed on a roof or as an integral part of a roof assembly shall comply with the requirements of Chapter 15 and the California Fire Code.

3111.2 Access and pathways. Roof access, pathways and spacing requirements shall be provided in accordance with California Fire Code Sections 605.11.1 through 605.11.1.3.3. Pathways shall be over areas capable of supporting fire fighters accessing the roof. Pathways shall be located in areas with minimal obstructions such as vent pipes, conduit, or mechanical equipment.

Exceptions:

- 1. Detached, non-habitable Group U structures including, but not limited to, detached garages serving R-3 buildings, parking shade structures, carports, solar trellises and similar structures.
- 2. Roof access, pathways, and spacing requirements need not be provided where the fire code official has determined rooftep operations will not be employed.

3111.2.1 Solar photovoltaic systems for Group R-3 buildings. Solar photovoltaic systems for Group R-3 buildings shall comply with California Fire Code Sections 605.11.1.2.1 through 605.11.1.2.5.

Exceptions:

- These requirements shall not apply to structures designed and constructed in accordance with the California Residential Code.
- 2. These requirements shall not apply to roofs with slopes of 2 units vertical in 12 units horizontal (2:12) or loss.

3111.2.2.1 Size of solar photovoltaic array. Each photovoltaic array shall be limited to 150 feet (45 720 mm) by 150 feet (45 720 mm). Multiple arrays shall be separated by a 3-foot-wide (914 mm) clear access pathway.

3111.2.2.2 Hip roof layouts. Panels and modules installed on Group R-3 buildings with hip roof layouts shall be located in a manner that provides a 3-footwide (914 mm) clear access pathway from the eave to the ridge on each roof slope where panels and modules are located. The access pathway shall be located at a structurally strong location on the building capable of supporting the live load of fire fighters accessing the roof.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

3111.2.3 Other than Group R-3 buildings. Access to systems for buildings other than those containing Group R-3 occupancies shall be provided in accordance with Sections 3111.2.3.1 through 3111.2.3.3.

Exception: Where it is determined by the fire code official that the roof configuration is similar to that of a Group R-3 occupancy, the residential access and ventilation requirements in Sections 3111.2.2.1 through 3111.2.2.5 shall be permitted to be used.

3111.2.3.1 Access. There shall be a minimum 6- foot wide (1829 mm) clear perimeter around the edges of the roof.

Exception: Where either axis of the building is 250 feet (76 200 mm) or less, the clear perimeter around the edges of the roof shall be a minimum 4-foot-wide (1200 mm).

- 3111.2.3.2 Pathways. The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:
 - 1. The pathway shall be over areas capable of supporting the live load of fire fighters accessing the roof.
 - 2. The centerline axis pathways shall be provided in both axes of the roof. Centerline axis pathways shall run where the roof structure is capable of supporting the live load of fire fighters accessing the roof.
 - 3. Shall be a straight line not less than 4 feet (1290 mm) clear to roof standpipes or ventilation hatches.
 - 4. Shall provide not less than 4 feet (1290 mm) clear around roof access hatch with at least one not less than 4 feet (1290 mm) clear pathway to parapet or roof edge.
- 3111.2.3.3 Smoke ventilation. The solar installation shall be designed to meet the following requirements:
 - 1. Arrays shall be no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.
 - 2. Smoke ventilation options between array sections shall be one of the following:
 - 2.1. A 4-foot (1290 mm) or greater in width pathway and bordering roof skylights or gravity operated dropout smoke and heat vents on not less than one side.
 - 2.2. A 4-foot (1290 mm) or greater in width pathway and bordering all sides of non-gravity operated dropout smoke and heat vents on not less than one side.
 - 2.4. A 4-foot (1290 mm) or greater in width pathway and bordering 4-foot by 8-foot (1290 mm by 2438 mm) "venting cutouts" every 20 foot (6096 mm) on alternating sides of the pathway.
- 3111.3 Ground-mounted photovoltaic arrays. Ground mounted photovoltaic arrays shall comply with this section and the California Electrical Code. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Index.]

INSTITUTIONAL I-1

Item 2. WUI Work Group [Chapter 7A [SFM] Materials and Construction for Exterior Wildfire Exposure]

[701A.3]

701A.3 Application. New buildings located in any Fire Hazard Severity Zone or any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date shall comply with the provisions of this chapter.

Exceptions:

- 1. Buildings of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from an applicable building.
- 2. Buildings of an accessory character classified as Group U occupancy of any size located least 50 feet from an applicable building.
- 3. Buildings classified as a Group U Agricultural Building, as defined in Section 202 of this code (see also Appendix C Group U Agricultural Buildings), when located at least 50 feet from an applicable building.
- Additions to and remodels of buildings originally constructed prior to the applicable application date.
- 5. Group C, special buildings conforming to the limitations specified in Section 450.4.1.

For the purposes of this section and 710A, applicable building includes all buildings that have residential, commercial, educational, institutional, or similar occupancy type use.

[HEAVY TIMBER]

702A

HEAVY TIMBER. A type of construction classification specified in Section 602. For use in this chapter, heavy timber shall be sawn lumber or glue laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Heavy Timber walls or floors shall be sawn or glue laminated planks splined, tongue and grove, or set close together and well spiked.

[707A.3]

...

707A.3 Exterior walls. The exterior wall covering or wall assembly shall comply with one of the following requirements:

- 1. Noncombustible material
- 2. Ignition-resistant material

- 3. Heavy timber exterior wall assembly Sawn lumber or glue laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Sawn or glue-laminated planks splined, tongue-and-grove, or set close together and well spiked.
- 4. Log wall construction assembly
- 5. Wall assemblies that meet the performance criteria in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in SFM Standard 12-7A-1

Exception: Any of the following shall be deemed to meet the assembly performance criteria and intent of this section:

- 1. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing
- 2. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.

... [707A.8]

707A.8 Underfloor protection. The underfloor area of elevated or overhanging buildings shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:

- 1. Noncombustible material
- 2. Ignition-resistant material
- 3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection
- 4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
- 5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in either of the following:
 - 5.1. SFM Standard 12-7A-3; or
 - 5.2. ASTM E2957

Exception: Heavy timber-Structural columns and beams do not require protection when constructed with sawn lumber or glue-laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Sawn or glue-laminated planks splined, tongue-and-grove, or set close together and well spiked.

[707A.9]

707A.9 Underside of appendages. When required by the enforcing agency the underside of overhanging appendages shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:

- 1. Noncombustible material
- 2. Ignition-resistant material
- 3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection

- 4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
- 5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in either of the following:
 - 5.1. SFM Standard 12-7A-3; or
 - 5.2. ASTM E2957

Exception: Heavy timber-Structural columns and beams do not require protection when constructed with sawn lumber or glue-laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Sawn or glue-laminated planks splined, tongue-and-grove, or set close together and well spiked.

••

[708A.2.2]

708A.2.2 Operable Skylights. Operable skylights shall be protected by a non-combustible mesh screen where the dimensions of the openings in the screen shall not exceed 1/8-inch (3.2mm).

708A.2.23 Structural glass veneer. The wall assembly behind structural glass veneer shall comply with Section 707A.3.

...

[708A.4]

708A.4 (R337.8.4) <u>Garage Door Perimeter Gap</u> Weather stripping. Exterior garage doors shall be provided with weather stripping to resist the intrusion of embers from entering <u>by preventing</u> through gaps between doors and door openings, at the bottom, sides and tops of doors, from exceeding gabs exceed 1/8-inch (3.2 mm). Weather stripping or seals shall be installed on the bottom, sides, and tops of doors to reduce gaps between doors and door openings to 1/8-inch (3.2 mm) or less. <u>Gaps between doors and door openings shall be controlled by one of the following methods:</u>

- Weather stripping products made of materials that: (a) have been tested for tensile strength in accordance with ASTM D638 (Standard Test Method for Tensile Properties of Plastics) after exposure to ASTM G155 (Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials) for a period of 2000 hours, where the maximum allowable difference in tensile strength values between exposed and non-exposed samples does not exceed 10%, and (b) exhibit a V-2 or better flammability rating when tested to UL 94, Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.
- 2. Door overlaps onto jambs and headers.
- 3. Garage door jambs and headers covered with metal flashing.

..

[709A.4.2]

709A.4.2 Conditions of acceptance for ASTM E2726. The ASTM E2726 test shall be conducted, <u>using a 2.2lb (1kg) burning "Class A" size 12" x 12" x 2.25" (300 mm x 300 mm x 57 mm) roof test brand,</u> on a minimum of three test specimens and the conditions of acceptance in 1 and 2 below shall be met. If any one of the three tests does not meet the conditions of acceptance, three additional tests shall be run. All of the additional tests shall meet the conditions of acceptance.

- 1. Absence of sustained flaming or glowing combustion of any kind at the conclusion of the 40- min observation period
- 2. Absence of falling particles that are still burning when reaching the burner or floor.

. . .

[709A.5]

709A.5 Requirements for type of ignition-resistant material in Section 709A.3, item (67): The material shall be tested in accordance with ASTM E2632 and shall comply with the following condition of acceptance. The ASTM E2632 test shall be conducted on a minimum of three test specimens and the peak heat release rate shall be less than or equal to 25 kW/ft² (269 kW/m²). If any one of the three tests does not meet the conditions of acceptance, three additional tests shall be run. All of the additional tests shall meet the condition of acceptance.

...

[710A.2]

710A.2 Applicability. The provisions of this section shall apply to buildings covered by Section 701A.3 Exception 1. This section shall also apply to specified attached and detached miscellaneous structures that require a building permit, including but not limited to; trellises, arbors, patio covers, earports, gazebos, and similar structures.

Exceptions.

- Decks shall comply with the requirements of Section 709A.
- 2. Awnings and canopies shall comply with the requirements of Section 3105.
- 3. Exterior wall architectural trim, embellishments, and fascias.
- 4. Roof or wall top cornice projections and similar assemblies.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 3. I-3 Work Group

[408.1.2.2]

408.1.2.2 Intervening spaces. Common rooms and spaces within Group I-3 occupancies can be considered an intervening space in accordance with Section 1016.2, and not considered a corridor, when they meet any of the following:

- 1. Within prisons and local detention facilities of Type I Construction, The inmate and/or staff movement is within cell complexes, medical housing wings and mental health housing wings of Type I construction. the exit access within a housing unit, may be a non-rated corridor provided the required exit occupant load from any dayroom does not exceed 64 persons.
- 2. Within prison, jails, and courthouses: Area within any temporary holding areas of noncombustible construction and an occupant load less than 100.
- 3. Within prisons and local detention facilities, Areas within secure mental health treatment facilities correctional medical or mental health housing suites, of noncombustible construction, and an occupant load less than 100.

4. Within prisons and local detention facilities: detention program areas of noncombustible construction and an occupant load less than 100.

. . .

[508.2.4]

508.2.4 Separation of occupancies. No separation is required between accessory occupancies and the main occupancy.

Exceptions:

- 1. Group H-2, H-3, H-4, H-5 and L occupancies shall be separated from all other occupancies in accordance with Section 508.4. 2.
- 2. Group R-1, R-2, R-2.1 and R-3 dwelling units and sleeping units shall be separated from other dwelling or sleeping units and from accessory occupancies contiguous to them in accordance with the requirements of Section 420.
- 3. <u>Group I-2 and I-2.1 shall be separated from all other occupancies in accordance with Section 508.4.</u> No separation is required between Group B, E, R-2 sleeping units and S-2 occupancies accessory to Group I-2 and I-2.1. Group I-2 and I-2.1 shall be separated from all other occupancies in accordance with Section 508.4.
- 4. <u>Group I-3 and vehicle sally-ports shall be separated from all other occupancies in accordance with Section 508.4.</u> No separation is required between Group B, E, R-2 sleeping units and S-2 occupancies accessory to Group I-3 of Type I Construction.—Group I-3 and vehicle sallyports shall be separated from all other occupancies in accordance with Section 508.4.

...

[508.3.3]

508.3.3 Separation. No separation is required between nonseparated occupancies.

Exceptions:

- 1. Group H-2, H-3, H-4, H-5, *I-2*, *I-2*.1, and *L* occupancies shall be separated from all other occupancies in accordance with Section 508.4.
- Group R-1, R-2, R-2.1 and R-3 dwelling units and sleeping units shall be separated from other dwelling or sleeping units and from other occupancies contiguous to them in accordance with the requirements of Section 420.
- 3. No separation is required between Group B, E, R-2 sleeping units and S-2 occupancies accessory to Group I-3 of Type I Construction. Group I-3 and vehicle sally ports shall be separated from all other occupancies in accordance with Section 508.4.
- 3. Separation is required between Group I-3 and vehicle sally ports.
- 4. Where I-3 is not the main occupancy and the area is greater than 10 percent of the floor area; it shall be separated per table 508.4.

...

[716.2.2.1]

716.2.2.1 Door assemblies in corridors and smoke barriers. Fire door assemblies required to have a minimum fire protection rating of 20 minutes where located in corridor walls or smoke barrier walls having a fire-resistance rating in accordance with Table 716.1 (2) shall be tested in accordance with NFPA 252 or UL 10C without the hose stream test.

Exceptions:

- 1. Viewports that require a hole not larger than 1 inch (25 mm) in diameter through the door, have at least a 0.25-inch-thick (6.4 mm) glass disc and the holder is of metal that will not melt out where subject to temperatures of 1,700°F (927°C).
- 2. Corridor door assemblies in occupancies of Group I-2 shall be in accordance with Section 407.3.1.
- 3. Unprotected openings shall be permitted for corridors in multi-theater complexes where each motion picture auditorium has not fewer than one-half of its required exit or exit access doorways opening directly to the exterior or into an exit passageway.
- 4. Horizontal sliding doors in smoke barriers that comply with Sections 408.6 and 408.8.4 in occupancies in Group I-3.
- 5. Cell or room doors, including cell or room doors with integral sidelites <u>that have speaker ports and /or cuff ports</u> that are part of the door assembly in Group I-3 occupancies which open into a required exit corridor within a cell complex, <u>medical and mental health suite</u>, program offices, family visiting area and complex control areas.

..

[804.1]

804.1 General. Interior floor finish and floor covering materials shall comply with Sections 804.2 through 804.4.2.

Exception: In areas except groups I-2 with detention and I-3, Ffloor finishes and coverings of a traditional type, such as wood, vinyl, linoleum or terrazzo, and resilient floor covering materials that are not comprised of fibers.

[804.4.1]

804.4.1 Test requirement. In all *other* occupancies *except Group I-3 and Group I-2 areas where patients are restrained,* interior floor *finish and interior floor* covering materials shall comply with the requirements of *ASTM Standard E 648, and having a specific optical density smoke rating not to exceed 450 per <i>ASTM E662. For Group I-3* occupancies and *Group I-2* areas where patients are restrained, see *Section 804.4.3.*

[804.4.2]

804.4.2 Minimum critical radiant flux. In all occupancies, interior floor finish and floor covering materials in enclosures for stairways and ramps, exit passageways, corridors and rooms or spaces not separated from corridors by partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux. The minimum critical radiant flux shall be not less than Class I in Groups I-2, *I-3 areas* where restraint is not used and R-2.1 and not less than Class II in Groups A, B, E, H, *I-2.1*, I- 4, M, R-1, R-2, R-2.2 and S.

Exception: Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, Class II materials are permitted in any area where Class I materials are required, and materials complying with ASTM Standard E648, and having a specific optical density smoke rating not to exceed 450 per ASTM E662 are permitted in any area where Class II materials are required.

For Group I-3 areas occupied by inmates or Group I-2 areas where patients are restrained, see Section 804.4.3.

[804.4.3]

804.4.3 Group I-2 and Group I-3 floor surfaces. Interior floor finish and floor coverings occupied by inmates or patients whose personal liberties are restrained shall be noncombustible.

Exception: Noncombustible floor finish and floor coverings in areas where restraint is not used may have c. Carpet or other floor covering materials applied may be used in areas protected by an automatic sprinkler system installed throughout in accordance with Section 903.3.1.1. and Carpet or other floor coverings shall comply with the requirements of meeting ASTM Standard E648; the minimum critical radiant flux shall be not less than Class I and shall having a the specific optical density smoke rating shall not to exceed 450 per ASTM E662. The c. Carpeting and carpet padding shall be tested as a unit in accordance with floor covering radiant panel test meeting class 1 and has a critical radiant flux limit of not less than 0.45 watt per centimeter square. The carpeting and padding shall be identified by a hang-tag or other suitable method as to manufacturer and style and shall indicate the classification of the material based on the limits set forth above.

..

[905.3.10]

905.3.10 Group I-3. A Housing units Pod within cell complexes Housing Units where 50 or more inmates are restrained, shall be provided with Class I wet standpipes. In addition, Class I wet standpipes shall he located so that it will not be necessary to extend hose lines through interlocking security doors and any doors in smoke-barrier walls, horizontal fire walls or fire barrier walls. Standpipes located in cell complexes Housing Units may be placed in secured pipe chases.

. . .

[Table 1004.5]

Table 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR
<u>Detention Facilities</u>	
Housing Pod	Number of beds and staff
Exercise rooms or exercise areas	<u>50 gross</u>
<u>Dining areas</u>	<u>15 net</u>
Instructional classroom	<u>15 net</u>
Shops and vocational areas	<u>50 net</u>

. .

c. Temporary holding cells, rooms or areas shall be calculated based on policies and procedures approved by the Authority Having Jurisdiction. See 408.3.11 for number of exits required.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 4. L Work Group

..

[LABORATORY SUITE]

202

LABORATORY SUITE. [SFM] A laboratory suite is a <u>Group L Occupancy</u> space within a building or structure, which may include multiple laboratories, offices, storage, equipment rooms or similar support functions, where the aggregate quantities of hazardous materials stored and used do not exceed the quantities set forth in Table 453.7.3.1 (see Section 453).

••

[302.1]

302.1 General.

9. [SFM] Research Laboratories Laboratory Suites (see Section 453): Group L

..

[307.1.1]

307.1.1 Uses other than Group H.

17. Group B higher education laboratory occupancies complying with Section 428 of the International Building Code and Chapter 38 of this code. [SFM] Group L occupancies defined in Section 453.1

...

[313.1]

313.1 <u>Group L</u> Laboratories-Group L. [SFM] Group L occupancy includes the use of a building or structure, or a portion thereof, containing one or more laboratory suites as defined in Section 453.

••

[414.1.1]

414.1.1 Other provisions. Buildings and structures with an occupancy in Group H shall comply with this section and the applicable provisions of Section 415 and the *California Fire Code*. For Group L occupancies see Section 453. See Section 453 for Group L occupancies.

...

[453.1]

453.1 Scope. The provisions of this section shall apply to buildings or structures, or portions thereof, containing one or more Group L laboratory suites as defined in Section <u>453.2202</u>. The provision of this section is optional and may apply to buildings or structures. See Section 304 for Group B Laboratories.

[453.3.1]

453.3.1 The gross square footage floor area of an individual laboratory suite shall not exceed 10,000 sq. ft. (929 m2).

[453.3.2]

453.3.2 An individual laboratory suite shall not serve more than a single tenant.

Exception: A laboratory suite controlled by a single responsible party. An individual laboratory suite shall have a responsible party or department for all hazardous materials within a suite.

[453.4.2]

453.4.2 Structural design occupancy category.

[453.4.2.1]

453.4.2.1 Buildings containing Group L occupancies with an occupant load greater than 500 for colleges or adult education facilities, or other buildings with an occupant load greater than 5,000 shall be classified as Occupancy Category III in accordance with Chapters 16 and 16A.

[453.4.2.2]

453.4.2.2 Other buildings containing Group L occupancies shall be classified as Occupancy Category II in accordance with Chapters 16 and 16A.

[453.4.3.1]

453.4.3.1 Fire barrier. A fire barrier having a fire resistance rating of not less than 2-hours shall divide any story containing more than one laboratory suite above the on the 4th story and above.

[453.4.3.2]

453.4.3.2 Fire-smoke barrier. Any story containing a Group L occupancy above the 10th story on the 11th story and above shall be subdivided by a fire-smoke barrier constructed as a fire barrier having a fire resistance rating of not less than 2-hours and shall also comply with the smoke barrier requirements of Section 709.

The 2-hour fire- smoke barrier shall be in accordance with Sections 453.4.3 through 453.4.3.2.3.

[453.4.4]

453.4.4 Emergency response equipment area. When required by the fire code official, an An area for emergency response equipment shall be provided on each floor in an approved location. The area shall be a minimum of 50 square feet (4.6 m2), for spill mitigation supplies per California Fire Code 5001.3.3.4 in a location approved by the fire code official, accessed from outside the laboratory suite and identified with signage.

[453.4.5]

453.4.5 Liquid tight floor. All portions of the laboratory suite where hazardous materials may be present stored, dispensed, handled or used shall be provided with a liquid tight floor. The intersections of such floors shall have an integral coved base that extends upward onto the wall not less than 2 inches. Where the floor is designed to provide spill control or secondary containment the floor shall be designed in accordance with California Fire Code Section 5004.2.

[453.4.6]

453.4.6 Emergency-Secondary power systems. A legally required standby power system shall have a automatic transfer time of not more than 10 seconds. An emergency power system shall be provided in accordance with Chapter 27.

[453.4.6.1]

453.4.6.1 Required systems. Emergency Standby power shall be provided for all electrically operated equipment, systems and connected control circuits including:

- 1. Mechanical ventilation systems. See Section 453.4.7.2.
- 2. Emergency alarm and monitoring systems.
- 32. Temperature control systems required to prevent unsafe process excursions or chemical reactions.
- 43. Treatment systems and scrubbers.
- 5. Egress lighting
- 4. Emergency Responder Radio Coverage System (ERRCS). See Section 510 of the California Fire Code.
- 65. Electrically operated systems required elsewhere in this code and the California Fire Code.

[453.4.7.2]

453.4.7.2 Fire dampers, smoke dampers and combination fire/smoke dampers. Fire dampers, smoke dampers or fire/smoke dampers shall not be permitted in product conveying and other mechanical exhaust duct systems used to maintain a safe laboratory environment. When the exhaust duct penetrates the laboratory suite boundary the exhaust duct shall be located within a horizontal assembly having a fire resistance rating equal to the fire barrier.

[453.4.7.3]

453.4.7.3 Duct materials. Product conveying and other mechanical exhaust duct systems used to maintain a safe laboratory environment shall be constructed in accordance with Chapters 5 and 6 of the California Mechanical Code.

[453.4.7.4.2]

453.4.7.4.2 Laboratory suite exhaust air shall be independently ducted to a point outside the building or a <u>an approved</u> roof top structure.

Exceptions:

- 1. Exhaust ducts serving a single laboratory suite.
- 21. Exhaust ducts serving separate laboratory suites on the same story may be connected to a common duct within a fire rated vertical shaft when the sub-duct extends vertically upward at least 22 inches.
- 3. Exhaust ducts serving separate laboratory suites on the basement through the 4th story may be connected to a common duct within a fire rated vertical shaft when the sub-duct extends vertically upward at least 22 inches.
- 4. Exhaust ducts serving separate laboratory suites on the 5th story and above may be connected to a common duct that does not exceed 100 vertical feet within a fire rated vertical shaft when the sub-ducts extends vertically upward at least 22 inches. Ducts serving the 5th story and above shall be separate from the duct serving the 4th story and below, but may be within the same fire rated

shaft.

[453.4.7.4.3]

453.4.7.4.3 Laboratory suite exhaust ducts shall not penetrate the 2-hour fire barriers required by Section 453.4.3-453.4.1.

Exception: Where the exhaust duct is enclosed in a 2-hour-rated shaft in accordance with Section 708713.

[453.4.7.5]

453.4.7.5 Ventilation rates. Mechanical exhaust ventilation systems shall provide a minimum ventilation rate not less than 1 cubic feet per minute per square foot [0.00508 m3/(s·m2)] of floor area, or 6 air exchanges per hour, whichever is greater. Systems shall operate continuously at the designed ventilation rate.

Exception.

1. Refer to California Fire Code Section 5001.3 Performance-based design alternatives, as approved by the Fire Code Official.

[453.4.7.6]

453.4.7.6 Mechanical ventilation systems on emergency power. When operating on emergency power, the ventilation rate may be reduced to a level sufficient to maintain a differential pressure negative to the surrounding area.

[453.4.7.7]

453.4.7.7 Mechanical ventilation system balancing. Mechanical ventilation systems shall be designed and balanced such that during normal and emergency conditions the door opening forces comply with the requirements of Sections <u>1008.1.31010.1.3</u> and Chapter 11B as applicable. Emergency conditions shall include: supply fan shutdown or failure, closing of smoke dampers or combination fire/smoke dampers, or emergency power.

[453.6.1]

453.6.1 Access to exits. Every pertion-room of a laboratory suite containing hazardous materials and having a floor area of 500 square feet (19 m²) or more shall have access to not less than two separate exits or exit-access doorways in accordance with Section 1015.2-1006.2.

[453.6.5]

453.6.5 Corridors. Corridors shall comply with Section 1018 and shall have opening protection in accordance with Tables 716.5 and 716.6.

[453.1.1]

453.7.1 453.1.1 Technical report. ...

[453.7.1]

453.7.21 Multiple hazards. When a hazardous material has multiple hazards, all hazards shall be addressed and controlled in accordance with the provisions of this code and the California Fire Code.

[453.7.2]

453.7.32 Percentage of maximum allowable quantities. The percentage of the maximum allowable quantity of hazardous materials per laboratory suite permitted for each story level within a building shall be in accordance with Table 453.7.32.1.

[TABLE 453.7.2.1]

TABLE 453.7.32.1 HAZARDOUS MATERIALS QUANTITY PER LABORATORY SUITE® [Table not shown]

- a. Percentages shall be of the maximum allowable quantity per laboratory suite shown in Tables 307.1(1) and 307.1(2). Allowable hazardous material increases for buildings equipped throughout with an automatic sprinkler system shall not be applicable to Group L occupancies.
- b. When an individual laboratory suite occupies more than one story, the more restrictive percentage of the maximum allowable quantity per laboratory suite shall apply.
- c. The total aggregate quantity of flammable liquids on the first story below grade shall be limited to the maximum total aggregate quantity for Group B occupancy control areas.
- d. The total aggregate quantity of flammable liquids on the second story level below grade shall be limited to a maximum total aggregate quantity for Group B occupancy control areas.

[453.7.3]

453.7.43 Handling and transportation. The handling and transportation of hazardous materials shall be in accordance with Section 5003.10 of the California Fire Code.

[453.7.5]

453.7.5 Transportation of hazardous materials above the 10th story. Transportation of hazardous materials above the 10th story shall be limited to 5 percent of the maximum allowable quantities of Tables 307.1 (1) and 307.1(2.) Quantities are permitted to be increased 100 percent in buildings with an approved automatic sprinkler system in accordance with Section 903.3.1.1. Materials where footnote g of Table 307.1(1) applies shall not be increased.

[453.8]

453.8 Elevators and elevator lobbies on the 11th story and above above the 10th story. Any story containing a Group L occupancy on the 11th above the 10th story and above shall be provided with elevators and elevator lobbies in accordance with Sections 453.8.1 through 453.8.3.

[453.9]

453.9 Existing Group L (Fermerly or Group H-8) occupancies, additions, alterations, or repairs. See California Fire Code Chapter11 Section 1116 and California Existing Building Code Section 316.

[TABLE 504.3]

TABLE 504.3 a, i

ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE

[Table not shown]

. . .

- c. New Group H <u>and all Group L</u> occupancies are required to be protected by an automatic sprinkler system in accordance with Sections 903.2.5 and 903.2.16
- d. The NS value is only for use in evaluation of existing building height in accordance with the California Existing Building Code.

••

[TABLE 506.2]

TABLE 506.2^{a, b, i}

ALLOWABLE AREA FACTOR (At = NS, S1, S13R, or SM, as applicable) IN SQUARE FEET

	NS <u>c</u>									
L	S1	UL	60,000	37,500	17,500	28,500	17,500	36,000	18,000	6,500
	SM									
	NS	UL	UL	21,500	12,500	18,500	12,500	20,500	14,000	9,000
M	S1	UL	UL	86,000	50,000	74,000	50,000	82,000	56,000	36,000
	SM	UL	UL	64,500	37,500	55,500	37,500	61,500	42,00	27,000

[TABLE 803.11]

TABLE 803.11

INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY k

	SI	PRINKLERED ^I		NONSPRINKLERED			
GROUP	Interior exit stairways and interior exit ramps and exit passageways	Corridors and enclosure for exit access stairways	Rooms and enclosed spaces ^c	Interior exit stairways and interior exit ramps and exit passageways	Corridors and enclosure for exit access stairways	Rooms and enclosed spaces ^c	

c. New Group H <u>and all Group L</u> occupancies are required to be protected by an automatic sprinkler system in accordance with Sections 903.2.5 and 903.2.16

d. The NS value is only for use in evaluation of existing building height in accordance with the California Existing Building Code.

	a, b	and exit access ramps			and exit access ramps	
A-1 & A-2	В	В	С	А	Ad	Вe
A-3 ^f , A-4, A-5	В	В	С	А	Ad	С
B, E, M, R- 1	В	С	С	А	В	С
R-4 <u></u>	В	С	С	Α	В	В
F	С	С	С	В	С	С
H, <i>L</i>	В	В	Ca	<u>NP</u>	<u>NP</u>	<u>NP</u>
 -1	₽	C	Ç	A	₽	₽
I-2, <i>I-2.1</i>	В	В	В ^{h, i}	А	Α	В
I-3	А	Ąj	Ç B	NP	NP	NP
I-4	В	В	в ^{h, i}	А	А	В
R-2	С	С	С	В	В	С
R-2.1	В	С	С	Α	В	В
R-3 <u>-m</u> , <i>R-3.1</i>	С	С	С	С	С	С
S	С	С	С	В	В	С
U	1	No restrictions			No restrictions	

• • •

[903.2.16]

903.2.16 Group L occupancies. An automatic sprinkler system shall be installed throughout buildings housing Group L occupancies. Sprinkler systems design for research laboratories and similar areas of a Group L occupancy shall be designed for the square footage area of the L Occupancy based on an area of sprinkler operation of 2,500 square feet (232 m²) and design density of 0.20 gpm/sf. 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 with Group L occupancies, but not classified as Group L, shall be provided with sprinkler protection system per NFPA 13. 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]

903.2.16.1 Group L occupancies located above the 10th story on the 11th story and above. 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 on the 11th story and above.

[903.2.5.4]

903.2.5.4 Group H occupancies located above the 10th story on the 11th story and above. 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 on the 11th story and above.

...

[TABLE 903.2.11.6]

TABLE 903.2.11.6
ADDITIONAL REQUIRED SUPPRESSION SYSTEMS

SECTION	SUBJECT
402.5, 402.6.2	Covered and open mall buildings
403.3	High-rise buildings
404.3	Atriums
405.3	Underground structures
407.6	Group I-2
410.7	Stages
411.4	Special amusement buildings
412.3.6	Airport traffic control towers
412.4.6, 412.4.6.1, 412.6.5	Aircraft hangars
415.11.11	Group H-5 HPM exhaust ducts
416.5	Flammable finishes
417.4	Drying rooms
419.5	Live/work units
424.3	Children's play structures
427	Buildings containing laboratory suites <u>Group L occupancies</u>
507	Unlimited area buildings
509.4	Incidental uses
1029.6.2.3	Smoke-protected assembly seating
I FC - <u>CFC</u>	Sprinkler system requirements as set forth in Section 903.2.11.6 of the <i>International California Fire Code</i>

[907.2.28]

907.2.28 Group L. A manual fire alarm system shall be installed throughout buildings containing having Group L occupancies.

When Group L occupancies are located in mixed use buildings, at least one manual fire alarm \underline{box} shall be located \underline{within} the Group L occupancy.

[907.2.28.1]

907.2.28.1 Group L occupancies located above the 10th story on the 11th story and above. 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 on the 11th story and above.

[907.6.4]

907.6.4 Zones. Fire alarm systems shall be divided into zones where required by this section. For the purposes of annunciation and notification, zoning shall be in accordance with the following:

- 1. Where the fire-protective signaling, system serves more than one building, each building shall be considered as a separate zone.
- 2. Each floor of a building shall be considered as a separate zone.
- 3. Each section of floor of a building that is separated by fire walls or by horizontal exits shall be considered as a separate zone.
- 4. Each zone shall not exceed 22,500 square feet (2090 m2). The length of any zone shall not exceed 300 feet (91 440 mm) in any direction.

Exception: Automatic sprinkler system zones shall not exceed the area permitted by NFPA 13.

- 5. For Group I-3 occupancies each cell complex shall be considered a separate zone.
- 6. For Group H and L occupancies above the 10th story on the 11th story and above, each side of the 2-hour fire-smoke barrier shall be considered a separate zone.
- 7. Annunciation shall be further divided into zones where deemed necessary by the enforcing agency.

[TABLE 1004.5]

TABLE 1004.5

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

Laboratory	
Educational (K-12th grade)	50 net
Laboratories, non-educational	100 net
Laboratory suite ^b	200 gross

[1006.2.1]

1006.2.1

SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

L See Section 453.6.1 NP NP NP

...

[TABLE 1006.3.3(2)]

TABLE 1006.3.3(2)

STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM OCCUPANT LOAD PER STORY	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)
First story above or below grade plane	A, B ^b , E F ^b , M, U	49	75
	H-2, H-3	3	25
	H-4, H-5, I, R-1, R-2 ^{a, c}	10	75
	S ^{b, d}	29	75
Second story above grade plane	B, F, M, S ^d	29	75
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

a. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided

with emergency escape and rescue openings in accordance with Section 1030.

- b. Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum exit access travel distance of 100 feet.
- c. This table is used for R-2 occupancies consisting of sleeping units. For R-2 occupancies consisting of dwelling units, use Table 1006.3.3(1).
- d. The length of exit access travel distance in a Group S-2 open parking garage shall be not more than 100 feet.
- e. For L Occupancies see Section 453.6.1.

..

[2702.2.17]

2702.2.17 *Group L-Occupancy.* Emergency Secondary power shall be provided in Group L occupancies in accordance with this chapter and Section 453.4.6 and 453.4.6.1.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 5. Higher Education Laboratories

[Table of Contents]

Table of Contents

[202 Definitions]

[F] HIGHER EDUCATION LABORATORY. Laboratories in Group B occupancies used for educational purposes above the 12th grade. Storage, use and handling of chemicals in such laboratories shall be limited to purposes related to testing, analysis, teaching, research or developmental activities on a nonproduction basis.

[307.1.1]

[F] 307.1.1 Uses other than Group H. An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.

17. Group B higher education laboratory occupancies complying with Section 428 and Chapter 38 of the International Fire Code. [SFM] Group L occupancies defined in Section 453-1

...

[414.2]

[F] 414.2 Control areas. Control areas shall comply with Sections 414.2.1 through 414.2.5 and the International California Fire Code.

Exception: Higher education laboratories in accordance with Section 428 and Chapter 38 of the International Fire Code.

[Note: Remove Section 428]

[SECTION 428]

SECTION 428

HIGHER EDUCATION LABORATORIES

[F] LABORATORY SUITE. A fire-rated, enclosed laboratory area providing one or more laboratory spaces within a Group B-educational occupancy that includes ancillary uses such as offices, bathrooms and corridors that are contiguous with the laboratory area, and are constructed in accordance with Section 428.

[F] 428.1 Scope. Higher education laboratories complying with the requirements of Sections 428.1 through 428.4 shall be permitted to exceed the maximum allowable quantities of hazardous materials in control areas set forth in Tables 307.1(1) and 307.1(2) without requiring classification as a Group H occupancy. Except as specified in Section 428, such laboratories shall comply with all applicable provisions of this code and the International Fire Code.

[F] 428.2 Application. The provisions of Section 428 shall be applied as exceptions or additions to applicable requirements of this code. Unless specifically modified by Section 428, the storage, use and handling of hazardous materials shall comply with all other provisions in Chapters 38 and 50 through 67 of the International Fire Code and this code for quantities not exceeding the maximum allowable quantity.

[F] 428.3 Laboratory suite construction. Where laboratory suites are provided, they shall be constructed in accordance with this section and Chapter 38 of the International Fire Code. The number of laboratory suites and

percentage of maximum allowable quantities of hazardous materials in laboratory suites shall be in accordance with Table 428.3.

[F] 428.3.1 Separation from other nonlaboratory areas. Laboratory suites shall be separated from other portions of the building in accordance with the most restrictive of the following:

1. Fire barriers and horizontal assemblies as required in Table 428.3. Fire barriers shall be constructed in accordance with Section 707 and horizontal assemblies constructed in accordance with Section 711.

Exception: Where an individual laboratory suite occupies more than one story, the fire-resistance rating of intermediate floors contained within the laboratory suite shall comply with the requirements of this code. 2. Separations as required by Section 508.

[F] 428.3.2 Separation from other laboratory suites. Laboratory suites shall be separated from other laboratory suites in accordance with Table 428.3.

[F] 428.3.3 Floor assembly fire resistance. The floor assembly supporting laboratory suites and the construction supporting the floor of laboratory suites shall have a fire-resistance rating of not less than 2 hours.

Exception: The floor assembly of the laboratory suites and the construction supporting the floor of the laboratory suites are allowed to be 1-hour fire-resistance rated in buildings of Types IIA, IIIA and VA construction, provided that the building is three or fewer stories.

[F] 428.3.4 Maximum number. The maximum number of laboratory suites shall be in accordance with Table 428.3. Where a building contains both laboratory suites and control areas, the total number of laboratory suites and control areas within a building shall not exceed the maximum number of laboratory suites in accordance with Table 428.3.

[F] 428.3.5 Means of egress. Means of egress shall be in accordance with Chapter 10.

[F] 428.3.6 Standby or emergency power. Standby or emergency power shall be provided in accordance with Section 414.5.2 where laboratory suites are located above the sixth story above grade plane or located in a story below grade plane.

[F] TABLE 428.3

DESIGN AND NUMBER OF LABORATORY SUITES PER FLOOR

a. Percentages shall be of the maximum allowable quantity per control area shown in Tables 307.1(1) and 307.1(2), with all increases allowed in the footnotes to those tables.

b. Fire barriers shall include walls, floors and ceilings necessary to provide separation from other portions of the building.

c. Vertical fire barriers separating laboratory suites from other spaces on the same floor shall be permitted to be 1-hour fire-resistance rated.

[F] 428.3.7 Ventilation. Ventilation shall be in accordance with Chapter 7 of NFPA 45, and the International Mechanical Code.

[F] 428.3.8 Liquid-tight floor. Portions of laboratory suites where hazardous materials are present shall be provided with a liquid-tight floor.

[F] 428.3.9 Automatic fire-extinguishing systems.

Buildings containing laboratory suites shall be equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1.

[F] 428.4 Percentage of maximum allowable quantity in each laboratory suite. The percentage of maximum allowable quantities of hazardous materials in each laboratory suite shall be in accordance with Table 428.3.

[F] 2702.2.12 Laboratory suites. Standby or emergency power shall be provided in accordance with Section 5004.7 where *laboratory suites* are located above the sixth story above grade plane or located in a story below grand plant.

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Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 6. R-2.2 Based on SB112

[Chapter 2 Definitions:]

Community Correctional Reentry Centers - California Department of Corrections and Rehabilitation (CDCR) - community-located facilities that provide housing and transitional rehabilitative or community-based programing services for ambulatory inmates. CDCR Program services assist with substance use disorder treatment, employment, education, family reunification, and social support. Program participants remain under the jurisdiction of CDCR, are monitored by CDCR staff and supervised by CDCR approved/contracted program providers 24/7. The facilities include residential living, food services, administrative and program functional spaces in a non-licensed 24 hr. facility.

[310.3.2]

310.3.2 Residential Group R-2.2 (CDCR Only). Residential occupancies operated by CDCR in a community located facility that provides housing and community based program services for non-transient ambulatory participants in a non-licensed facility with 24/7 supervision.

[310.4]

310.4 Residential Group R-3. Residential Group R-3 occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, <u>R-2.2</u>, R-4 or I, including:

Buildings that do not contain more than two *dwelling units* Care facilities that provide accommodations for five or fewer persons receiving care

Congregate living facilities (non-transient) with 16 or fewer occupants

Boarding houses (non-transient)

Convents

Dormitories

Fraternities and sororities

Monasteries

Congregate living facilities (transient) with 10 or fewer occupants

Boarding houses (transient)

Lodging houses (transient) with five or fewer guest rooms and 10 or fewer occupants

... [SECTION 420 Title]

SECTION 420 GROUPS R-1, R-2, *R-2.1*, *R-2.2*, R-3, *R-3.1* and R-4

[420.1]

420.1 General. Occupancies in Groups I-1, R-1, R-2, <u>R-2.2</u>, R-3, <u>R-3.1</u> and R-4 shall comply with the provisions of Sections 420.1through 420.10 and other applicable provisions of this code.

•••

[420.4]

420.4 Automatic sprinkler system. Group R occupancies shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.8. <u>Group R-2.2 shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. <u>Group I-1 Group R-2.1</u> occupancies shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.6. Quick response or residential automatic sprinklers shall be installed in accordance with Section 903.3.2.</u>

[420.5]

420.5 Fire alarm systems and smoke alarms. Fire alarm systems and smoke alarms shall be provided in Group I-1, R-1 and R-2, *R-2.1 and R-4* occupancies in accordance with Sections 907.2.6, 907.2.8, and 907.2.9 and 907.2.10, respectively. Single- or multiple-station smoke alarms shall be provided in Groups I-1, R-2, *R-2.1*, R-3 and R-4 in accordance with Section 907.2.10. Group R-2.2 shall be equipped throughout with an automatic fire alarm systems per 907.2.9.2 and shall have a manual fire alarm pull station at the 24-hour staff watch office.

[420.6]

420.46 Smoke barriers in Group *R-2.1*. Smoke barriers shall be provided in Group *R-2.1*, to subdivide every story used by persons receiving care, treatment or sleeping and to provide other stories with an occupant load of 50 or

more persons, into no fewer than two smoke compartments. Such stories shall be divided into smoke compartments with an area of not more than 22,500 square feet (2092 m2) and the distance of travel 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 in accordance with Section 709.

[420.6.1]

420.6.1 Smoke barrier in Group R-2.2. Occupancies in Group R-2.2 shall have smoke barriers complying with Sections 709 to divide every story occupied by residents for sleeping, into no fewer than two smoke compartments.

Exception: Spaces having a direct exit to a public way

[420.6.2]

420.6.1 <u>420.6.2</u> **Refuge area.** Refuge areas shall be provided within each smoke compartment. The size of the refuge area shall accommodate the occupants and care recipients from the adjoining smoke compartment. Where a smoke compartment is adjoined by two or more smoke compartments, the minimum area of the refuge area shall accommodate the largest occupant load of the adjoining compartments. The size of the refuge area shall provide the following:

- 1. Not less than 15 net square feet (1.4 m2) for each care recipient.
- 2. Not less than 6 net square feet (0.56 m2) for other occupants.

Areas or spaces permitted to be included in the calculation of the refuge area are corridors, lounge or dining areas and other low-hazard areas.

[420.11]

420.11 Electronic Monitoring.

In R-2.2. Occupancies there will be continuous electronic supervision via CCTV system camera coverage and monitoring the following areas: corridors, storage rooms over 100 square feet, central kitchen, and main entryway of the facility.

٠.

[TABLE 504.3]

TABLE 504.3 a.i. ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE

	COCUDANCY		TYPE OF CONSTRUCTION									
	OCCUPANCY CLASSIFICATION	OFF FOOTNOTES	TY	PEI	TYF	PEII	TYF	PE III	TYPE IV	TYF	ΈV	
	CLASSIFICATION	SEE FOOTNOTES	Α	В	Α	В	Α	В	HT	Α	В	
	Doh	NS ^{d,h}	UL	160	65	55	65	55	65	50	40	
		S13R	60	60	60	<i>5</i> 5	60	55	60	50	40	
	<u>R-2^h</u>	S (without area increase)	UL	180	85	75	85	75	85	70	60	
		S (with area increase)	UL	160	65	<i>5</i> 5	65	55	65	60 ^j	40	
	<u>R-2.2</u>	S (without area increase)	<u>UL</u>	<u>180</u>	<u>85</u>	<u>75</u>	<u>85</u>	<u>75</u>	<u>85</u>	<u>70</u>	<u>60</u>	
		S (with area increase)	<u>UL</u>	<u>160</u>	<u>65</u>	<u>55</u>	<u>65</u>	<u>55</u>	<u>65</u>	<u>60</u>	<u>40</u>	

. . .

[TABLE 504.4]

TABLE 504.4 a, b_n
ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE

COCURANOV			TYPE OF CONSTRUCTION								
OCCUPANCY CLASSIFICATION	SEE FOOTNOTES	TY	PEI	TYPE II		TYPE III		TYPE IV	TYPE V		
CLASSIFICATION	SEE FOOTNOTES	Α	В	Α	В	Α	В	HT	Α	В	
	NS ^{d,h}	UL	11	4	4	4	4	4	3	2	
R-2 ^h	S13R	4	4	4	4	4	4	4	3	2	
K-2"	S (without area increase)	UL	12	5	5	5	5	5	4	3	
	S (with area increase)	UL	11	4	4	4	4	4	40	2	
D 22h	S (without area increase)	<u>UL</u>	<u>12</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>4</u>	<u>3</u>	
<u>R-2.2</u> <u></u> ^b	S (with area increase)	<u>UL</u>	<u>11</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u> º	<u>2</u>	
	<i>N</i> S ^{d,h}	UL	6'	3 ^k	NP	3^k	NP	NP	3^k	NP	
R-2.1 ^h	S13R	UL	41	3^k	NP	3^k	NP	NP	3^k	NP	
	S	UL	6′	3^k	NP	3^k	NP	NP	3^k	NP	
	NS ^{d,h}	UL	11						3	3	
R-3, <i>R-3.1</i> ^h	S13D	4	4	4	4	4	4	4	3	3	
·	S13R	4	4						4	4	
	S	UL	12	5	5	5	5	5	4	4	

. . .

[TABLE 506.2]

TABLE 506.2 a, b, \underline{i} ALLOWABLE AREA FACTOR (At = NS, S1, S13R, or SM, as applicable) IN SQUARE FEET

00011041101/			TYPE	OF CON	ISTRUC [*]	TION				
OCCUPANCY CLASSIFICATION	SEE FOOTNOTES	TYPE I		TYPE II		TYPE III		TYPE IV	TYF	PΕV
CLASSIFICATION	SEE FOOTNOTES	Α	В	Α	В	Α	В	HT	Α	В
	NS ^{d,h}	UL	UL	24,000	16,000	24,000	16,000	20.500	12,000	7,000
	S13R	UL	UL	24,000	16,000	24,000	16,000	20,500	12,000	7,000
R-2 ^h	S1	UL	UL	96,000	64,000	96,000	64,000	82,000	48,000	28,000
	SM (without height increase)	UL	UL	72,000	48,000	72,000	48,000	61,500	36,000	21,000
	SM (with height increase)	UL	UL	24,000	16,000	24,000	16,000	20,500	12,000	7,000
	NS ^d	NP	NP	NP	NP	NP	NP	NP	40,000	NP
	S13R	NP			IVE	IVI			12,000	NP
R-2 Type VA construction ^h	S1	NP	NP	NP	NP	NP	NP	NP	48,000	NP
	SM (without height increase)	NP	NP	NP	NP	NP	NP	NP	36,000	NP
	SM (with height increase)	NP	NP	NP	NP	NP	NP	NP	36,000 ^j	NP
	NS ^d	UL	<i>EE</i> 000	10,000	NP	16 500	NP	NP	160 F00	NP
	S13R	UL	55,000	19,000	INP	16,500	IVP	NP	1 <u>60</u> ,500	NP
R-2.1 ^h	S1	UL	220,000	76,000	40,000 <u>NP</u>	66,000	40,000 <u>NP</u>	72,000	42,000	18,000 <u>NP</u>
	SM (without height increase)	UL	165,000	57,000	30,000 <u>NP</u>	49,500	30,000 <u>NP</u>	54,000	31,500	NP
	SM (with height increase)	UL	55,000	19,000	NP	16,500	NP	NP	16,500	NP

									<u>10,500</u>	
	<u>S1</u>	<u>UL</u>	<u>UL</u>	<u>96,000</u>	<u>64,000</u>	<u>96,000</u>	<u>64,000</u>	<u>82,000</u>	<u>48,000</u>	<u>28,000</u>
<u>R-2.2^h</u>	SM (without height increase)	<u>UL</u>	<u>UL</u>	<u>72,000</u>	<u>48,000</u>	<u>72,000</u>	<u>48,000</u>	<u>61,500</u>	<u>36,000</u>	<u>21,000</u>
	SM (with height increase)	<u>UL</u>	<u>UL</u>	<u>24,000</u>	16,000	<u>24,000</u>	<u>16,000</u>	<u>20,500</u>	<u>12,000</u>	<u>7,000</u>

...

[508.2.4]

508.2.4 Separation of occupancies. No separation is required between accessory occupancies and the main occupancy.

Exceptions:

- Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.4.
- 2. Group I-1, R-1, R-2, <u>R-2.2</u>, and R-3 *dwelling units* and *sleeping units* shall be separated from other *dwelling* or *sleeping units* and from accessory occupancies contiguous to them in accordance with the requirements of Section 420.

•••

[508.3.3]

508.3.3 Separation. No separation is required between nonseparated occupancies.

Exceptions:

- 1. Group H-2, H-3, H-4 and H-5 occupancies shall be separated from all other occupancies in accordance with Section 508.4.
- 2. Group I-1, R-1, R-2, <u>R-2.2</u>, and R-3 *dwelling units* and *sleeping units* shall be separated from other *dwelling* or *sleeping units* and from other occupancies contiguous to them in accordance with the requirements of Section 420.

..

[510.5]

510.5 Group R-1, R-2, and *R-2.2* buildings of Type IIIA construction.

The height limitation for buildings of Type IIIA construction in Groups R-1, R-2 and R-2,2 shall be increased to six stories and 75 feet (22 860 mm) where the first-floor assembly above the basement has a fire-resistance rating of not less than 3 hours and the floor area is subdivided by 2-hour fire resistance-rated fire walls into areas of not more than 3,000 square feet (279 m2).

...

[510.6]

510.6 Group R-1, R-2, and R-2.2 buildings of Type IIA construction.

The height limitation for buildings of Type IIA construction in Groups R-1, and R-2, and R-2.2 shall be increased to

nine stories and 100 feet (30 480 mm) where the building is separated by not less than 50 feet (15 240 mm) from any other building on the lot and from lot lines, the exits are segregated in an area enclosed by a 2-hour fire-resistance-rated fire wall and the first-floor assembly has a fire-resistance rating of not less than 1^{1/2} hours.

. . .

[TABLE 706.4]

TABLE 706.4
FIRE WALL FIRE-RESISTANCE RATINGS

GROUP	FIRE-RESISTANCE RATING
A, B, E, H-4, I, R-1, R-2, <i>R-2.1, <u>R-2.2</u></i> , U, <i>L</i>	3ª
F-1, H-3 ^b , H-5, M, S-1	3
H-1, H-2	4 ^b
F-2, S-2, R-3, R-4	2

a. In Type II or V construction, walls shall be permitted to have a 2-hour fire-resistance rating.

...

[708.4.2]

708.4.2 Fireblocks and draftstops in combustible construction.

In combustible construction where fire partitions do not extend to the underside of the floor or roof sheathing, deck or slab above, the space above and along the line of the fire partition shall be provided with one of the following:

- 1. Fireblocking up to the underside of the floor or roof sheathing, deck or slab above using materials complying with Section 718.2.1.
- 2. Draftstopping up to the underside of the floor or roof sheathing, deck or slab above using materials complying with Section 718.3.1 for floors or Section 718.4.1 for attics.

Exceptions:

- Buildings equipped with an automatic sprinkler system installed throughout in accordance with Section 903.3.1.1, or in accordance with Section 903.3.1.2 provided that protection is provided in the space between the top of the fire partition and underside of the floor or roof sheathing, deck or slab above as required for systems complying with Section 903.3.1.1.
- 2. Where corridor walls provide a sleeping unit or dwelling unit separation, draftstopping shall only be required above one of the corridor walls.
- 3. In Group R-2 occupancies with fewer than four dwelling units, fireblocking and draftstopping shall not be required.
- 4. In Group R-2, <u>R-2.2</u> occupancies up to and including four stories in height in buildings not exceeding 60 feet (18 288 mm) in height above grade plane, the attic space shall be subdivided by draftstops into areas not exceeding 3,000 square feet (279 m2) or above every two dwelling units, whichever is smaller.
- 5. In Group R-3 occupancies with fewer than three dwelling units, fire-blocking and draftstopping shall not be required in floor assemblies.

b. For Group H-1, H-2 or H-3 buildings, also see Sections 415.7 and 415.8.

...

[TABLE 803.13]

TABLE 803.13

INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY^k

		SPRINKLERED ¹	NONSPRINKLERED					
GROUP	Interior exit stairways and ramps and exit passageways ^{a, b}	Corridors and enclosure for exit access stairways and ramps	Rooms and enclosed spaces ^c	Interior exit stairways and ramps and exit passageways ^{a, b}	Corridors and enclosure for exit access stairways and ramps	Rooms and enclosed spaces ^c		
A-1 & A-2	В	В	С	A	A ^d	Be		
A-3 ^f , A-4, A-5	В	В	С	A	A ^d	С		
B, E, M, R-1	В	C _m	С	А	В	С		
R-4	В	С	С	А	В	В		
F	С	С	С	В	С	С		
Н	В	В	Ca	А	А	В		
I-1	В	С	С	А	В	В		
I-2	В	В	B ^{h, i}	A	А	В		
I-3	Α	A ^j	С	А	А	В		
I-4	В	В	B ^{h, i}	А	А	В		
R-2	С	С	С	В	В	С		
R-2.2	<u>C</u>	<u>C</u>	<u>C</u>	<u>B</u>	<u>B</u>	<u>C</u>		
R-3	С	С	С	С	С	С		
S	С	С	С	В	В	С		
U	No restrictions			No restrictions				

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2 .

b. In other than Group I-3 occupancies in buildings less than three stories above grade plane, Class B interior finish for nonsprinklered buildings and Class C interior finish for sprinklered buildings shall be permitted in interior exit stairways and ramps.

[804.4.2]

804.4.2 Minimum critical radiant flux. In all occupancies, interior floor finish and floor covering materials in enclosures for stairways and ramps, exit passageways, corridors and rooms or spaces not separated from corridors by partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux. The minimum critical radiant flux shall be not less than Class I in Groups I-2, *I-3 areas where restraint is not used and R-2.1* and not less than Class II in Groups A, B, E, H, *I-2.1*, I- 4, M, R-1, R-2, <u>R-2.2</u> and S.

Exception: Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, Class II materials are permitted in any area where Class I materials are required, and materials complying with ASTM Standard E648, and having a specific optical density smoke rating not to exceed 450 per ASTM E662 are permitted in any area where Class II materials are required.

a. Class C interior finish materials shall be permitted for wainscotting or paneling of not more than 1,000 square feet of applied surface area in the grade lobby where applied directly to a noncombustible base or over furring strips applied to a noncombustible base and fireblocked as required by Section 803.15.1.

For Group I-3 areas occupied by inmates or Group I-2 areas where patients are restrained, see Section 804.4.3.

• • •

[906.1]

906.1 Where required. Portable fire extinguishers shall be installed in all of the following locations:

1. In Group A, B, E, F, H, I, M, R-1, R-2, <u>R-2.2</u>, R-4 and S occupancies.

...

[907.2.9]

907.2.9 Group R-2, and R-2.1 <u>and R-2.2</u>. Fire alarm systems and smoke alarms shall be installed in Group R-2 occupancies as required in Sections 907.2.9.1 through 907.2.9.3. <u>Group R-2.2 shall be equipped throughout with an automatic fire alarm systems and shall have a manual fire alarm pull station at the 24-hour staff watch office.</u>

..

[907.2.12.1.2]

907.2.12.1.2 Duct smoke detection. Duct smoke detectors complying with Section 907.3.1 shall be located as follows:

- 1. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m3/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.
- At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2, <u>R-2.2</u>, occupancies, a smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm (2.4m3/s) and serving not more than 10 airinlet openings.

..

[907.5.2.3.3]

907.5.2.3.3 Group R-2. In Group R-2, <u>and R-2.2</u>, occupancies required by Section 907 to have a fire alarm system, each story that contains dwelling units and sleeping units shall be provided with the capability to support visible alarm notification appliances in accordance with Chapter 11 of ICC A117.1. Such capability shall accommodate wired or wireless equipment. The future capability shall include one of the following:

- The interconnection of the building fire alarm system with the unit smoke alarms.
- 2. The replacement of audible appliances with combination audible/visible appliances.
- The future extension of the existing wiring from the unit smoke alarm locations to required locations for visible appliances.

[907.2.10.2]

907.2.10.2 Groups R-2, <u>R-2.1, R-2.2</u>, R-3, R-4 and I-1. Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, <u>R2.1, R-2.2</u>, R-3, R-4 and I-1 regardless of occupant load at all of the following locations:

..

[1005.7.1]

1005.7.1 Doors. Doors, when fully opened, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half.

Exceptions:

- 1. Surface-mounted latch release hardware shall be exempt from inclusion in the 7-inch maximum (178) encroachment where both of the following conditions exist:
 - 1.1 The hardware is mounted to the side of the door facing away from the adjacent wall where the door is in the open position.
 - 1.2. The hardware is mounted not less than 34 inches (865 mm) nor more than 48 inches (1219 mm) above the finished floor.
- 2. The restrictions on door swing shall not apply to doors within individual dwelling units and sleeping units of Group R-2 <u>and R-2.2</u> occupancies and dwelling units of Group R-3 occupancies.

...

[TABLE 1006.2.1]

TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

OCCUPANCY	MAYIMUM OOQUDANT	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)						
	MAXIMUM OCCUPANT LOAD OF SPACE		nkler System et)	With Sprinkler System				
		Occupa	int Load	(feet)				
		OL ≤ 30	OL > 30					
A ^c , E, M	49	75	75	75ª				
В	49	100	75	100 ^a				
F	49	75	75	100 ^a				
H-1, H-2, H-3	3	NP	NP	25 ^b				
H-4, H-5	10	NP	NP	75 ^b				
I-1 , I-2 ^d , I-4	10	NP	NP	75ª				
I-3	10	NP	NP	100 ^a				
R-1	10	NP	NP	75ª				
R-2	20	NP	NP	125ª				
R-2.2	<u>20</u>	<u>NP</u>	<u>NP</u>	125ª				
R-3 ^e	20	NP	NP	125 ^{a, g}				
R-4 ^e	20	NP	NP	125 ^{a, g}				
S^{f}	29	100	75	100 ^a				
U	49	100	75	75°				

...

[TABLE 1006.3.3(2)]

TABLE 1006.3.3(2)

STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY			MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)		
	$A, B^b, E F^b, M, U$	49	75		
First story above or below grade plane	H-2, H-3	3	25		
	H-4, H-5, I, R-1, R-2 ^{a, c} , <u><i>R</i>-2.2</u>	10	75		
	$S^{\mathrm{b,d}}$	29	75		
Second story above grade plane	B, F, M, S ^d	29	75		
Third story above grade plane and higher	NP	NA	NA		

• • •

[1008.2]

1008.2 Illumination required. The means of egress serving a room or space shall be illuminated at all times that the room or space is occupied.

Exceptions:

- 1. Occupancies in Group U.
- 2. Aisle access ways in Group A.
- 3. Dwelling units and sleeping units in Groups R-1, R- 2, R-2.2 and R-3.
- 4. Sleeping units of Group I occupancies.

...

[1010.1.2]

1010.1.2 Door swing. Egress doors shall be of the pivoted or side-hinged swinging type.

Exceptions:

- 1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.
- 2. Group I-3 occupancies used as a place of detention.
- 3. Critical or intensive care patient rooms within suites of health care facilities.
- 4. Doors within or serving a single dwelling unit in Groups R-2 and R-3.
- 5. In other than Group H occupancies, revolving doors complying with Section 1010.1.4.1.
- 6. In other than Group H occupancies, special purpose horizontal sliding, accordion or folding door assemblies complying with Section 1010.1.4.3.
- 7. Power-operated doors in accordance with Section 1010.1.4.2.
- 8. Doors serving a bathroom within an individual sleeping unit in Group R-1 and R-2.2.
- In other than Group H occupancies, manually operated horizontal sliding doors are permitted in a means of egress from spaces with an occupant load of 10 or less.

. . .

[1011.11]

1011.11 Handrails. Flights of stairways shall have handrails on each side and shall comply with Section 1014. Where glass is used to provide the handrail, the handrail shall comply with Section 2407.

Exceptions:

- 1. Flights of stairways within dwelling units and flights of spiral stairways are permitted to have a handrail on one side only.
- 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.
- 3. In Group R-3 occupancies, a change in elevation consisting of a single riser at an entrance or egress door does not require handrails.
- 4. Changes in room elevations of three or fewer risers within dwelling units and sleeping units in Group R-2, *R-2.2*, and R-3 do not require handrails.

...

[1019.3]

1019.3 Occupancies other than Groups I-2, *I-2.1*, and I-3 and R-2.1. In other than Group I-2, *I-2.1* and I-3 and R-2.1 occupancies, floor openings containing exit access stairways or ramps that do not comply with one of the conditions listed in this section shall be enclosed with a shaft enclosure constructed in accordance with Section 713.

- 1. Exit access stairways and ramps that serve or atmospherically communicate between only two stories. Such interconnected stories shall not be open to other stories.
- 2. In Group R-1, R-2, R-2.1, R-2.2, er R-3 or R-3.1 occupancies, exit access stairways and ramps connecting four stories or less serving and contained within an individual dwelling unit or sleeping unit or live/work unit.
- 3. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.
- 4. Exit access stairways and ramps in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the stairway or ramp and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.

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[1020.4]

1020.4 Dead ends. Where more than one exit or exit access, doorway is required, the exit access shall be arranged such that dead-end corridors do not exceed 20 feet (6096 mm) in length.

Exceptions:

- 1. In in Group I-3, Condition 2, 3 or 4, occupancies, the dead end in a corridor shall not exceed 50 feet (15 240 mm).
- 2. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, R-2.1, R-2.2, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15 240 mm).
- 3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less

than 2.5 times the least width of the dead-end corridor.

...

[1027.6]

1027.6 Exterior exit stairway and ramp protection. Exterior exit stairways and ramps shall be separated from the interior of the building as required in Section 1023.2. Openings shall be limited to those necessary for egress from normally occupied spaces. Where a vertical plane projecting from the edge of an exterior exit stairway or ramp and landings is exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the exterior wall shall be rated in accordance with Section 1023.7.

Exceptions:

- 1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1, R-2, or <u>R-2.2</u>, in buildings that are not more than two stories above grade plane where a level of exit discharge serving such occupancies is the first story above grade plane.
- Separation from the interior of the building is not required where the exterior exit stairway or ramp is served by an exterior exit ramp or balcony that connects two remote exterior exit stairways or other approved exits with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be not less than 50 percent of the height of the enclosing wall, with the top of the openings not less than 7 feet (2134 mm) above the top of the balcony.
- 3. Separation from the open-ended corridor of the building is not required for exterior exit stairways r ramps, provided that Items 3.1 through 3.5 are met:
 - 3.1. The building, including open-ended corridors, and stairways and ramps, shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 3.2. The open-ended corridors comply with Section 1020.
 - 3.3. The open-ended corridors are connected on each end to an exterior exit stairway or ramp complying with Section 1027.
 - 3.4. The exterior walls and openings adjacent to the exterior exit stairway or ramp comply with Section 1023.7.
 - 3.5. 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 stairway or ramp shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.
- 4. In Group R-3 occupancies not more than four stories in height, exterior exit stairways and ramps serving individual dwelling units are not required to be separated from the interior of the building where the exterior exit stairway or ramp discharges directly to grade.

. . .

[1030.1]

1030.1 General. In addition to the means of egress required by this chapter, emergency escape and rescue openings shall be provided in the following occupancies:

1. Group R-2, <u>R-2.2</u> occupancies located in stories with only one exit or access to only one exit as permitted by Tables 1006.3.3(1) and 1006.3.3(2).

2. Group R-3 and R-4 occupancies.

Basements and sleeping rooms below the fourth story above grade plane shall have not fewer than one exterior emergency escape and rescue opening in accordance with this section. Where basements contain one or more sleeping rooms, emergency escape and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Such openings shall open directly into a public way or to a yard or court that opens to a public way.

Exceptions:

- 1. In Groups R-1 and R-2 occupancies constructed of Type I, Type IIA, Type IIIA or Type IV construction equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1.
- 2.Group R-2.1 Occupancies, meeting the requirements for delayed egress in accordance with Section 1010.1.9.8 may have operable windows that are breakable in sleeping rooms permanently restricted to a maximum of 4-inch open position.
- 43. Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue openings.
- 24. Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court or exterior exit balcony that opens to a public way.
- 3<u>5</u>. Basements without habitable spaces and having not more than 200 square feet (18.6 m2) in floor area shall not be required to have emergency escape and rescue openings.
- 4<u>6</u>. Within individual dwelling and sleeping units in Groups R-2, <u>R-2.2</u> and R-3, where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:
 - 4.16.1. One means of egress and one emergency escape and rescue opening.
 - 4.26.2. Two means of egress.
 - 4.3 6.3. In R-2.2 occupancies a certified fire escape is acceptable as a secondary means of egress for existing buildings for this section of the code.

[3006.2]

3006.2 Hoist-way opening protection required. Elevator hoist-way door openings shall be protected in accordance with Section 3006.3 where an elevator hoist-way connects more than *two stories in Group A, E, H, I, L, R-1, R-2 and R-2.1, R-2.2* occupancies, high-rise buildings, and other applications listed in Section 1.11 regulated by the Office of The State Fire Marshal, and more than three stories for all other occupancies, is required to be enclosed within a shaft enclosure in accordance with Section 712.1.1 and any of the following conditions apply:

- 1. The building is not protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
- 2. Group A occupancies;
- 3. Group E occupancies;

- 4. Group H occupancies;
- 5. Group I occupancies;
- 6. Group L occupancies:
- 7. Group R-1, R-2 and R-2.1, R-2.2 occupancies; and
- 8. High-rise buildings.

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

Exceptions:

- 1. Protection of elevator hoist-way door openings is not required where the elevator serves only open parking garages in accordance with Section 406.5.
- 2. Protection of elevator hoist-way door openings is not required at the level(s) of exit discharge, provided the level(s) of exit discharge is equipped with an automatic sprinkler system in accordance with Section 903.3.1.1.
- 3. Enclosed elevator lobbies and protection of elevator hoist-way door openings are not required on levels where the elevator hoist-way opens to the exterior.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 7. Stairway Capacity

1005.3 Required capacity based on occupant load. The required capacity, in inches (mm), of the means of egress for any room, area, space or story shall be not less than that determined in accordance with Sections 1005.3.1 and 1005.3.2:

[1005.3.1]

1005.3.1 Stairways. The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairways by a means of egress capacity factor of 0.3 inch (7.6 mm) per occupant. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story.

Exceptions:

- 1. For other than Group \underline{A} , H and I-2 occupancies, the capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairways by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.
- 2. Facilities with smoke-protected assembly seating shall be permitted to use the capacity factors in Table 1029.6.2 indicated for stepped aisles for exit access or exit stairways where the entire path for means of egress from the seating to the exit discharge is provided with a smoke control system complying with Section 909.

- 3. Facilities with open-air assembly seating shall be permitted to the capacity factors in Section 1029.6.3 indicated for stepped aisles for exit access or exit stairways where the entire path for means of egress from the seating to the exit discharge is open to the outdoors.
- 4.For Group H-1, H-2, H-3 and H-4 occupancies the total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by 0.7 inches (7.62 mm) per occupant.
- 5. For rooms or spaces used for assembly purposes without smoke protection see Section 1029.

[1005.3.2]

1005.3.2 Other egress components. The capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant.

Exceptions:

- 1. For other than Group <u>A</u>, H and I-2 occupancies, the capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.15 inch (3.8 mm) per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.
- 2. Facilities with smoke-protected assembly seating shall be permitted to use the capacity factors in Table 1029.6.2 indicated for level or ramped aisles for means of egress components other than stairways where the entire path for means of egress from the seating to the exit discharge is provided with a smoke control system complying with Section 909.
- 3. Facilities with open-air assembly seating shall be permitted to the capacity factors in Section 1029.6.3 indicated for level or ramped aisles for means of egress components other than stairways where the entire path for means of egress from the seating to the exit discharge is open to the outdoors.
- 4. For Group H-1, H-2, H-3 and H-4 occupancies the total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by 0.4 inches (5.08 111m) per occupant.
- 5. Means of egress complying with Section 1029.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 8. Balcony and Elevated Walking Surfaces

[705.2.3.2]

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705.2.3.2 Vents. [SFM] Vents required by Section 2304.12.2.6 in fire rated exterior balconies or elevated walkway surfaces shall be designed where the voids created at the intersection of the exterior curtain wall and the balcony floor are sealed with an approved material or system to retard the interior spread of flame, hot gases and products of combustion. Rated assemblies shall comply with Section 715. Ventilation openings shall comply with WUI requirements where applicable. Balconies shall comply with the fire sprinkler protection as required by 903.3.1.1 or 903.3.1.2 and the reference standard.

. . .

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 9. Secondary Attachments to steel

. . .

[704.6.1]

704.6.1 Secondary attachments to structural members. Where primary and secondary structural steel members require fire protection, secondary steel attachments to those structural members shall be protected with the same fire resistive material and thickness as required for the structural member. The protection shall extend away from the structural member a distance of not less than 12 inches, or shall be applied to the entire length when the attachment is less than 12 inches long. When an attachment is hollow and the ends are open, the fire resistive material and thickness shall be applied to both exterior and interior of the hollow steel attachment.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 10. Carbon Monoxide

[915.1]

915.1 General. Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through *915.7*. Carbon monoxide detection shall be installed in existing buildings in accordance with *this section* <u>and</u> Chapter 11 of the <u>International</u> <u>California</u> Fire Code.

Pursuant to Health and Safety Code Section 17926, carbon monoxide detection shall be installed in all existing Group R buildings as required in this section.

[915.2.3]

915.2.3 Group E occupancies. Carbon monoxide detectors shall be installed in classrooms in Group E occupancies where classrooms include any of the conditions identified in Sections 915.1.2 through 915.1.6. Carbon monoxide alarm signals shall be automatically transmitted to an on-site location that is staffed by school personnel.

Exception: Carbon monoxide alarm signals shall not be required to be automatically transmitted to an on-site location that is staffed by school personnel in Group E occupancies with an occupant load of 30 or less.

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[915.4.2]

915.4.2 Listings. Residential Carbon monoxide alarms shall be listed in accordance with UL 2034....

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 11. Class A Wiring in High-rise buildings

. . .

[907.6.1.1]

907.6.1.1 High-rise buildings. Wiring for fire alarm <u>network communication circuits between multiple-control units signaling line circuits, initiating circuits and notification circuits in high-rise buildings shall be in accordance with the following:</u>

1. Class A or Class X installed in accordance with NFPA 72.

Exception: Initiating circuits which serve only a single initiating device.

Installed in E-enclosed in continuous metallic raceways in accordance with the California Electrical Code.

Exception: Metallic cable (MC) shall be permitted for fire alarm notification circuits where continuous metallic raceways are not required for survivability.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 12. Fire Command Center

[911.1.2]

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911.1.2 Separation. The fire command center shall be separated from the remainder of the building by not less than a 4 <u>2</u>-hour fire barrier constructed in accordance with Section 707 or horizontal assembly constructed in accordance with Section 711, or both.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 13. Chapter 35 - NFPA 13 Waterflow test

[NFPA 13 section 23.2.1.1]

[Revise Section 23.2.1.1 as follows:]

23.2.1.1* Where a waterflow test is used for the purposes of system design, the test shall be conducted no more than 42 6 months prior to working plan submittal unless otherwise approved by the authority having jurisdiction.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 14. Business Areas Table 1004.5

[TABLE 1004.5 Business Areas]

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TABLE 1004.5

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT
OCCUPANT
FUNCTION OF SPACE
LOAD
FACTOR ^a

Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	3
Baggage claim Baggage handling	20 gross 300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.) Exhibit gallery and museum	11 gross 30 net See Section
Assembly with fixed seats	1004.7
Assembly without fixed seats	
Concentrated (chairs only-not fixed)	7 net
Standing space Unconcentrated (tables and chairs)	5 net 15 net
,	10 Het
Bowling centers, allow 5 persons for each lane including 15 feet of	
runway, and for additional areas	7 net
Business areas	150 100 gross
Concentrated business use areas	See Section 1004.8
Courtrooms-other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational Classroom area (K – 12 th grade)	20 net
Shops and other vocational room areas	50 net
Exercise rooms H-5 Fabrication and manufacturing	50 gross
areas	200 gross
Industrial areas	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Laboratory Educational <u>(K-12th grade)</u>	50 net
Laboratories, non-educational	100 net
Laboratory suite ^b	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross
Mall buildings – covered and open	See Section 402.8.2
Mercantile	702.0.2

Areas on other floors Storage, stock, shipping areas	60 gross 300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool Decks	50 gross 15 gross
Stages and platforms	15 net
Warehouses	500 gross

For SI: 1 square foot = 0.0929 m2.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13110, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 15. OSHPD I-2 and I-2.1

CHAPTER 2 DEFINITIONS

[CARE SUITE]

...

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

[NON-PATIENT-CARE SUITE]

NON-PATIENT-CARE SUITE. In Group I-2 or I-2.1 occupancies, a group of rooms or spaces within a suite for use as administrative, business and professional offices.

CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

[407.2.1]

...

407.2.1 Waiting and similar areas. Waiting areas, public-use areas or group meeting <u>and similar</u> spaces constructed as required for corridors shall be permitted to be open to a corridor, only where all of the following criteria

^a Floor area in square feet per occupant.

^b See Section 453.2.

are met:

- 1. The spaces are not occupied as care recipient's sleeping rooms, treatment rooms, incidental uses *listed in Table 509*, or hazardous uses.
- 2. The open space is protected by an automatic *smoke* detection system installed in accordance with Section 907.
- 3. The corridors onto which the spaces open, in the same smoke compartment, are protected by an automatic *smoke* detection system installed in accordance with Section 907, *and* the smoke compartment in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
- 4. The space is arranged so as not to obstruct access to the required exits.
- 5. Each space is located to permit direct visual supervision by the facility staff.

[407.4.2.1]

...

407.4.2.1 Two means of egress. Any sleeping room of more than 1,000 square feet (93 m²) shall have no fewer than two exit access doors from the sleeping room located in accordance with Section 1007.1. Any room, other than sleeping rooms, with an area of more than 2,500 square feet (232 m²) shall have no fewer than two exit access doors from the room located in accordance with Section 1007.1.

[407.4.4]

. . .

407.4.4 Group I-2 <u>and I-2.1</u> care suites. Care suites in Group I-2 or I-2.1 shall comply with Sections 407.4.4.1 through 407.4.4.4 and either Section 407.4.4.5 or 407.4.4.6 or 407.4.5.

[407.4.4.5.2]

...

407.4.4.5.2 Exit access. Any sleeping room, or any care suite that contains sleeping rooms, of more than 1,000 square feet (93 m²) shall have no fewer than two *exit access* doors from the *care suite* located in accordance with Section 1007.

[407.4.5, 407.4.5.1, 407.4.5.2, 407.4.5.3]

...

<u>407.4.5 Group I-2 and I-2.1 non-patient-care suites.</u> The means of egress provisions for non-patient-care suites shall be in accordance with the primary use and occupancy of the suite.

407.4.5.1 Separation. Non-patient-care suites shall be separated from other portions of the building, including other suites, by not less than a one-hour fire barrier complying with Section 707. Each suite of rooms shall be separated from the remainder of the building by not less than a one-hour fire barrier.

407.4.5.2 Area. Non-patient-care suites of rooms shall have an area not greater than 10,000 square feet (929 m²).

407.4.5.3 Automatic sprinkler system protection. Non-patient-care suites shall be located in fully sprinklered buildings.

[407.5.1]

407.5.1 Smoke compartment size. Stories shall be divided into smoke compartments with an area of not more than 22,500 square feet (2092 m²) in Group I-2 occupancies.

Exceptions:

- A smoke compartment in Group I-2, Condition 2 is permitted to have an area of not more than 40,000 square feet (3716 m²) provided that all patient sleeping rooms within that smoke compartment are configured for single patient occupancy and any suite within the smoke compartment complies with Section 407.4.4.
- A smoke compartment in Group I-2, Condition 2 without patient sleeping rooms is permitted to have an area of not more than 40,000 square feet (3716 m²).

..

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

[TABLE 504.3]

...

TABLE 504.3 ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE a, i

	TYPE OF CONSTRUCTION										
OCCUPANCY CLASSIFICATION	SEE FOOTNOTES	TYPE I		TYPE II		TYPE III		TYPE IV TYP		PE V	
		Α	В	Α	В	Α	В	HT	Α	В	
	NS d, f, e	UL	160	65		0.5	NID	0.5	50	ND	
I-2, <i>I-2.1</i>	S (without area increase)	UL	180	85	55	65	<u>NP</u>	65	50	<u>NP</u>	
	S (with area increase)	UL	160	65							

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CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

[709.5.1]

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709.5.1 Group I-2, *I-2.1*, *R-2.1* and ambulatory care facilities. In Group I-2, *I-2.1*, *R-2.1* and ambulatory care facilities, where doors protecting openings in *smoke barriers* are installed across a corridor and have hold-open devices, the doors shall be automatic-closing in accordance with Section 716.2.6.6. Such doors shall have a vision panel with fire-protection-rated glazing materials in fire-protection-rated frames, the area of which shall not exceed

that tested. <u>In Group I-2, where swinging doors are installed across a corridor, such doors shall be opposite swinging pairs.</u>

[716.5.3]

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716.5.3 Door assemblies in corridors and smoke barriers. Fire door assemblies required to have a minimum fire protection rating of 20 minutes where located in *corridor* walls or *smoke barrier* walls having a fire-resistance rating in accordance with Table 716.1(2) shall be tested in accordance with NFPA 252 or UL 10C without the hose stream test.

Exceptions:

- 1. Viewports that require a hole not larger than 1 inch (25 mm) in diameter through the door, have not less than a 0.25-inch-thick (6.4 mm) glass disc and the holder is of metal that will not melt out where subject to temperatures of 1,700°F (927°C).
- 2. Corridor door assemblies in occupancies of Group I-2 <u>and I-2.1 in fully sprinklered buildings</u> shall be in accordance with Section 407.3.1.
- 3. Unprotected openings shall be permitted for corridors in multi-theater complexes where each motion picture auditorium has at least one-half of its required exit or exit access doorways opening directly to the exterior or into an exit passageway.
- 4. Horizontal sliding doors in smoke barriers that comply with Sections 408.6 and 408.8.1 in occupancies in Group I-3.
- 5. Cell or room doors, including cell or room doors with integral side-lites that are part of the door assembly in Group I-3 occupancies which open into a required exit corridor within a cell complex.

[717.5.4.1]

717.5.4.1 Corridors. 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, duct and air transfer openings that penetrate corridors shall be protected with dampers as follows:

- 1. A *corridor damper* shall be provided where corridor ceilings, constructed as required for the corridor walls as permitted in Section 708.4, Exception 3, are penetrated.
- 2. A *ceiling radiation damper* shall be provided where the ceiling membrane of a fire-resistance rated floor-ceiling or roof-ceiling assembly, constructed as permitted in Section 708.4, Exception 2, is penetrated.
- 3. A listed *smoke damper* designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a corridor enclosure required to have smoke and draft control doors in accordance with Section 716.2.2.1.

Exceptions:

- Smoke dampers are not required where the building is equipped throughout with an approved smoke control system in accordance with Section 909, and smoke dampers are not necessary for the operation and control of the system.
- Smoke dampers are not required in corridor penetrations where the duct is constructed of steel
 not less than 0.019 inch (0.48 mm) in thickness and there are no openings serving the corridor.

[SFM] 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, a listed smoke damper designed to resist the passage of smoke shall also be provided at each point a duct or air transfer opening penetrates a fire-resistance rated corridor enclosure required to have smoke and draft doors in accordance with Section 716.5.3 2.2.1 or doors that provide an effective barrier to limit the transfer of smoke in accordance with Section 407.3.1.

Exceptions:

- 1. Smoke dampers are not required where ducts are used as part of an approved mechanical smoke control system designed in accordance with Section 909 and where the smoke damper will interfere with the operation of the smoke control system.
- 2. Smoke damper are not required in corridor penetrations where the duct is constructed of steel not less than 0.019 inch (0.48 mm) in thickness and there are no openings serving the corridor.

CHAPTER 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS

[907.5.1]

907.5.1 Pre-signal feature. A pre-signal feature shall not be installed unless *approved* by the *fire code official*. Where a pre-signal feature is provided, a signal shall be annunciated at a constantly attended location *approved* by the *fire code official*, so that occupant notification can be activated in the event of fire or other emergency.

Exception: A pre-signal feature shall not be permitted to be installed in a Group I-2, I-2.1 or R-2.1 occupancy.

[907.5.2.2]

907.5.2.2 Emergency voice/alarm communication systems. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving *approved* information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404. In high-rise buildings *and Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle <i>access*, the system shall operate on at least the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

- 1. Elevator groups.
- 2. Interior exit stairways.
- 3. Each floor.
- 4. Areas of refuge as defined in Chapter 2.

Exception: In Group I-2, I-2.1 and R-2.1 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

Exception: In Group I-2 <u>and I-2.1</u> occupancies, <u>where in accordance with Section 907.5.2.5</u>, <u>audible fire alarm notification devices are not provided, upon receipt of an alarm at a constantly attended location, a general occupant notification shall be broadcast over the public-address system.</u>

[907.5.2.5]

907.5.2.5 Groups I-2 and I-2.1. Audible appliances shall be used in nonpatient areas. Visible appliances are allowed to be used in lieu of audible appliances in patient occupied areas. Audible appliances located in patient areas shall be only chimes or similar sounding appliances for alerting staff.

Where audible fire alarm notification devices are not provided, upon receipt of an alarm at a constantly attended

location, a general occupant notification shall be broadcast over the public-address system.

In occupancies housing non-ambulatory persons where restraint is practiced, staff and attendants shall be provided and housed or located in such a manner that such supervisory personnel will also be alerted upon activation of the fire alarm system or any detector required by this section.

[909.5.3]

909.5.3 Opening protection. Openings in *smoke barriers* shall be protected by *self-closing devices* automatic closing devices actuated by the required controls for the mechanical smoke control system. Door openings shall be protected by *fire door assemblies* complying with Section 716.

[909.5.3.1]

909.5.3.1 Group I-2, *I-2.1, R-2.1,* and ambulatory care facilities. In Group I-2, *I-2.1, R-2.1,* and ambulatory care facilities, where doors are installed across a *corrido*r, the doors shall be automatic-closing by smoke detection in accordance with Section 716.2.6.5 6 and shall have a vision panel with fire-protection-rated glazing materials in fire protection-

rated frames, the area of which shall not exceed that tested. <u>In Group I-2, where swinging doors are installed across a corridor, such doors shall be opposite swinging pairs.</u>

CHAPTER 10 MEANS OF EGRESS

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[1006.2.1]

1006.2.1 Egress based on occupant load and common path of egress travel distance. Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1. The cumulative occupant load from adjacent rooms, areas or spaces shall be determined in accordance with Section 1004.2.

Exceptions:

- The number of exits from foyers, lobbies, vestibules or similar spaces need not be based on cumulative occupant loads for areas discharging through such spaces, but the capacity of the exits from such spaces shall be based on applicable cumulative occupant loads.
- 2. Rooms and care suites in Group I-2 and I-2.1 occupancies complying with Section 407.4.
- 3. In detention and correctional facilities and holding cells, such as are found in courthouse buildings, when the occupant load is more than 20 see Section 408.3.11.

[TABLE 1006.2.1]

TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY [Table not shown]

Notes:

- a. 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
- b. Group H occupancies equipped throughout with an automatic sprinkler system in accordance with

Section 903.2.5.

- c. For a room or space used for assembly purposes having fixed seating, see Section 1029.8.
- d. For the travel distance limitations <u>and number of exit and exit access requirements for rooms and</u> spaces in Group I- 2 or I-2.1, see Section 407.4.
- e. The common path of egress travel distance shall only apply in a Group R-3 occupancy located in a mixed occupancy building.
- f. The length of common path of egress travel distance in a Group S-2 open parking garage shall be not more than 100 feet.
- g. For the travel distance limitations in Group R-3 and R-4 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.3, see Section 1006.2.2.6.
- h. For holding cells, see Section 408.3.11.

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[1008.3.2]

1008.3.2 Buildings. In the event of power supply failure in buildings that require two or more *means of egress*, an emergency electrical system shall automatically illuminate all of the following areas:

- 1. Interior exit access stairways and ramps.
- Interior and exterior exit stairways and ramps.
- 3. Exit passageways.
- 4. Vestibules and areas on the level of discharge used for exit discharge in accordance with Section 1028.1.
- 5. Exterior landings as required by Section 1010.1.6 for exit doorways that lead directly to the exit discharge.
- 6. Group I-2 and I-2.1 exit discharge stairways, ramps, aisles, walkways and escalators leading to a public way or to a safe dispersal area in accordance with Section 1028.5.

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[1010.1.1.1]

1010.1.1.1 Projections into clear width. There shall not be projections into the required clear opening width lower than 34 inches (864 mm) above the floor or ground. Projections into the clear opening width between 34 inches (864 mm) and 80 inches (2032 mm) above the floor or ground shall not exceed 4 inches (102 mm).

Exceptions:

- <u>1</u>. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.
- 2. In a Group I-2 or I-2.1 occupancy, there shall be no projections into the clear width of doors used for the movement of beds and stretcher patients in the means of egress.

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[1020.1]

1020.1 Construction. Corridors shall be fire-resistance rated in accordance with Table 1020.1. The corridor walls

required to be fire-resistance rated shall comply with Section 708 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 not less than one door opening directly to the exterior and rooms for assembly purposes have not less than 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 unit* or *sleeping unit* in an occupancy in Groups I-1 and 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 that is a space requiring only a single *means of egress* complying with Section 1006.2.
- Corridors adjacent to the exterior walls of buildings shall be permitted to have unprotected openings on unrated exterior walls where unrated walls are permitted by Table 602 and unprotected openings are permitted by Table 705.8.
- A fire-resistance rating is not required for corridors within suites in a Group I-2 or I-2.1 constructed in accordance with Section 407.4.4.5, or 407.4.4.6 or 407.4.5.

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[1024.6]

1024.6 Penetrations. Penetrations into or through an exit passageway are prohibited except for the following:

- 1. Equipment and ductwork necessary for independent *ventilation or* pressurization.
- 2. Fire protection systems.
- 3. Security systems.
- 4. Two-way communication systems.
- 5. Electrical raceway for fire department communication.
- Electrical raceway serving the exit passageway and terminating at a steel box not exceeding 16 square inches (0.010 m2).

Such penetrations shall be protected in accordance with Section 714. There shall not be penetrations or communicating openings, whether protected or not, between adjacent *exit passageways*.

Exception: Membrane penetrations shall be permitted on the outside of the *exit passageway*. Such penetrations shall be protected in accordance with Section 714.4.2.

CHAPTER 35 REFERENCED STANDARDS

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[NFPA 72-2016 23.8.1.2.1.1]

NFPA 72-2016

23.8.1.2.1.1 The positive alarm sequence operation shall comply with the following:

- (1) To initiate the positive alarm sequence operation, the signal from an automatic fire detection device selected for positive alarm sequence operation shall be acknowledged at the fire alarm control unit by trained personnel within 5 seconds of annunciation.
- (2) If the signal is not acknowledged within 15 seconds, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.
- (3) If the positive alarm sequence operation is initiated in accordance with 23.8.1.2.1.1(1), trained personnel shall have an alarm investigation phase of up to 180 seconds to evaluate the fire condition and reset the system.
- (4) If the system is not reset during the alarm investigation phase, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.
- (5) If a second automatic fire detector selected for positive alarm sequence is actuated during the alarm investigation phase, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.
- (6) *If any other fire alarm initiating device is actuated, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.
- (7) Operation of a patient room smoke detector in Group I-2, and R-2.1 occupancies shall not include a positive alarm sequence feature.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 16. R-2.1 Emergency Escape and Rescue Openings

[1030.1]

1030.1 General. In addition to the means of egress required by this chapter, emergency escape and rescue openings shall be provided in the following occupancies:

- 1. Group R-2, <u>R-2.2</u> occupancies located in stories with only one exit or access to only one exit as permitted by Tables 1006.3.3(1) and 1006.3.3(2).
- 2. Group R-3 and R-4 occupancies.

Basements and sleeping rooms below the fourth story above grade plane shall have not fewer than one exterior emergency escape and rescue opening in accordance with this section. Where basements contain one or more sleeping rooms, emergency escape and rescue openings shall be required in each sleeping

room, but shall not be required in adjoining areas of the basement. Such openings shall open directly into a public way or to a yard or court that opens to a public way.

Exceptions:

- 1. In Groups R-1 and R-2 occupancies constructed of Type I, Type IIA, Type IIIA or Type IV construction equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1.
- 2.Group R-2.1 Occupancies, meeting the requirements for delayed egress in accordance with Section 1010.1.9.8 may have operable windows that are breakable in sleeping rooms permanently restricted to a maximum of 4-inch open position.
- 43. Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue openings.
- 24. Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court or exterior exit balcony that opens to a public way.
- 3<u>5</u>. Basements without habitable spaces and having not more than 200 square feet (18.6 m2) in floor area shall not be required to have emergency escape and rescue openings.
- 4<u>6</u>. Within individual dwelling and sleeping units in Groups R-2, <u>R-2.2</u> and R-3, where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:
 - 4.16.1. One means of egress and one emergency escape and rescue opening.
 - 4.26.2. Two means of egress.
 - 4.3 6.3. In R-2.2 occupancies a certified fire escape is acceptable as a secondary means of egress for existing buildings for this section of the code.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

Item 17. Flammability Standards for Building Insulation Materials

1809.5 Frost Protection. Except where otherwise protected from frost, foundations and other permanent supports of building and structures shall be protected from frost by one or more of the following methods:

- 1. Extending below the frost line of the locality.
- 2. Constructed in accordance with ASCE 32

Exception: Foam plastic insulation installed in the horizontal portions of shallow frost protected foundations in accordance with ASCE 32 of a thickness no greater than 2-inch nominal shall not require a limiting oxygen index ≥24% as required in ASTM C578.

3. Erected on solid rock.

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2603.2.1 Polystyrene Foam Labeling. Polystyrene foam insulation boards manufactured with no flame retardants added shall be labeled on each face in red with the following information:

- WARNING FIRE HAZARD
- This product is required to be installed HORIZONTALLY according to any of the following:
 - (a) Below at least 12 inches of soil
 - (b) Protected by a 3.5-inch concrete slab
 - (c) Protected by another approved barrier per ASCE 32 Section 4.1.4 or CRC Section R506.1
- NOT FOR VERTICAL OR ANY ABOVE GRADE APPLICATIONS
- This product contains NO flame retardants
- Not tested for flame spread or smoke development requirements of the model building codes
- [ASTM material Type, "except Oxygen Index is less than 24%"]
- [Compressive resistance]
- [Manufacturer]

Additionally, each package of polystyrene foam insulation boards manufactured without testing in accordance with ASTM E84 and ASTM D2863 shall be labeled in red on at least two sides with the following information:

• Warning - combustible material, observe code required storage and structure separation distance (30 feet).

...

2603.3 Surface Burning Characteristics. Unless otherwise indicated in this section, foam plastic insulation and foam plastic cores of manufactured assemblies shall have a flame spread index of not more than 75 and a smokedeveloped index of not more than 450 where tested in the maximum thickness intended for use in accordance with ASTM E84 or UL 723. Loose fill-type foam plastic insulation shall be tested as board stock for the flame spread and smoke-developed indexes.

Exceptions:

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6. Exception: Foam plastic insulation, of a thickness no greater than 2-inch nominal, installed in the horizontal portions of frost protected shallow foundations in accordance with CRC Section R403.3, CBC Section 1809.5/ASCE 32, or hydronic heated slab floors on grade in accordance with CEC Section 110.8.

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2603.4.1 Thermal barrier not required. The thermal barrier specified in Section 2603.4 is not required under the conditions set forth in Sections 2603.4.1.1 through 2603.4.1.44<u>15</u>.

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2603.4.1.15. Foam plastic insulation installed in the horizontal portions of frost protected shallow foundations in accordance with CRC Section R403.3, CBC Section 1809.5/ASCE 32, or CEC Section 110.8.

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code

Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

PART 2

[Chapter 1]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 1 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 2]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 2 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 3]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 3 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 4]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 4 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 5]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 5 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 6]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 6 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 7]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 7 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 7A]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 7A without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code

Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 8]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 8 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 9]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 9 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 10]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 10 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 11]

[The SFM proposes to not adopt Chapter 11]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

[Chapter 11A]

[The SFM proposes to not adopt Chapter 11A]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 11B]

[The SFM proposes to not adopt Chapter 11B]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 12]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 12 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 13]

[The SFM proposes to not adopt Chapter 13]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 14]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 14 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

[Chapter 15]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 15 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 16]

[The SFM proposes to not adopt Chapter 16]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 16A]

[The SFM proposes to not adopt Chapter 16A]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 17]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 17 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 18]

[The SFM proposes to not adopt Chapter 18]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

[Chapter 19]

[The SFM proposes to not adopt Chapter 19]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 20]

[The SFM proposes to not adopt Chapter 20]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 21]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 21 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 22]

[The SFM proposes to not adopt Chapter 22]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 22A]

[The SFM proposes to <u>not</u> adopt Chapter 22A]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

[Chapter 23]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 23 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 24]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 24 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 25]

[The SFM proposes to not adopt Chapter 25]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 26]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 26 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code

Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 27]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 27 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Chapter 28]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 28 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Chapter 29]

[The SFM proposes to not adopt Chapter 29]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545. Government Code

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Cod Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Chapter 30]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 30 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Chapter 31]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 31 without modification.]

(Note: See Part 1 of this document for California amendments with editorial updates and errata for adoption into the 2019 California Building Code.)

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

[Chapter 32]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 32 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Chapter 33]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 33 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Chapter 34]

[RESERVED]

[Chapter 35]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Chapter 35 without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204.

[Appendix A]

[The SFM proposes to not adopt Appendix A]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Appendix B]

[The SFM proposes to not adopt Appendix B]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Appendix C]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Appendix C without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Appendix D]

[The SFM proposes to not adopt Appendix D]

[Appendix E]

[The SFM proposes to <u>not</u> adopt Appendix E]

[Appendix F]

[The SFM proposes to not adopt Appendix F]

[Appendix G]

[The SFM proposes to <u>not</u> adopt Appendix G]

[Appendix H]

[The SFM proposes to <u>not</u> adopt Appendix H]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code

[Appendix I]

[The SFM proposes to only adopt Sections 1101, I102, and I103 of Appendix I without amendment.]

[The SFM is maintaining the adoption of those existing California amendments or building standards in Appendix I without modification.]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Appendix J]

[The SFM proposes to not adopt Appendix J]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Appendix K]

[The SFM proposes to not adopt Appendix K]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Appendix L]

[The SFM proposes to not adopt Appendix L]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Appendix M]

[The SFM proposes to <u>not</u> adopt Appendix M]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

[Appendix N]

[The SFM proposes to not adopt Appendix N]

Notation

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50 Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code

Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204