

# Independent Fire and Life Safety Risk Assessment Report

The Proposed Ellis Street Condominium Project  
8041 Ellis Avenue  
Huntington Beach, California

Prepared For

The City of Huntington Beach  
2000 Main Street  
Huntington Beach, California 92647

February 10, 2020

Prepared By

James F. McMullen, Forensic Fire Expert  
The McMullen Company  
1260 Lake Blvd., Suite 226  
Davis, California 95616  
530.757.1291

February 10, 2020

Michael Gates, Esquire  
City of Huntington Beach Attorney's Office  
2000 Main Street  
Huntington Beach, California 92648

Re: Fire and Life Safety Expert Report  
Proposed Development – 8041 Ellis Avenue

The following information reflects my findings and expert opinions regarding the City of Huntington Beach (City) disapproval of the 8041 Ellis Avenue Condominium project. As a point of information, my opinions are based on over 50 years of experience in fire protection, including serving as the State Fire Marshal of California. In addition, my experience also includes my years in fire training and certifying of fire department personnel and management as well as direct involvement in the development of the California fire and building codes and at the local and state levels as a local and State fire official; and as a State Building Standards Commissioner. I also served as code coordinator for the western fire chiefs association and executive director of the national code services association. See attached curriculum vitae.

## **PREFACE**

The fire and building standards codes adopted by the California Building Standards Commission(California Building Standards Code/Title 24 California Code Regulations CCR) which includes the California building code part 2 and California fire code part 9. , the codes are minimum requirements for the construction, operation and occupancy of a building.<sup>1</sup>

The City's amendments may only be more restrictive than the minimum state requirements contained in the California Building Standards code (Title 24 CCR).

This expert report is based on the minimal information provided, as the portion of the plans made available are incomplete and non-binding making them inadequate for a complete fire protection evaluation. My expert opinion is supported by the

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<sup>1</sup> Chapter 1, Section 1.1.2 California Building Code and Section 101.3 California Fire Code (2016 ed.)

disclaimer issued by the architect which states “This information is conceptual in nature and is subject to adjustments pending further verification and Client, Tenant, and Governmental Agency approvals. No warranties or guaranties of any kind are given or implied by the Architect”. A substantial amount of information and specifications are missing which are addressed in this report.

It is unknown how much detailed information has actually been provided to the city or if the city’s initial comments reflect preliminary or general type requirements.

## **THE SITE**

The following issues should be resolved prior to approval of this project:

- (1) The need for the fire department to depend on the use of ground ladders longer than 24 feet, would require the commitment of multiple firefighters to raise them as indicated by the ladder pads shown on the plans on the west side of the structure.
- (2) An apparent lack of a solution for the use of ground ladders for the portion of the building facing the underground garage ramp; The East side of structure cannot use ladders north of the turnaround due to the descending driveway into the underground garage.
- (3) The lack of control of and the suitability for aerial ladder operations on the adjacent properties to the west side of the building include long-term access and availability as well as the east side descending driveway north of the turnaround.
- (4) In the event that the fire department found the need to place an aerial ladder in the only fire lane, additional operational access problems would most likely arise.
- (5) At this time the plans do not indicate the installation of an on-site hydrant near the entrance ramp to the parking garage. This absence can lead to congestion of the fire lane due to supply lanes (for hose) being laid in front of street.
- (6) The plans propose a dead-end corridor inside on the first floor of the northern end of the building. At the north terminus of the corridor, a wet

standpipe connection is indicated in order to satisfy a deficiency related to the code required allowable distances for hose lines. It is my expert opinion that the installation of the standpipe at the location indicated, fails to meet the criteria under Section 1.11.2.4 (Att.) of the California Fire Code in terms of both the process required and for an equal alternate. Furthermore, the proposed project is a “State-regulated building” under Section 1.1.3.2 of the CFC (Att.). therefore, section 1.11.2.4 should have been cited and not section 104.9. Moreover, that section was not presented with the required alternatives.

## **CONSTRUCTION**

The current plans indicate that this building is to be of Type III-A construction which has the potential during construction stages to represent a significant fire threat to adjacent properties if a fire should occur. This is due to the limited setbacks which are not adequate to allow for the dissipation of radiant heat and in some cases direct flame impingement.

The plans do not list the type of construction for the underground parking garage nor the fire rated separation required between the parking garage and the at/above ground portions of the building. The level of fire resistive construction for the parking garage and occupying fire separation assembly should be identified as it is imperative that the occupants of the building above are adequately protected from fire and smoke.

## **OCCUPANCY DESIGNATION**

Currently the plans indicate that the project is designed to be a Group R-2 Occupancy for the condominium portion of the building and a Group M Occupancy for the commercial portion facing Ellis Avenue; however, a portion of the M occupancy could be a public assembly occupancy “A” predicated on the occupant load for public assembly. However, although an underground parking garage is indicated on the plans provided, the plans lack any occupancy classification for this parking garage. It is my opinion that the parking garage is a separate occupancy from the Group R-2 and must meet the requirements for a Group S-2 Occupancy. While it will be up to the Building Official to make a final determination, the current design

appears to include some other un-described uses within the parking garage that may not be permitted by the California/City's Building Codes. In addition, the Building Official will also be tasked with insuring that the fire separation between the parking garage and the other occupancies is in place including the protection of the stairwells, a mechanical ventilation system and that an automatic fire sprinkler system is provided as the plans to date do not reflect compliance with any of those items.

## **EMERGENCY VEHICLE ACCESS**

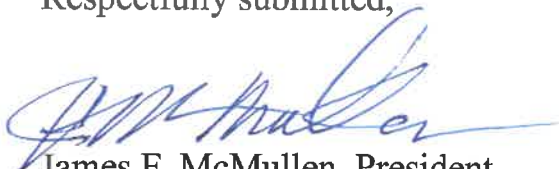
The following assessment on emergency vehicle access is based on the specific measurements on the plans made available and City Specifications No. 401-Minimum Standards for Fire Apparatus Access

- (1) City Specification No. 401 clearly identified a minimum of a 17-foot inner radius and a 45-foot outer radius of clear and unobstructed access for corners and turns for fire apparatus. Based on the information on the plans, this minimum criterion established has not been met. The proposed turn around design located near the main entrance to the building identifies the outer radius at 32 feet to the finished curb which fails to meet the minimum standard adopted by the fire department.

## **SUMMARY**

It is my expert opinion, revised plans should address the issues raised in this expert report in order to provide reasonable fire and life safety for the proposed development at 8041 Ellis Avenue, Huntington Beach.

Respectfully submitted,



James F. McMullen, President  
Forensic Fire Expert



# ***The McMullen Company, Inc.***

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## **JAMES F. McMULLEN**

### **CURRICULUM VITAE**

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Forensic fire expert witness James McMullen is court qualified having testified approximately 150 times in deposition or trial. Chief McMullen has over 50 years of experience in fire service administration, training and certifying, including strategic fire planning and evaluating public fire services. Additionally, he's qualified to testify in the administration of building and fire codes as well as laws, regulations, ordinances and standards, to evaluate fire and life safety. The training/certifying in fire protection of fire professionals is another area of his expertise. He is a leading expert in fire safety roofing and wildland fire safety. Chief McMullen also was the chair of California's Special Arson Task Force and has extensive experience in the investigation of fire origin, cause and spread. Further, he is a certified NFPA 921 Forensic Fire Investigator. He is a leading expert in window safety codes and standards and served on the National Safety Council's Window Safety Task Force. He has served as Executive Director/CEO of the National Code Services Association, Inc., a non-profit corporation, and the President and Commissioner of the Board of Commissioners of the West Plainfield Fire Protection District, Davis, CA.

### **EXPERIENCE**

**Fire Protection Consulting Expert, The McMullen Company, Inc., Davis, CA (1993 – Present).**  
President of The McMullen Company, Inc., a fire protection consulting firm with both private sector and government clients. The McMullen Company's services include fire and life safety evaluations; fire and building code development for State and model codes; fire product and code analysis; fire cause investigation and evaluation; fire department management reviews; emergency management planning and training; as well as forensic fire expert witness services. (1992 – 1993 Gage-Babcock & Associates, Inc., Senior Fire Protection Consultant.)

- Executive Director, National Code Services Association (2001 – 2015)
- Commissioner/Vice President/President (2002 – Present), Training Officer (1999 – 2002), West Plainfield Fire Protection District, Davis, CA

**1985-1992 Chief California State Fire Marshal, Sacramento, CA.**

Senior Fire Official for the State of California with responsibilities for fire code enforcement, regulations promulgation, legislation, public education, state fire academy/training/certification and fire investigation.

**1979-1985 Fire Chief/Emergency Services Director for the City of Campbell, CA. (Santa Clara County.)**

Responsible for fire suppression, code enforcement, fire investigation, emergency medical services and disaster preparedness/response for the City.

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## **EXPERIENCE (Continued)**

**1977-1979 Fire Marshal/Emergency Services Coordinator – City of San Bernardino, CA.**  
Responsible for fire suppression, code enforcement, disaster preparedness, and fire investigation.

**1962-1977 Fire Fighter to Chief**

Increasingly responsible positions in fire suppression, code enforcement, fire investigation and emergency medical services.

## **EDUCATION**

August 1984	Master of Public Administration (MPA) – Golden Gate University (Fire Protection Emphasis)
June 1978	Bachelor of Arts (BA) – University of Redlands (Management) (Fire Protection Emphasis)
June 1966	Associate of Arts (AA) – Mt. San Antonio College (Fire Science)
June 1963	Certificate in Fire Science – Mt. San Antonio College

## **LICENSES / CREDENTIALS**

- Certified Forensic Fire Investigator
- Recipient, Robert W. Gain Award, Western Fire Chiefs Association
- State of California Private Investigator and Qualified Manager/Owner
- Qualified Fire Expert Witness
- Commissioned California State Military Reserve
- Commissioned Kentucky Colonel
- Lifetime California Community College Teaching Credential in Fire Science

## **MAJOR PROFESSIONAL AFFILIATIONS**

2005 – Present	<b>West Plainfield Fire Protection District</b> – Davis, CA, President, Board of Commissioners.
2005 – Present	<b>Office of the State Fire Marshal</b> - Member of the California State Fire Marshal's Stakeholders.
2005 – Present	<b>Fire Districts Association of California</b> - Member
2003 – Present	<b>International Code Council</b> – Voting Member

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## **MAJOR PROFESSIONAL AFFILIATIONS (Continued)**

2002 – 2013	<b>Forensic Expert Witness Association</b> – Member and Former President, Sacramento / Sierra Chapter.
2000 – 2015	<b>National Code Services Association, Inc.</b> – Life Charter Voting Member; Former Executive Director/CEO; Former Member: Technical Committee on Codes, Technical Committee on Training and NFPA 921 Fire Investigation Committee.
2004 – 2012	<b>National Safety Council</b> – Member of Window Safety Task Force; Former Member, Fire Task Group.
2001 – 2012	<b>Western Fire Chiefs Association</b> – Code Coordinator
2000 – 2008	<b>American College of Forensic Examiners, Inc.</b> – Member
2008 – 2009	<b>Jackson Rancheria Fire Safety Committee</b> – Member
2005	<b>State Assemblies For Emergency Response (SAFE)</b> – Member
2000 – 2002	<b>California Electrician Certification Advisory Committee</b> – Member. <b>Specialty Panel</b> – Member
2000 – 2002	<b>California State Department of Housing and Community Development Mobile Home Park Fire Protection Task Force</b> – Member. (Northern and Southern Task Forces)
2000 – 2008	<b>International Association of Arson Investigators</b> – Member.
1989 – Present	<b>National Association of State Fire Marshals (NASFM)</b> – Founding President and Member Emeritus.
1998 – 2002	<b>California Building Standards Commission</b> – Member, 2000 Code Partnership; Member, Technical Task Group.
1981 – 1985	<b>California Building Standards Commission</b> – Commissioner
1994 – 2001	<b>American Society for Testing and Materials (ASTM)</b> – Past Member, Sub-committee F15.38 – Window Fall Prevention.
1994 – 2000	<b>International Fire Code Institute (IFCI)</b> – Charter Member
1991 – 1992	<b>Federal Emergency Management Agency's "Operation Urban Wildfire" Task Force</b> – Member.
1990 – 1992	<b>National Fire Fighters Joint Apprenticeship Training Program</b> – Management sponsor.
1989 – 1992	<b>CAL OSHA Advisory Committee on Personal Protective Clothing And Equipment for Firefighters</b> -- Committee Member.



## MAJOR PROFESSIONAL AFFILIATIONS (Continued)

- 1989 – 1993      **California Seismic Safety Commission** – Commissioner; Chairman of the Emergency Planning and Response Committee and member of Earthquake Task Force.
- 1989 – 1992      **Panel for Fire Research of the National Research Council** – Member of panel of National Institute of Standards and Training (NIST) Center for Fire Research.
- 1986 – 1992      **California Chemical Emergency Planning and Response Commission** – Member and served on the Hazardous Materials Training Funding Committee.
- 1985 – 1992      **California Fire Fighters Joint Apprenticeship Committee** – Management sponsor and member of the Board of Directors.
- 1985 – 1992      **California Historical Building Safety Board** – Advisory Member.
- 1985 – 2002      **California Rural Fire Association** – Member.
- 1985 – 1992      **California State Board of Fire Services** – Chairman.
- 1985 – 1997      **Congressional Fire Services Institute** – Senate and Charter Member. Chair of the Western Steering Committee for the Annual Dinner. Served as a member of the Institute's Urban Search and Rescue Task Force.
- 1985 – 1992      **Governor's Special Arson Task Force** – Chairman.
- 1979 – Present      **Western Fire Chiefs Association** - Life Member. Former Code Coordinator. Representative to California State Building Standards Commission.
- 1972 – Present      **California Fire Chiefs Association** – Life Member; Former Member of Board of Directors. Member and former liaison chief to the Northern California Fire Prevention Officers Section. Life member of the Southern California Fire Training Officers Section.
- 1972 – Present      **National Fire Protection Association** – *Member:* International Fire Marshals Association, Education, Building Fire Safety Systems and Fire Service Sections. *Former Member:* Strategic Planning Committee for Public Education, Public Education Advisory Committee, Educational Messages Advisory Committee, Wildland Fire Management Committee. *Former Chair:* Presidential Advisory Committee, Center for High Risk Outreach; Home Security and Fire Safety Taskforce and Nominating Committee.
- 1985 – 2003      **International Conference of Building Officials (ICBO)** – Member. East Bay and Sacramento Valley Chapters – Member (1999 – 2003)
- 1985 – 1992      **Underwriters Laboratories, Inc.** – Corporate and Fire Council Member.
- 1979 – Present      **International Association of Fire Chiefs** - Life Member. Former Vice Chair of the Operation Life Safety Board of Trustees.

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## **MAJOR PROFESSIONAL AFFILIATIONS (Continued)**

1962 – Present      **California State Firefighters' Association – Life Member.**

## **PUBLICATIONS (Author/Contributor)**

2018	"How to.. Be Sure Your Fire Extinguisher Really Works. Most Don't!" Bottomline Magazine, February 2018
2013	"Wildfire Prevention and How to Save Your Home" Experts.com, January 2013
2012	"Home Heating Fire Safety," Experts.com, November 2012
2012	"NCSA – A Strong Future Ahead," Western Fire Chiefs Association Daily Dispatch, November 2012
2009	Hermosillo, MX ABC Day Care Fire Analysis and Report by the Supreme Court of Justice Mexico, June 2009
2009	"Plastic Trash Containers in SFM – Regulated Facilities," The California Fire Service Magazine, May 2009
2004	"Emerging Fire Code Issues Roundtable Report" International Association of Fire Chiefs, 2004
2003	"2000 Uniform Fire Code: Code Applications Manual," Western Fire Chiefs Association and Uniform Fire Code Association, January 2003
2001	"Specification for Window Fall Prevention Devices With Emergency Escape (Egress) Release Mechanisms," ASTM F2090-1a, September 2001
2000	"NFPA 1145 – Standard for the Use of Class A Foams in Manual Fire Fighting," National Fire Protection Association, August 2000
2000	"Standard Safety Specification for Window Fall Prevention Devices for Non-Emergency Escape (Egress) and Rescue (Ingress) Windows, ASTM F2006-00, March 2000
1999	"NFPA 1150 – Standard on Fire Fighting Foam Chemicals for Class A Fuels in Rural, Suburban and Vegetated Areas," National Fire Protection Association, August 1999
1999	"NFPA 1142 – Standard for Suburban and Rural Fire Fighting," National Fire Protection Association, August 1999
1999	"UL Standard 2326 – Releasing Systems for Window Bars in Residential Occupancies," Underwriters Laboratories Inc., December 1999.

## **PUBLICATIONS (Continued)**

- 1998 "NFPA 1141 – Standard for Fire Protection in Planned Building Groups," National Fire Protection Association, August 1998
- 1998 "NFPA 295 – Standard for Wildfire Control," National Fire Protection Association, August 1998
- 1997 "NFPA 299 – Standard for Protection of Life and Property from Wildfire," National Fire Protection Association, August, 1997
- 1996 "Steel Roofs: A View From The Top" American Fire Journal, September, 1996, Volume 48, Number 9, Page 20. John A. Ackerman, Publisher
- 1996 "Firefighting Procedures for Steel Roofs" The California Fire Service, July, 1996, Volume 7, Number 7, Page 24. California State Firefighters' Association, Publisher
- 1996 "Marina Point Condominium Complex Fire – Blue Ribbon Committee Report." Commissioned by the Foster City City Council. Presented June 17, 1996
- 1996 "Steel Roofing: A Technology Whose Time Has Come" Metal Home Digest, May-June, 1996, Page 40
- 1996 Ibid. Western Metal In Architecture, March-April, 1996, Page 8. Western Association for Metal In Architecture, Publisher
- 1995 "Just How Protected are 'Protected' Aboveground Tanks?" American Fire Journal, July 1995, Volume 47, Number 7, Page 28. John A. Ackerman, Publisher
- 1994 – Present Developed numerous code changes for the International Conference of Building Officials (ICBO), International Code Council (ICC), and Western Fire Chiefs Association (WFCA)
- 1994 Arson Investigation, California District Attorneys Association and California State Fire Marshal
- 1994 "An Innovative Approach to Fire Protection of Existing Roofing Systems." Firefighter's Gazette, Volume 1, No. 5, November 1994
- 1992 "NFPA 921 – Guide for Fire and Explosion Investigations," National Fire Protection Association, 1992
- 1992 Report on Oakland Fire Department Operations, California State Operations Emergency Services, during Major Conflagration
- 1992 "Accelerant Detection Canines," National Fire Service Yearbook 1992
- 1991 "Oakland/Berkley Hills Fire Investigation," National Fire Protection Association, October 1991

## **PUBLICATIONS (Continued)**

Prior to 1991                      Author/Contributor to numerous of other articles.

## **INSTRUCTIONAL EXPERIENCE**

- University of California, Davis
- University of Missouri
- San Jose City College
- Victor Valley College
- San Bernardino Valley College
- California Fire Service Training & Education Program
  - Fire Control 1/2/3/4
  - Basic Emergency Vehicle Operations
  - Basic Pump Operations
  - Hazmat – Fire Responder Operations
- California State Office of Emergency Services
- International City Managers Association
- New York State Fire Academy
- California State Fire Academy System
- Fire/police academies and fire departments
- Numerous professional fire safety associations (instructor/lecturer)
- Emergency Services Insurance Program
- National Propane Gas Association

## **REFERENCES**

Available upon request.

# CHAPTER 1

## 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 thirteen 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 International Building Code of the International Code Council with necessary California amendments.

**1.1.2 Purpose.** The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, access to persons with disabilities, sanitation, adequate lighting and ventilation and energy conservation; safety to life and property from fire and other hazards attributed to the built environment; and to provide safety to fire fighters and emergency responders during emergency operations.

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

**1.1.3.1 Nonstate-regulated buildings, structures and applications.** Except as modified by local ordinance pursuant to Section 1.1.8, the following standards in the California Code of Regulations, Title 24, Parts 2, 2.5, 3, 4, 5, 6, 9, 10 and 11 shall apply to all occupancies and applications not regulated by a state agency.

**1.1.3.2 State-regulated buildings, structures and applications.** The model code, state amendments to the model code, and/or state amendments where there are no relevant model code provisions shall apply to the following buildings, structures, and applications regulated by state agencies as specified in Sections 1.2 through 1.14, except where modified by local ordinance pursuant to Section 1.1.8. When adopted by a state agency, the provisions of this code shall be enforced by the appropriate enforcing agency, but only to the extent of authority granted to such agency by the state legislature.

**Note:** See "How to Distinguish Between Model Code Language and California Amendments" in the front of the code.

1. State-owned buildings, including buildings constructed by the Trustees of the California State

University, and to the extent permitted by California laws, buildings designed and constructed by the Regents of the University of California, and regulated by the Building Standards Commission. See Section 1.2 for additional scope provisions.

2. Local detention facilities regulated by the Board of State and Community Corrections. See Section 1.3 for additional scope provisions.
3. Barbering, cosmetology or electrolysis establishments, acupuncture offices, pharmacies, veterinary facilities and structural pest control locations regulated by the Department of Consumer Affairs. See Section 1.4 for additional scope provisions.
4. Section 1.5 reserved for the California Energy Commission.
5. Dairies and places of meat inspection regulated by the Department of Food and Agriculture. See Section 1.6 for additional scope provisions.
6. Organized camps, laboratory animal quarters, public swimming pools, radiation protection, commissaries serving mobile food preparation vehicles and wild animal quarantine facilities regulated by the Department of Public Health. See Section 1.7 for additional scope provisions.
7. Hotels, motels, lodging houses, apartments, dwellings, dormitories, condominiums, shelters for homeless persons, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilets or cooking facilities. See Section 1.8.2.1.1 for additional scope provisions.
8. Accommodations for persons with disabilities in buildings containing newly constructed covered multifamily dwellings, new common use areas serving existing covered multifamily dwellings, additions to existing buildings where the addition alone meets the definition of covered multifamily dwellings, and new common-use areas serving new covered multifamily dwellings, which are regulated by the Department of Housing and Community Development. See Section 1.8.2.1.2 for additional scope provisions.
9. Permanent buildings and permanent accessory buildings or structures constructed within mobile-home parks and special occupancy parks regulated by the Department of Housing and Community

# DIVISION II ADMINISTRATION

## PART 1—GENERAL PROVISIONS

### SECTION 101 SCOPE AND GENERAL REQUIREMENTS

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

[A] 101.1 **Title.** These regulations shall be known as the *Fire Code* of [NAME OF JURISDICTION], hereinafter referred to as "this code."

[A] 101.2 **Scope.** This code establishes regulations affecting or relating to structures, processes, premises and safeguards regarding all of the following:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices.
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises.
3. Fire hazards in the structure or on the premises from occupancy or operation.
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems.
5. Conditions affecting the safety of fire fighters and emergency responders during emergency operations.

[A] 101.2.1 **Appendices.** Provisions in the appendices shall not apply unless specifically adopted.

[A] 101.3 **Intent.** The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations.

[A] 101.4 **Severability.** If a section, subsection, sentence, clause or phrase of this code is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

[A] 101.5 **Validity.** In the event any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions hereof, which are determined to be legal; and it shall be presumed that this code would have been adopted without such illegal or invalid parts or provisions.

### SECTION 102 APPLICABILITY

[A] 102.1 **Construction and design provisions.** The construction and design provisions of this code shall apply to:

1. Structures, facilities and conditions arising after the adoption of this code.

2. Existing structures, facilities and conditions not legally in existence at the time of adoption of this code.
3. Existing structures, facilities and conditions where required in Chapter 11.
4. Existing structures, facilities and conditions that, in the opinion of the fire code official, constitute a distinct hazard to life or property.

[A] 102.2 **Administrative, operational and maintenance provisions.** The administrative, operational and maintenance provisions of this code shall apply to:

1. Conditions and operations arising after the adoption of this code.
2. Existing conditions and operations.

[A] 102.3 **Change of use or occupancy.** Changes shall not be made in the use or occupancy of any structure that would place the structure in a different division of the same group or occupancy or in a different group of occupancies, unless such structure is made to comply with the requirements of this code and the *California Building Code*. Subject to the approval of the fire code official, the use or occupancy of an existing structure shall be allowed to be changed and the structure is allowed to be occupied for purposes in other groups without conforming to all of the requirements of this code and the *California Building Code* for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

[A] 102.4 **Application of building code.** The design and construction of new structures shall comply with the *California Building Code*, and any alterations, additions, changes in use or changes in structures required by this code, which are within the scope of the *California Building Code*, shall be made in accordance therewith.

[A] 102.5 **Application of residential code.** Where structures are designed and constructed in accordance with the *California Residential Code*, the provisions of this code shall apply as follows:

1. Construction and design provisions of this code pertaining to the exterior of the structure shall apply including, but not limited to, premises identification, fire apparatus access and water supplies. Where interior or exterior systems or devices are installed, construction permits required by Section 105.7 of this code shall apply.
2. Administrative, operational and maintenance provisions of this code shall apply.

[A] 102.6 **Historic buildings.** The provisions of this code relating to the construction, alteration, repair, enlargement, restoration, relocation or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the state or local jurisdiction as historic buildings where such buildings or structures do not constitute a distinct hazard to life or property. Fire protection

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### **IMPORTANT NOTICE**

Act now to keep your code up-to-date.  
The purchase of this code includes a  
free subscription for all State-issued  
supplements and errata. To receive  
these important updates through  
2019, you **MUST** register online  
[www.iccsafe.org/CAL16](http://www.iccsafe.org/CAL16)

# **2016 CALIFORNIA FIRE CODE**

**CALIFORNIA CODE OF REGULATIONS  
TITLE 24, PART 9**

Based on the 2015 International Fire Code®

California Building Standards Commission



**Effective January 1, 2017**

For Errata and Supplement effective  
dates see the History Note Appendix

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## SECTION 502 DEFINITIONS

**502.1 Definitions.** The following terms are defined in Chapter 2:

**AGENCY.**

**FIRE APPARATUS ACCESS ROAD.**

**FIRE COMMAND CENTER.**

**FIRE DEPARTMENT MASTER KEY.**

**FIRE LANE.**

**KEY BOX.**

**TRAFFIC CALMING DEVICES.**

❖ Definitions of terms can help in the understanding and application of code requirements. This section directs the code user to Chapter 2 for the proper application of the indicated terms used in this chapter. Terms may be defined in Chapter 2, or in another *International Code®* (I-Code®) as indicated in Section 201.3, or the dictionary meaning may be all that is needed (also see the commentary to Sections 201 through 201.4).

## SECTION 503 FIRE APPARATUS ACCESS ROADS

**503.1 Where required.** Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3.

❖ This section introduces the requirements for dedicated fire apparatus access roads serving new and relocated buildings in the jurisdiction. The requirements are to be established in coordination with the local fire service to accommodate the jurisdiction's fire apparatus and equipment. The intent of the requirements is to provide the fire department with sufficient access to buildings to enable efficient fire suppression and rescue operations.

**503.1.1 Buildings and facilities.** *Approved* fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the *exterior walls* of the first story of the building as measured by an *approved* route around the exterior of the building or facility.

### Exceptions:

1. The *fire code official* is authorized to increase the dimension of 150 feet (45 720 mm) where any of the following conditions occur:

1.1. The building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

1.2. Fire apparatus access roads cannot be installed because of location on property,

topography, waterways, nonnegotiable grades or other similar conditions, and an *approved* alternative means of fire protection is provided.

1.3. There are not more than two Group R-3 or Group U occupancies.

2. Where approved by the *fire code official*, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

❖ This section establishes a requirement for a fire apparatus access road and the maximum distance from buildings or facilities to fire apparatus access roads. The provisions are intended to limit the maximum length of hose needed to reach any point along the exterior of a building or facility from a fire department vehicle. Large-area buildings may require a fire apparatus access road on all four sides. An access road is required to extend to within 150 feet (45 720 mm) of all portions along the exterior wall of the grade level story of each new or relocated building [see Commentary Figure 503.1.1(1)]. The 150-foot (45 720 mm) distance is based on the standard length of preconnected hoses carried on fire apparatus and is not intended to be measured to any point within the building.

A long, narrow building may require fire department access roads on two sides only, if all portions of the exterior of the grade level story are within 150 feet (45 720 mm) of the access road [see Commentary Figure 503.1.1(2)].

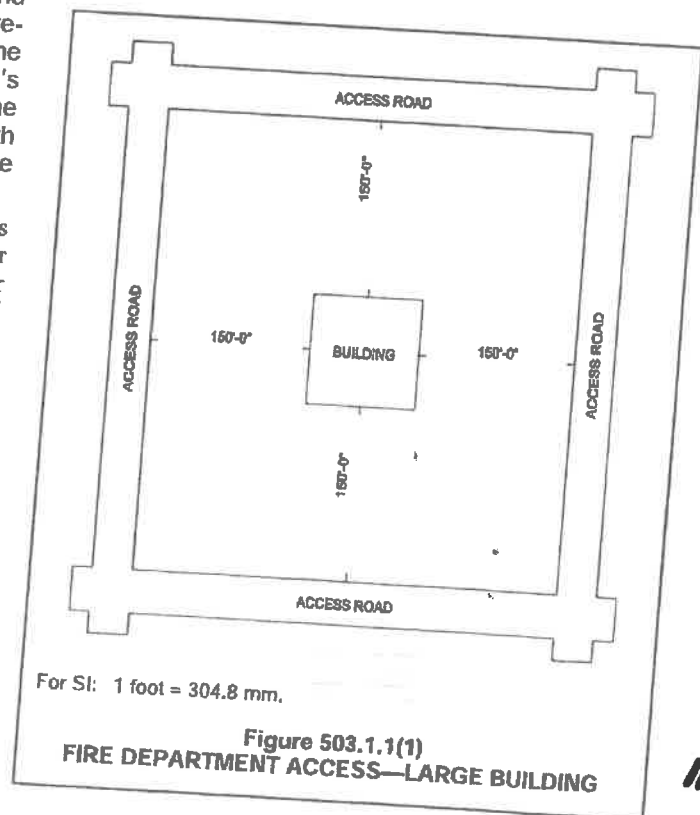


Figure 503.1.1(1)  
FIRE DEPARTMENT ACCESS—LARGE BUILDING