ORDINANCE NO. 2016-07

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LOS ALAMITOS, CALIFORNIA, DELETING CHAPTER 15.08 OF THE LOS ALAMITOS MUNICIPAL CODE AND ADDING A NEW CHAPTER 15.08 ADOPTING BY REFERENCE THE 2016 EDITION OF THE CALIFORNIA FIRE CODE (TITLE 24, PART 9) WITH APPENDICES AND AMENDMENTS THERETO

THE CITY COUNCIL OF THE CITY OF LOS ALAMITOS DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. Findings.

A. California law requires that on January 1, 2017, all portions of the 2016 Building Standards Code will be effective within the City.

B. Pursuant to Sections 17922, 17958, 17958.5 and 17958.7 of the California Health and Safety Code, the City may amend the provisions of the Building Standards Code which are reasonably necessary to protect the health, welfare and safety of citizens of Los Alamitos because of "local climatic, geological, or topographical conditions."

C. The City of Los Alamitos is located in the northwest portion of Orange County and is more prone to high winds and earthquakes than other portions of the state.

D. The Orange County Fire Authority and the City's Building Official have recommended modifying the 2016 California Fire Code due to local conditions in the City of Los Alamitos.

E. The findings within Exhibit A are incorporated by reference. Such findings are in accordance with California Health and Safety Code Sections.

F. In accordance with CEQA Guidelines section 15060(c)(2) – the adoption of California Fire Code will not foreseeably result in direct or reasonably foreseeable indirect impacts and is exempt from the provisions of the California Environmental Quality Act.

SECTION 2. Chapter 15.08 of the Los Alamitos Municipal Code is hereby repealed in its entirety and a new Chapter 15.08 is hereby added to read as follows:

15.08.010 Fire Code Adopted.

A. The City hereby adopts the California Fire Code, 2016 Edition, as amended by this ordinance and shall constitute the Fire Regulations of the City of Los Alamitos.

B. One copy of all the California Fire Code and the City's amendments thereto shall be kept on file in the office of the Fire Code Official pursuant to Health and Safety Code Section 18942 (d) (1) and made available for public inspection.
C. References in Documents and Continuing Legal Effect. References to prior editions of the Fire Code or the Municipal Code sections amended herein that are cited on notices issued by the City or the agency enforcing the City's fire regulations or other documents of ongoing or continuing legal effect, including specifically resolutions adopting or imposing fees or charges, until converted, are deemed to be references to the new counterpart 2016 Fire Code or amended Municipal Code sections for the purposes of notice and enforcement. The provisions adopted hereby shall not in any manner affect deposits, established fees or other matters of record which refer to, or are otherwise connected with, ordinances which are specifically designated by number, code section or otherwise, but such references shall be deemed to apply to the corresponding provisions set forth in the 2016 Building Standards Code adopted hereby. Any fee authorized by the above-referenced fire codes which was in effect at the time of the adoption of this ordinance need not be re-adopted by resolution, and shall continue in effect, and remain unadjusted in amount unless and until a resolution is adopted repealing the fee or establishing a different fee.

15.08.020 Enforcement and Inspections.

The 2016 California Fire Code shall be enforced by the Orange County Fire Authority, which shall be operated under the Director of Fire Services of the Orange County Fire Authority. The Director of Fire Services of the Fire Authority may detail such members of the Fire Authority as inspectors as shall be necessary from time to time.

15.08.030 Amendments

The following apply with respect to the 2016 California Fire Code.

Chapter 1 Scope and Administration is adopted in its entirety with the following amendments:

Section 109.4 Violation penalties is hereby revised to read as follows:

109.4 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or shall fail to comply with any issued orders or notices or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate issued under provisions of this code, shall result in penalties assessed as prescribed in the OCFA Prevention Field Services adopted fee schedule. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

Section 109.4.2 Infraction and misdemeanor is hereby added as follows:

109.4.2 Infraction and misdemeanor. Persons operating or maintaining any occupancy, premises or vehicle subject to this code that shall permit any fire or life safety hazard to exist on premises under their control shall be guilty of an infraction. Persons who fail to take immediate action to abate a fire or life safety hazard when ordered or notified to do so by the chief or a duly authorized representative are guilty of a misdemeanor.
Chapter 2 Definitions is adopted in its entirety with the following amendments:

Sections 202 General Definitions is hereby revised by adding "OCFA," "Sky Lantern," and "Spark Arrester" as follows:

202 General Definitions

OCFA: Orange County Fire Authority, fire authority having jurisdiction.

SKY LANTERN. An airborne lantern typically made of paper, Mylar, or other lightweight material with a wood, plastic, or metal frame containing a candle, fuel cell, or other heat source that provides buoyancy.

SPARK ARRESTER. A listed device constructed of noncombustible material specifically for the purpose of meeting one of the following conditions:

1. Removing and retaining carbon and other flammable particles/debris from the exhaust flow of an internal combustion engine in accordance with California Vehicle Code Section 38366.
2. Fireplaces that burn solid fuel in accordance with California Building Code Chapter 28.

Chapter 3 General Requirements is adopted in its entirety with the following amendments:

Section 304.1.2 Vegetation is hereby revised to read as follows:

304.1.2 Vegetation. Type, amount, or arrangement of weeds, grass, vines or other growth that is capable of being ignited and endangering property needing to comply with OCFA Guidelines, shall be cut, thinned, and removed by the owner or occupant of the premises in accordance with OCFA Guideline C-05 "Vegetation Management Guideline—Technical Design for New Construction, Fuel Modification Plans, and Maintenance Program. Vegetation clearance requirement in urban-wildland interface areas shall be in accordance with Chapter 49.

Section 305.6 Hazardous Conditions is hereby added as follows:

305.6 Hazardous conditions. Outdoor fires are not allowed when predicted sustained winds exceed 8 MPH during periods when relative humidity is less than 25%, or a red flag condition has been declared or public announcement is made, when an official sign was caused to be posted by the fire code official, or when such fires present a hazard as determined by the fire code official.
Section 305.7 Disposal of rubbish is hereby added as follows:

305.7 Disposal of rubbish. Rubbish, trash or combustible waste material shall be burned only within an approved incinerator and in accordance with Section 307.2.1.

Section 307 OPEN BURNING, RECREATIONAL FIRES AND PORTABLE OUTDOOR FIREPLACES is hereby revised to read as follows:

SECTION 307 OPEN BURNING, RECREATIONAL FIRES, FIRE PITS, FIRE RINGS, AND PORTABLE OUTDOOR FIREPLACES

Sections 307.6 Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices used at Group R Occupancies is hereby added as follows:

307.6 Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices used at Group R Occupancies. Outdoor fireplaces, fire pits, fire rings, or similar exterior devices used at Group R shall comply with this section.

Exception: Barbeques, grills, and other portable devices intended solely for cooking.

Section 307.6.1 Gas-fueled devices is hereby added as follows:

307.6.1 Gas-fueled devices. Outdoor fireplaces, fire pits and similar devices fueled by natural gas or liquefied-petroleum gas are allowed when approved by the Building Department and the device is designed to only burn a gas flame and not wood or other solid fuel. At R-3 occupancies, combustible construction shall not be located within three feet of an atmospheric column that extends vertically from the perimeter of the device. At other R occupancies, the minimum distance shall be ten feet. Where a permanent Building Department approved hood and vent is installed, combustible construction may encroach upon this column between the bottom of the hood and the vent opening. Where chimneys or vents are installed, they shall have a spark arrester as defined in Section 202.

Section 307.6.2 Devices using wood or fuels other than natural gas or liquefied-petroleum gas is hereby added as follows:

307.6.2 Devices using wood or fuels other than natural gas or liquefied-petroleum gas. Fireplaces burning wood or other solid fuel shall be constructed in accordance with the California Building Code. Fires in a fireplace shall be contained within a firebox with an attached chimney. The opening in the face of the firebox shall have an installed and maintained method of arresting sparks. The burning of wood or other solid fuel in a device is not allowed within 15 feet of combustible structures, unless within a permanent or portable fireplace. Conditions which could cause a fire to spread within 25 feet of a structure or to vegetation shall be eliminated prior to ignition. Fires in devices burning wood or solid fuel shall be in accordance with Sections 305, 307, and 308.
Section 307.6.2.1 Where prohibited is hereby added as follows:

307.6.2.1 Where prohibited. The burning of wood and other solid fuels shall not be conducted within a fuel modification zone. Wood and other solid fuel burning fires in devices other than permanent fireplaces are not allowed within Wildfire Risk Areas (WRA) and Wildland-Urban Interface Areas (WUI) or in locations where conditions could cause the spread of fire to the WRA or WUI unless determined by the Fire Code Official that the location or design of the device should reasonably prevent the start of a wildfire.

Section 309.2.1 Indoor charging of electric carts/cars is hereby added as follows:

309.2.1 Indoor charging of electric carts/cars. Indoor charging of electric carts/cars where the combined volume of all battery electrolyte exceeds 50 gallons shall comply with following:
1. Spill control and neutralization shall be provided and comply with Section 608.5.
2. Room ventilation shall be provided and comply with Section 608.6.1
3. Signage shall be provided and comply with Section 608.7.1
4. Smoke detection shall be provided and comply with Section 608.9.

Section 320 Fuel Modification Requirements for New Construction is hereby added as follows:

320 Fuel Modification Requirements for New Construction. All new structures and facilities adjoining land containing hazardous combustible vegetation shall be approved and in accordance with the requirements of OCFA Guideline C-05 "Vegetation Management Guideline – Technical Design for New Construction Fuel Modification Plans and Maintenance Program."

Section 321 Clearance of brush or vegetation growth from roadways is hereby added as follows:

321 Clearance of brush or vegetation growth from roadways. The fire code official is authorized to cause areas within 10 feet (3048 mm) on each side of portions of highways and private streets which are improved, designed or ordinarily used for vehicular traffic, to be cleared of flammable vegetation and other combustible growth. Measurement shall be from the flow-line or the end of the improved edge of the roadway surfaces.

Exception: Single specimens of trees, ornamental shrubbery or cultivated ground cover such as green grass, ivy, succulents or similar plants used as ground covers, provided that they do not form a means of readily transmitting fire.

Section 322 Unusual Circumstances is hereby added as follows:

322 Unusual circumstances. The fire code official may suspend enforcement of the vegetation management requirements and require reasonable alternative measures
designed to advance the purpose of this code if determined that in any specific case that any of the following conditions exist:

1. Difficult terrain.
2. Danger of erosion.
3. Presence of plants included in any state and federal resources agencies, California Native Plant Society and county-approved list of wildlife, plants, rare, endangered and/or threatened species.
4. Stands or groves of trees or heritage trees.
5. Other unusual circumstances that make strict compliance with the clearance of vegetation provisions undesirable or impractical.

**Section 323 Use of Equipment** is hereby added as follows:

**323 Use of equipment.** Except as otherwise provided in this section, no person shall use, operate, or cause to be operated in, upon or adjoining any hazardous fire area any internal combustion engine which uses hydrocarbon fuels, unless the engine is equipped with a spark arrester as defined in Section 202 maintained in effective working order, or the engine is constructed, equipped and maintained for the prevention of fire.

**Exceptions:**
1. Engines used to provide motor power for trucks, truck tractors, buses, and passenger vehicles, except motorcycles, are not subject to this section if the exhaust system is equipped with a muffler as defined in the Vehicle Code of the State of California.
2. Turbocharged engines are not subject to this section if all exhausted gases pass through the rotating turbine wheel, there is no exhaust bypass to the atmosphere, and the turbocharger is in good mechanical condition.

**Section 323.1 Spark Arresters** is hereby added as follows:

**323.1 Spark arresters.** Spark arresters shall comply with Section 202, and when affixed to the exhaust system of engines or vehicles subject to Section 323 shall not be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite any flammable material.

**Section 324 Sky Lanterns or similar devices** is hereby added as follows:

**324 Sky Lanterns or similar devices.** The ignition and/or launching of a Sky Lantern or similar device is prohibited.

**Chapter 4: Emergency Planning and Preparedness**

Chapter 4: Emergency Planning and Preparedness. Adopt only the sections, subsections, and amendment listed below:
Section 407.5 is revised to read as follows:

407.5 Hazardous Materials Inventory Statement. Where required by the fire code official, each application for a permit shall include OCFA's Chemical Classification Packet in accordance with Section 5001.5.2.

Chapter 5
Fire Service Features

Chapter 5 Fire Service Features is adopted in its entirety with the following amendments:

SECTION 501.1 Scope is revised to read as follows:

501.1 Scope. Fire service features for buildings, structures and premises shall comply with this chapter and, where required by the fire code official, with OCFA Guideline B-09, "Fire Master Plan for Commercial & Residential Development." Fire service features for buildings, structures and premises located in State Responsibility Areas shall also comply with OCFA Guideline B-09a, "Fire Safe Development in State Responsibility Areas."

Section 510.1 Emergency responder radio coverage is revised to read as follows:

510.1 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems. The Emergency Responder Radio Coverage System shall comply with the local authority having jurisdiction's ordinance and this code.

Exceptions:
1. Where it is determined by the fire code official that the radio coverage system is not needed.
2. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the fire code official shall have the authority to accept an automatically activated emergency radio coverage system.

This section shall not apply to the following:
1. Existing buildings or structures, unless required by the Building Official and OCFA for buildings and structures undergoing extensive remodel and/or expansion.
2. Elevators.
3. Structures that are three stories or less without subterranean storage or parking and that do not exceed 50,000 square feet on any single story.
4. Wood-constructed residential structures four stories or less without subterranean storage or parking that are not built integral to an above ground multi-story parking structure.
5. Should construction that is three stories or less that does not exceed 50,000 square feet on any single story include subterranean storage or parking, then this ordinance shall apply only to the subterranean areas.

Section 510.2 Emergency responder radio coverage in existing buildings is deleted without replacement:

Section 510.4.2.2 Technical Criteria is revised to read as follows:

510.4.2.2 Technical criteria. The fire code official shall maintain a document providing the specific technical information and requirements for the emergency responder radio coverage system. This document shall contain, but not be limited to, the various frequencies required, the location of radio sites, effective radiated power of radio sites, and other supporting technical information.
1. The frequency range supported from the 800 MHz Countywide Communications System shall be 851-869 MHz (base transmitter frequencies).
2. The frequency range supported to the 800 MHz Countywide Communications System shall be 806-824 MHz (radio field transmit frequencies).
3. A public safety radio amplification system shall include filters to reject frequencies below 851 MHz and frequencies above 869 MHz by a minimum of 35dB.
4. All system components must be 100 percent compatible with analog and digital modulations after installation without adjustments or modifications. The systems must be capable of encompassing the frequencies stated herein and capable of future modifications to a frequency range subsequently established by the jurisdiction.
5. Active devices shall have a minimum of -50 dB 3rd order intermodulation protection.
6. All active in-building coverage devices shall be FCC Part 90 Type Certified

Section 510.5.1 Approval prior to installation is revised to read as follows:

510.5.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC shall not be installed without prior plan submittal, coordination and approval from Orange County Communications and a copy of the approved plan provided to of the fire and building code officials.

Section 510.5.2 Minimum qualification of personnel is revised to read as follows:

510.5.2 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include both of the following:
1. A valid FCC-issued general radio operator's license.
2. Certification of in-building system training issued by a nationally recognized organization, school or a certificate issued by the manufacturer of the equipment being installed.

Section 510.5.3 Acceptance test procedure item 7 is revised to read as follows:

510.5.3 Acceptance test procedure. When an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to ensure that two-way coverage on each floor of the building is not less than 90 percent. The test procedure shall be conducted as follows: ...

7. As part of the installation a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at the time of installation and subsequent annual inspections by the FCC licensed technician hired by the property owner and an OCSD/Communications Division FCC-certified technician.

Section 510.6.1 Testing and proof of compliance is revised to read as follows:

510.6.1 Testing and proof of compliance.
The owner of the building or their representative shall have the emergency responder radio coverage system shall be inspected and tested annually or where structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following:

1. In-building system components shall be tested to determine general functional operability.
2. Signal boosters shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.
3. Backup batteries and power supplies shall be tested under load of a period of one hour to verify that they will properly operate during an actual power outage. If within the 1-hour test period the battery exhibits symptoms of failure, the test shall be extended for additional 1-hour periods until the integrity of the battery can be determined.
4. Other active components shall be checked to verify operation within the manufacturer's specifications.
5. If noncompliance is found, the FCC licensed technician will assess improvements necessary and provide such information to OCSD Communications and the fire and building code officials.
6. At the conclusion of the testing, a certification report, which shall verify compliance with Section 510.5.3, shall be submitted to OCSD Communications and the fire and building code officials.

Chapter 6
Building Services and Systems
Chapter 6 Building Services and Systems is adopted in its entirety without amendments:

Chapter 7
Fire-Resistance-Rated Construction

Chapter 7 Fire-Resistance-Rated Construction is adopted in its entirety without amendments.

Chapter 8
Interior Finish, Decorative Materials and Furnishings

Chapter 8 Interior Finish, Decorative Materials and Furnishings is adopted in its entirety without amendments.

Chapter 9
Fire Protection Systems

Adopt Chapter 9 Fire Protection Systems is adopted in its entirety with the following amendments:

Section 903.2 Where required is hereby revised to read as follows:

903.2 Where required. Approved automatic sprinkler systems in buildings and structures shall be provided when one of the following conditions exists:

1. New buildings: Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2.19, an automatic fire-extinguishing system shall also be installed in all occupancies when the total building area exceeds 5,000 square feet as defined in Section 202, regardless of fire areas or allowable area, or is more than two stories in height.

   Exception: Subject to approval by the Fire Code Official, open parking garages in accordance with Section 406.5 of the California Building Code

2. Existing Buildings: Notwithstanding any applicable provisions of this code, an automatic sprinkler system shall be provided in an existing building when an addition occurs and one of the following conditions exists:
   a. When an addition is 33% or more of the existing building area, and the resulting building area exceeds 5000 square feet
   b. When an addition exceeds 2000 square feet and the resulting building area exceeds 5000 square feet.
   c. An additional story is added above the second floor regardless of fire areas or allowable area.

   Exception: Additions to Group R-3 occupancies shall comply with Section 903.2.8 (2).

Section 903.2.8 Group R is hereby revised to read as follows:
903.2.8 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area as follows:

1. **New Buildings:** An automatic sprinkler system shall be installed throughout all new buildings.

2. **Existing R-3 Buildings:** An automatic sprinkler system shall be installed throughout when one of the following conditions exists:
   a. When an addition is 33% or more of the existing building area as defined in Section 202, and greater than 1000 square feet within a two year period; or,
   b. An addition when the existing building is already provided with automatic sprinklers; or,
   c. When an existing Group R Occupancy is being substantially renovated, and where the scope of the renovation is such that the Building Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.

**Exceptions:**
1. Existing Group R-3 occupancies converted to Group R-3.1 occupancies and not housing bedridden clients, not housing nonambulatory clients above the first floor, and not housing clients above the second floor.
2. Existing Group R-3 occupancies converted to Group R-3.1 occupancies housing only one bedridden client and complying with Section 435.8.3.3 of the California Building Code.
3. Pursuant to Health and Safety Code, Section 13113, occupancies housing ambulatory children only, none of whom are mentally ill children or children with intellectual disabilities, and the buildings or portions thereof in which such children are housed are not more than two stories in height, and building or portions thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.
4. Pursuant to Health and Safety Code, Section 13143.6, occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

When not used in accordance with Section 504.2 or 506.3 of the California Building Code, an automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be allowed in Group R-2.1 occupancies.

An automatic sprinkler system designed in accordance with Section 903.3.1.3 shall not be utilized in Group R-2.1 or R-4 occupancies.

**Section 903.3.5.3 Hydraulically calculated systems** is hereby added as follows:

**903.3.5.3 Hydraulically calculated systems.** The design of hydraulically calculated fire sprinkler systems shall not exceed 90% of the water supply capacity.

**Exception:** When static pressure exceeds 100 psi, and when required by the fire code official, the fire sprinkler system shall not exceed the water supply capacity specified by Table 903.3.5.3.
Chapter 10
Means of Egress

Chapter 10 Means of Egress is adopted in its entirety without amendments.

Chapter 11
Construction Requirements for Existing Buildings

Chapter 11 Construction Requirements for Existing Buildings. Adopt only those sections and subsections listed below:
Chapter 20
Aviation Facilities
Chapter 20 Aviation Facilities is adopted in its entirety without amendments.

Chapter 21
Dry Cleaning
Chapter 21 Dry Cleaning is adopted in its entirety without amendments.

Chapter 22
Combustible Dust-Producing Operations
Chapter 22 Combustible Dust-Producing Operations is adopted in its entirety without amendments.

Chapter 23
Motor Fuel-Dispensing Facilities and Repair Garages
Chapter 23 Motor Fuel-Dispensing Facilities and Repair Garages is adopted in its entirety without amendments.

Chapter 24
Flammable Finishes
Chapter 24 Flammable Finishes is adopted in its entirety without amendments.

Chapter 25
Fruit and Crop Ripening
Chapter 25 Fruit and Crop Ripening is deleted in its entirety.

Chapter 26
Fumigation and Insecticidal Fogging
Chapter 26 Fumigation and Insecticidal Fogging is deleted in its entirety.

Chapter 27
Semiconductor Fabrication Facilities

Chapter 27 Semiconductor Fabrication Facilities is adopted in its entirety without amendments

Chapter 28
Lumber Yards and Agro-Industrial, Solid Biomass and Woodworking Facilities

Chapter 28 Lumber Yards and Agro-Industrial, Solid Biomass and Woodworking Facilities is adopted in its entirety with the following amendments:

Section 2801.2 Permit is hereby revised to read as follows:

2801.2 Permit. Permits shall be required as set forth in Section 105.6 and 105.6.29.

Section 2808.2 Storage site is hereby revised to read as follows:

2808.2 Storage site. Storage sites shall be level and on solid ground, elevated soil lifts or other all-weather surface. Sites shall be thoroughly cleaned and approval obtained from the fire code official before transferring products to the site.

Section 2808.3 Size of piles is hereby revised to read as follows:

2808.3 Size of piles. Piles shall not exceed 15 feet in height, 50 feet in width and 100 feet in length.

Exception: The fire code official is authorized to allow the pile size to be increased where a fire protection plan is provided for approval that includes, but is not limited to, the following:
1. Storage yard areas and materials-handling equipment selection, design and arrangement shall be based upon sound fire prevention and protection principles.
2. Factor that lead to spontaneous heating shall be identified in the plan, and control of the various factors shall be identified and implemented, including provisions for monitoring the internal condition of the pile.
3. The plan shall include means for early fire detection and reporting to the public fire department; and facilities needed by the fire department for fire extinguishment including a water supply and fire hydrants.
4. Fire apparatus access roads around the piles and access roads to the top of the piles shall be established, identified and maintained.
5. Regular yard inspections by trained personnel shall be included as part of an effective fire prevention maintenance program.

Additional fire protection called for in the plan shall be provided and shall be installed in accordance with this code. The increase of the pile size shall be based upon the capabilities of the installed fire protection system and features.

Section 2808.4 Pile Separation is hereby revised to read as follows:

2808.4. Pile separation. Piles shall be separated from adjacent piles by a minimum distance of 20 feet. Additionally, piles shall have a minimum separation of 100 feet from combustible vegetation.

Section 2808.7 Pile fire protection is hereby revised to read as follows:

2808.7 Pile fire protection. Automatic sprinkler protection shall be provided in conveyor tunnels and combustible enclosures that pass under a pile. Combustible conveyor systems and enclosed conveyor systems shall be equipped with an approved automatic sprinkler system. Oscillating sprinklers with a sufficient projectile reach are required to maintain a 40% to 60% moisture content and wet down burning/smoldering areas.

Section 2808.9 Material-handling equipment is hereby revised to read as follows:

2808.9 Material-handling equipment. All material-handling equipment operated by an internal combustion engine shall be provided and maintained with an approved spark arrester. Approved material-handling equipment shall be available for moving wood chips, hogged material, wood fines and raw product during fire-fighting operations.

Section 2808.11 Temperature control is hereby added as follows:

2808.11 Temperature control. The temperature shall be monitored and maintained as specified in Sections 2808.11.1 and 2808.11.2.

Section 2808.11.1 Pile temperature control is hereby added as follows:

2808.11.1 Pile temperature control. Piles shall be rotated when internal temperature readings are in excess of 165 degrees Fahrenheit.

Section 2808.11.2 New material temperature control is hereby added as follows:

2808.11.2 New material temperature control. New loads delivered to the facility shall be inspected and tested at the facility entry prior to taking delivery. Material with temperature exceeding 165 degrees Fahrenheit shall not be
accepted on the site. New loads shall comply with the requirements of this chapter and be monitored to verify that the temperature remains stable.

Section 2808.12 Water availability is hereby added as follows:

2808.12 Water Availability. Facilities with over 2500 cubic feet shall provide a water supply. The minimum fire flow shall be no less than 500 GPM @ 20 psi for a minimum of 1 hour duration for pile heights up to 6 feet and 2 hour duration for pile heights over 6 feet. If there is no water purveyor, an alternate water supply with storage tank(s) shall be provided for fire suppression. The water supply tank(s) shall provide a minimum capacity of 2500 gallons per pile (maximum 30,000 gallons) for piles not exceeding 6 feet in height and 5000 gallons per pile (maximum 60,000) for piles exceeding 6 feet in height. Water tank(s) shall not be used for any other purpose unless the required fire flow is left in reserve within the tank at all times. An approved method shall be provided to maintain the required amount of water within the tank(s).

Section 2808.13 Tipping area is hereby added as follows:

2808.13 Tipping areas shall comply with the following:
1. Tipping areas shall not exceed a maximum area of 50 feet by 50 feet.
2. Material within a tipping area shall not exceed 5 feet in height at any time.
3. Tipping areas shall be separated from all piles by a 20 foot wide fire access lane.
4. A fire hydrant or approved fire water supply outlet shall be located within 150 feet of all points along the perimeter of the tipping area.
5. All material within a tipping area shall be processed within 5 days of receipt.

Section 2808.14 Emergency Contact is hereby added as follows:

2808.14 Emergency Contact. The contact information of a responsible person or persons shall be provided to the Fire Department and shall be posted at the entrance to the facility for responding units. The responsible party should be available to respond to the business in emergency situation.

Chapter 29
Manufacture of Organic Coatings

Chapter 29 Manufacture of Organic Coatings is adopted in its entirety without amendments.

Chapter 30
Industrial Ovens

Chapter 30 Industrial Ovens is adopted in its entirety without amendments.

Chapter 31
Tents and Other Membrane Structures
Chapter 31 Tents and Other Membrane Structures is adopted in its entirety without amendments.

Chapter 32
High-Piled Combustible Storage

Chapter 32 High-Piled Combustible Storage is adopted in its entirety without amendments.

Chapter 33
Fire Safety During Construction and Demolition

Chapter 33 Fire Safety During Construction and Demolition is adopted in its entirety without amendments.

Chapter 34
Tire Rebuilding and Tire Storage

Chapter 34 Tire Rebuilding and Tire Storage is adopted in its entirety without amendments.

Chapter 35
Welding and Other Hot Work

Chapter 35 Welding and Other Hot Work is adopted in its entirety without amendments.

Chapter 36
Marinas

Chapter 36 Marinas is adopted in its entirety without amendments.

Chapter 37
Combustible Fibers

Chapter 37 Combustible Fibers is adopted in its entirety without amendments.

Chapter 48
Motion Picture and Television Production Studio Sound Stages, Approved Production Facilities and Production Locations

Chapter 48 Motion Picture and Television Production Studio Sound Stages, Approved Production Facilities and Production Locations is adopted in its entirety without amendments.
Chapter 49
Requirements for Wildland-Urban Interface Fire Areas

Chapter 49 Requirements for Wildland-Urban Interface Fire Areas is adopted in its entirety with the following amendments:

Section 4906.3 Requirements is hereby revised to read as follows:

4906.3 Requirements. Hazardous vegetation and fuels around all applicable buildings and structure shall be maintained in accordance with the following laws and regulations:

1. Public Resources Code, Section 4291.
2. California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299 (see guidance for implementation “General Guideline to Create Defensible Space”).
4. California Code of Regulations, Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07.

Section 4908 Fuel Modification Requirements for New Construction is hereby added as follows:

4908 Fuel Modification Requirements for New Construction. All new buildings to be built or installed in a Wildfire Risk Area shall comply with the following:

1. Preliminary fuel modification plans shall be submitted to and approved by the fire code official prior to or concurrently with the approval of any tentative map.

2. Final fuel modification plans shall be submitted to and approved by the fire code official prior to the issuance of a grading permit.


3.1 The fuel modification plan shall include provisions for the maintenance of the fuel modification in perpetuity.

4. The fuel modification plan may be altered if conditions change. Any alterations to the fuel modification areas shall have prior approval from the fire code official.
5. All elements of the fuel modification plan shall be maintained in accordance with the approved plan and are subject to the enforcement process outlined in the Fire Code.

Chapter 50

Chapter 50 Hazardous Materials – General Provisions is adopted in its entirety with the following amendments.

Section 5001.5.2 Hazardous Materials Inventory Statement (HMIS) is hereby revised to read as follows:

5001.5.2 Hazardous Materials Inventory Statement (HMIS). Where required by the fire code official, an application for a permit shall include Orange County Fire Authority’s Chemical Classification Packet, which shall be completed and approved prior to approval of plans, and/or the storage, use or handling of chemicals on the premises. The Chemical Classification Packet shall include the following information:

1. Product Name.
2. Component.
3. Chemical Abstract Service (CAS) number.
4. Location where stored or used.
5. Container size.
7. Amount in storage.
8. Amount in use-closed systems.
9. Amount in use-open systems.

Section 5003.1.1.1 Extremely Hazardous Substances is hereby added as follows:

5003.1.1.1 Extremely Hazardous Substances. No person shall use or store any amount of extremely hazardous substances (EHS) in excess of the disclosable amounts (see Health and Safety Code Section 25500 et al) in a residential zoned or any residentially developed property.

Chapter 51
Aerosols

Chapter 51 Aerosols is adopted in its entirety without amendments.

Chapter 53
Compressed Gases

Chapter 53 Compressed Gases is adopted in its entirety without amendments.
Corrosive Materials

Chapter 54 Corrosive materials is adopted in its entirety without amendments.

Chapter 55
Cryogenic Fluids

Chapter 55 Cryogenic Fluids is adopted in its entirety without amendments.

Chapter 56
Explosives and Fireworks

Chapter 56 Explosives and Fireworks is adopted in its entirety with the following amendments:

Section 5608.2 Firing is hereby added as follows:

5608.2 Firing. All fireworks displays, regardless of mortar, device, or shell size, shall be electrically fired.

Section 5608.3 Application for Permit is hereby added as follows:

Section 5608.3 Application for Permit. A diagram of the grounds on which the display is to be held showing the point at which the fireworks are to be discharged, the fallout area based on 100 feet per inch of shell size, the location of all buildings, roads, and other means of transportation, the lines behind which the audience will be restrained, the location of all nearby trees, telegraph or telephone line, or other overhead obstructions shall be provided to OCFA.

Chapter 57
Flammable and Combustible Liquids

Chapter 57 Flammable and Combustible Liquids is adopted in its entirety without amendments.

Chapter 58
Flammable Gases and Flammable Cryogenic Fluids

Chapter 58 Flammable Gases and Flammable Cryogenic Fluids is adopted in its entirety without amendments.

Chapter 59
Flammable Solids

Chapter 59 Flammable Solids is adopted in its entirety without amendments.

Chapter 60
Highly Toxic and Toxic Materials

Chapter 60 Highly Toxic and Toxic Materials is adopted in its entirety without amendments.

Chapter 61
Liquefied Petroleum Gases

Chapter 61 Liquefied Petroleum Gases is adopted in its entirety without amendments.

Chapter 62
Organic Peroxides

Chapter 62 Organic Peroxides is adopted in its entirety without amendments.

Chapter 63
Oxidizers, Oxidizing Gases, and Oxidizing Cryogenic Fluids

Chapter 63 Oxidizers, Oxidizing Gases, and Oxidizing Cryogenic Fluids is adopted in its entirety without amendments.

Chapter 64
Pyrophoric Materials

Chapter 64 Pyrophoric Materials is adopted in its entirety without amendments.

Chapter 65
Pyroxylin (Cellulose Nitrate) Plastics

Chapter 65 Pyroxylin (Cellulose Nitrate) Plastics is adopted in its entirety without amendments.

Chapter 66
Unstable (Reactive) Materials

Chapter 66 Unstable (Reactive) Materials is adopted in its entirety without amendments.

Chapter 67
Water-Reactive Solids and Liquids

Chapter 67 Water-Reactive Solids and Liquids is adopted in its entirety without amendments.

Chapter 80
Referenced Standards
Chapter 80 Referenced Standards is adopted in its entirety with the following amendments:

NFPA 13, 2016 Edition, Standard for the Installation of Sprinkler Systems is hereby amended as follows:

Section 6.7.3 is hereby revised to read as follows:

6.7.3 Fire department connections (FDC) shall be of an approved type. The location shall be approved and be no more than 150 feet from a public hydrant. The FDC may be located within 150 feet of a private fire hydrant when approved by the fire code official. The size of piping and the number of 2½" inlets shall be approved by the fire code official. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red or as approved. When the fire sprinkler density design requires more than 500 gpm (including inside hose stream demand), or a standpipe system is included, four 2½" inlets shall be provided.

Section 8.3.3.1 is hereby revised to read as follows:

8.3.3.1 When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the fire sprinkler plan is submitted. Sprinklers in light hazard occupancies shall be one of the following:
(1) Quick-response type as defined in 3.6.4.8
(2) Residential sprinklers in accordance with the requirements of 8.4.5
(3) Quick response CMSA sprinklers
(4) ESFR sprinklers
(5) Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
(6) Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 11.1.1.1 is hereby added as follows:

11.1.1.1 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction(s) in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve “G”. Use is considered undetermined if a specific tenant/occupant is not identified at the time the sprinkler plan is submitted. Where a subsequent use or occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new use or occupancy.
Section 11.2.3.1.1.1 is hereby added as follows:

11.2.3.1.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the fire code official:
1) Subtract the project site elevation from the low water level for the appropriate pressure zone and multiply the result by 0.433;
2) Use a maximum of 40 psi, if available;
3) Utilize the OCFA water-flow test form/directions to document a flow test conducted by the local water agency or an approved third party licensed in the State of California.

NFPA 13D 2016 Edition, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:
Section 7.1.2 is hereby revised to read as follows:

7.1.2 The sprinkler system piping shall not have separate control valves installed unless supervised by a central station, proprietary, or remote station alarm service.

NFPA 14, 2016 Edition, Installation of Standpipe and Hose Systems is hereby amended as follows:
Section 7.3.1.1 is hereby revised to read as follows:

7.3.1.1 Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet or more than 5 feet above the finished floor.

NFPA 24, 2016 Edition, Standard for the Installation of Private Fire Service Mains and Their Appurtenances is hereby amended as follows:
Section 6.2.8.1 is hereby added as follows:

6.2.8.1 All indicating valves controlling fire suppression water supplies shall be painted OSHA red.

Exceptions:
1. Brass or bronze valves on sprinkler risers mounted to the exterior of the building may be left unpainted.
2. Where OS&Y valves on the detector check assembly are the only control valves, at least one OS&Y valve shall be painted red.

Section 6.2.9 is hereby revised to read as follows:
All connections to private fire service mains for fire protection systems shall be arranged in accordance with one of the following so that they can be isolated:

1. A post indicator valve installed not less than 40 ft (12 m) from the building
   a. For buildings less than 40 ft (12 m) in height, a post indicator valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the post indicator valve.

2. A wall post indicator valve

3. An indicating valve in a pit, installed in accordance with Section 6.4

4. A backflow preventer with at least one indicating valve not less than 40 ft (12 m) from the building
   a. For buildings less than 40 ft (12 m) in height, a backflow preventer with at least one indicating valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the backflow preventer.

5. Control valves installed in a fire-rated room accessible from the exterior

6. Control valves in a fire-rated stair enclosure accessible from the exterior

Section 10.1.5 is hereby added as follows:

10.1.5 All ferrous pipe and joints shall be polyethylene encased per AWWA C150, Method A, B, or C. All fittings shall be protected with a loose 8-mil polyethylene tube or sheet. The ends of the tube or sheet shall extend past the joint by a minimum of 12 inches and be sealed with 2 inch wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

Exception: 304 or 316 Stainless Steel pipe and fittings

Section 10.4.1.1 is hereby revised to read as follows:

10.4.1.1 All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material after installation.

Exception: Bolted joint accessories made from 304 or 316 stainless steel.

Section 10.4.1.1.1 is hereby added as follows:

10.4.1.1.1 All bolts used in pipe-joint assembly shall be 316 stainless steel.
Section 10.4.3.2 is hereby revised to read as follows:

10.4.3.2 Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 24 inches, as measured from the interior face of the exterior wall to the center of the vertical pipe. The pipe under the building or building foundation shall be 304 or 316 stainless steel and shall not contain mechanical joints or it shall comply with 10.4.3.2.1 through 10.4.3.2.4.

Appendices

Appendix A is deleted in its entirety without amendments.

Appendix B is adopted in its entirety without amendments.

Appendix BB is adopted in its entirety without amendments.

Appendix C is adopted in its entirety without amendments.

Appendix CC is adopted in its entirety without amendments.

Appendix D is deleted in its entirety without amendments.

Appendix E is deleted in its entirety without amendments.

Appendix F is deleted in its entirety without amendments.

Appendix G is deleted in its entirety without amendments.

Appendix H is adopted in its entirety without amendments.

Appendix I is deleted in its entirety without amendments.

Appendix J is deleted in its entirety without amendments.

Appendix K is deleted in its entirety without amendments.

Appendix L is deleted in its entirety without amendments.

Appendix M is deleted in its entirety without amendments.

Appendix N is deleted in its entirety without amendments.

SECTION 3. No Effect on Enforceability. The repealing provisions of the Los Alamitos Municipal Code shall not affect or impair any act done, or right vested or approved, or any proceeding, suit or prosecution had or commenced in any cause before such repeal shall take effect; but every such act, vested right, proceeding, suit, or prosecution shall remain in full force and effect for all purposes as if the applicable provisions of the 1990 Code, or part thereof, had remained in force and effect. No offense committed and no
liability, penalty, or forfeiture, either civil or criminal, incurred prior to the repeal or alteration of any applicable provision of the 2007 Code as amended, shall be discharged or affected by such repeal or alteration but prosecutions and suits for such offenses, liabilities, penalties or forfeitures shall be instituted and proceed in all respects as if the applicable provisions of the 2007 Code, as amended, had not been repealed or altered.

SECTION 4. Continuity. To the extent the provisions of this Ordinance are substantially the same as previous provisions of the Los Alamitos Municipal Code, these provisions shall be construed as continuations of those provisions and not as amendments of the earlier provisions.

SECTION 5. Intent to Comply with Laws. The City Council intends this Ordinance to supplement, not to duplicate or contradict, applicable state and federal law and this Ordinance shall be construed in light of that intent.

SECTION 6. Filing with Building Standards Commission. The City Clerk shall file a certified copy of this Ordinance with the California Building Standards Commission.

SECTION 7. CEQA. In accordance with CEQA Guidelines section 15060(c)(2) – the adoption of the California Fire Code will not foreseeably result in direct or reasonably foreseeable indirect impacts and is exempt from the provisions of the California Environmental Quality Act and City Clerk shall file such Notice of Exemption with the County Clerk.

SECTION 8. Severability. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held out to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have adopted this ordinance and each section, subsection, sentence, clause, phrase or portion thereof irrespective of the fact that any one or more sections, subsection, sentence clause, phrases or portions be declared valid or unconstitutional.

SECTION 9. Effective Date. This Ordinance shall not take effect until thirty (30) days after its final passage, or January 1, 2017, whichever occurs later.

SECTION 10. Publication by Clerk. The City Clerk shall certify as to the adoption of this Ordinance and shall cause a summary thereof to be published within fifteen (15) days of adoption and shall post a certified copy of this Ordinance, including the vote for and against same, in the Office of the City Clerk, in accordance with Government Code 36933.

PASSED AND APPROVED THIS 21ST DAY OF NOVEMBER, 2016.

Richard D. Murphy, Mayor
I, Windmera Quintanar, CMC, City Clerk of the City of Los Alamitos, do hereby certify that the foregoing Ordinance No. 2016-07 was duly introduced and placed upon its first reading at a regular meeting of the City Council on the 17th day of October, 2016 and that thereafter, said Ordinance was duly adopted and passed at a meeting of the City Council on the 21st day of November, 2016, by the following vote, to wit:

AYES: COUNCILMEMBERS: Edgar, Grose, Kusumoto, Murphy
NOES: COUNCILMEMBERS: None
ABSENT: COUNCILMEMBERS: Hasselbrink
ABSTAIN: COUNCILMEMBERS: None

Windmera Quintanar, CMC, City Clerk
EXHIBIT A
LOCAL AMENDMENT FINDINGS

FACTUAL FINDINGS ESTABLISHING THE REASONABLE NEED FOR LOCAL AMENDMENTS TO PORTIONS OF THE BUILDING STANDARDS CODE AND FIRE CODE BASED UPON CLIMATIC, GEOLOGICAL AND/OR TOPOGRAPHICAL CONDITIONS

Section 1 of this Exhibit sets forth various findings that apply in Los Alamitos, explaining the various local climatic, geological and/or topographical conditions that necessitate the various changes.

Section 2 of this Exhibit explains which findings apply to which amendments.

Section 1. General Findings
The following findings apply in the City of Los Alamitos, and explain why the changes to the Building Standards Code are necessary because of climatic, geological and/or topographical conditions in the city.

I. Climatic Conditions

A. Orange County is located in a semi-arid Mediterranean type climate. It annually experiences extended periods of high temperatures with little or no precipitation. Hot, dry (Santa Ana) winds, which may reach speeds of 70 M.P.H. or greater, are also common to the area. These climatic conditions cause extreme drying of vegetation and common building materials. Frequent periods of drought and low humidity add to the fire danger. This predisposes the area to large destructive fires (conflagration). In addition to directly damaging or destroying buildings, these fires are also prone to disrupt utility services throughout the County. Obstacles generated by a strong wind, such as fallen trees, street lights and utility poles will greatly impact the response time to reach an incident scene.

B. The climate alternates between extended periods of drought and brief flooding conditions. Flood conditions may affect the Orange County fire Authority’s ability to respond to a fire or emergency condition. Floods also disrupt utility services to buildings and facilities within the County.

C. Water demand in this densely populated area far exceeds the quantity supplied by natural precipitation; and although the population continues to grow, the already-taxed water supply does not. California is projected to increase in population by nearly 10 million over the next quarter of a century with 50 percent of that growth centered in Southern California. Due to storage capacities and consumption, and a limited amount of rainfall future water allocation is not fully dependable. This necessitates the need for additional and on-site fire protection features.

D. These dry climatic conditions and winds contribute to the rapid spread of even small fires originating in high-density housing or vegetation. These fires spread very quickly and create a need for increased levels of fire protection. The added protection of fire sprinkler systems and other fire protection features will supplement normal fire department response by providing immediate protection for the building occupants and
by containing and controlling the fire spread to the area of origin. Fire sprinkler systems will also reduce the use of water for firefighting by as much as 50 to 75 percent.

II. Topographical conditions

A. Natural; slopes of 15 percent or greater generally occur throughout the foothills of Orange County. The elevation change caused by the hills creates the geological foundation on which communities with Orange County is built and will continue to build. With much of the populated flatlands already built upon, future growth will occur on steeper slopes and with greater constraints in terrain.

B. Traffic and circulation congestion is an artificially created, obstructive topographical condition, which is common throughout Orange County.

C. These topographical conditions combine to create a situation that places fire department response time to fire occurrences at risk and makes it necessary to provide automatic on-site fire-extinguishing systems and other protection measures to protect occupants and property.

III. Geological Conditions

The Orange County region is a densely populated area that has buildings constructed over and near a vast and complex network of faults that are believed to be capable of producing future earthquakes similar or greater in size than the 1994 Northridge and the 1971 Sylmar earthquakes. Earthquake faults run along the northeast and southwest boundaries of Orange County. The Newport-Inglewood Fault, located within Orange County was the source of the destructive 1933 Long Beach earthquake (6.3 magnitude) which took 120 lives and damaged buildings in an area from Laguna Beach to Marina Del Rey to Whittier. In December 1989, another earthquake occurred in the jurisdiction of Irvine at an unknown fault line. Regional planning for reoccurrence of earthquakes is recommended by the state of California, Department of Conservation.

A. Previous earthquakes have been accompanied by disruption of traffic flow and fires. A severe seismic event has the potential to negatively impact any rescue or fire suppression activities because it is likely to create obstacles similar to those indicated under the high wind section above. The October 17, 1989, Santa Cruz earthquake resulted in one major fire in the Marina District (San Francisco). When combined with the 34 other fires locally and over 500 responses, the department was taxed to its fullest capabilities. The Marina fire was difficult to contain because mains supplying water to the district burst during the earthquake. This situation creates the need for both additional fire protection and automatic on-site fire protection for building occupants. State Department of Conservation noted in their 1988 report (Planning Scenario on a Major Earthquake on the Newport-Inglewood Fault Zone, page 59), “unfortunately, barely meeting the minimum earthquake standards of building codes places a building on the verge of being legally unsafe.”

B. Road circulation features located throughout the County also make amendments reasonably necessary. Located through the County are major roadways, highways and
flood control channels that create barriers and slow response times. Hills, slopes, street and storm drain design, accompanied by occasional heavy rainfall, causes roadway flooding and landslides and at times may make an emergency access route impassable. There are areas in Orange County that naturally have extended emergency response times that exceed the 5 minute goal.

C. Soils throughout the County possess corrosive properties that reduce the expected usable life of water services when metallic pipes are in contact with soils.

D. Portions so of the County contain active or former oil production fields. These areas contain a variety of naturally occurring gasses, liquids and vapors. These compounds present toxicity or flammability hazards to building occupants. Evaluation of these hazards and the risks they pose to development is necessary implement appropriate mitigation.

Due to the topographical conditions of sprawling development separated by waterways and narrow and congested streets and the expected infrastructure damage inherent in seismic zones described above, it is prudent to rely on automatic fire sprinkler systems to mitigate extended fire department response time and keep fires manageable with reduced fire flow (water) resources available for a given structure. Additional fire protection is also justified to match the current resources of firefighting equipment and personnel within the Orange County Fire Authority.

Section 2 — Which Findings Apply to Which Amendments

Amendments to the 2016 Edition of the California Codes are found reasonably necessary based on the climatic and/or geologic conditions cited in Section 1 hereof of this ordinance.
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Note: Changes have been made to the same sections of the NFPA Standards in both the California Building Code and the California Residential Code; the justification is the same for the changes in the Residential Code as set forth for the Building Code.