ORDINANCE NO. 2017-183


WHEREAS, pursuant to California Government Code Section 50022.1 et seq. the City of Aliso Viejo ("City") may adopt by reference the California Building Standards Code, 2016 Edition as provided in Title 24 of the California Code of Regulations and other model codes; and

WHEREAS, the California Building Standards Commission ("Commission") recently adopted the 2016 Edition of the California Building Standards Code; and

WHEREAS, California Health and Safety Code Section 17958.7 and 18941.5 authorize cities to adopt the California Building Standards Code with modifications determined to be reasonably necessary because of local climatic, geological or topographical conditions; and

WHEREAS, the City desires to adopt the California Building Standards Code and other model codes with the necessary amendments to assure the Codes are tailored to the particular safety needs of the City as required by its unique climatic, geological and topographical conditions; and

WHEREAS, the Fire Marshal and Building Official have recommended that changes and modifications be made to the California Building Standards Code, and have advised that certain changes and modifications to said Code are reasonably necessary due to local conditions within the City of Aliso Viejo, and have further advised that the remainder of the said changes and modifications are of an administrative or procedural nature, or concern themselves with subjects not covered by the Code, or are reasonably necessary to safeguard life and property within the City of Aliso Viejo; and

WHEREAS, the Fire Marshal and Building Official have also recommended that changes and modifications be made to the California Building Standards Code, which are
necessary for administrative clarification and to establish administrative standards for the
effective enforcement of the building standards of the City of Aliso Viejo and do not modify
a building standard pursuant to California Health & Safety Code Section 17958, 17958.7,
and/or 18941.5; and

WHEREAS, the City held a public hearing on February 15, 2017 at which time all
interested persons had the opportunity to appear and be heard on the matter of adopting
the Codes as amended herein; and

WHEREAS, the City published notice of the aforementioned public hearing pursuant to
California Government Code Section 6066 on November 3, 2016 and February 2, 2017;
and

WHEREAS, any and all other legal prerequisites relating to the adoption of this Ordinance
have occurred.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ALISO VIEJO,
CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. Authority
The City Council enacts this Ordinance under the authority granted to the City as follows:

A. California Government Code Section 50022 et seq. authorizes the City to
adopt by reference the California Building Standards Code and authorizes the City to
adopt other uniform codes by reference;

B. California Health & Safety Code Section 17958.7 and 18941.5 authorize
the City to adopt the California Building Standards Code with modifications determined
to be reasonably necessary because of local climatic, geological or topographical
conditions.

SECTION 2. Findings
I. Climatic Conditions:

1. Amendments to Sections 202, 701A.3, 710A.3.2, 710A.4, and 903.3.5.3 of
the 2016 Edition of the California Building Code, Sections R202, F301.2, R337.1.3,
R337.1.6 and R1001.13 of the 2016 Edition of the California Residential Code, and
Sections 1014.1.4 and 1014.1.2 of the 2016 Edition of the California Plumbing Code are
reasonably necessary due to the following climatic condition:

Orange County and the City of Aliso Viejo are 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. Additionally, there is a significant increase in the amount of wind force at 60 feet above the ground. Use of aerial type fire-fighting apparatus above this height would place rescue personnel at increased risk of injury.

2. Amendments to Sections 202, 701A.3, 710A.3.2, 710A.4, and 903.3.5.3 of the 2016 Edition of the California Building Code and Sections R202, R301.2, R337.1.3, R337.1.6 and R1001.13 of the 2016 Edition of the California Residential Code are reasonably necessary due to the following climatic condition:

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

3. Amendments to Sections 202, 701A.3, 710A.3.2, 710A.4, and 903.3.5.3 of the 2016 Edition of the California Building Code and Sections R202, R301.2, R337.1.3, R337.1.6 and R1001.13 of the 2016 Edition of the California Residential Code are reasonably necessary due to the following climatic condition:

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. It would also leave tall buildings vulnerable to uncontrolled fires due to a lack of available water and an inability to pump sufficient quantities of available water to floors in a fire.

4. Amendments to Sections 202, 701A.3, 710A.3.2, 710A.4 and 903.3.5.3 of the 2016 Edition of the California Building Code and Sections R301.2, R337.1.3, R337.1.6 and R1001.13 of the 2016 Edition of the California Residential Code are reasonably necessary due to the following climatic condition:

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. In addition, untreated wood roofs cause or contribute to serious fire hazard and to the rapid spread of fires when such fires are accompanied by high winds. Pieces of burning
wooden roofs become flying brands and are carried by the wind to other locations and thereby spread fire quickly.

II. Topographical conditions:

Amendments to Sections 710A.3, 710A.3.2, 710A.4, 903.2, 903.2.8, 903.3.3.1.1.1, 903.3.5.3, 3109.4, 3109.4.1, 3109.4.1.8 and Chapter 35 of the 2016 Edition of the California Building Code and Sections R319.1, R337.1.3, R337.1.6, R1001.13 and Chapter 44 of the 2016 Edition of the California Residential Code are reasonably necessary due to the following topographical conditions:

1. 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 within Orange County are built and will continue to be built on. With much of the populated flatlands already built upon, future growth will occur in areas with steeper slopes and greater constraints in terrain.

2. 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 with 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 Fire Department emergency response times that exceed the 5 minute goal.

3. Placement of multiple occupancy buildings, location of arterial roads, and fire department staffing constraints due to recent revenue-limiting state legislation have made it difficult for the fire department to locate additional fire stations and provide manpower sufficient to concentrate fire companies and personnel to control fires in high density apartment or condominium buildings. Fire Department equipment does not allow easy access to areas of buildings greater than 55 feet above the level of Fire Department vehicle access. These conditions create the need for built-in on-site fire protection systems to protect occupants and property until fire-fighting apparatus and personnel arrive on the scene.

4. These topographical conditions combine to create a situation which 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:

1. Amendments to Chapter 35 of the 2016 Edition of the California Building Code and Sections R301.2, R301.9, R309.6, R313.1, R313.2, R313.3.6.2.2 and Chapter 44 of the 2016 Edition of the California Residential Code are reasonably necessary due to the following geological conditions:

Orange County and the City of Aliso Viejo are located in a highly active seismic
area. There are earthquake faults that run along both the northeastern and southwestern boundaries of Orange County. The Newport-Inglewood Fault Zone (NIFZ), which runs through Orange County, was the source of the destructive 1933 Long Beach earthquake (6.3 magnitude, hypocenter off Newport Beach coast), which took 120 lives. The quake damaged areas from Laguna Beach to Marina del Rey and inland to Whittier and poses one of the greatest hazards to lives and property in the nation. Regional planning for reoccurrence is recommended by the State of California, Department of Conservation. There was also an earthquake in December 1989, with the epicenter located near the City of Irvine. The fault on which this quake occurred was unknown prior to this activity. The October 17, 1989, Santa Cruz earthquake resulted in only one major San Francisco fire in the Marina District, but when combined with the 34 other fires and over 500 responses, the fire department was taxed to its full capabilities. The Marina District fire was difficult to contain because mains supplying water to the district burst during the earthquake. If more fires had been ignited by the earthquake, it would have been difficult for the fire department to contain them. Experts predict a major earthquake in our area within the next 50 years. This situation creates the need for both additional fire protection measures and automatic on-site fire protection for building occupants since a multitude of fires may result from breakage of gas and electric lines as a result of an earthquake. As noted by “Planning Scenario on a Major Earthquake on the Newport-Inglewood Fault Zone, 1988, State Department of Conservation,” page 59; “unfortunately, barely meeting the minimum earthquake standards of building codes places a building on the verge of being legally unsafe.”

2. Amendments to Sections 903.2, 903.2.8, and Chapter 35 of the 2016 Edition of the California Building Code and Sections R301.2, R301.9, R309.6, R313.1, R313.2, R313.3.6.2.2 and Chapter 44 of the 2016 Edition of the California Residential Code are reasonably necessary due to the following geological conditions:

Traffic and circulation congestion presently existing in the City of Aliso Viejo often places fire department response time to fire occurrences at risk. This condition will be exacerbated by any major disaster, including any earthquake wherein damage to the highway system will occur. This condition makes the need for additional on-site protection for property occupants necessary.

3. Amendments to Chapter 35 of the 2016 Edition of the California Building Code are reasonably necessary due to the following geological conditions:

The City of Aliso Viejo is located in a seismically active area. The viability of the public water system would be questionable at best after a major seismic event. This would leave tall buildings vulnerable to uncontrolled fires due to a lack of available water and an inability to pump sufficient quantities of any available water to floors above the 55-foot-level. 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. With the probability of strong aftershocks there exists a need to provide increased protection for anyone on upper floors.
4. Amendments to Chapter 35 of the 2016 Edition of the California Building Code and Sections R301.2, R301.9, R309.6, R313.1, R313.2, R313.3.6.2.2 and Chapter 44 of the 2016 Edition of the California Residential Code are reasonably necessary due to the following geological conditions:

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

5. Amendments to Chapter 35 of the 2016 Edition of the California Building Code and Sections R301.2, R301.9, R309.6, R313.1, R313.2, R313.3.6.2.2 and Chapter 44 of the 2016 Edition of the California Residential Code are reasonably necessary due to the following geological conditions:

Portions 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 to implement appropriate mitigation.

IV. Other amendments:

All other changes to the codes referenced in this Ordinance are hereby found, declared and determined by the City Council to be primarily procedural and non-substantive, and therefore to be equivalent for the purposes intended by the original codes.

V. Fire Code Amendments:

The City Council finds that the following table sets forth the sections of the 2016 Edition of the California Fire Code that have been modified and the associated local climatic, topographical and/or geological conditions described above supporting the modifications.

<table>
<thead>
<tr>
<th>Code Section</th>
<th>Supportive Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I – Climatic Conditions</td>
</tr>
<tr>
<td></td>
<td>II – Topographical Conditions</td>
</tr>
<tr>
<td></td>
<td>III – Geological Conditions</td>
</tr>
<tr>
<td>109.4</td>
<td>Administrative</td>
</tr>
<tr>
<td>202</td>
<td>I</td>
</tr>
<tr>
<td>304.1.2</td>
<td>I</td>
</tr>
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<td>305.6</td>
<td>I</td>
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<tr>
<td>305.7</td>
<td>I</td>
</tr>
<tr>
<td>307</td>
<td>I, III</td>
</tr>
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<td>307.6</td>
<td>I, III</td>
</tr>
<tr>
<td>307.6.1</td>
<td>I, III</td>
</tr>
<tr>
<td>307.6.2</td>
<td>I, III</td>
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<tr>
<td>Section</td>
<td>Level</td>
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<td>-----------</td>
<td>-------</td>
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<tr>
<td>307.6.2.1</td>
<td>I, III</td>
</tr>
<tr>
<td>390.2.1</td>
<td>I</td>
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<tr>
<td>320</td>
<td>I, III</td>
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<tr>
<td>321</td>
<td>I, III</td>
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<td>I, III</td>
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<td>324</td>
<td>I, III</td>
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<tr>
<td>407.5</td>
<td>I, II, III</td>
</tr>
<tr>
<td>501.1</td>
<td>Administrative</td>
</tr>
<tr>
<td>510.1</td>
<td>I, II, III</td>
</tr>
<tr>
<td>510.2</td>
<td>Administrative</td>
</tr>
<tr>
<td>510.4.2.2</td>
<td>Administrative</td>
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<tr>
<td>510.5.1</td>
<td>Administrative</td>
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<td>510.5.2</td>
<td>Administrative</td>
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<td>510.5.3</td>
<td>Administrative</td>
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<tr>
<td>510.6.1</td>
<td>Administrative</td>
</tr>
<tr>
<td>903.2</td>
<td>I, II, III</td>
</tr>
<tr>
<td>903.2.8</td>
<td>I, II, III</td>
</tr>
<tr>
<td>903.3.5.3</td>
<td>I, II, III</td>
</tr>
<tr>
<td>2801.2</td>
<td>Administrative</td>
</tr>
<tr>
<td>2808.2</td>
<td>I, II, III</td>
</tr>
<tr>
<td>2808.3</td>
<td>I, II, III</td>
</tr>
<tr>
<td>2808.7</td>
<td>I, II, III</td>
</tr>
<tr>
<td>2808.9</td>
<td>I, II, III</td>
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<tr>
<td>2808.11</td>
<td>I, II, III</td>
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<tr>
<td>2808.11.1</td>
<td>I, II, III</td>
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<tr>
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<td>I, II, III</td>
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<td>2808.12</td>
<td>I, II, III</td>
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<tr>
<td>2808.13</td>
<td>I, II, III</td>
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<tr>
<td>2808.14</td>
<td>I, II, III</td>
</tr>
<tr>
<td>4906.3</td>
<td>I, II, III</td>
</tr>
<tr>
<td>4908</td>
<td>I, II, III</td>
</tr>
<tr>
<td>4909</td>
<td>I, II, III</td>
</tr>
<tr>
<td>5001.5.2</td>
<td>I, II, III</td>
</tr>
<tr>
<td>5003.1.1.1</td>
<td>I, II, III</td>
</tr>
<tr>
<td>5606.8.2</td>
<td>I, II, III</td>
</tr>
<tr>
<td>5608.3</td>
<td>Administrative</td>
</tr>
<tr>
<td>Chapter 80</td>
<td>Administrative</td>
</tr>
<tr>
<td>Appendix A</td>
<td>Administrative</td>
</tr>
<tr>
<td>Appendix B</td>
<td>Administrative</td>
</tr>
<tr>
<td>Appendix BB</td>
<td>Administrative</td>
</tr>
<tr>
<td>Appendix C</td>
<td>Administrative</td>
</tr>
<tr>
<td>Appendix CC</td>
<td>Administrative</td>
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<td>Appendix D</td>
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SECTION 3. Chapter 13.02 of Title 13 entitled “Building Regulations” is hereby amended to read in full as follows:

"CHAPTER 13.02 BUILDING REGULATIONS"

13.02.010 Adoption of 2016 California Building Code and Related Codes.
13.02.020 Violations.
13.02.030 Board of Appeals.
13.02.040 Fees.
13.02.050 Administration.
13.02.060 Amendments to Chapter 1 of the California Building Code.
13.02.065 Amendments to Chapter 2 of the California Building Code.
13.02.075 Amendments to Chapter 7A of the California Building Code.
13.02.080 Amendments to Chapter 9 of the California Building Code.
13.02.100 Amendments to Chapter 31 of the California Building Code.
13.02.110 Amendments to Chapter 35 of the California Building Code.
13.02.120 Amendments to the California Residential Code.
13.02.130 Amendments to the California Green Building Standards Code.
13.02.140 Amendments to the California Plumbing Code.
13.02.150 Building deposits.
13.02.010  Adoption of 2016 California Building Code and Related Codes.

The City Council, for the purpose of prescribing regulations for the erecting, construction, enlargement, alteration, repair, improving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of all buildings and structures in the city, hereby adopts the following construction codes and the amendment to these codes set forth in this article; hereby adopts:


K. The Uniform Swimming Pool, Spa and Hot Tub Code, 2015 Edition, as published by the International Association of Plumbing and Mechanical Officials;

The provisions of these codes as amended by this chapter ("Codes") shall constitute the Building Regulations of the City of Aliso Viejo. Where the California Code of Regulations and California Building Standards Code differ from any sections of the Codes, the State regulations shall prevail over the Codes, except as expressly provided in this chapter. The Codes are on file for public examination in the office of the Building Official. Such Codes are hereby adopted and incorporated as though set forth in full in this section.

13.02.020 Violations.

For all sections of the Codes including any and all amendments to these Codes included within this chapter, the following shall apply pertaining to violations and shall replace any sections of those codes that pertain to violation.

It shall be unlawful for any person, firm or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy, or maintain any building or structure in the City, or cause same to be done, contrary to or in violation of any of the provisions of this chapter.

Any person, firm, or corporation violating any of the provisions of this chapter, shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this chapter is committed, continued, or permitted, and upon conviction of any such violation such persons shall be punished by a fine of not more than $1,000.00 or by imprisonment for not more than six months, or by both such fine and imprisonment.

13.02.030 Board of Appeals.

For all sections of the Codes, including any and all amendments included within this chapter, the following shall apply pertaining to board of appeals and shall replace any sections of those codes that pertain to board of appeals.

In order to determine the suitability of alternate materials and methods of construction and provisions of these Codes, there shall be and there is hereby create a board of appeals, consisting of five members, composed of the mayor and the other members of the city council. Said members shall hold their respective membership on said board of appeals by reason of, and concurrently with their terms of service as council members and shall cease to be such members upon their ceasing to be such council members. The building official shall be the secretary of the board. The board may adopt reasonable rules and regulations for conducting its investigations and shall render all its decisions and findings on contested matters, in writing to the building official, with a duplicate copy thereof to any appellant or contestant affected by any such decision or finding, and may recommend to the city council such new legislation, if any, as is consistent therewith.

Three members of the board shall constitute a quorum. The mayor shall be the presiding officer of the board and in the mayor's absence the mayor pro-tem shall preside. Meetings shall be conducted in accordance with the Brown Act.
The board shall have the right, subject to such limits as the city council may prescribe by resolution, to employ at the cost and expense of the city, such qualified individuals as the board, in its discretion, may deem reasonably necessary in order to assist it in its investigations and making its findings and decisions.

13.02.040 Fees.

For all sections of the Codes including any and all amendments included within this chapter, pertaining to fees are hereby amended to read as follows:

All fees shall be as set forth by resolution of the city council.

13.02.050 Administration.

For all administrative sections of the Codes, are hereby deleted and replaced by Chapter 1 of the 2016 California Building Code, as amended in this chapter.

13.02.060 Amendments to Chapter 1 of the California Building Code.

Chapter 1, Division II, Scope and Administration, is amended as follows:

SECTION 104.8 Liability is amended to include the following:

The provisions of this section shall apply if the Building Official or his/her authorized representative are employees of this jurisdiction and shall also apply if the Building Official or his/her authorized representatives acting under contract as agents of this jurisdiction.

SECTION 105.2, Work Exempt from Permit, under Subsection Building is amended to revise Item 2:

Section 105.2. Work Exempt from Permit.

Building:

2. Walls and fences less than 42 inches in height.

SECTION 105.8 is added to read as follows:

Section 105.8. Reconstruction. If the value of the reconstruction (or renovations) of a building is equal to or exceeds 75 percent of the value of the building, the entire building shall comply with the code provisions for new construction. The value of the reconstruction (or renovation) for a property shall include the value of all construction stemming from construction-related permits issued within the last two years.

SECTION 111.5, Declaration of Intended Use, is added to read as follows:
Section 111.5. Declaration of Intended Use. When required by the fire chief, with the concurrence of the building official, any or all owners of any occupancy may be required to record with the county recorder of the County of Orange a legal instrument of intended use. This legal instrument shall be called a declaration of intended use. The declaration of intended use shall be in accordance with the requirements of this section. It shall specifically state, by occupancy classification, all intended uses of all portions of the occupancy and may not be modified or withdrawn without the approval of the fire chief with the concurrence of the building official. Unapproved changes of occupancy or use can be cause for an immediate hearing before the building official and the fire chief or their designees. Such hearing shall be conducted to rule on the revocation of the certificate of occupancy and the revocation of all permits issued to all owners, tenants, operators and occupants of all portions of the occupancy. The declaration of intended use shall be binding on all present and future owners, tenants, operators and occupants.

SECTION 111.5.1, Certified Copies, is added to read as follows:

Section 111.5.1 Certified Copies. A certified copy of the recorded declaration of intended use may be required to be filed with the building official and the fire chief before any certificate of occupancy and/or any permits are issued to any or all owners, tenants, operators or occupants of the occupancy.

13.02.065 Amendments to Chapter 2 of the California Building Code.

Chapter 2, Definitions, is amended as follows:

SECTION 202 Definitions is revised as follows:

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.
13.02.075 Amendments to Chapter 7A of the California Building Code.

Chapter 7A, Materials and Construction Methods for Exterior Wildfire Exposure, is amended as follows:

SECTION 710A.3 is amended to read as follows:

701A.3 APPLICATION. New buildings located in any Fire Hazard Severity Zone or any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date, and additions to and remodel of buildings constructed before 2012 located in areas currently designated as such, shall comply with the provisions of this chapter. The provisions shall also apply to additions, remodels, and accessory structures located within 100 feet of a fuel modification zone, vegetation management area, or similar area containing hazardous combustible vegetation, regardless of whether the property is currently located in a designated Fire Hazard Severity Zone or Wildland-Urban Interface Fire Area, when materials and/or construction methods for exterior wildfire exposure were previously required at the property by the Building or Fire Code Official.

Exceptions:

1. Buildings of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from the applicable building.

2. Buildings of an accessory character classified as a Group U occupancy of any size located least 50 feet from an applicable building.

3. Buildings classified as a Group U Agricultural Building, as defined in Section 202 of this code (see also Appendix C – Group U Agricultural Buildings), when located at least 50 feet from an applicable building.

SECTION 710A.3.2 is amended to read as follows:

710A.3.2 Detached accessory structures within 50 feet of an applicable building shall comply with the requirements of this section.

SECTION 710A.4 Requirements, is amended to read as follows:

710A.4 Requirements. Accessory structures shall be constructed of non-combustible or ignition-resistant materials.
13.02.080 Amendments to Chapter 9 of the California Building Code.

Chapter 9, Fire Protection Systems, is amended as follows:

SECTION 903.2, Where Required, is amended to read as follows:

Section 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 of the California Building Code, 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 amended 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, with the exception of accessory dwelling
units where automatic fire extinguishing systems have not been required for the primary residence.

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.

903.3.1.1.1, Exempt Locations, is amended by revising Item 5 as follows:

5. When approved by the fire code official, spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, and associated electrical power distribution equipment, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by fire barriers consisting of not less than 1-hour fire barriers constructed in accordance with Section 707 or not less than 2 hour horizontal assemblies constructed in accordance with Section 712, or both.

SECTION 903.3.5.3, Hydraulically Calculated Systems, is hereby added as follows:

Section 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 required by the Fire Code Official, the fire sprinkler system shall not exceed water supply capacity specified by Table 903.3.5.3

TABLE 903.3.5.3
Hydraulically Calculated Systems

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13.02.100 Amendments to Chapter 31 of the California Building Code.

Chapter 31, Special Construction, is amended as follows:

SECTION 3109.4, Residential Swimming Pools, is amended to add the following subsections to read as follows:

SECTION 3109.4.1, Barrier Height and Clearances, is amended to read as follows:

Section 3109.4.1 Barrier Height and Clearances. The top of the barrier shall be at least 60 inches above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance at the bottom of the barrier may be increased to 4 inches when grade is a solid surface such as a concrete deck, or when the barrier is mounted on the top of the above ground pool structure. When barriers have horizontal members spaced less than 45 inches apart, the horizontal members shall be placed on the poolsid of the barrier. Any decorative design work on the side away from the swimming pool, such as protrusions, indentations or cutouts, which render the barrier easily climbable, is prohibited.

SECTION 3109.4.1.8 is amended to read as follows:

Section 3109.4.1.8 (1) Doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door or it’s screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017, the deactivation switch shall be located 54 inches or more above the threshold of the door, and be permanently mounted within the wall cavity.

13.02.110 Amendments to Chapter 35 of the California Building Code.

Chapter 35 Reference Standards, is amended as follows:

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

SECTION 6.7.3 is hereby revised as follows:

Section 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 8.17.1.1.1 is hereby added as follows

Section 8.17.1.1.1 Residential Waterflow Alarms. A local water-flow alarm shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system, where provided. Group R occupancies not requiring a fire alarm system by the California Fire Code shall be provided with a minimum of one approved interior alarm device in each unit. Interior alarm devices shall be required to provide 55 dBA or 15 dBA above ambient, whichever is greater, throughout all living spaces within each unit. Sound levels in all sleeping areas with all intervening doors closed shall be a minimum of 15 dBA above the average ambient sound level but not less than 75 dBA, whichever is greater. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

SECTION 11.1.1.1 is hereby added as follows:

Section 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 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 occupancy.

SECTION 11.2.3.1.1.1 is hereby added as follows:

Section 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 Orange County Fire Authority 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 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 amended as follows:

Section 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:

Section 6.2.8.1 The closest upstream indicating valve to the riser 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:

Section 6.2.9 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:

Section 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 as follows:

Section 10.4.1.1 Coatings. All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material, prior to poly-tube, and after installation.

Exception: Bolted joint accessories made from 304 or 316 stainless steel.
SECTION 10.4.1.1.1 is hereby added as follows:

Section 10.4.1.1.1 All bolts used in pipe-joint assembly shall be 316 stainless steel.

SECTION 10.4.3.2 is hereby deleted and replaced as follows:

Section 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.

13.02.120 Amendments to the California Residential Code.

Chapter 2, Definitions, is amended as follows:

SECTION R202 Definitions is amended by adding “OCFA” and “Spark Arrester” as follows:

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

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 combustible vegetation.

Chapter 3, Building Planning, is amended as follows:

SECTION R301.2, Climatic and Geographic Design Criteria, is amended as follows:

R301.2 Climatic and Geographic Design Criteria, Table R301.2(1) Climatic and Geographic Design Criteria.
TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

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<th>WINTER DESIGN TEMP</th>
<th>ICE BARRIER UNDERPLACEMENT REQUIRED</th>
<th>FLOOD HAZARDS</th>
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SECTION R301.9, Fuel Modification Requirements for New Construction, is hereby added as follows:

R301.9 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 R309.6, Fire sprinkler attached garages, and carports with habitable space above, is hereby amended by modifying the exception to read as follows:

Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing carports and/or garages that do not have an automatic fire sprinkler system installed unless a sprinkler system is required in accordance with California Fire Code Section 903.2.8.

SECTION R313.1, Townhouse automatic fire sprinkler systems, is hereby amended by modifying the exception as follows:

Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic fire sprinkler system installed unless a sprinkler system is required in accordance with California Fire Code Section 903.2.8.

SECTION R313.2, One- and two-family dwellings automatic fire sprinkler systems, is hereby amended by modifying the exception as follows:

Exception: An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic sprinkler system unless a sprinkler system is required in accordance with California Fire Code Section 903.2.8.
SECTION R313.3.6.2.2, Calculation procedure, is hereby revised as follows:

R313.3.6.2.2 Calculation procedure. Determination of the required size for water distribution piping shall be in accordance with the following procedure and California Fire Code Section 903.3.5.3.

SECTION R319.1, Address identification, is hereby revised as follows:

R319.1 Address Identification. New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches in height with a stroke width of not less than 0.5 inch. Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

SECTION R337.1.3, Application, is hereby revised to read as follows:

R337.1.3 Application. New buildings located in any Fire Hazard Severity Zone or any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date, and additions to and remodel of buildings constructed before 2012 located in areas currently designated as such, shall comply with the provisions of this chapter. The provisions shall also apply to additions, remodels, and accessory structures located within 100 feet of a fuel modification zone, vegetation management area, or similar area containing hazardous combustible vegetation, regardless of whether the property is currently located in a designated Fire Hazard Severity Zone or Wildland-Urban Interface Area, when materials and/or construction methods for exterior wildfire exposure were previously required at the property by the Building or Fire Code Official.

Exceptions:

1. Buildings of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from an applicable building.

2. Buildings of an accessory character classified as a Group U occupancy of any size located at least 50 feet from an applicable building.
3. Buildings classified as a Group U Agricultural Building, as defined in Section 202 of this code (see also Appendix C – Group U Agricultural Buildings), when located at least 50 feet from an applicable building.

SECTION R337.1.6, Fuel Modification Requirements for New Construction, is hereby added as follows:

R337.1.6 Fuel Modification Requirements for New Construction. All new buildings to be built or installed in hazardous fire areas shall comply with the following:

1. Preliminary fuel modification plans shall be submitted to and approved by the fire code official concurrent with the submittal for 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.

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

3. The fuel modification plans shall meet the criteria set forth in the Fuel Modification Section of the Orange County Fire Authority Vegetation Management Guidelines.

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 10, Chimneys and Fireplaces, is amended as follows:

SECTION R1001.13, Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices, is hereby added as follows:

R1001.13 Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices. Outdoor fireplaces, fire pits, fire rings, or similar exterior devices shall comply with this section.

Exception: Barbeques, grills, and other portable devices intended solely for cooking
SECTION R1001.13.1, Gas-fueled devices, is hereby added as follows:

R1001.13.1 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. 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 in accordance with Section R1003.9.2.

SECTION R1001.13.2, Devices using wood or fuels other than natural gas or liquefied-petroleum gas, is hereby added as follows:

R1001.13.2 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 Section R1001. 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.

SECTION R1001.13.3, Devices using wood or fuels other than natural gas or liquefied-petroleum gas, is hereby added as follows:

R1001.13.3 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 adopted Fire Hazard Severity Zones (FHSZ) or in locations where conditions could cause the spread of fire to the WRA or FHSZ, unless determined by the Fire Code Official that the location or design of the device should reasonably prevent the start of a wildfire.

Chapter 44, Referenced Standards, is amended as follows:

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

SECTION 6.73 is hereby revised as follows:

6.73 Fire department connections (FDC) shall be of an approved type. The FDC shall contain a minimum of two 2½” inlets. 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 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. When the fire sprinkler density design requires 500 gpm (including inside hose stream demand) or greater, or a standpipe system is included, four 2 ½” inlets shall be provided.

SECTION 8.3.3.1 is hereby revised 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 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 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 Orange County Fire Authority 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 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.

Appendix O, Vehicular Gates, is adopted with only the section indicated below:

SECTION AO103.3 Vehicular gates or other barriers across required fire apparatus access roads is added as follows:

AO103.3 Vehicular gates or other barriers across required fire apparatus access roads. The installation of gates or other barriers across a required fire apparatus access road shall be approved by the fire code official. Gates or barriers shall be in accordance with Orange County Fire Authority Guideline B-09 “Fire Master Plans for Commercial and Residential Development”.

13.02.140 Amendments to the California Plumbing Code.

SECTION 1014.1.4 is added to read as follows:

Grease interceptors/traps in new construction shall comply with one of the following standards:

(1) Laterals must be oversized two (2) pipe diameter increments at the point of connection with the interceptor discharge downstream to the sewer main; or
(2) Grease interceptors/traps must connect directly to the sewer main with no additional connections.

SECTION 1014.1.2 is amended by adding the following paragraph:

In locations where a grease interceptor/trap is present, and the discharge of the interceptor/traps is connected to the building lateral, such laterals must be cleaned on a semi-annual basis by a qualified professional. Verification of such cleaning shall be submitted to the Building Department for approval on an annual basis. Verification shall be in the form of a statement and/or invoice from the person performing the cleaning. Premises that have had an overflow within the last 24 months shall clean the laterals and verify such cleaning as often as deemed necessary by the Building Official.

13.02.150 Building deposits.

A. As a part of any application for, and prior to the issuance of, any building permit such as where damage may occur to public property, the applicant, if required, shall post a cash deposit in an amount established to cover the city's cost of opening and closing of the necessary files, administration of the permit status, and code enforcement, if necessary. The current deposit amount established for an encroachment permit is $3,000.

B. Any remaining portion of the deposit required by this section shall be returned to the applicant, without interest, upon completion of the work for which the building permit was issued, or upon the request of the applicant if the building permit application is withdrawn prior to commencement of work.

C. The deposit required by this section shall be forfeited entirely, and retained by the city as a penalty, if the applicant fails to comply with any provision of this code as it applies to the work for which the building permit was issued or if the applicant fails to request a refund of the deposit within 30 days of either expiration of the building permit or completion of the work for which the building permit was issued.

D. Nothing in this section shall preclude the city from initiating any enforcement or legal action for violation of any provision of this code.

E. For purposes of this section, “completion of the work” shall mean final inspection approval or issuance of a certificate of occupancy, as applicable.
SECTION 4. Chapter 13.04 of Title 13 entitled "2016 Edition of the California Fire Code" is hereby amended to read in full as follows:

13.04.010 Chapter 1, Scope and Administration, amended.

Chapter 1, Scope and Administration, is hereby amended as follows:

SECTION 109.4, Violation penalties, is hereby revised 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 used 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 hereby amended as follows:

SECTION 202, General Definitions, is hereby revised by adding and amending the following definitions:

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 hereby amended as follows:

SECTION 304.1.2, Vegetation, Item (7), is hereby revised 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
SECTION 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 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 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, Use of Equipment and Devices Generating Heat, Sparks or Open Flames is hereby added as follows:

323.1 Equipment and devices generating heat, sparks or open flames. During any time of the year within Wildfire Risk Areas, within or immediately adjacent to any forest- or brush-covered land or non-irrigated grass-covered land, no person shall use or operate any welding equipment, cutting torches, tarpots, grinding devices, or other tools or equipment that may produce a spark, fire, or flame that could result in a wildfire without doing the following:

- First clearing away all flammable material, including snags, from the area around such operation for a distance of 30 feet or other approved method to reduce fire spread into the wildlands. If 30 foot clearing
cannot be achieved then an alternate method shall be approved by the AHJ prior to work starting.

- Maintain one serviceable round point shovel with an overall length of not less than forty-six (46) inches and one backpack pump water-type fire extinguisher fully equipped and ready for use at the immediate area during the operation.
- Stop work when winds are 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.
- Keep a cell phone nearby and call 911 immediately in case of a fire.

SECTION 323.2, Spark Arresters, is hereby added as follows:

323.2 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.

13.04.040 Chapter 4, Emergency Planning and Preparedness, amended.

Chapter 4, Emergency Planning and Preparedness, is not adopted with the exception of the sections listed below:

A. 401;
B. 401.3.4;
C. 401.9;
D. 402;
E. 403.2;
F. 404.5 through 404.6.6;
G. 407;

SECTION 407.5, Hazardous Materials Inventory Statement, 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.

13.04.050 Chapter 5, Fire Service Features, amended.

Chapter 5, Fire Service Features, is hereby amended as follows:

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 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 are hereby 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 9, Fire Protection Systems, is hereby amended as follows:

SECTION 903.2, Where required, is hereby revised 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, with the exception of accessory dwelling units where automatic fire extinguishing systems have not been required for the primary residence.

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.

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13.04.080 Chapter 11, Construction Requirements for Existing Buildings, amended.

Chapter 11, Construction Requirements for Existing Buildings, is not adopted with the exception of the sections listed below:

A. 1103.7;

B. 1103.7.3;

C. 1103.7.3.1;
D. 1103.7.8 through 1103.7.8.2;
E. 1103.7.9 through 1103.7.9.10;
F. 1103.8 through 1103.8.5.3;
G. 1107;
H. 1113;
I. 1114;
J. 1115;
K. 1116.

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

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

Chapter 28, Lumber Yards and Woodworking Facilities, is hereby amended as follows:

SECTION 2801.2, Permit, is hereby revised by adding the following statement to the last sentence:

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

SECTION 2808.2, Storage site, is hereby revised as follows:

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

SECTION 2808.3, Size of piles, is hereby revised as follows:

2808.3 Size of piles. Piles shall not exceed 15 feet (4572 mm) in height, 50 feet (15 240 mm) in width and 100 feet (30 480 mm) 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 2808.7, 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 by adding the following sentence at the beginning of the section:

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 the 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 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.

13.04.110 Chapter 49, Requirements for Wildland-Urban Interface Fire Areas, amended.

Chapter 49, Requirements for Wildland-Urban Interface Fire Areas, is hereby amended as follows:

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. The fuel modification plans shall meet the criteria set forth in the Fuel Modification Section of OCFA Guideline C-05 “Vegetation

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.

SECTION 4909, Explosives and Blasting, is hereby added as follows:

Section 4909 Explosives and Blasting. Explosives shall not be possessed, kept, stored, sold, offered for sale, given away, used, discharged, transported or disposed of within wildland-urban interface areas, or hazardous fire areas except by permit from the fire code official.


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 amended by modifying the first paragraph 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
6. Hazard classification

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 residentially zoned or any residentially developed property.

13.04.130 Chapter 55, Cryogenic Fluids, adopted.

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

13.04.140 Chapter 56, Explosives and Fireworks, amended.

Chapter 56, Explosives and Fireworks, is hereby amended as follows:

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.

13.04.150 Chapter 57, Flammable and Combustible Liquids, adopted.

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

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

**13.04.170 Chapter 80, Referenced Standards, amended.**

Chapter 80, Referenced Standards, is hereby amended as follows:

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

SECTION 6.7.3 is hereby revised as follows:

6.7.3 Fire department connections (FDC) shall be of an approved type. The FDC shall contain a minimum of two 2 1/2" inlets. 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 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. When the fire sprinkler density design requires 500 gpm (including inside hose stream demand) or greater, or a standpipe system is included, four 2 1/2" inlets shall be provided.

SECTION 8.3.3.1 is hereby revised 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) SFR 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 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 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 Orange County Fire Authority 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 as follows:

7.1.2 The system piping shall not have a separate control valve 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 deleted in its entirety and replaced 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:

6.2.9 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 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 deleted and replaced 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 10.6.2.

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 5. EFFECTIVE DATE

This ordinance and all codes referenced in this ordinance shall take effect upon the later of (1) 30 days from the adoption of this ordinance or (2) January 1, 2017. Projects for which a building permit application and building plans have been submitted prior to the effective date of this ordinance, and for which building permits have been obtained within 180 days from the effective date of this ordinance, shall be exempt from the provisions of this ordinance. Projects for which a building permit application and building plans have been submitted prior to the effective date of this ordinance, and building permits have not been obtained within 180 days from the effective date of this ordinance, shall be subject to all provisions of this ordinance and the codes referenced in this ordinance.

SECTION 6. REPEAL OF CONFLICTING ORDINANCES

Ordinance Nos. 2014-156 and 2013-155, all former ordinances or parts thereof conflicting or inconsistent with the provisions of this ordinance or of the California Building Standards Code, as adopted and amended herein, are hereby repealed.

SECTION 7. SEVERABILITY

If any section, subsection, subdivision, sentence, clause, phrase, or portion of this ordinance, is for any reason held to be invalid or unconstitutional by the decision of any court or 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, subdivision, sentence, clause, phrases, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof, be declared invalid or unconstitutional.

SECTION 8. CITY CLERK'S CERTIFICATION

The City Clerk shall certify to the adoption of this Ordinance and cause the same to be posted at the duty designated posting places within the City and published once within fifteen (15) days after passage and adoption as required by law; or, in the alternative, the City Clerk may cause to be published a summary of this Ordinance in the Office of the City Clerk five (5) days prior to the date of adoption of this Ordinance, and, within fifteen (15) days after adoption, the City Clerk shall cause to be published the aforementioned summary and shall post a certified copy of this Ordinance, together with the vote for and against the same, in the Office of the City Clerk.

PASSED, APPROVED AND ADOPTED this 15th day of February, 2017.

David C. Harrington
Mayor

APPROVED AS TO FORM:  ATTEST:

Scott C. Smith, City Attorney  Mitzi Ortiz, MMC, City Clerk

Page 52 of 53
STATE OF CALIFORNIA       )
COUNTY OF ORANGE     ) ss.
CITY OF ALISO VIEJO    )

I, MITZI ORTIZ, City Clerk of the City of Aliso Viejo, California, DO HEREBY CERTIFY
that foregoing Ordinance No. 2017-183 was duly passed and adopted by the City Council
of the City of Aliso Viejo at their regular meeting held on the 15th day of February, 2017,
by the following roll call vote, to wit:

AYES:       Mayor Harrington, Mayor Pro Tem Tsunoda, Councilmembers Chun,
            Munzing and Phillips

NOES:       None

ABSENT:     None

MITZI ORTIZ, MMC
CITY CLERK
(SEAL)

I hereby certify that the foregoing is the original of Ordinance No. 2017-183 duly passed
and adopted by the Aliso Viejo City Council at its regular meeting held February 15, 2017
and that the Summary of the Ordinance was published on February 9, 2017 and February

MITZI ORTIZ, MMC
CITY CLERK
(SEAL)