AGENDA ITEM

October 8, 2019

TO: **Honorable Mayor and Members of the City Council**

THRU: **Rick Otto, City Manager**

FROM: **Chris Boyd, Fire Chief** C.B.

REVIEW: City Manager ___ Finance ___

1. SUBJECT

Resolution No. 11185 - A Resolution of the City Council of the City of Orange setting forth findings with respect to local conditions within the City of Orange justifying modifications and changes to the 2019 California Fire Code.

Introduction and first reading of an Ordinance of the City Council of the City of Orange: Ordinance No. 09-19 - An Ordinance repealing and replacing Chapter 15.32 of the Orange Municipal Code to update the City of Orange Fire Code with the 2019 California Fire Code and portions of the International Fire Code as amended.

2. SUMMARY

Effective January 1, 2020, the 2019 California Fire Code will go into effect and be binding on the City. Any changes or modifications to the 2019 California Fire Code must be adopted before January 1 to become effective. State law requires any changes or modification to the California Fire Code be supported by findings related to local conditions. Resolution No. 11185 contains the appropriate and necessary findings to support the recommended changes to the 2019 California Fire Code found in Ordinance 09-19.

Ordinance 09-19 repeals and replaces Chapter 15.32 of the Orange Municipal Code (City of Orange Fire Code) so that it can be updated with the 2019 California Fire Code and portions of the International Fire Code with appropriate revisions ensuring compatibility with local City conditions.

3. RECOMMENDED ACTION

1. Approve Resolution No. 11185
2. Adopt Ordinance No. 09-19 for first reading

4. FISCAL IMPACT

None.

5. STRATEGIC PLAN GOALS

Goal 1: Provide for a safe community

d. Assure the development of the City occurs in a fashion that maximizes public safety.

6. DISCUSSION AND BACKGROUND

The California Health and Safety Code authorizes the City to make changes in the provisions of the California Fire Code (CFC), as long as those changes are more stringent than the state's minimum requirements and the changes are reasonably necessary based upon local climatic, geological or topographical conditions.

There have been many updates to the CFC that have added additional occupant safety, as well as statistical research supporting a more streamlined local ordinance. The proposed changes to the "City of Orange Fire Code" are now more consistent with the adopted codes of other jurisdictions throughout Orange County.

The Orange City Fire Department is responsible for enforcing standards and regulations of the State Fire Marshal. Portions of the State Fire Marshal's standards are incorporated in the 2019 CFC, which is based on the International Fire Code (IFC) and updated periodically as necessary by the California Building Standards Commission. A new IFC and CFC are published every three years. The City is subject to the CFC, as written, effective January 1, 2020, unless the City adopts amendments to that Code, supported by local findings reasonably supporting such amendments. The City must adopt any portion of the IFC it wishes to follow.

The Fire Prevention Division of the Services Section of the Fire Department has reviewed the 2019 CFC and recommends repealing and replacing Chapter 15.32 of the Orange Municipal Code to update the "City of Orange Fire Code" in a comprehensive and logical manner. The proposed amendments ensure compatibility with the CFC and local conditions and reflect neither substantive changes in the previous "City of Orange Fire Code" nor a significant departure from the CFC. Attached is a copy of the ordinance that replaces the "City of Orange Fire Code." Changes in the code that are not merely administrative provisions are discussed below.

Ordinance 09-19 adds Orange Municipal Code Section 15.32.020, Section 105.6.54 Mid-rise buildings, to require a permit to operate a mid-rise building. The permit provides for cost-recovery of annual inspections of these existing buildings and their integrated fire protection systems. This change has no impact on building construction cost, it is only applicable to existing mid-rise buildings as defined in Section 15.32.020 "Definitions."

Ordinance 09-19 amends Orange Municipal Code Section 15.32.020, "Definitions," to add the definition of a mid-rise building of any type of construction or occupancy, when originally constructed with high-rise conditions under local ordinance at the time of construction, having floors used for human occupancy located between 55 feet and 75 feet above the lowest floor level having building access. Original construction of these buildings required fire protection systems equivalent to that of a high-rise building. Such systems require continuous maintenance and annual inspections for the life of the building. This definition is applicable to existing buildings constructed prior to 2017, with applicable conditions only. This change has no impact on building construction cost.

Ordinance 09-19 amends Orange Municipal Code Section 15.32.020, Section 505.1 Address Identification, to increase the size of identification on commercial structures from 6 inches to 8 inches and include illumination requirement during the hours of darkness. The amendment increases visibility during emergency response, thus reducing response times and aligns the requirement to match with the Building Security Ordinance No. 06-18 prepared by the Orange Police Department and approved by the Council in 2018. This change only impacts new construction or substantial rehabilitation, and has minimal impact on building construction cost.

7. ATTACHMENTS

1. Resolution No. 11185
2. Ordinance No. 09-19

RESOLUTION NO. 11185

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ORANGE SETTING FORTH FINDINGS WITH RESPECT TO LOCAL CONDITIONS WITHIN THE CITY OF ORANGE JUSTIFYING MODIFICATIONS AND CHANGES TO THE CALIFORNIA FIRE CODE.

WHEREAS, the Health & Safety Code provides that the City of Orange shall be governed by the same requirements as those found in the California Fire Code unless the City Council acts to change the requirements; and

WHEREAS, the Health & Safety Code permits the City Council to make such changes or modifications to the California Fire Code as are reasonably necessary because of local conditions; and

WHEREAS, the Health & Safety Code requires that the City Council make express findings before making any changes or modifications to the California Fire Code, that such changes or modifications to the Code must be done in response to local climatic, geographic, or topographic conditions; and

WHEREAS, the Fire Chief has recommended amendments to the 2019 California Fire Code as set forth in Ordinance 09-19 because of local climatic, geographical and topographical conditions; and

WHEREAS, changes and modifications to the 2019 California Fire Code as found in Ordinance 09-19 are required as a result of the local climatic, geographical and topographical conditions listed herein.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Orange as follows:

1. The foregoing recitals are true and correct.

2. The City Council finds the following local climatic, geographical and topographical conditions exist in the City of Orange:

   I. Climatic Conditions

      A. The jurisdiction of Orange is located in a semi-arid Mediterranean type climate. It annually experiences extended periods of high temperatures with little or no precipitation. Hot, dry (Santa Ana) winds, which may reach speeds of 70 M.P.H. or greater, are also common to the area. These climatic conditions cause extreme

drying of vegetation and common building materials. Frequent periods of drought and low humidity add to the fire danger. This predisposes the area to large destructive fires (conflagration). In addition to directly damaging or destroying buildings, these fires are also prone to disrupt utility services throughout the City. Obstacles generated by a strong wind, such as fallen trees, street lights and utility poles, and the requirement to climb 75 feet vertically up flights of stairs 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.

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

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

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

II. Topographical Conditions

A. Natural slopes of 15 percent or greater generally occur throughout the foothills of the City of Orange. The community of Orange has built and continues to build upon hills located within the city. The topography of the hills increases the time it takes to reach buildings, facilities and premises by creating the need for responding emergency vehicles to climb varying grades, some of which are steep. Additionally, topography determines the configuration of the access roads in the hills, sometimes creating circuitous routes which are difficult for large, heavy

vehicles to navigate. With much of the populated flatlands already built upon, future growth will occur on steeper slopes and greater constraints in terrain.

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

C. These topographical conditions combine to create a situation which extends fire department response times to fires and other emergencies involving the built environment, and makes it necessary to provide automatic on-site fire-extinguishing systems and other protection measures to protect occupants and property.

III. Geological Conditions

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

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

B. Road circulation features located throughout Orange can be compromised during seismic and meteorological events. Located within the City 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, cause roadway flooding and landslides and at times may make an emergency access route impassable. There are areas in Orange that naturally have extended emergency response times that exceed the 5 minute goal.

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

D. Portions of the City contain active or former flammable gas and/or liquid production fields, as well as methane-producing closed landfills. These areas contain a variety of naturally occurring gases, liquids and vapors. These compounds present toxicity or flammability hazards to building occupants. Evaluation of these hazards and the risks they pose to development is necessary implement appropriate mitigation.

IV. Summary

Due to the topographical conditions of sprawling development separated by waterways and narrow and congested streets, and the expected infrastructure damage inherent in seismic zone described above, it is prudent to amend building standards adopted by the City of Orange to address these hazards and their respective risks. Part of the strategy to reduce risks includes the installation of automatic fire sprinkler systems, with the goals of mitigating extended fire department response time and keeping fires manageable with reduced fire flow (water) requirements for a given structures. Additional fire protection is also justified to match the current resources of firefighting equipment and personnel within the Orange City Fire Department.

ADOPTED this ____ day of _____, 2019

_____
Mark A. Murphy, Mayor, City of Orange

ATTEST:

_____
Pamela Coleman, City Clerk, City of Orange

I, PAMELA COLEMAN, City Clerk of the City of Orange, California, do hereby certify that the foregoing Resolution was duly and regularly adopted by the City Council of the City of Orange at a regular meeting thereof held on the ____ day of _____, 2019 by the following vote:

AYES: COUNCILMEMBERS:
NOES: COUNCILMEMBERS:
ABSENT: COUNCILMEMBERS:
ABSTAIN: COUNCILMEMBERS:

_____
Pamela Coleman, City Clerk, City of Orange

ORDINANCE 09-19

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ORANGE DELETING CHAPTER 15.32, CITY OF ORANGE FIRE CODE, IN ITS ENTIRETY AND ADDING CHAPTER 15.32 TO TITLE 15 (BUILDINGS AND CONSTRUCTION) OF THE ORANGE MUNICIPAL CODE, ADOPTING AND AMENDING THE 2019 CALIFORNIA FIRE CODE AND PORTIONS OF THE 2018 INTERNATIONAL FIRE CODE AS THE CITY OF ORANGE FIRE CODE.

WHEREAS, the City of Orange Fire Department is responsible for enforcing the fire and safety regulations of the State Fire Marshal; and

WHEREAS, the State Fire Marshal's building standards regulations are incorporated in the 2019 California Fire Code; and

WHEREAS, the City is subject to the California Fire Code, as written, effective January 1, 2020 unless the City adopts amendments to said Code, with the appropriate findings supporting such amendments; and

WHEREAS, cities are allowed to make amendments to State building standards when justified by local topographical, climactic and geographical conditions; and

WHEREAS, contemporaneously herewith, in Resolution No. 11185, the City Council has made appropriate findings that justify amendments to the California Fire Code based on local topographical, climactic and geographical conditions; and

NOW, THEREFORE, the City Council of the City of Orange does ordain as follows:

SECTION I:

Chapter 15.32, City of Orange Fire Code, is deleted in its entirety and is hereby replaced with Chapter 15.32, adopting the 2019 California Fire Code including appendices B, BB, C, and CC, as copyrighted in 2019 by the International Code Council and the California Building Standards Commission, to read as amended below:

Chapter 15.32 CITY OF ORANGE FIRE CODE

15.32.010 Adoption by Reference

The City Council adopts by reference the California Fire Code, 2019 Edition, including appendices B, BB, C and CC, as copyrighted by the International Code Council and California Building Standards Commission, as hereinafter amended, modified or altered. Such Codes are adopted by

reference, for the purpose of safeguarding the public from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises. One copy of the code has been and is now on file in the office of the City Clerk, and the code is adopted by reference as if incorporated and set out at length in this chapter. The provisions therein shall be controlling within the limits of the City of Orange and shall be designated, known and referred to as the Orange Fire Code.

15.32.020 The following sections of the California Fire Code, 2019 Edition are amended, modified or altered as follows:

101.1 Title. These regulations shall be known as the Orange Fire Code, hereinafter referred to as "this code."

103.2 Appointment. [Amended] The fire code official shall be appointed by the fire chief and may be removed at any time.

105.1.1 Permits required. [Amended] A property owner or owner's authorized agent who intends to conduct an operation or business, or install or modify systems and equipment that are regulated by this code, or to cause any such work to be performed, shall first make application to the fire code official and obtain the required permit. The permit shall be required to conduct an operation or business, or install or modify systems and equipment which is regulated by this code, or to cause any such work to be done.

105.4.2 Information on construction documents. [Amended] Construction documents shall be drawn to scale upon suitable material. Plans shall be submitted in accordance with the City of Orange Building Division Plan Submittal Guidelines. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that will conform to the provisions of this code and relevant laws, ordinances, rules and regulations as determined by the fire code official.

105.6.29. Miscellaneous combustible storage. [Amended] An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet gross volume of combustible empty packing cases, boxes, barrels or similar containers, combustible pallets, rubber tires, rubber, cork, green waste, composting, yard waste, or similar combustible material.

105.6.52 Day-care. [Added] An operational permit is required to operate a day-care center.

105.6.53 Day-care, large family. [Added] An operational permit is required to operate a large family day-care home.

105.6.54 Mid-rise buildings. [Added] An operational permit is required to operate a mid-rise building.

105.6.55 High-rise buildings. [Added] An operational permit is required to operate a high-rise building.

110.2.1 Fire and life safety hazards. [Added] Persons operating, maintaining or controlling any building, occupancy, facility, premises or vehicle subject to this code shall neither create, nor allow to exist, any condition deemed a fire or life safety hazard by the fire code official.

110.4 Violation penalties. [Amended] Persons who shall violate a provision of this code or who shall fail to comply with any of the requirements thereof 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 be prosecuted in accordance with Chapter 1.08 of the Orange Municipal Code. Each day that a violation continues shall be deemed a separate offense.

202 General Definitions [Amended]

FLOW-LINE. [Added] The lowest continuous elevation on a curb defined by the path traced by a particle in a moving body of water at the bottom of the rolled curb.

HAZARDOUS FIRE AREA. [Added] Includes all areas identified within Section 4906.2 and other areas as determined by the Fire Code Official as presenting a fire hazard due to the presence of combustible vegetation, or the proximity of the property to an area that contains combustible vegetation.

MID-RISE BUILDING. [Added] Every building of any type of construction or occupancy, when originally constructed with high-rise conditions under local ordinance at the time of construction, having floors used for human occupancy located between 55 feet and 75 feet above the lowest floor level having building access.

SPARK ARRESTER. [Added] 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. Removing and retaining carbon and other flammable particles/debris from fireplaces that burn solid fuel in accordance with California Building Code Chapters 21 or 28.

304.1.2 Vegetation. [Amended] Types, amounts, and arrangements of weeds, grass, vines and other growth that is capable of being ignited and endangering property within the scope of Orange City Fire Department Guidelines, shall be cut, thinned, or removed by the owner or occupant of the premises as required by the Orange City Fire Department Guideline entitled "Vegetation Management Guideline - Technical Design for New Construction, Fuel Modification Plans, and Maintenance Program". Vegetation clearances in urban-wildland interface areas shall be in accordance with Chapter 49.

307.1 General. [Amended] A person shall not kindle or maintain or authorize to be kindled or maintained any open burning unless constructed and approved in accordance with Sections 307.1.1 through **307.6.2.1.**

307.1.2 Fuel modification areas. [Added] Outdoor fires using wood or other solid fuel shall not be built, ignited or maintained in a fuel modification area.

307.2.2 Hazardous conditions. [Added] 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.

Exception: Gas-fueled devices operated in accordance with 307.6.1.

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

307.5.1 Supervision. [Added] Where a permit is issued, such open burning or fire shall be supervised by a person 18 years of age or older.

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

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

307.6.1 Gas-fueled devices. [Added] Outdoor fireplaces, fire pits and similar devices fueled by natural gas or liquefied-petroleum gas are allowed when approved by the City of Orange Building Division and the device is designed to only burn a gas flame and not wood or other solid fuel. At premises containing Group R division 3 occupancies, combustible construction shall not be located within 3 feet of an atmospheric column that extends vertically from the perimeter of the device. At premises containing other than Group R division 3 occupancies, the minimum distance shall be 10 feet. Where a permanent hood and vent is installed and approved by the City of Orange Building Department, 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 an approved spark arrester meeting the requirements of Section 2113.9.2 of the California Building Code.

307.6.2 Devices using wood or fuels other than natural gas or liquefied-petroleum gas. [Added] 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 equipped with a spark arrester. The spark arrester shall meet the requirements of Section 2113.9.2 of the California Building Code. 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.

307.6.2.1 Where prohibited. [Added] 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.

308.1.6.3 Sky Lanterns or similar devices. [Amended] The ignition and/or launching of a Sky Lantern or similar device is prohibited.

321 Fuel Modification Requirements for New Construction. [Added] All new structures and facilities adjoining land containing hazardous combustible vegetation shall be approved and in accordance with the requirements of the Orange City Fire Department Guideline, "Vegetation Management Guideline - Technical Design for New Construction Fuel Modification Plans and Maintenance Program."

322 Clearance of brush or vegetation growth from roadways. [Added] The fire code official is authorized to cause areas within 10 feet 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 in the opinion of the fire code official.

323 Vegetation management alternate materials and methods. [Added] The fire code official is authorized to require and approve alternate materials and methods to comply with the vegetation management requirements if the fire code official determines 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.

Acceptance of alternate materials and methods will be made on a case-by-case basis, and shall not set precedent.

324 Use of equipment. [Added] 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 and 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 California Vehicle Code.

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

324.1 Spark arresters. [Added] Spark arresters shall comply with Section 202, and when affixed to the exhaust system of engines or vehicles subject to Section 324 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.

325 Development on or near land containing or emitting toxic, combustible or flammable liquids, gases or vapors. [Added] The fire code official may require the submittal for approval of geological studies, evaluations, reports, remedial recommendations and/or similar documentation from a state-licensed and department-approved individual or firm, on any parcel of land to be developed which has, or is adjacent to, or within 1,000 feet of a parcel of land that has an active, inactive, or abandoned oil or gas well operation, petroleum or chemical refining facility, petroleum or chemical storage, or may contain or give off toxic, combustible or flammable liquids, gases or vapors.

326 Restricted entry. [Added] The fire code official shall determine and publicly announce when hazardous fire areas are closed to entry and when such areas are again opened to entry. Entry on and occupation of hazardous fire areas, except public roadways, inhabited areas or established trails and camp sites which have not been closed during such time when the hazardous fire area is closed to entry, is prohibited.

Exceptions:

1. Residents and owners of private property within hazardous fire areas and their invitees and guests going to or being upon their lands may enter when an area is closed if given permission by the fire code official.

2. Entry into closed areas is allowed, in the course of duty, by peace or police officers, and other duly authorized public officers, members of a fire department and members of the United States Forest Service.

Chapter 4: Emergency Planning and Preparedness. Only the sections, subsections, and amendments thereto listed below are adopted:

401-401.9
402
403.2
403.5 – 403.5.4
403.10.2.1.1
403.13-403.13.3
404.5-404.6.6
407

501.1 Scope. [Amended] Fire service features for buildings, structures and premises shall comply with this chapter and, where required by the fire code official, the Orange City Fire Department Guideline "Fire Master Plan for Commercial & Residential Development."

503.2.1 Dimensions. [Amended] Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches. Street widths are to be measured from the top face of curb to top face of curb, on streets with curb and gutter, and from flow-line to flow-line on streets with rolled curbs.

503.2.1.1 Hazardous fire areas. [Added] Fire apparatus roads in hazardous fire areas shall have an unobstructed with of not less than 28 feet. The width shall be maintained to an approved point outside of the Hazardous Fire Area.

> **Exception:** When the road serves no more than three dwelling units and the road does not exceed 150 feet in length, the road width may be reduced 24 feet. This length may be increased to 400 feet where serving no more than three dwelling units and all structures accessed from the roadway are protected by automatic fire sprinklers.

503.2.1.2 Divided fire access roads. [Added] Divided fire access roads shall be subject to review and approval by the fire code official. Each lane shall be a minimum width of 14 feet. Lengths and locations of specific divided sections shall be approved by the fire code official.

503.2.5 Dead ends. [Amended] Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus, and shall not exceed 600 feet in length.

503.6 Security gates. [Amended] The installation of security gates across a fire apparatus access road shall be approved by the fire code official. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200. Vehicle access gates or barriers shall be in accordance with the City of Orange Fire Master Plan Guidelines. All electrically

operated vehicle access gates shall be equipped with an automatic opening device in addition to a key opening switch.

505.1 Address Identification. [Amended] New and existing buildings shall be provided with approved address identification. The 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 not be less than 4 inches high with a minimum stroke width of ½ inch for R-3 occupancies. For all other occupancies, the identification shall be a minimum of 8 inches high with a minimum stroke width of 1 inch, and shall be approved by the fire code official. Address numbers shall be illuminated during the hours of darkness. 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 cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address numbers shall be maintained.

505.1.1 Building complexes. [Added] Approved diagrammatic representations shall be positioned at all entrances to building complexes. The diagrammatic representations shall show the overall site, location of the viewer, buildings and units and the addresses or unit designations within the complex, and shall be internally or externally illuminated as approved during the hours of darkness.

510.1 Emergency responder radio coverage in new buildings. [Amended] 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 utilized by the jurisdiction, measured at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

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.

3. Elevators.

4. 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.

5. 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.

6. This ordinance shall apply only to the subterranean areas if construction is three stories or less and does not exceed 50,000 square feet on any single story including subterranean storage or parking.

7. Existing buildings or structures, unless required by the building official and the fire code official for buildings and structures undergoing extensive remodel and/or expansion.

510.2 Emergency responder radio coverage in existing buildings. [Deleted]

510.4.1.1 Minimum signal strength into the building. [Amended] The minimum inbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the fire code official. The inbound signal level shall be sufficient to provide not less than a Delivered Audio Quality (DAQ) of 3.4 or an equivalent Signal-to-Interference-Plus-Noise Ratio (SINR) applicable to the technology for either analog or digital signals.

510.4.1.2 Minimum signal strength out of the building. [Amended] The minimum outbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the fire code official. The outbound signal level shall be sufficient to provide not less than a DAQ of 3.4 or an equivalent SINR applicable to the technology for either analog or digital signals.

510.4.2.2 Technical criteria. [Amended] 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, the maximum propagation delay in microseconds, the applications being used and other supporting technical information necessary for system design.

1. The frequency range supported from the 800 MHz Countywide Communications System shall be 851-861 MHz (base transmitter frequencies).

2. The frequency range supported to the 800 MHz Countywide Communications System shall be 806-816 MHz (radio field transmit frequencies).

3. A public safety radio amplification system shall include filters to reject frequencies below 851 MHz and frequencies above 861 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

510.5.2 Minimum qualifications of personnel. [Amended] 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 an approved organization or approved school, or a certificate issued by the manufacturer of the equipment being installed.

510.5.3 Acceptance test procedure. [Item 7 Amended] 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 95 percent. The test procedure shall be conducted as follows:

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.

510.6.1 Testing and proof of compliance. [Amended] The owner of the building or owner's authorized agent shall have the emergency responder radio coverage system inspected and tested annually or when 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. 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 code official.

6. If noncompliance is found, the FCC licensed technician will assess improvements necessary and provide such information to OCSD Communications and the fire code official.

605.10.2 Automatic and manual operation. [Amended] An automatic emergency stop feature shall be provided in accordance with Sections 605.10.2.1 and 605.10.2.2, and shall be capable of manual operation. The manual valves shall be located in an approved location immediately outside of the machinery room, in a secure metal box or equivalent and marked as "Emergency Controls."

901.6.1.1 Maintenance of smoke alarms in apartment buildings. [Added] Installation and maintenance of smoke alarms in apartment buildings shall conform to the following:

1. Apartment building owners shall supply, install, test and maintain all required smoke alarms before renting to a new tenant. The amount and types of smoke alarms shall conform to the California Building Code in effect at the time of building construction and requirements for existing buildings.

2. The tenant shall be responsible for testing of all required smoke alarms in accordance with manufacturer instructions in his/her respective dwelling unit. Within 60 days of the first of each year, the owner shall request each tenant for the status of all smoke alarms.

3. Within 10 days of receiving the smoke alarm status request, and in no event later than March 10 of each year, each tenant shall notify the owner, in writing, on a form provided by the owner, of the condition of each required smoke alarm installed in the dwelling unit.

4. Upon receipt of a written notice from a tenant that a smoke alarm is in need of maintenance or replacement, the owner shall perform such maintenance as is necessary within 10 days of receipt of such notification.

5. The hotel or apartment owner shall maintain records of compliance for a period of three years from March 10 of each year.

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

New buildings: Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2.19, all buildings shall be protected throughout by an automatic fire sprinkler system when the total building area exceeds 5,000 square feet in Types I, II, III and IV construction, and 3,000 square feet in Type V construction as defined in the California Building Code, regardless of fire areas or allowable area.

Exceptions:

1. Buildings with areas reduced to less than that requiring fire sprinklers using 3-hour minimum rated fire walls constructed in accordance with the California Building Code Chapter 7.

2. Open parking garages, fences, retaining walls, towers classified as Group U occupancies, and tanks.

Existing Buildings: Notwithstanding any applicable provisions of this code, an existing building shall be protected throughout by an automatic fire sprinkler system when the building meets the conditions for required automatic fire sprinkler protection throughout, and one or more of the following conditions occurs:

1. An area increase of 33% or more is made to a building, resulting in an area requiring installation of an automatic fire sprinkler system in a new building.

   Exception: Buildings housing Group R-3 occupancies shall be protected throughout by an automatic fire sprinkler system when the area of the building is increased, resulting in an area exceeding 5,000 square feet.

2. A change is made to the occupancy classification and use of the building which increases the level of hazard as determined by the fire code official. When the occupancy is changed to an assembly use, the requirements of Section 903.2.1 shall apply.

3. A significant modification is made to the building, or a modification impacts the structural system of the building as determined by the fire code official.

903.3.5.3 Hydraulically calculated systems. [Added] The design of hydraulically calculated fire sprinkler systems shall not exceed 90% of the water supply capacity. The capacity shall be calculated using a combination of the following criteria:

1. The lowest water supply flow test conducted in accordance with National Fire Protection Association (NFPA) within the last 12 calendar months.

2. Subtraction of the head pressure of the highest-elevation tank supplying water to the fire hydrant flowing water, assuming the tank is full at the time of the test and empty at the time of fire sprinkler activation.

903.4.4 Locking of control valves. [Added] All valves required to be electrically supervised by this section shall also be sealed or locked in the position of normal operation.

904.3.5 Monitoring. [Added] Where a building fire alarm or monitoring system is installed, automatic fire-extinguishing systems shall be monitored by the building fire alarm or monitoring system in accordance with NFPA 72.

905.4.3 Height of outlet. [Added] The centerline of the 2.5 inch outlet shall be no less than 18 inches and no more than 24 inches above the finished floor.

910.3.4 Sprinklered buildings. [Added] Where installed in buildings provided with an approved automatic sprinklers system, smoke and heat vents shall be designed to operation automatically by actuation of a heat-responsive device rated at least 100 degrees Fahrenheit above the operating temperature of the sprinklers, unless otherwise approved.

Chapter 11 Construction Requirements for Existing Buildings. Only those sections and subsections listed below are adopted:

1103.7
1103.7.3
1103.7.3.1
1103.7.8 – 1103.7.8.2
1103.7.9 – 1103.7.9.10
1103.8 – 1103.8.5.3
1107
1113
1114
1115
1116

Chapter 25 Fruit and Crop Ripening. [Deleted]

Chapter 26 Fumigation and Insecticidal Fogging. [Deleted]

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

2808.3 Size of piles. [Amended] Piles shall not exceed 15 feet in height, 50 feet in width and 150 feet in length.

Exception: The fire code official is authorized to allow the pile size to be increased where a fire protection plan is provided for approval that includes, but is not limited to, the following:

1. Storage yard areas and materials-handling equipment selection, design and arrangement shall be based upon sound fire prevention and protection principles.

2. Factor that lead to spontaneous heating shall be identified in the plan, and control of the various factors shall be identified and implemented, including provisions for monitoring the internal condition of the pile.

3. The plan shall include means for early fire detection and reporting to the public fire department; and facilities needed by the fire department for fire extinguishment including a water supply and fire hydrants.

4. Fire apparatus access roads around the piles and access roads to the top of the piles shall be established, identified and maintained.

5. Regular yard inspections by trained personnel shall be included as part of an effective fire prevention maintenance program. Inspection logs shall be kept for three years.

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.

2808.7 Pile fire protection. [Amended] 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.

2808.9 Material-handling equipment. [Amended] 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.

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

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

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

2808.12 Emergency Contact. [Added] 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.

3208.3.1 Flue space protection. Flue spaces required by Table 3208.3 above the first tier of storage in single-, double- or multiple-row rack storage installations shall be equipped with approved protection devices. Devices shall be fabricated of ¼" minimum thickness steel or other approved material, and shall extend a minimum of 4 inches above the shelves or cross members when in the mounted position. Such devices shall not be removed or modified.

4906.3 Requirements. [Amended] 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").

3. California Government Code, Section 51182.

4. California Code of Regulations, Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07.

5. Orange City Fire Department Guideline "Vegetation Management Guideline – Technical Design for New Construction Fuel Modification Plans and Maintenance Program."

4908 Fuel Modification Requirements for New Construction. [Added] 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 Orange City Fire Department Guideline "Vegetation Management Guideline – Technical Design for New Construction Fuel Modification Plans and Maintenance Program."

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

5. 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.

6. 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.

5003.1.1.1 Extremely Hazardous Substances. [Added] No person shall use or store any amount of extremely hazardous substances (EHS), as defined in 40 CFR part 355.61, in excess of the disclosable amounts (see Health and Safety Code Section 25500 et al.) in a residentially zoned or any residentially developed property.

5004.12 Noncombustible floor. [Amended] Except for surfacing, floors of storage areas shall be of noncombustible, liquid-tight construction.

5601.2.2 Sale and retail display or use. [Amended] Persons shall not construct a retail display nor offer for sale explosives, explosive materials or fireworks on highways, sidewalks, public property or in Group A or E occupancies. Exception: Fireworks in accordance with California Code of Regulations, Title 19, Division 1, Chapter 6, see Section 5608. The storage, use, sale, possession, and handling of fireworks 1.4G (commonly referred to as Safe & Sane) and fireworks 1.3G is prohibited.

Exceptions:

1. Fireworks in accordance with California Code of Regulations, Title 19, Division 1, Chapter 6, see Section 5608.

2. Fireworks 1.4G and fireworks 1.3G may be part of an electrically fired public display when permitted and conducted by a licensed pyrotechnic operator

5601.7 Seizure. [Amended] The fire code official shall have the authority to seize, take, and remove all fireworks stored, sold, offered for sale, used or handled in violation of the provisions of Title 19 CCR, Chapter 6.

5608.1 General. [Amended] Outdoor fireworks displays, use of pyrotechnics before a proximate audience and pyrotechnic special effects in motion picture, television, theatrical and group entertainment productions shall comply with California Code of Regulations, Title 19, Division 1, Chapter 6 Fireworks, the Orange City Fire Department Guidelines for Public Fireworks Displays, with the conditions of the permit as approved by the fire code official and this section.

5608.2 Firing. [Added] All fireworks displays shall be electrically fired.

Section 5608.3 Application for Permit. [Added] The fire code official shall be provided 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..

5701.1.1 On-Demand Mobile Fueling. [Added] On-demand mobile fueling of Class I, II, and III liquids into the fuel tanks of vehicles is prohibited.

5704.2.9.6.1 Location where above-ground tanks are prohibited. [Amended] Above-ground tanks shall be prohibited except for the following locations:

1. M-1 or M-2 zones as established by the Planning Division of the City of Orange Community Development Department, and

2. As approved by the fire code official.

5704.2.11 Underground tanks. [Amended] Underground storage of flammable and combustible liquids in tanks shall comply with Section 5704.2 and Sections 5704.2.11.1 through 5704.2.11.4.2, the applicable Sections of Chapter 50, and California Health and Safety Code (H&SC) Ch. 6.7.

Section 5707 On-Demand Mobile Fueling Operations [Deleted]

Section 5801.1 Scope. [Amended] The storage and use of flammable gases and flammable cryogenic fluids shall be in accordance with this chapter, NFPA 2 and NFPA 55. Compressed gases shall also comply with Chapter 53 and cryogenic fluids shall also comply with Chapter 55. Flammable cryogenic fluids shall comply with Section 5806. Hydrogen motor fuel-dispensing stations and repair garages and their associated above-ground hydrogen storage systems shall also be designed, constructed and maintained in accordance with Chapter 23. Mobile fueling of gaseous

and liquid hydrogen, compressed natural gas (CNG), and liquefied natural gas (LNG) into the fuel tanks of vehicles is prohibited.

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 605).

2. Liquefied petroleum gases and natural gases regulated by Chapter 61.

3. Fuel-gas systems and appliances regulated under the California Mechanical Code and the California Plumbing Code other than gaseous hydrogen systems and appliances.

4. Pyrophoric gases in accordance with Chapter 64.

Section 5809 Mobile Gaseous Fueling of Hydrogen-Fueled Vehicles [Deleted]

6004.2.2.7 Treatment Systems. [Amended] The exhaust ventilation from gas cabinets, exhausted enclosures and gas rooms, and local exhaust systems required in Sections 6004.2.2.4 and 6004.2.2.5 shall be directed to a treatment system. The treatment system shall be utilized to handle the accidental release of gas and to process exhaust ventilation. The treatment system shall be designed in accordance with Sections 6004.2.2.7.1 through 6004.2.2.7.5 and Chapter 5 of the California Mechanical Code.

Exceptions:

1. Highly toxic and toxic gases – storage/use. Treatment systems are not required for toxic gases supplied by cylinders or portable tanks not exceeding 1,700 pounds (772 kg) where all of the following controls are provided:

   1.1 A listed or approved gas detection system with a sensing interval not exceeding 5 minutes.

   1.2 A listed and approved automatic-closing fail-safe valve located immediately adjacent to cylinder valves. The fail-safe valve shall close when gas is detected at the permissible exposure limit (PEL) by a gas detection system monitoring the exhaust system at the point of discharge from the gas cabinet, exhausted enclosure, ventilated enclosure or gas room. The gas detection system shall comply with Section 6004.2.2.10.

Chapter 80 Referenced Standards NFPA 13, 2016 Edition, Standard for the Installation of Sprinkler Systems

6.7.3 [Amended] The FDC shall contain a minimum of two 2 1/2" inlets. The location shall be approved and be no more than 40 feet from a fire hydrant, and at least 40 feet from the building it supplies unless otherwise 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 purveyor, it may be

installed on the backflow assembly. Fire department inlet connections shall be painted "OSHA safety red." Four 2 1/2" inlets shall be provided when the automatic fire sprinkler system design (including system-supplied fire hose stream demand) requires 500 gpm or greater.

8.3.3.1 [Amended] 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

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

NFPA 13D 2016 Edition, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes

7.1.2 [Amended] 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, Standard for the Installation of Standpipe and Hose Systems

7.3.1.1 [Amended] 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

6.2.8.1 [Added] 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.

6.2.9 [Amended] 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 feet from the building.

   1.1 For buildings less than 40 feet (12 m) in height, a post indicator valve shall be permitted to be installed closer than 40 feet 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 feet from the building.

   4.1 For buildings less than 40 feet in height, a backflow preventer with at least one indicating valve shall be permitted to be installed closer than 40 feet 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.

10.1.5 [Added] 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

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

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

10.4.1.1.1 [Added] All bolts used in pipe-joint assembly shall be 316 stainless steel.

10.4.3.1 [Amended]Private fire service mains supplying fire protection systems within the building shal be permitted to extend no more than 24 inches, as measured from the outside of the building, under the building to the riser location.

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

Appendices D, E, F, G, H, I, J, K, L, M and N. [Deleted]

SECTION II:

Severability – Should any sentence, section clause, part or provision of this ordinance be declared invalid, the same shall not affect the validity of the ordinance as a whole or any other part thereof.

SECTION III:

Savings Clause – Neither the adoption of this ordinance nor the amendment hereby of any other ordinance of this City shall in any manner affect the prosecution for violations of ordinances, which violations were committed prior to the effective date hereof, nor to be construed as a waiver of any license or penalty or the penal provisions applicable to any violation thereof. The provisions of this ordinance, insofar as they are substantially the same as ordinance provisions previously adopted by the City related to the same subject matter, shall be constructed as restatements and continuations, and not as new enactments.

SECTION IV:

References to Prior Code – Unless superseded and expressly repealed, references in City forms, documents and regulations to the chapters and sections of former adopted Orange Fire Codes shall be construed to apply to the corresponding provisions within the 2019 Orange Fire Code. Ordinance 09-19 of the City of Orange and all other ordinances and parts of ordinances in conflict herewith are hereby superseded and expressly repealed.

SECTION V:

A summary of this Ordinance shall be published and a certified copy of the full text of this Ordinance shall be posted in the Office of the City Clerk at least five (5) days prior to the City Council meetings at which this Ordinance is to be adopted. A summary of this Ordinance shall also be published once within fifteen (15) days after this Ordinance's passage in a newspaper of general circulation, published, and circulated in the City Council members voting for and against the Ordinance in accordance with Government Code Section 36933. This Ordinance shall take effect thirty (30) days from and after the date of its final passage.

ADOPTED this ____ day of _____, 2019.

_____
Mark A. Murphy, Mayor, City of Orange

ATTEST:

_____
Pamela Coleman, City Clerk, City of Orange

STATE OF CALIFORNIA)
COUNTY OF ORANGE)
CITY OF ORANGE)

I, PAMELA COLEMAN, City Clerk of the City of Orange, California, do hereby certify that the foregoing Ordinance was introduced at the regular meeting of the City Council held on the ___ day of _____, 2019, and thereafter at the regular meeting of said City Council duly held on the ___ day of _____, 2019, was duly passed and adopted by the following vote, to wit:

AYES: COUNCILMEMBERS:
NOES: COUNCILMEMBERS:
ABSENT: COUNCILMEMBERS:
ABSTAIN: COUNCILMEMBERS:

_____
Pamela Coleman, City Clerk, City of Orange