

**Title 17
FIRE CODE**

UPDATED: October 3, 2023

Chapters:

- 17.02 GENERAL PROVISIONS**
- 17.04 FIRE CODE**
- 17.08 FIRE HYDRANTS AND WATER MAINS**
- 17.11 FIREWORKS**

17.02 GENERAL PROVISIONS

Sections:

- 17.02.010 Relationship to comprehensive plan and growth management act.

17.02.010 Relationship to comprehensive plan and growth management act.

This title is hereby enacted to be consistent with and implement the comprehensive plan in accordance with RCW 36.70A. (Ord. 11625 § 1, 1994).

17.04 FIRE CODE

Sections:

- 17.04.010 Adoption.
- 17.04.020 Term changes.
- 17.04.200 General authority and responsibilities - General.
- 17.04.210 General authority and responsibilities - General - Enforcement.
- 17.04.220 General authority and responsibilities - General - Additional conditions.
- 17.04.230 General authority and responsibilities - General - Duties of the fire marshal and fire districts.
- 17.04.240 General authority and responsibilities - Right of entry.
- 17.04.250 General authority and responsibilities - Right of entry - Warrant.
- 17.04.260 General authority and responsibilities - Notices and orders.
- 17.04.280 General authority and responsibilities - Notice to fire districts.
- 17.04.290 Permits - Compliance with code - Penalties.
- 17.04.295 Solar photovoltaic power systems.
- 17.04.310 Board of appeals - Qualifications.
- 17.04.320 Stop work order - Order and Issuance.
- 17.04.330 Stop work order - Failure to comply).
- 17.04.370 Fire apparatus access roads - (IFC 503).
- 17.04.373 Fire apparatus access roads - Where required.
- 17.04.375 Fire apparatus access roads - Specifications.
- 17.04.377 Fire apparatus access roads - Specifications - Dimensions.
- 17.04.380 Fire apparatus access roads - Specification - Surface.
- 17.04.390 Fire apparatus access roads - Specifications - Turning radius.
- 17.04.400 Fire apparatus access roads - Specifications - Dead ends.
- 17.04.410 Fire apparatus access roads - Specifications - Grade.
- 17.04.420 Fire apparatus access roads - Marketing, establishment and obstruction of fire lanes.
- 17.04.425 Fire apparatus access roads - Security gates, bollards or other obstructions.

- 17.04.445 Access to building openings and roofs - Roof hatches.
- 17.04.447 Access to building openings and roofs - Buildings with enclosed interior courtyards.
- 17.04.450 Premises identification - Addresses.
- 17.04.455 Fire protection water supplies - Required water supply.
- 17.04.466 Emergency responder radio coverage - Technical requirements - Emergency responder communication enhancement system signal strength.
- 17.04.467 Emergency responder radio coverage - Technical requirements - Emergency responder communication enhancement system signal strength - Minimum signal strength out of the building.
- 17.04.468 Emergency responder radio coverage - Technical requirements - System design - Amplification systems and components.
- 17.04.472 Emergency responder radio coverage - Technical requirements - System design - System monitoring.
- 17.04.476 Emergency responder radio coverage - Installation requirements - Approval prior to installation.
- 17.04.477 Emergency responder radio coverage - Installation requirements - Minimum qualifications of personnel.
- 17.04.478 Emergency responder radio coverage - Installation requirements - Acceptance test procedure.
- 17.04.479 Emergency responder radio coverage - Installation requirements - Wiring.
- 17.04.486 Emergency responder radio coverage - Maintenance - Testing and proof of compliance.
- 17.04.487 Emergency responder radio coverage - Maintenance - Testing and proof of compliance - Alternative acceptance test procedure.
- 17.04.488 Emergency responder radio coverage - Maintenance - Testing and proof of compliance - Field Testing.
- 17.04.489 Fire protection and safety systems - General - Scope.
- 17.04.520 Automatic sprinkler systems - General.
- 17.04.540 Automatic sprinkler systems - Where required.
- 17.04.560 Automatic sprinkler systems - Where required - Habitable space of structures built under the IRC.
- 17.04.563 Automatic sprinkler systems - Where required - Specific buildings areas and hazards - Buildings exceeding 10,000 square feet.
- 17.04.572 Automatic sprinkler systems - Installation requirements - standards.
- 17.04.574 Automatic sprinkler systems - Sprinkler system supervision and alarms - Floor control valves.
- 17.04.581 Automatic sprinkler systems - Testing and maintenance.
- 17.04.582 Automatic sprinkler systems - Testing and maintenance - Height.
- 17.04.590 Fire department connections - Location - Distance.

17.04.010 Adoption. The International Fire Code 2018 Edition, together with Appendices B (Fire-flow requirements for buildings) and C (Fire hydrants location and distribution), as published by the International Code Council, as amended in chapter 51-54A WAC, effective February 1, 2021, and referred to in this title as the International Fire Code ("IFC"), together with amendments, additions, and deletions adopted in this chapter by reference, together with King County modifications are adopted as the King County Fire Code, and referred to in this chapter as "this code." Administrative rules may be adopted in accordance with K.C.C. chapter 2.98 to further clarify and implement these code requirements. The King County modifications shall be codified in this chapter. (Ord. 19485 § 159, 2022: Ord. 17837 § 72, 2014: Ord. 15803 § 1, 2007: 14915 § 1, 2004:

Ord. 14111 § 176, 2001: Ord. 12560 § 143, 1996: Ord. 12196 § 7, 1996: Ord. 11700 § 12, 1995: Ord. 11017 § 8, 1993: Ord. 11016 § 24, 1993: Ord. 10608 § 2, 1992: Ord. 8184 § 4, 1987: Ord. 6328 § 3, 1983: Ord. 5484 § 1, 1981: Ord. 3660 § 1, 1978: Ord. 2097 § 1, 1974).

17.04.020 Term changes. Whenever the following words appear in the code, they are to be changed as follows:

- A. "Department" to "department of local services, permitting division."
- B. "Fire chief", "chief of the fire department," "fire prevention engineer" and "fire code official" to "King County fire marshal".
- C. "Fire department" to "department of local services, permitting division." (Ord. 18791 § 135, 2018: Ord. 17837 § 73, 2014: Ord. 17420 § 70, 2012: Ord. 15319 § 3, 2005: Ord. 14915 § 2, 2004: Ord. 12560 § 144, 1996: Ord. 2097 § 2, 1974).

17.04.200 General authority and responsibilities - General. Section 104.1 of the International Fire Code is not adopted and the following is substituted:

General (IFC 104.1). The fire marshal is authorized to render interpretations of this code and make and enforce such rules and regulations, in accordance with K.C.C. chapters 2.98 and 2.100, for the prevention and control of fires and fire hazards as necessary to execute the application and the intent of this code, including but not limited to:

1. Procedures to ensure that building permits for structures shall conform to the requirements of this code.
2. Procedures to ensure that applicable standards of this code shall be reviewed as part of the subdivision, short subdivision, urban planned development, rezone, conditional use, special use, site development permit, binding site plan and building permit processes.
3. Procedures to assure that the standard known as NFPA 13R shall be applied as a minimum standard to all R occupancies.
4. Procedures to allow for relaxation of the hydrant spacing requirements by as much as 50 percent, except when such allowances would unreasonably reduce fire protection to the area or structures served. (Ord. 19485 § 160, 2022: Ord. 14915 § 4, 2004: Ord. 14111 § 177, 2001: Ord. 12560 § 148, 1996. Formerly K.C.C. 17.04.01001).

17.04.210 General authority and responsibilities - General - Enforcement. Section 104.1 of the International Fire Code is supplemented with the following:

Enforcement (IFC 104.1.1).

1. The fire marshal is authorized to enforce the provisions of this title, the ordinances codified in it, and any adopted rules and regulations in accordance with the enforcement and penalty provisions of K.C.C. Title 23.
2. The fire marshal, any officer of the department of public safety, and the chief of the fire district or designee, is authorized to take such lawful action, including the writing and issuance of citations for civil infractions, as may be required to enforce the provisions of the fire lane ordinance codified in this title. (Ord. 19485 § 161, 2022: Ord. 18683 § 22, 2018: Ord. 14915 § 6, 2004: Ord. 14111 § 235, 2001: Ord. 11783 § 2, 1995: Ord. 7980 § 2, 1987: Ord. 2910 § 6, 1976: Ord. 2097 (part), 1974. Formerly K.C.C. 17.04.080).

17.04.220 General authority and responsibilities - General - Additional conditions. Section 104.1 of the International Fire code is supplemented with the following:

Additional conditions (IFC 104.1.2). The fire marshal or designee retains the authority to impose additional conditions, including but not limited to increased setbacks,

use of fire retardant materials, installation of fire sprinkler systems, automatic fire suppression systems, automatic fire detection systems or standpipes where determined necessary to mitigate identified fire protection impacts. (Ord. 18683 § 23, 2018: Ord. 14915 § 8, 2004: Ord. 14111 § 182, 2001: Ord. 12560 § 153, 1996. Formerly K.C.C. 17.04.01006).

17.04.230 General authority and responsibilities - General - Duties of the fire marshal and fire districts. Section 104.1 of the International Fire Code is supplemented with the following:

Duties of the fire marshal and fire districts (IFC 104.1.3).

1. The fire marshal shall have responsibility for administration and inspection functions to promote compliance of the fire prevention provisions of this code.

2. The chiefs of the King County fire districts, municipal fire departments and regional fire protection service authorities shall have responsibility for fire suppression or extinguishing provisions of this code within their respective jurisdictions.

3. The fire marshal may, by written contract, delegate to the chiefs of the fire districts or fire departments authority for inspections of the fire prevention provisions of this code within their respective jurisdictions.

4. The fire marshal may, at the request of a fire districts or fire department, assume an advisory status in matters of operations, function, expenditure, tactics, personnel and equipment or any other function performed by the fire district or fire department. (Ord. 19485 § 162, 2022: Ord. 17837 § 74, 2014: Ord. 17420 § 71, 2012: Ord. 15319 § 4, 2005: Ord. 14915 § 10, 2004: Ord. 14111 § 183, 2001: Ord. 12560 § 154, 1996. Formerly K.C.C. 17.04.01007).

17.04.240 General authority and responsibilities - Right of entry. Section 104.3 of the International Fire Code is not adopted and the following is substituted:

Right of entry (IFC 104.3). The right of entry shall be in accordance with the procedures specified in K.C.C. Title 23. (Ord. 14915 § 12, 2004: Ord. 14111 § 184, 2001: Ord. 12560 § 155, 1996. Formerly K.C.C. 17.04.01008).

17.04.250 General authority and responsibilities - Right of entry - Warrant. Section 104.3.1 of the International Fire Code is not adopted. (Ord. 14915 § 13, 2004).

17.04.260 General authority and responsibilities - Notices and orders. Section 104.5 of the International Fire Code is not adopted and the following is substituted:

Notices and orders (IFC 104.5). Orders and notices authorized or required by this code shall be given or served in accordance with K.C.C. Title 23. (Ord. 14915 § 15, 2004: Ord. 14111 § 186, 2001: Ord. 12560 § 157, 1996. Formerly K.C.C. 17.04.01010).

17.04.280 General authority and responsibilities - Notice to fire districts. Section 104 of the International Fire Code is supplemented with the following:

Notice to fire districts (IFC 104.12).

A. Prior to submitting an application for a commercial building permit, site development permit, binding site plan, a preliminary subdivision or short subdivision approval, final subdivision or short subdivision, urban planned development, zoning reclassification, conditional use and special use permits to the department:

1. the applicant shall submit a copy of the application to the fire district providing fire protection services to the proposed development;

2. subdivisions and short subdivisions applied for and/or recorded before February 1, 1989, shall be submitted once to the applicable fire district for review at the time of the first building permit by the applicant for that building permit;

3. it shall be the responsibility of the fire district to issue a receipt to the applicant the same day it receives a copy of a permit application. The receipt shall constitute proof to the director of the notification;

4. the applicant shall include the fire district receipt with the permit application to the department;

5. it shall be the responsibility of the fire district to notify the fire marshal of any comments within seven days of the receipt of an applied for permit. (Ord. 18683 § 25, 2018: Ord. 14915 § 19, 2004: Ord. 14111 § 178, 2001: Ord. 12560 § 149, 1996. Formerly K.C.C. 17.04.01002).

17.04.290 Permits - Compliance with code - Penalties. Section 105.3.6 of the International Fire Code is supplemented with the following:

Penalties (IFC 105.3.6.1). When installation of a fire protection system, which requires approval of the Fire Marshal, is started or proceeded with prior to obtaining said approval, the ordinary fees specified in K.C.C. Title 27 shall be doubled. The payment of such double fee shall not relieve any persons from fully complying with the requirement of this code in the execution of the work nor from any other penalties prescribed herein. (Ord. 14915 § 21, 2004: Ord. 14111 § 185, 2001: Ord. 12560 § 156, 1996. Formerly K.C.C. 17.04.01009).

17.04.295 Solar photovoltaic power systems.

Section 105.7.21 of the International Fire Code is not adopted and the following is substituted:

Solar photovoltaic power systems (IFC 105.7.21). A construction permit shall be required to install or modify solar photovoltaic power systems.

EXCEPTION: Roof-mounted photovoltaic solar panels on one and two family dwellings that have a total dead load not exceeding four pounds per square foot and are mounted no more than eighteen inches above the roof or highest roof point on which they are mounted. (Ord. 19485 § 163, 2022: Ord. 17837 § 75, 2014).

17.04.310 Board of appeals - Qualifications. Sections 109 of the International Fire Code is not adopted. (Ord. 19485 § 164, 2022: Ord. 14915 § 25, 2004).

17.04.320 Stop work order - Order and Issuance. Sections 112.1 and 112.2 of the International Fire Code are not adopted and the following is substituted:

Order and Issuance (IFC 112.1 and 112.2). Whenever any work is being done contrary to the provisions of this code, the fire marshal may order the work stopped in accordance with K.C.C. Title 23 by notice in writing served on any persons engaged in the doing or causing such work to be done, or by posting such notice in a conspicuous place on the premises where the violation is occurring, and any such persons shall immediately stop such work until authorized by the fire marshal to proceed with the work.

Whenever any work is being done contrary to the provisions of this code, the fire marshal may order the violations corrected without ordering all work stopped by issuing a correction notice which identifies the violation. The correction notice may require reinspection before further construction or at the time of the next required inspection. The correction notice shall be served or posted in the same manner as a stop work order.

These remedies are in addition to those authorized elsewhere in the code. (Ord. 19485 § 165, 2022: Ord. 14915 § 26, 2004).

17.04.330 Stop work order - Failure to comply. Section 112.4 of the International Fire Code is not adopted. (Ord. 19485 § 166, 2022: Ord. 14915 § 27, 2004).

17.04.341 Definitions. Section 202 of the International Fire Code is supplemented with the following:

Definitions (IFC 202.1). Definitions. The definitions in this section apply throughout this title unless the context clearly requires otherwise.

A. Applicant: a property owner or a public agency or public or private utility which owns a right-of-way or associated easement or has been adjudicated the right to such an easement pursuant to RCW 8.12.090, or any person or entity designated or named in writing by the property or easement owner to be the applicant, in an application for a permit.

B. Critical fire service areas: Areas that provide vital services for the coordination or implementation of fire suppression services, such as fire command centers, fire pump rooms, interior exit stairways, exit passageways, elevator lobbies, standpipe cabinets and sprinkler sectional valve locations, and other areas required by the fire marshal.

C. Fire detection system: a heat and/or smoke detection system monitored by a central and/or remote station conforming to the current edition of the International Fire Code as adopted by the Washington State Building Code Council and/or the fire marshal or designee.

D. Fire marshal: The King County fire marshal as designated in K.C.C. 2.16.055, or designee.

E. Life safety/rescue access: an unobstructed access to all floor levels and each roof level of a building on not less than twenty percent of the building perimeter by utilizing a thirty-five foot ladder. An alternate method would be at least one stairway enclosure with exit doorways from each floor level and with a door opening onto each roof level which conforms to the requirements of the International Building Code.

F. NFPA: The National Fire Protection Association.

G. Water main: piping used to deliver water to any fire hydrants or to one or more individual service connections. (Ord. 19485 § 167, 2022).

17.04.370 Fire apparatus access roads - (IFC 503). Section 503 of the International Fire Code as amended and supplemented by this chapter is hereby adopted as King County fire access standards. (Ord. 14915 § 39, 2004: Ord. 14111 § 194, 2001: Ord. 12560 § 164, 1996. Formerly K.C.C. 17.04.01017).

17.04.373 Fire apparatus access roads - Where required.

Section 503.1 of the International Fire Code is not adopted and the following is substituted:

Where required (IFC 503.1). Fire apparatus access roads shall be provided and maintained for new facilities or buildings, or portions thereof. (Ord. 19485 § 168, 2022).

17.04.375 Fire apparatus access roads - Specifications.

Specifications (IFC 503.2). Fire apparatus access roads shall be installed and arranged in accordance with IFC 503.2.1 and 503.2.2. (Ord. 19485 § 169, 2022).

17.04.377 Fire apparatus access roads - Specifications - Dimensions.

Section 503.2 of the International Fire Code is not adopted and the following is substituted:

Dimensions (IFC 503.2.1). An approved fire apparatus access road shall be a minimum of 20 feet wide and provide a minimum unobstructed height of 13 feet 6 inches. (Ord. 19485 § 170, 2022).

17.04.380 Fire apparatus access roads - Specifications - Surface. Section 503.2.3 of the International Fire Code is not adopted and the following is substituted:

Surface (IFC 503.2.3). Fire apparatus access roads shall be designed and maintained to be accessible with an asphalt, concrete or other approved driving surface suitable for all-weather driving and capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds, or other weight as required by the fire marshal, and shall comply with K.C.C. chapter 14.42 and the provisions of this chapter. (Ord. 19485 § 171, 2022; Ord. 15803 § 3, 2007; Ord. 14915 § 41, 2004; Ord. 14111 § 195, 2001; Ord. 12560 § 165, 1996. Formerly K.C.C. 17.04.01018).

17.04.390 Fire apparatus access roads - Specifications - Turning radius. Section 503.2.4 of the International Fire Code is not adopted and the following is substituted:

Turning radius (IFC 503.2.4). The turning radius of a fire apparatus access road shall have a 20 foot inside and 40 foot outside turning radius, or shall be otherwise approved by the Fire Marshal. (Ord. 14915 § 43, 2004; Ord. 14111 § 196, 2001; Ord. 12560 § 166, 1996. Formerly K.C.C. 17.04.01019).

17.04.400 Fire apparatus access roads - Specifications - Dead ends. Section 503.2.5 of the International Fire Code is not adopted and the following is substituted:

Dead ends (IFC 503.2.5). Dead-end fire apparatus access roads in excess of 150 feet (45.72 m) in length shall be provided with an approved cul-de-sac having a 40 foot turning radius, or a "hammerhead-like" turnaround designed as described in King County Administrative Rule for Chapter 17-04 or other designs approved by the Fire Marshal. (Ord. 14915 § 45, 2004; Ord. 14111 § 197, 2001; Ord. 12560 § 167, 1996. Formerly K.C.C. 17.04.01020).

17.04.410 Fire apparatus access roads - Specifications - Grade. Section 503.2.7 of the International Fire Code is not adopted and the following is substituted:

Grade (IFC 503.2.7). The gradient for a fire apparatus access road shall not exceed 15 percent at any point. (Ord. 14915 § 48, 2004; Ord. 14111 § 199, 2001; Ord. 12560 § 168, 1996. Formerly K.C.C. 17.04.01021).

17.04.420 Fire apparatus access roads - Marking, establishment and obstruction of fire lanes. Sections 503.3 and 503.4 of the International Fire Code is not adopted and the following is substituted:

Marking, establishment and obstruction of fire lanes (IFC 503.3 and 503.4).

1. Establishment of fire lanes. Fire lanes in conformance with this code shall be established by the fire marshal, and shall be referred to as designated fire lanes in this section.

2. Definition of fire lanes. The area within any public right-of-way, easement or on private property designated for the purpose of allowing fire trucks and other fire fighting or emergency equipment to use, travel upon and park.

3. Marking of fire lanes. All designated fire lanes shall be clearly marked as follows:

3.1. Vertical curbs shall be painted red on the top and side, extending the length of the designated fire lane. The pavement adjacent to the painted curbs shall be marked with minimum 18 inch in height block lettering with a minimum 3- inch brush stroke reading: "NO PARKING - FIRE LANE." Lettering shall be white and spaced at 50 foot or portion thereof intervals;

3.2. Rolled curbs or surface without curbs shall have a red 6-inch wide stripe painted extending the length of the designated fire lane. The surface adjacent to the stripe shall be marked with minimum 18 inch in height block lettering with a minimum 3- inch brush stroke reading: "NO PARKING - FIRE LANE." Lettering shall be in white and spaced at 50 ft. or portion thereof intervals; or

3.3. Fire lane signs shall be installed as follows:

a. Signs shall be a type "R8-31" reflective sign or of an equivalent reflectivity.

b. Red letters on white background with the wording:

"NO PARKING
FIRE LANE"

c. Signs shall be no less than 12 inches by 18 inches in size and shall be placed at a maximum center-to-center spacing of 150 feet on both sides of the fire lane, or an additional sign may be put beneath the fire lane sign lettered as:

"BOTH SIDES"

d. Signs shall be posted at a minimum height of 7 feet measured from the road or sidewalk to the bottom of the sign, unless required otherwise by this section.

e. Signs may be placed on a fence or building when approved by the fire marshal. When signs are wall or fence mounted, they shall be posted at a minimum height of 5 feet measured from the road or sidewalk to the top of the sign.

f. When posts are required, they shall meet current road standards in K.C.C. chapter 14.42. Signs shall be placed so they face the direction of the vehicular travel.

g. Sign numbers and spacing may be modified by the King County fire marshal.

4. Obstruction of Fire Lanes Prohibited. Unless required otherwise by this chapter, the obstruction of a designated fire lane by a parked vehicle or any other object is prohibited, shall constitute a traffic hazard as defined in state law and an immediate hazard to life and property.

5. Alternate materials and methods. The fire marshal may modify any of the provisions of this section where practical difficulties exist. The particulars of a modification that are approved by the fire marshal shall be entered into the final records for the project permit.

6. Existing fire lane signs and markings.

6.1. Signs that are a minimum 9 inches by 16 inches may be allowed to remain until there is a need for replacement and at that time a 12 inch by 18 inch sign shall be installed.

6.2. Markings may be allowed to remain until there is a need for repainting. When markings are repainted, they shall comply with subsection 3. of this section.

7. Maintenance. Fire lane markings shall be maintained at the expense of the property owner as often as needed to clearly identify the designated area as being a fire lane.

8. Towing notification. At each entrance to property where fire lanes have been designated, signs shall be posted in a clearly conspicuous location and shall clearly state that vehicles parked in fire lanes may be impounded, and the name, telephone number and address of the towing firm where the vehicle may be collected.

9. Property owner responsible. The owner, manager or person in charge of any property upon which designated fire lanes have been established shall prevent the parking of vehicles or placement of other obstructions in such fire lanes.

10. Violation - Civil infraction. Any person who fails to mark or maintain the marking of a designated fire lane as prescribed in this chapter, or who parks a vehicle in, allows the parking of a vehicle in, obstructs or allows the obstruction of a designated fire lane commits a civil infraction to which the provisions of chapter 7.80 RCW shall apply. The penalty for failing to mark or maintain the marking of a designated fire lane shall be one hundred and fifty dollars. The penalty for parking a vehicle in, allowing the parking of a vehicle in, obstructing or allowing the obstruction of a designated fire lane shall be fifty dollars.

11. Violation - Civil penalty. In addition to, or as an alternative to, the provisions of subsection 10. of this section, any person who fails to meet the provisions of the fire lane requirements codified in this title shall be subject to civil penalties in conformance with K.C.C. Title 23.

12. Impoundment. Any vehicle or object obstructing a designated fire lane is hereby declared a traffic hazard and may be abated without prior notification to its owner by impoundment in accordance with the applicable state law. (Ord. 19485 § 172, 2022: Ord. 18791 § 136, 2018: Ord. 18683 § 28, 2018: Ord. 17420 § 73, 2012: Ord. 14915 § 51, 2004: Ord. 11783 § 1, 1995: Ord. 8868, 1989: Ord. 7980 § 1, 1987. Formerly K.C.C. 17.04.070).

17.04.425 Fire apparatus access roads - Security gates, bollards or other obstructions.

Section 503.6 of the International Fire Code is not adopted and the following is substituted.

Security gates, bollards or other obstructions (IFC 503.6).

1. The installation of security gates, bollards or other obstructions across a fire apparatus access road shall not be allowed unless approved by the fire marshal. The use of directional-limiting devices, such as tire spikes, is prohibited. Where security gates, bollards or other obstructions are installed, they shall have an approved means of emergency operation. The security gates, bollards or other obstructions and the emergency operation shall be maintained so that they are operational at all times.

2. Electric gate operators shall be listed in accordance with Underwriter Laboratories (UL) 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of American Society for Testing and Materials (ASTM) F 2200 and shall be equipped with equipment approved by the fire marshal that allows for operation of the gate by fire and police personnel from their vehicle.

3. Gates shall be at a minimum as wide as the required fire apparatus access road width. Gates, bollards or other obstructions on commercial properties shall be set back at least 30 feet from roadway edge of pavement. Where a fence is provided on each side of a gate for a commercial property, an access door shall be provided at an approved location with a secure key box that is approved by the fire marshal.

EXCEPTION: Automated gates with equipment approved by the fire marshal that allow for operation of the gate by fire and police personnel from their vehicle are not required to be set back 30 feet from the roadway edge of pavement if the roadway is not a principal or collector arterial or a road with lane markers. (Ord. 19485 § 173, 2022).

17.04.445 Access to building openings and roofs - Roof hatches.

Section 504.3 of the International Fire Code is supplemented with the following:

Roof hatches (IFC 504.3.1). All required interior stairways that extend to the top floor in any building four or more stories in height shall have, at the highest point of the stair shaft, an approved hatch that can open to the exterior not less than 16 square feet (1.5m²) in area and having a minimum dimension of 3 feet (914mm).

EXCEPTION: A roof hatch is not required for stairways that extend to the roof with

an opening onto that roof or for stairways that comply with International Building Code Section 1011.12.2. (Ord. 19485 § 174, 2022).

17.04.447 Access to building openings and roofs - Buildings with enclosed interior courtyards.

Section 504 of the International Fire Code is supplemented with the following:

Buildings with enclosed interior courtyards (IFC 504.5). New buildings with enclosed interior courtyards shall have a straight, direct access corridor or stairway or both from the exterior to the courtyard at a location acceptable to the fire marshal. Stairways shall comply with IFC 1011 and corridors shall comply with IFC 1020. The access shall have a minimum width of 4 feet, or an alternative width as directed by the fire marshal, and be large enough to carry a 35-foot-long sectional ladder, with a minimum folded length of 20 feet, directly from the exterior to the courtyard without obstructions. The access door shall be marked at the road as "Direct access to courtyard." (Ord. 19485 § 175, 2022).

17.04.450 Premises identification – Addresses. Section 505.1 of the International Fire Code is not adopted and the following is substituted:

Premises identification – Addresses (IFC 505.1). Approved numbers or addresses shall be provided for all new and existing buildings in accordance with K.C.C. chapter 16.08. (Ord. 19485 § 176, 2022; Ord. 14915 § 56, 2004).

17.04.455 Fire protection water supplies - Required water supply.

Section 507.1 of the International Fire Code is supplemented with the following:

Required water supply (IFC 507.1.1). Underground piping shall conform to the following requirements:

1. All underground piping shall be designed, constructed and installed in accordance with NFPA 24 for private fire service mains and NFPA 13 for water-based fire protection systems. Two forms of joint restraint shall be used.
2. Piping systems under the control of a water district or city utilities department shall be installed in accordance with said Utilities Engineering Standard. The fire marshal shall be responsible for determining hydrant spacing and location connecting to these systems. (Ord. 19485 § 177, 2022).

17.04.462 Emergency responder radio coverage - Emergency responder radio coverage in new buildings.

Section 510.1 of the International Fire Code is not adopted and the following is substituted:

Emergency responder radio coverage in new buildings (IFC 510.1). New buildings meeting the conditions of this section shall have an approved radio coverage system for emergency responders installed in accordance with IFC 510.4 through 510.5.5 and NFPA 1221. Radio coverage is 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 improvements of the existing public safety communication system. An approved radio coverage system shall be provided within new buildings meeting any of the following conditions:

1. High-rise buildings;
2. The total building area is 50,000 square feet or more;
3. The total basement area is 10,000 square feet or more;
4. There are floors used for human occupancy more than 30 feet below the finished floor of the lowest level of exit discharge; or
5. Buildings or structures where the fire marshal determines, in consultation with the

fire chief, that in-building radio coverage is critical because of its unique design, location, use or occupancy.

EXCEPTIONS:

1. Buildings and areas of buildings that have minimum radio coverage signal strength levels of the public safety radio operator within the building in accordance with IFC 510.4.1 without the use of a radio coverage system.

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 marshal shall have the authority to accept an automatically activated emergency responder radio coverage system.

3. One- and two-family dwellings and townhouses.

4. Where it is determined by the fire marshal that the radio coverage system is not needed. (Ord. 19485 § 178, 2022).

17.04.466 Emergency responder radio coverage - Technical requirements - Emergency responder communication enhancement system signal strength.

Section 510.4.1 of the International Fire Code is not adopted and the following is substituted:

Emergency responder communication enhancement system signal strength (IFC 510.4.1). A building shall be considered to have acceptable emergency responder communications enhancement system coverage when the following conditions are met:

1. Emergency responder communications enhancement system signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in IFC 510.4.1.1 through 510.4.1.3; and

2. Critical fire service areas shall have 99 percent floor area radio coverage. (Ord. 19485 § 179, 2022).

17.04.467 Emergency responder radio coverage - Technical requirements - Emergency responder communication enhancement system signal strength - Minimum signal strength out of the building.

Section 510.4.1.2 of the International Fire Code is not adopted and the following is substituted:

Minimum signal strength out of the building (IFC 510.4.1.2). The minimum outbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the fire marshal. 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. A minimum signal strength of -100 dBm shall be received by the public safety radio operator when transmitted from within the building. (Ord. 19485 § 180, 2022).

17.04.468 Emergency responder radio coverage - Technical requirements - System design - Amplification systems and components.

Section 510.4.2.1 of the International Fire Code is not adopted and the following is substituted:

Amplification systems and components (510.4.2.1). Buildings and structures that cannot support the required level of radio coverage shall be equipped with systems and components to enhance the public safety radio signals and achieve the required level of radio coverage specified in IFC 510.4.1 through 510.4.1.3. Public safety communications enhancement systems utilizing radio-frequency-emitting devices and cabling shall be approved by the fire code marshal. Prior to activating rebroadcasting of public safety frequencies, all RF-emitting devices shall obtain an executed rebroadcast agreement from the public safety radio system operator and be suitable for public safety use. (Ord.

19485 § 181, 2022).

17.04.471 Emergency responder radio coverage - Technical requirements - System design - Signal booster requirements.

Section 510.4.2.4 of the International Fire Code is not adopted and the following is substituted:

Signal booster requirements (IFC 510.4.2.4).

1. All signal booster components shall be contained in a National Electrical Manufacturer's Association (NEMA) 4-type, IP65 or IP66 waterproof cabinet or equivalent.

EXCEPTION: Listed battery systems that are contained in integrated battery cabinets.

2. Battery systems used for the emergency power source shall be contained in a NEMA 3R or higher-rated cabinet, IP14-type waterproof cabinet or equivalent.

3. Equipment shall have FCC or other radio licensing authority certification and be suitable for public safety use before installation.

4. Where a donor antenna exists, isolation shall be maintained between the donor antenna and all inside antennas to not less than 20dB more than the system gain under all operating conditions.

5. Active RF emitting devices used in emergency responder radio coverage systems shall have built-in oscillation detection and control circuitry.

6. The installation of amplification systems or systems that operate on or provide the means to cause interference on any emergency responder radio coverage networks shall be coordinated and approved by the fire marshal and the public safety radio operator.

7. Unless otherwise approved by the fire marshal, only channelized signal boosters shall be permitted. Channelized signal boosters shall comply with operating requirements of the public safety radio operator, including the capacity of supporting a minimum of 28 channels and 800 MHz analog and digital operation including P25 Phase I frequency division multiple access (FDMA) and P25 Phase II time division multiple access (TDMA). (Ord. 19485 § 182, 2022).

17.04.472 Emergency responder radio coverage - Technical requirements - System design - System monitoring.

Section 510.4.2.5 of the International Fire Code is not adopted and the following is substituted:

System monitoring (IFC 510.4.2.5). The emergency responder radio enhancement system shall include automatic supervisory and trouble signals that are monitored by a supervisory service and are annunciated by the fire alarm system in accordance with NFPA 1221. The following conditions shall be separately annunciated by the fire alarm system or, if the status of each of the following conditions is individually displayed on a dedicated panel on the radio enhancement system, a single automatic supervisory signal may be annunciated on the fire alarm system indicating deficiencies of the radio enhancement system:

1. Loss of normal AC power supply.
2. System battery charger(s) failure.
3. Malfunction of the donor antenna(s).
4. Failure of active RF-emitting device(s).
5. Low-battery capacity at 70-percent reduction of operating capacity.
6. Active system component malfunction.

7. Malfunction of the communications link between the fire alarm system and the emergency responder radio enhancement system. (Ord. 19485 § 183, 2022).

17.04.476 Emergency responder radio coverage - Installation requirements - Approval prior to installation.

Section 510.5.1 of the International Fire Code is not adopted and the following is substituted:

Approval prior to installation (IFC 510.5.1). Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC or other radio licensing authority shall not be activated to rebroadcast without prior coordination and approval of the fire marshal and public safety radio system operator. (Ord. 19485 § 184, 2022).

17.04.477 Emergency responder radio coverage - Installation requirements - Minimum qualifications of personnel.

Section 510.5.2 of the International Fire Code is not adopted and the following is substituted:

Minimum qualifications of personnel (IFC 510.5.2). The minimum qualifications of the system designer and lead installation personnel shall include the following:

1. A valid FCC-issued general radiotelephone operators license; and
2. Certification of in-building system training issued by an organization or school approved by the fire marshal, or a certificate issued by the manufacturer of the equipment being installed. (Ord. 19485 § 185, 2022).

17.04.478 Emergency responder radio coverage - Installation requirements - Acceptance test procedure.

Section 510.5.3 of the International Fire Code is not adopted and the following is substituted:

Acceptance test procedure (IFC 510.5.3). Where an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building in accordance with IFC 510.4.1. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of 20 approximately equal test areas, with a maximum test area size of 6,400 square feet. Where the floor area exceeds 128,000 square feet, the floor shall be divided into as many approximately equal test areas as needed, such that no test area exceeds the maximum square footage allowed.

2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for each of the test grids. A diagram of this testing shall be created for each floor where coverage is provided, indicating the testing grid used for the test in IFC 510.5.3(1), and including inbound signal strengths and frequencies for each test area. The diagram shall indicate all critical fire service areas.

3. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the fire marshal. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3.4 or higher. Communications between handsets shall be tested and recorded in the grid square diagram required by IFC 510.5.3(2): each grid square on each floor; between each critical fire service area and a radio outside the building; between each critical fire service area and the fire command center or fire alarm control panel; and between each landing in each stairwell and the fire command center or fire alarm control panel.

4. Failure of more than five percent of the test areas on any floor shall result in failure of the test.

EXCEPTION: Critical fire service areas shall be provided with 99 percent floor area coverage.

5. If two of the test areas fail the test, and to be more statistically accurate, the floor shall be permitted to be divided into 40 equal test areas. Failure of not more than two nonadjacent test areas shall not result in failure of the test. If the system fails the 40-area test, the system shall be altered to meet the 95 percent coverage requirement.

6. A test location approximately in the center of each test area shall be selected for the test, with the radio enabled to verify two-way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire test area. Failure in the selected test location shall be considered to be a failure of that test area. Additional test locations shall not be permitted.

7. The gain values of all amplifiers shall be measured, and the test measurement results shall be kept on file with the building owner so that the measurements can be verified during annual tests. If the measurement results become lost, the building owner shall be required to rerun the acceptance test to reestablish the gain values.

8. As part of the installation, a spectrum analyzer or other suitable test equipment shall be used to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at the time of installation and at subsequent annual inspections.

9. Systems incorporating Class B signal booster devices or Class B broadband fiber remote devices shall be tested using two portable radios simultaneously conducting subjective voice quality checks. One portable radio shall be positioned not more than 10 feet (3,048 mm) from the indoor antenna. The second portable radio shall be positioned at a distance that represents the farthest distance from any indoor antenna. With both portable radios simultaneously keyed up on different frequencies within the same band, subjective audio testing shall be conducted and comply with DAQ levels as specified in IFC 510.4.1.1 and 510.4.1.2.

10. At the conclusion of the testing, and before issuance of the building certificate of occupancy, the building owner or owner's representative shall place a copy of the following records in the DAS enclosure or the main building office. The following records shall be available to the fire marshal and maintained by the building owner for the life of the system:

a. A certification letter stating that the emergency responder radio coverage system has been installed and tested in accordance with this code, and that the system is complete and fully functional.

b. The grid square diagram created as part of testing in IFC 510.5.3(2) and 510.5.3(3).

c. Data sheets and manufacturer specifications for the emergency responder radio coverage system equipment, back up battery and charging system, if used.

d. A diagram showing device locations and wiring schematic.

e. A copy of the electrical permit.

11. At the conclusion of testing, and before issuance of the building certificate of occupancy, the building owner or owner's representative shall submit to the fire marshal a report of the acceptance test. (Ord. 19485 § 186, 2022).

17.04.479 Emergency responder radio coverage - Installation requirements - Wiring.

Section 510.5 of the International Fire Code is supplemented with the following:

Wiring (IFC 510.5.6). The backbone, antenna distribution, radiating or any fiber-optic cables or other system interconnection cables shall be rated as plenum cables. The backbone cables shall be connected to the antenna distribution, radiating or copper cables using hybrid coupler devices of a value determined by the overall design. Backbone cables, and the connection between backbone cables and antenna cables,

shall be routed through an enclosure that matches the building's required fire-resistance rating for shafts or interior exit stairways. Passage of the antenna distribution cable in and out of the enclosure shall be protected as a penetration under the International Building Code. (Ord. 19485 § 187, 2022).

17.04.481 Emergency responder radio coverage - Installation requirements - Identification Signs.

Section 510.5 of the International Fire Code is supplemented with the following:

Identification Signs (IFC 510.5.7). Emergency responder radio coverage systems shall be identified by an approved sign located on or near the Fire Alarm Control Panel, or other approved location, stating "This building is equipped with an Emergency Responder Radio Coverage System. Control Equipment located in room_____." A sign stating "Emergency Responder Radio Coverage System Equipment" shall be placed on or adjacent to the door of the room containing the main system components. (Ord. 19485 § 188, 2022).

17.04.486 Emergency responder radio coverage - Maintenance - Testing and proof of compliance.

Section 510.6.1 of the International Fire Code is not adopted and the following is substituted:

Testing and proof of compliance (510.6.1). The owner of the building or owner's authorized agent shall have the emergency responder radio coverage system be 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 coverage test as required by the fire marshal and as described in IFC 510.5.3 or IFC 510.6.1.

EXCEPTION: Group R Occupancy annual testing is not required within dwelling units.

2. Signal boosters shall be tested to verify that the gain or output level is the same as it was upon initial installation and acceptance or set to optimize the performance of the system. Altering of the distributed antenna systems (DAS) output from the initial commissioning values shall require revalidation by the public safety radio operator.

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 one-hour test period the battery exhibits symptoms of failure, the test shall be extended for additional one-hour periods until the integrity of the battery can be determined.

4. If a fire alarm system is present in the building, a test shall be conducted to verify that the fire alarm system is properly supervising the emergency responder communication system as required in IFC 510.4.2.5. The test is performed by simulating alarms to the fire alarm control panel. The certifications in IFC 510.5.2 are sufficient for the personnel performing this testing.

5. Other active components shall be checked to verify operation within the manufacturer's specifications.

6. At the conclusion of the testing, a report, which shall verify compliance with IFC 510.6.1, shall be submitted to the fire marshal.

7. At the conclusion of testing, a record of the inspection and maintenance along with an updated grid diagram of each floor showing tested strengths in each grid square and each critical fire service area shall be added to the documentation maintained on the premises in accordance with IFC 510.5.3. (Ord. 19485 § 189, 2022).

17.04.487 Emergency responder radio coverage - Maintenance - Testing and proof of compliance - Alternative acceptance test procedure.

Section 510.6.1 of the International Fire Code is supplemented with the following:

Alternative acceptance test procedure. (IFC 510.6.1.1). When the comprehensive test documentation required by IFC 510.5.3 is available, or the most recent five-year test results are available if the system is older than six years, the in-building coverage test required by IFC 510.6.1(1) may be conducted as follows:

1. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the fire marshal. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3.4 or higher. Communications between handsets in the following locations shall be tested: between the fire command center or fire alarm control panel and a location outside the building; and between the fire alarm control panel and each landing in each stairwell.

2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for:

a. The three grid areas to be tested on each floor are the three grid areas with poorest performance in the acceptance test or the most recent annual test, whichever is more recent;

b. Each of the critical fire service areas identified in acceptance test documentation required by IFC 510.5.3 or as modified by the fire marshal; and

c. One grid square per serving antenna.

3. The test area boundaries shall not deviate from the areas established at the time of the acceptance test or as modified by the fire marshal. The building shall be considered to have acceptable emergency responder radio coverage when the required signal strength requirements in IFC 510.4.1.1 and 510.4.1.2 are located in 95 percent of all areas on each floor of the building and 99 percent in critical fire service areas, and any non-functional serving antenna are repaired to function within normal ranges. If the documentation of the acceptance test or most recent previous annual test results are not available or acceptable to the fire marshal, the radio coverage verification testing described in IFC 510.5.3 shall be conducted. (Ord. 19485 § 190, 2022).

17.04.488 Emergency responder radio coverage - Maintenance - Testing and proof of compliance - Field Testing.

Section 510.6.4 of the International Fire Code is not adopted and the following is substituted:

Field Testing (IFC 510.6.4). Department personnel shall have the right to enter onto the property at any reasonable time to conduct field testing to verify the required level of radio coverage or to disable a system that, due to malfunction or poor maintenance, has the potential to impact the emergency responder radio system in the region. (Ord. 19485 § 191, 2022).

17.04.489 Fire protection and safety systems - General - Scope.

Section 901.1 of the International Fire Code is not adopted and the following is substituted:

Scope (IFC 901.1). This chapter specifies where fire protection and life safety systems are required and applies to the design, installation, inspection, operation, testing and maintenance of fire protection systems.

1. ADDITIONAL REQUIREMENTS.

1.1. The fire marshal retains the authority under the IFC to impose additional conditions, including but not limited to increased setbacks, use of fire retardant materials or standpipes where determined necessary to mitigate identified fire protection impacts.

1.2. This chapter applies to all buildings or structures undergoing a substantial improvement as defined in K.C.C. chapter 21A.06.

1.3. Any additions to an existing building or structure shall be considered new construction and subject the entire structure to the provisions of this chapter.

1.4. All condominiums shall have the following wording in the recorded Declaration of Covenants and a copy of the document shall be provided to the fire marshal:

1.4.1 If any unit is equipped with a sprinkler system, nothing shall be hung from the sprinklers comprising a part of the system nor shall any such sprinklers be painted, covered or otherwise changed, tampered with or altered.

1.4.2. Before any alteration, amendment, modification or change thereof, the owners or their agents shall submit such alteration, amendment, modification or change to the fire marshal for approval and agree to comply with all applicable sprinkler requirements. (Ord. 19485 § 192, 2022).

17.04.520 Automatic sprinkler systems - General. Section 903.1 of the International Fire Code is not adopted and the following is substituted:

General (IFC 903.1).

1. An automatic fire-extinguishing system shall be installed in the occupancies and locations in accordance with IFC 903.2.

For provisions on special hazards and hazardous materials, see IFC 901.4.4.

2. The provisions of this section shall apply to all buildings undergoing a substantial improvement as defined in K.C.C. chapter 21A.06.

3. Any additions to an existing structure shall be considered new construction and subject the entire structure to the provisions of this section.

EXCEPTION: A one time exemption for buildings regulated by the International Residential Code shall be allowed for a single addition not to exceed 500 square feet, unless sprinklers or other fire protection systems are required by other statutes.

4. All condominiums shall have the following wording in the recorded Declaration of Covenants and a copy of the document shall be provided to the fire marshal:

4.1. If any unit is equipped with a sprinkler system, nothing shall be hung from the sprinklers comprising a part of the system nor shall any such sprinklers be painted, covered or otherwise changed, tampered with or altered.

4.2. Before any alteration, amendment, modification or change thereof, the owners or their agents shall submit such alteration, amendment, modification or change to the fire marshal for approval and agrees to comply with all applicable sprinkler requirements. (Ord. 19485 § 193, 2022: Ord. 18683 § 29, 2018: Ord. 14915 § 74, 2004: Ord. 14238 § 27, 2001: Ord. 14111 § 214, 2001: Ord. 12560 § 171, 1996. Formerly K.C.C. 17.04.01024).

17.04.540 Automatic sprinkler systems - Where required. Section 903.2 of the International Fire Code is not adopted and the following is substituted:

Where required (IFC 903.2). Sprinklers are required as follows:

1. For residential units and their accessory structures built under the International Residential Code, sprinklers shall be installed in accordance with IFC 903.2.1.

2. For all other occupancies an automatic sprinkler system shall be installed in locations in accordance with IFC 903.2.1 through 903.2.12.

EXCEPTION: Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, if those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with IFC 907.2 and are separated from the remainder of the building by not less than 1-hour fire barriers constructed in

accordance with IFC 707 or not less than 2-hour horizontal assemblies constructed in accordance with IFC 711, or both. (Ord. 19485 § 194, 2022: Ord. 17837 § 81, 2014: Ord. 14915 § 78, 2004: Ord. 14111 § 215, 2001. Formerly K.C.C. 17.04.010245).

17.04.560 Automatic sprinkler systems - Where required - Habitable space of structures built under the IRC. Section 903.2.11 of the International Fire Code is supplemented with the following:

Habitable space of structures built under the IRC (IFC 903.2.11.8). An automatic sprinkler system shall be installed in the habitable space of structures built under the International Residential Code (IRC) when:

1. There is no approved fire access as defined in K.C.C. Title 14 and IFC 503;
2. The structure has a total floor area, including basements, that exceed 10,000 square feet; or:
3. There is not:
 - 3.1 A minimum fire flow of 1,000 gallons per minute as defined in IFC Appendix B; or
 - 3.2 A fire hydrant within 400 feet or 600 feet of the property line as outlined in IFC 507.5.1.

EXCEPTIONS: Structures are located on lots that:

1. Are sized 35,000 square feet or larger;
2. Are outside the Urban Growth Area; and
3. Have a residential use as the primary land use. (Ord. 19485 § 195, 2022: Ord. 17837 § 84, 2014: Ord. 17837 § 84, 2014: Ord. 15802 § 7, 2007: Ord. 14915 § 83, 2004: Ord. 14111 § 218, 2001: Ord. 12560 § 174, 1996. Formerly K.C.C. 17.04.01027).

17.04.563 Automatic sprinkler systems - Where required - Specific buildings areas and hazards - Buildings exceeding 10,000 square feet.

Section 903.2 of the International Fire Code is supplemented with the following:

Specific buildings areas and hazards - Buildings exceeding 10,000 square feet (IFC 903.2.13). An automatic sprinkler system, installed in accordance with IFC 903.2, 901.4.3 and 901.4.4 shall be provided throughout all buildings where the total floor area, including basements, exceeds 10,000 square feet. For purposes of this section, portions of buildings separated by one or more fire walls shall not be considered a separate building.

Existing buildings shall comply with this section when an addition is made to the building and the new total floor area, including basements, exceeds 10,000 square feet, or an existing building exceeding 10,000 square feet is substantially improved as defined in K.C.C. chapter 21A.06. (Ord. 19485 § 196, 2022).

17.04.572 Automatic sprinkler systems - Installation requirements - standards.

Section 903.3.1 of the International Fire Code is not adopted and the following is substituted:

Installation requirements – standards (IFC 903.3.1). Sprinkler systems shall be designed and installed in accordance with IFC 903.3.1.1, unless otherwise permitted by IFC 903.3.1.2, 903.3.1.3 and other chapters of this code, as applicable. In addition, sprinkler systems shall be designed with a buffer to account for water system fluctuations to include a low reservoir condition. Such buffer shall be five pounds per square inch (PSI) for static pressures less than 50 PSI and 10 PSI for static pressures above 50 PSI. Permit applicants shall independently verify site specific static pressure at the following intervals:

1. Before initiating sprinkler system;
2. Before installing sprinkler piping, including the underground supply; and
3. Before requesting a cover inspection. (Ord. 19485 § 197, 2022).

17.04.574 Automatic sprinkler systems - Sprinkler system supervision and alarms - Floor control valves.

Section 903.4.3 of the International Fire Code is not adopted and the following is substituted:

Floor control valves (IFC 903.4.3). Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor. The floor control valves shall be located within stair enclosures and within six feet of floors or landings unless chains or other approved devices are readily available.

EXCEPTION: In buildings without stair enclosures, the location of the floor control valves shall be determined by the fire marshal. (Ord. 19485 § 198, 2022).

17.04.581 Automatic sprinkler systems - Testing and maintenance.

Section 903.5 of the International Fire Code is not adopted and the following is substituted:

Testing and maintenance (IFC 903.5). Sprinkler systems shall be tested and maintained in accordance with IFC 901 and the following:

1. Maintenance or testing discharges from a fire sprinkler system, standpipe or fire pump shall be treated to comply with the National Pollution Discharge Elimination System requirements.
2. Water drained or otherwise discharged from a fire sprinkler system, standpipe or fire pump is considered an illicit discharge, and shall drain to the sanitary sewer or be treated prior to discharge to storm drains, ditches or water bodies. (Ord. 19485 § 199, 2022).

17.04.582 Automatic sprinkler systems - Testing and maintenance - Height.

Section 905.3.1 of the International Fire Code is not adopted and the following is substituted:

Height (IFC 905.3.1). Class I standpipe systems shall be installed throughout buildings where any of the following conditions exist:

1. Four or more stories are above or below grade plane.
2. The floor level of the highest story is located more than 30 feet (9144 mm) above the lowest level of the fire apparatus access.
3. The floor level of the lowest story is located more than 30 feet (9144 mm) below the highest level of fire apparatus access.

EXCEPTIONS:

1. Class II standpipes may be used for hose connections in open parking garages in accordance with IFC 905.5.
2. In determining the lowest level of fire apparatus access, the following does not apply:
 - 2.1. Recessed loading docks for four vehicles or less.
 - 2.2. Conditions where topography makes access from the fire apparatus to the building impractical or impossible. (Ord. 19485 § 200, 2022).

17.04.590 Fire department connections - Location - Distance. Section 912.2 of the International Fire Code is supplemented with the following:

Distance (IFC 912.2.3). Fire apparatus connections shall not be located on a building unless approved by the fire marshal, and shall be located within 50 feet of a

required fire hydrant. (Ord. 19485 § 201, 2022: Ord. 14915 § 101, 2004: Ord. 14111 § 211, 2001. Formerly K.C.C. 17.04.010237).

17.08 FIRE HYDRANTS AND WATER MAINS

Sections:

- 17.08.020 Application.
- 17.08.030 Exemptions.
- 17.08.090 Variances.
- 17.08.100 Water authority responsibility.
- 17.08.130 Water purveyor authority.
- 17.08.140 Individual service connections.

17.08.020 Application.

A. Subdivisions and short subdivisions are required to be provided with water mains and fire hydrants meeting IFC Appendix C, consistent with county standards and state Department of Social and Health Services principles of water system design as a condition of final plat or short plat approval unless exempt under K.C.C. 17.08.030.

B. All structures or additions thereto erected under a building permit shall be served by operational water mains and fire hydrants consistent with county standards before:

1. the start or installation of combustible construction; or
2. construction of a second floor if the building is noncombustible, whichever occurs first, unless exempt under K.C.C. 17.08.030.

C. Mobile home parks and recreational vehicle parks shall be required to provide water mains and fire hydrants consistent with county standards as a condition of final site plan approval.

D. Permits or approvals for uses not involving a structure shall be served by water mains and fire hydrants consistent with county standards.

E. All new water mains and all additions and extensions to existing water mains shall meet the requirements of this chapter if water mains which serve only uses exempt under K.C.C. 17.08.030 are also exempt from the requirements of this chapter.

F. All water purveyor comprehensive plans approved under K.C.C. chapter 13.24 shall be consistent with this chapter.

G. All water mains and fire hydrants shall be served by a water district or water purveyor in accordance with a current water comprehensive plan approved under K.C.C. chapter 13.24, or by other adequate means providing service levels consistent with the provisions of this chapter. (Ord. 19485 § 202, 2022: Ord. 5828 § 3, 1982).

17.08.030 Exemptions.

A. The following permits and approvals are exempt from the fire flow and fire hydrant requirements of this title. These exemptions do not exempt any development from compliance with the requirements of state law.

1. Subdivisions and short subdivisions located outside the Urban Growth Area and that do not contain a lot less than thirty-five thousand square feet in size.

2. Building permits for buildings with one or two dwelling units located outside the Urban Growth Area, only if the lot is at least thirty-five thousand square feet in size.

3. Building permits for structures classified as Group U occupancies under the International Building Code that conform to the definition of agricultural buildings in Appendix C of the International Building Code only if the structures are located outside the Urban Growth Area.

4. Building permits for structures that are:

- a. two-thousand-five hundred square feet in floor area, excluding garage or less;
- b. served by a Group B water system; and
- c. located outside the Urban Growth Area.

5. Building permits for structures that are more than two-thousand-five hundred square feet in floor area (excluding garages) and comply with subsection A.4.b. and c. of this section, shall be exempt if the fire marshal determines that the project will not create a substantial fire hazard.

B. The fire marshal shall have the authority to impose conditions including, but not limited to, increased setbacks, use of fire retardant materials or sprinkler system requirements on permits exempt under subsection A. of this section where necessary to mitigate identified fire hazards.

C. Building permits and subdivisions and short subdivisions exempt under subsection A. of this section shall as a condition of approval, record a covenant running with the land which acknowledges the absence of fire hydrants and by which owners of the property and their successors are deemed to have agreed to participate in and not oppose or protest annexation to a public water district or the formation of a utility local improvement district for installation of water mains and fire hydrants consistent with applicable county standards. However, this condition shall not apply when the lot is five acres or larger, or the proposed subdivision, short subdivision or structure is located outside the Urban Growth Area. (Ord. 19485 § 203, 2022: Ord. 14915 § 117, 2004: Ord. 12321 § 1, 1996: Ord. 11625 § 2, 1994: Ord. 6541, 1983: Ord. 5828 § 4, 1982).

17.08.090 Variances.

A. The fire marshal shall have the authority to approve deviations from the standards established under this chapter when it is shown that:

1. Strict compliance would require unreasonable fire hydrant locations, fire flow requirements or water main sizes; and
2. The variance would not unreasonably affect adequate fire protection to the area or structures served.

B. The fire marshal may approve variances, except as provided in subsection C. of this section for connections to single family residences served by existing water system that have fire hydrants and fire flow of at least five hundred gallons per minute if the variance would not unreasonably affect fire protection and only if the purveyor's approved comprehensive plan includes a method for increasing fire flow to current standards.

C. The fire marshal shall not approve any variance which would result in a violation of chapters 246-290 and 246-293 WAC without prior approval of the state Department of Social and Health Services. (Ord. 15803 § 13, 2007: Ord. 14915 § 123, 2004: Ord. 7080 § 1, 1985: Ord. 5828 § 10, 1982).

17.08.100 Water authority responsibility.

A. Water authorities shall not be required to exercise police or regulatory powers toward the enforcement of this chapter. The only role of water authorities shall be to provide information, such as:

1. The water authority may be requested by the county to indicate in writing its capability to provide water service, consistent with the standards contained in this chapter, to any building permit, subdivision, or short subdivision applicant, or to the county;
2. The water authority may be required by the fire marshal to notify the fire department in writing when a water system installed pursuant to this chapter is available for use.

B. Enforcement responsibility, for determining whether or not to approve a building permit, subdivision, or short subdivision application, based on information provided by the water authority, shall belong solely to King County. (Ord. 3316 § 4, 1977).

17.08.130 Water purveyor authority. Nothing in this chapter or rules and regulations adopted by the department in accordance with this chapter shall be construed to prohibit water purveyors from imposing more stringent requirements for the construction of water mains and fire hydrants. (Ord. 14915 § 124, 2004: Ord. 5828 § 11, 1982).

17.08.140 Individual service connections. No more than sixty feet of piping that connects the customer's plumbing system to the purveyor's water main or water meter shall be located in any public road right-of-way unless approved in accordance with K.C.C. chapter 14.28. (Ord. 14915 § 125, 2004: Ord. 5828 § 12, 1982).

17.11 FIREWORKS

Sections:

- 17.11.010 Definitions.
- 17.11.020 Application of RCW, WAC, and International Fire Code - tribal trust land exception.
- 17.11.030 Delegation of powers to fire marshal - adoption of procedures and policies - specification of additional safeguards - assistance by sheriff's office.
- 17.11.040 Limitation on retail sale, use, discharge or display of fireworks - public display permits, applications, fees, additional state license -public display traffic control, notices, compensation - pyrotechnic operator required for public display - public display bond or certificate of insurance - public display deposit for cleanup costs, forfeiture, return.
- 17.11.050 Prohibition during fire hazard conditions - process.
- 17.11.060 Violations - penalties - separate offenses - delayed enforcement of K.C.C. 17.11.040.D. and 17.11.040.B.

17.11.010 Definitions. Unless otherwise specified in K.C.C. 17.04.020 or the context clearly requires otherwise, the definitions for terms used in this chapter shall be as established in chapter 70.77 RCW, chapter 212-17 WAC and the International Fire Code, Chapter 56, as adopted under K.C.C. 17.04.010. (Ord. 19276 § 4, 2021).

17.11.020 Application of RCW, WAC, and International Fire Code - tribal trust land exception.

A. Except as otherwise noted in this chapter, all permitting, licensing and regulatory requirements shall be in accordance with the fireworks regulations of chapter 70.77 RCW, chapter 212-17 WAC and the International Fire Code, Chapter 56, as adopted under K.C.C. 17.04.010.

B. This chapter does not apply to the sale or discharge of fireworks on tribal trust lands. (Ord. 19276 § 5, 2021).

17.11.030 Delegation of powers to fire marshal - adoption of procedures and policies - specification of additional safeguards - assistance by sheriff's office.

A. The county council hereby delegates the power to grant all permits required under this chapter to the King County fire marshal or designee. The King County fire marshal may adopt reasonable procedures and policies to clarify the application of this chapter. As a condition of any permit, the fire marshal may specify additional safeguards as necessary to provide for public safety.

B. In addition to the sheriff's powers to enforce state and county criminal law, the sheriff's office may assist the King County fire marshal in enforcing the permitting, licensing and regulatory requirements of this chapter. (Ord. 19276 § 6, 2021).

17.11.040 Limitation on retail sale, use, discharge or display of fireworks - public display permits, applications, fees, additional state license -public display traffic control, notices, compensation - pyrotechnic operator required for public display - public display bond or certificate of insurance - public display deposit for cleanup costs, forfeiture, return.

A. The retail sale of fireworks in unincorporated King County is prohibited.

B. The use, discharge or display of fireworks in unincorporated King County is prohibited absent a permit issued by the county pursuant to RCW 70.77.260(2) and this section.

C. Any person desiring to give a public display of fireworks shall submit to the fire marshal an application for a permit to operate the public display. This is in addition to any permits required by Section 105 of the International Fire Code for pyrotechnic special effects material and use of hazardous materials. Public displays of fireworks shall not be permitted more than two days per calendar year on any site as defined in K.C.C.

21A.06.1170.

D. A complete permit application for a public display of fireworks shall be made at least twenty days in advance of the date set for the public display. Applications received after that date or incomplete applications shall be denied.

E. The fee for the permit shall be as established in K.C.C. Title 27. The permit required by this section shall be in addition to any license required by the state fire marshal under chapter 70.77 RCW. Permits for displays of fireworks for religious purposes shall not be subject to a fee, in accordance with RCW 70.77.311.

F.1. For any scheduled public display, applicants shall submit such information as deemed appropriate by the department and the sheriff's office to ensure that adequate traffic control and crowd protection policing has either been arranged through private security agencies or has been contracted for with the sheriff.

2. A written notice that the applicant has complied with this requirement shall be issued by the sheriff to the fire marshal before a public display permit is issued.

3. If the applicant contracts for traffic control and crowd protection policing with King County, the sum agreed upon in payment for the policing shall not be less than the actual expense incurred by the county in providing that service. The compensation for a contract for traffic control and crowd protection policing with King County shall be calculated for personnel resources in the hourly rate for overtime under the current collective bargaining agreement, plus the percentage being paid for fringe benefits, and all sums paid under the contract shall be paid in accordance with procedures specified by the county treasurer.

G. Every public display of fireworks shall be conducted with a pyrotechnic operator licensed by the state of Washington under RCW 70.77.255 supervising the handling and discharge of the fireworks.

H. A bond or certificate of insurance must be furnished to the department before a permit is issued. The bond shall be in the amount of one million dollars and shall be conditioned upon the applicant's payment of all damages to persons and property resulting from or caused by the public display of fireworks, or by any negligence on the part of the applicant or its agents, servants, employees or subcontractors in the presentation of the display. The certificate of insurance shall evidence a comprehensive general liability insurance policy providing limits of one million dollars combined single limit, per occurrence and annual aggregate, and naming King County as an additional insured. Any such a bond or insurance policy must be approved by the fire marshal.

I. A cash deposit in the amount of one hundred fifty dollars must be posted with the department at least twenty days in advance of the public display date to provide for costs of site cleanup. The deposit shall be forfeited to King County if the operator fails to perform such cleanup within six days after the public display. If the operator properly performs the cleanup, the deposit shall be returned to the operator. (Ord. 19276 § 7, 2021).

17.11.050 Prohibition during fire hazard conditions - process. In the event of drought or other fire hazard conditions that pose a threat to public health, safety and welfare, the fire marshal, in consultation with the representatives of the fire districts of the county, may declare an emergency and prohibit the use or discharge of any fireworks, including public displays, until the hazard has been abated. (Ord. 19276 § 8, 2021).

17.11.060 Violations - penalties - separate offenses - delayed enforcement of K.C.C. 17.11.040.D. and 17.11.040.B.

A. A violation of this chapter is a misdemeanor and is punishable as prescribed by law.

B. Notwithstanding any criminal penalty provided in this chapter, a person who

violates this chapter or chapter 70.77 RCW is subject to the maximum civil penalty in an amount not to exceed two hundred fifty dollars per violation. In addition, a person in violation of this chapter is responsible for any costs incurred to enforce this chapter, including bringing a civil action, court costs and reasonable attorneys' fees. All civil penalties assessed shall be enforced under K.C.C. Title 23.

C. A person commits a separate offense for each day during which the person commits, continues or permits a violation of this chapter.

D. The civil and criminal penalties described in subsections A. through C. of this section shall not be enforced for violations of K.C.C. 17.11.040.B. as it pertains to the use or discharge of consumer fireworks, as defined in RCW 70.77.136, until one year after Ordinance 19276 takes effect under RCW 70.77.250. During the period in which these penalties are not being enforced, the King County sheriff's office and the fire marshal shall only issue warnings to violators of K.C.C. 17.11.040.B. and shall provide information to violators on the county's laws governing fireworks. (Ord. 19485 § 204, 2022: Ord. 19276 § 9, 2021).