



Fire Sprinkler Systems, Non-Residential and Multi- Family

The requirements for installation of non-residential and multi-family fire sprinkler systems are intended to mitigate certain life-safety issues relating to building and occupancy type, emergency access, water supply, and anticipated response times. An approved fire sprinkler system shall be installed in accordance with International Fire Code (IFC) 2021 edition, as amended, and designed / installed per the National Fire Protection Association (NFPA) 13 or 13R, 2019 editions.

Apply On-Line at [MyBuildingPermit.com](https://www.kingcounty.gov/permits)

Select: King County | Fire | (Project Type)
| (Activity Type) | Fire Sprinkler Systems



Requirements for Non-Residential and Multi-Family Properties

Non-residential and multi-family structures are typically required to have an automatic fire sprinkler system in the following conditions:

- A. Non-residential and multi-family structures or occupancies as outlined and required in Chapter 9 §903.2 of the International Building and Fire Codes.
- B. Non-residential and multi-family structures in rural zones, and all properties in urban zones, that are not required per section (A) shall meet all of the following or may be required to be sprinklered:
 1. The minimum fire department apparatus access road requirements as defined by the IFC and King County Code (KCC), Title 17.
 2. Water supply from a utility providing a minimum fire flow as defined by IFC, Appendix B.
 3. Fire hydrants provided or installed as defined by IFC, Appendix C.
- C. Buildings exceeding 10,000 square feet. [KCC Title 17 §17.04.563]
- D. Tenant improvements to new and existing structures may require the installation of a fire sprinkler system as outline in chapter 9 of the International Building and Fire Codes.

Temporary and medical hardship mobile homes may be exempt from water, access, and sprinkler conditions for a period of one year. [KCC Title 16 §16.04.970]

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Fire Access Road Requirements – Where Required

A fire apparatus access road/fire lane can be a driveway, easement, public or private road and shall meet all the following requirements:

- A. 20-foot-wide, unobstructed height of 13 feet 6 inches, permanent all-weather driving surface, and capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds (37.5 tons). [KCC Title 17 §17.04.377 & 17.04.380]
- B. Minimum of 20-foot inside turning radius and 40-foot outside turning radius at all bends and turns. A fire apparatus access road/fire lane or driveway over 150 feet long is required to have an approved hammerhead turn-around configuration. In some cases, a circular 80-foot diameter turn-around may be acceptable. [KCC Title 17 §17.04.390 & 14.04.400]
- C. Maximum grade of 15-percent at all locations. [KCC Title 17 §17.04.410]
- D. The installation of security gates, bollards or other obstructions across a fire apparatus access road shall not be allowed unless approved (permitted) by the Fire Marshal. [KCC 17 §17.04.425]

Water Availability

Applicants may obtain information regarding fire hydrant distances and water supply (fire flow) from the local Water District or utility in the form of a [King County Certificate of Water Availability](#).

Required water supply (fire flow) of 1,500 gallons-per-minute or more as outlined in IFC Appendix B at 20-pounds per-square-inch pressure for two hours or more.

Non-Residential and Multi-family Sprinkler System Requirements

Fire sprinkler systems must be designed by a Washington State Level 2 or Level 3 Certified Sprinkler Designer and installed in accordance with the 2019 editions of NFPA 13 or 13R.

Separate permits are required for the underground fire service main (designed and installed under NFPA 24) and sprinkler system for each building. The sprinkler requirement on the building permit will not hold up the building permit review process. Review of each system will not begin until the building permits have been issued.

Non-Residential and Multi-family Sprinkler System Submittal Requirements

A fire sprinkler system permit submittal package must include:

- A. Fire System Permit application available on [MyBuildingPermit.com](#).
- B. Plan set cover sheet and a set of plans
 - a. Plan cover sheets should include the following information:
 - i. A statement of the scope of work that this permit is intended to cover;
 - ii. Summary of the number of zones, systems, and sprinkler heads;
 - iii. The fire and water districts serving the proposed site.
 - iv. Water supply information.

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C. Plans must include the following information:

- a. Site plans including the following:
 - i. Outside hookups to utilities, including the underground sprinkler supply line; either from the meter or well serving the property.
- b. Floor plans, including the following:
 - i. The location of risers, piping, and sprinklers;
 - ii. Show all room designations (examples: kitchen, stairwells, bedrooms);
 - iii. Location of partitions and fire walls
- c. Complete riser details;
- d. Details and legends for the hangars and sprinklers, including sway bracing;
- e. Cross-sections showing trusses framing, ceilings, stairs, and location of sprinklers;
- f. Hydraulic calculations;
- g. If this is an addition to an existing system, show existing risers, piping, and sprinklers in enough detail to allow Permitting to determine the adequacy of the existing system;
- h. If sprinklers are being installed within an existing structure, provide verification that the structure can support the weight of the proposed system;
- i. Plans and hydraulic calculations shall be stamped by a person holding a current Sprinkler Certificate of Competency issued by the State of Washington.

D. **** Note: See 2019 NFPA 13R §8.1.7 or 2016 NFPA §23.1.3 for a full list of required information to be provided at time of submittal.**

Applying for a Non-Residential or Multi-family Fire Sprinkler Permit Go

[MyBuildingPermit.com](https://www.mybuildingpermit.com). The permit type selections are:

Jurisdiction: King County

Application Type: Fire

Project Type: Non-Residential OR Multifamily Activity

Type: (Choose one)

Scope of Work: Fire Sprinkler Systems

Apply On-Line at [MyBuildingPermit.com](https://www.mybuildingpermit.com)

Select: King County | Fire | (Project Type)|
(Activity Type) | Fire Sprinkler Systems



If you have questions or would like to inquire about alternatives, please fmo.dper@kingcounty.gov.

Additional Resources

[Department of Local Services, Permitting Division](#)

[Permit Fees](#)

[Location and office hours](#)

[State of Washington Washington State Patrol, Fire Marshal's Office Fire Sprinklers, List of Sprinkler Certificate Holders](#)