

FIRE SPRINKLER – 13D SYSTEM

Submittal Checklist



For the installation or alteration of an automatic 13D fire sprinkler system for detached one- and two-family dwellings and townhouses that are built out of the International Residential Code.

The following checklist sets the minimum requirements for a complete application. If you are not providing an item, specify the reason for omission at the end of this document. The submittal will be deemed incomplete if the submittal does not meet the minimum requirements of this checklist.

1	Building and Fire Prevention Application	☐
2	Automatic Fire Sprinkler Plans	☐
3	Hydraulic Calculations	☐
4	Cut Sheets and Equipment Specifications	☐
5	Other Supporting Documents	☐

** Additional materials may be requested during the review process.*

Upload PDF copies of the documents to the City's [Permit Portal](https://portal.cityofedgewood.org) (portal.cityofedgewood.org). Name each item exactly as identified in the table of documents. Include the name of the project and name and address of the applicant on every document. All documents must comply with our [Electronic Document Submittal Standards](#).

DOCUMENT COMPONENTS

1. Building and Fire Prevention Permit Application – A completed and signed [Building and Fire Prevention Application Form](#).
2. Automatic Fire Sprinkler Plans – Plans shall be stamped by a person holding a current Sprinkler Certificate of Competency issued by the State of Washington. Plans must include the following information:
 - a. Full height cross section or schematic diagram, including structural member information if required for clarity and including ceiling construction and method of protection for nonmetallic piping.
 - b. Ceiling/roof heights and slopes not shown in the full height cross section.
 - c. Label each room and use for clarity.
 - d. Location and size of concealed spaces, closets, attics, and bathrooms.
 - e. Label any small enclosures in which no sprinklers are to be installed.
 - f. Make, type, model, and nominal K-factor of sprinklers, including sprinkler identification

- number.
 - g. Temperature rating and location of high-temperature sprinklers.
 - h. Location of riser, providing appropriate working space.
 - i. Make, type, model, and size of backflow prevention assembly.
 - j. Hydraulic reference points shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets.
 - k. System showing a design buffer being 5 pounds per square inch (PSI) for static pressures less than or equal to 50 PSI and 10 PSI for static pressures above 50 PSI.
 - l. Additional hose stream for second dwelling units.
3. Hydraulic Calculations – Calculations shall be stamped by a person holding a current Sprinkler Certificate of Competency issued by the State of Washington. Calculations must include the following information:
- a. Calculations must be provided on forms sheets and include a summary sheet, detailed worksheet(s) and graph sheet.
 - b. Summary sheet must contain: date, location, name of owner and occupant, scope of work, building Identification, description of hazard, name and address of contractor or designer, system design requirements, total water requirements with allowances for inside and outside hose streams, in rack sprinkler allowances if present, limitations on extended coverage or any other special sprinklers
 - c. Detailed worksheets must include: sheet number, sprinkler descriptions and discharge constant (K factor), flow in gpm, pipe size, pipe lengths for fitting and devices, total friction loss between reference points, any in-rack sprinkler demand balanced to ceiling demand, elevation head in psi between reference points, velocity and normal pressures if used in calculations, indication of starting points or references to other sheets to clarify data shown, diagram to accompany gridded system calculations to indicate flow quantities and directions for lines with sprinklers operating in the remote area, and combined K-factor calculations for sprinklers on drops, arm overs, or sprigs where calculations do not begin at the sprinkler
 - d. Graph Sheet shall include: a water supply curve, sprinkler system demand, hose (inside and outside) demands, and if required, in-rack sprinkler demands
4. Cut Sheets and Equipment Specifications – Provide cut sheets and equipment specifications provided by the manufacturer.
5. Other Supporting Documents – Other drawings or documents as required for specific projects to fully demonstrate the scope of work and how it complies with current adopted codes.
- a. System Designer Certificate
 - b. Backflow Prevention
 - c. Water Availability
 - d. Flushing and System testing

ADDITIONAL STEPS

- ☐ Fire Sprinkler Permits cannot be reviewed/approved prior to building permit approval. Please ensure the associated building permit has been approved prior to application.
- ☐ Inspections are intended to be completed in two site visits. One visit for all rough-in inspections and one for final. Please plan accordingly.

If any document is not provided with this application, please explain using the corresponding item number.

Item	Reason for Omission
1	
2	
3	
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