City of Fridley
Fire Department
7071 University Avenue NE
Fridley, MN 55432-3111
763-572-3621 or 763-572-3612
Fax: 763-572-8825

Automatic Fire Sprinkler Systems Installation Requirements

Automatic sprinkler systems shall be installed or modified with a fire suppression permit and be in compliance with the following requirements:

General Information:

A. All Sprinkler systems must be designed and installed per current applicable standards to meet the minimum requirements of the Minnesota State Fire Code (MSFC) and NFPA standards.

Submittal Requirements:

A. A completed permit application signed by a state licensed sprinkler contractor.

B. A check made out to the City of Fridley.
(if paying by credit card, please call the office to make arrangements)

C. Provide 2 copies of scaled plans.

D. Submit 1 copy of scaled plans electronically.
(E-mail plans to michael.spencer@fridleymn.gov)

E. Provide 1 set of hydraulic calculations for each areas of sprinkler design.

F. Provide equipment data sheets on all material being used for installation of the system.

Calculations:

A. Sprinkler contractor is responsible for choosing appropriate density and for the accuracy of hydraulic calculations.

B. The remote hydraulic area for a combustible attic must be increased 30% for dry systems and an additional 30% for roof slope. (2535 square feet)

C. Sprinkler systems in buildings used for storage must have a minimum remote area designed for 2000 square feet.

D. Sprinkler systems in industrial buildings with an undetermined use must have a minimum sprinkler design of Ordinary Hazard Group 2 over 3000 square foot design area and have 8.0 or higher k-factor sprinkler heads.

E. Sprinkler systems with specialized design criteria (i.e. high pile storage, flammable liquids) must include a code analysis of the proposed design including specific code references.

Water Supply:

A. All sprinkler systems shall have a leak detection water meters installed on the system.

B. All doors on the interior and exterior of the building providing access to sprinkler systems controls must be clearly labeled as such.

C. Existing sprinkler systems with combined domestic and fire system water supply must be retrofitted with a solenoid valve on the domestic side when the building or system is modified.

Installation Requirements:

A. All areas of a building shall be sprinklered including: attics, electrical rooms, under stairs, under overhead doors, each landing in stairwell, concealed combustible areas, elevator mechanical rooms, etc.

B. Where required by the International Mechanical Code, automatic sprinklers shall be provided in ducts conveying hazardous exhaust, flammable or combustible materials.
Exception: Ducts where the largest cross-sectional diameter of the duct is less than 10 inches.

C. Main drain and primary inspectors test must terminate at the exterior of the building.

D. The maximum height of indication control valves and main drains shall not exceed 6 feet. You should be able to read all gauges from the floor.

E. All systems that are in areas subject to freezing are required to be continuously heated and have a low temperature alarm installed that will read a supervisory signal at the alarm panel.

System Components and Hardware:

A. Fire Department connection shall be a minimum of 15 feet from gas meter and electric transformers.

B. Fire Department connection shall be a minimum of 2 feet above grade, maximum 4 feet above grade.

C. All indicating control valves and risers shall have permanent signs identifying the area of the building that is controlled by that valve or riser.

D. Power supply breakers for all alarm systems components must have approved locking devices to prevent the accidental disconnection of power.

E. A control valve will be required on all flammable storage rooms, hazardous materials storage rooms, spray booths, hoods, and other locations involving special consideration.

F. Control valves are required before and after the check valve on systems that are combination domestic and fire served by one underground line.

G. All indicating control valves must be secured and electronically supervised.

Monitoring and Alarm:

A. Separate plans and permit are required for all fire alarm systems.

B. Systems with 20 or more heads must be equipped with central station monitoring service.

C. All sprinkler systems containing air pressure shall have the air pressure electronically supervised.

D. Test the flow switch retard setting with the inspector's test, 30-60 second retard setting is required.

E. Dry valve trip test-water to flow from inspector's test within 60 seconds on systems containing more than 750 gallons. Accelerators and. or exhausters will be required if the 60 second requirement is not met.

Inspections Required:

A. 24 hour advance notice to the Fire Department is required for inspections and witnessing tests.

B. Rough-in inspection.

C. 2 hour, 200# wet pressure test.

D. 24 hour, 40psi air pressure test for dry systems.

E. Main drain and alarm test.

F. NFPA 13 contractor's material and test certificate for above piping paperwork.

G. Permit and 1 set of approved plans for work must be kept at the site or inspections will not be performed.