



SCOPE

This standard covers the permitting, installation, inspection, testing and maintenance of NFPA 13 and 13R fire sprinkler systems in the City of Marysville as administered by the city fire marshal (hereinafter referred to as the AHJ).

Fire sprinkler systems shall meet the requirements of these codes and standards, unless specifically amended or noted otherwise, and as approved by the AHJ:

- A. The 2013 editions of NFPA 13 and 13R sprinkler systems installation standards.
- B. The 2014 edition of NFPA 25 fire protection systems maintenance standard.
- C. The 2015 International Fire Code (IFC) as amended by the city and state.
- D. The Marysville Municipal Code (MMC) [Chapter 9.04 FIRE CODE](#).

PERMITS

A fire permit from the city's Building Department is required for all sprinkler installation and modification work. The application for a fire construction permit is available [online](#). Approved plans and permit inspection cards shall be available onsite for the permitted work. A permit is only valid for the contractor and work designated by the permit.

EMERGENCY REPAIR WORK

A permit is required for repairs. Emergency repairs may begin without a permit provided the system configuration is not altered and a permit application is submitted the next working business day. A fire inspection is required for final approval of all repair work.

CONTRACTOR LICENSING

Contractors must be WA licensed for the type of work performed. (U = Underground; Level 1 = 13D; Level 2 = 13R&13D; Level 3 = 13, 13R, 13D & Underground). Proof of licensing shall be available onsite for all workers.

DESIGN REQUIREMENTS

- A. System designer qualifications shall comply with Chapter 212-80 WAC, Chapter 18.160 RCW, and Chapter 18.270 RCW as administered by the WSP (<http://www.wsp.wa.gov/fire-sprinklers/>).
- B. All plans and calculations shall be stamped with a valid Washington State certificate seal identifying the appropriate level of competency.
- C. Submittals will be sent out for engineering review at the applicant's expense.

SPECIAL DESIGN REQUIREMENTS

For IFC Section 903 Automatic Sprinkler Systems, the definition of FIRE AREA shall be as follows: The aggregate floor area enclosed and bounded by exterior walls of a building ([MMC 9.04.902](#)). An area or occupancy separation wall or fire wall shall not constitute a separation between two areas within a structure for sprinkler requirement purposes.



Standard for NFPA 13 and 13R Fire Sprinkler Systems

EST. 1891

MARYSVILLE
WASHINGTON

IFC Section 903.2 is amended by adding these items:

- A. Existing buildings altered such that the total fire area square footage exceeds the threshold square footage for each occupancy group listed in this section shall be provided with an automatic sprinkler system. Where there is a change-of-occupancy classification in an existing building, the sprinkler requirements for the new occupancy classification shall apply.
- B. An automatic sprinkler system shall be provided throughout buildings where the combined area of all fire areas on all floors, including any mezzanines, exceeds the threshold square footage for each occupancy group listed in this section.

See [MMC 9.04.903](#) for reduced fire sprinkler thresholds that apply in the city.

WATER SUPPLIES

Hydraulic calculations are required for alterations involving more than five sprinklers. Available flow information shall be obtained from the Marysville Water Utilities Division. Fire pumps shall be diesel driven, or electric motor with diesel driven standby power, with 24-hour fuel diesel supply.

UNDERGROUND PIPING

- A. All underground sprinkler supply piping shall be included on civil drawings and shall be approved by the water supplier and the Marysville Fire District (MFD).
- B. All NFPA 13 and 13R fire sprinkler systems serving commercial or multi-family structures shall be fed by a minimum of 6" ductile iron underground fire main supply line, unless hydraulic calculations by a sprinkler designer prove a different size is acceptable to the AHJ and as shown on approved plans.
- C. All pipe joints shall be triple restrained.

FIRE DEPARTMENT CONNECTION (FDC)

- A. FDCs shall be installed in a location as shown on approved civil plans.
- B. FDC signage shall comply with city EDDS standard plan 2-050-001.
- C. FDCs shall be located at least 40 feet from buildings and within 3-10 feet of a hydrant. Exception: When approved by the AHJ, wall mounted FDCs may be used on existing buildings with retrofit sprinkler systems. If a wall mounted FDC is allowed, it should be installed on the side of the building adjacent to the approved fire access and be located within 50 feet of a hydrant.

BACKFLOW PREVENTION

A State of Washington Department of Health approved and city approved backflow prevention device is required on all sprinkler systems. Provide an approved means for full forward flow testing of the backflow device. Submittals shall indicate the specific device to be used, and a location in the riser room. A certified backflow assembly tester shall test the backflow device for initial acceptance and for proper operation annually. After this test is complete and prior to the request for final system acceptance, the completed backflow assembly test report shall be submitted by email to:

Julie Davis, City Water Quality Specialist

jdavis@marysvillewa.gov

360-363-8141

Marysville Public Works



CONTROL VALVES

Main riser control valves shall be in sprinkler riser rooms and have tamper supervision.

FIRE SPRINKLER RISER ROOMS

- A. The main fire sprinkler riser, its appurtenances and the building's fire alarm panel shall be located in a room with 1-hour fire separation and with an exterior door.
- B. A minimum 3-foot clearance in front of the entire width of the fire sprinkler equipment and 1-foot clearance on the remaining 3 sides shall be provided.
- C. Phone and electrical equipment may be allowed in the fire sprinkler riser room, provided it does not interfere with the operation of, or access to, the fire alarm panel and fire sprinkler system components.
- D. Riser rooms shall be locked at all times and openable with the building master key secured in the Knox box.
- E. All riser rooms shall be provided with zone maps showing what areas of the building are covered by the system(s) installed. They shall be laminated and permanently attached to the wall in the riser room. When the system is modified, it is the responsibility of the installing contractor to update the maps.
- F. Storage is prohibited in fire sprinkler riser rooms. Signs stating "NO STORAGE" (4" letters) shall be provided on at least one wall.
- G. All fire sprinkler riser rooms shall have signs on the door stating: "Fire Sprinkler and Fire Alarm Control" (as applicable). Letters shall be a minimum of 2" in height and shall contrast with their background.
- H. Location of interior and exterior alarm sounding devices for sprinkler water flow alarms shall be approved by the AHJ on building sprinkler and fire alarm plans.

INSPECTIONS & ACCEPTANCE TESTING

Fire inspections are required from the Marysville Fire District (MFD) for permitted work. Call the MFD Inspection Request Hotline 24/7 at (360) 363-8525 to request all fire inspections. Approved plans and permit inspection cards must be available on site during inspections. The installing contractor shall pretest all systems prior to requesting an inspection. If fire code violations are noted, correction will be required for approval.

MAINTENANCE

- A. All NFPA 13 and 13R fire sprinkler systems shall be maintained, inspected, tested and reported at least annually using the MFD approved Tegriss confidence test form (online at www.tegrisfire.com) and procedures from NFPA 25.
- B. Contracts for the maintenance and emergency repair of all NFPA 13 systems in the building(s) must be in place prior to the final acceptance of any system. These contracts shall require that emergency repair response initiated by either the owner, fire personnel, or fire dispatch will be provided on a 24/7 basis.
- C. A fire construction permit is not required for routine maintenance work.