



Requirements for Fire Alarm Systems



SCOPE

This policy covers the fire safety requirements of fire alarm systems as they pertain to the design, installation, inspection, operation, testing and maintenance of these systems and their components as outlined in the 2018 International Fire Code (IFC) Section 907 with Washington amendments and NFPA 72.

These requirements shall apply to all new and existing systems, modifications to existing systems, and non-required systems (IFC 901).

DEFINITIONS

FIRE ALARM SYSTEM. A system or portion of a combination system consisting of components and circuits arranged to monitor and annunciate the status of fire alarm or supervisory signal-initiating devices and to initiate the appropriate response to those signals (IFC 202).

A system where otherwise not specified shall be defined as including the alarm signal transmission method and related equipment when applicable.

EQUIPMENT

All systems and components, including alarm signal transmission equipment, shall be listed and approved for the purpose for which they are installed (IFC 907.1.3).

- Fire alarm systems shall be addressable, and monitored by an approved UL listed central station agency with runner service available per NFPA 72 (IFC 907.6.6).
- The main fire alarm control panel (FACP), and remote annunciator panels, shall be installed in approved locations, have smoke detector coverage, and shall show the status of all initiating devices and system signals. (IFC 907.6.3.1).

INSTALLATION

A Fire Construction Permit from the City of Marysville is required for installation. The permit application form is available online from [permit services](#).

- Fire alarm systems and all of their components shall be located in approved locations and in accordance with approved plans.
- A copy of the approved system installation plans shall be available onsite for inspections. An as-built plan shall be provided in an approved document box.
- It shall be unlawful to occupy any portion of a building or structure until the required fire detection, alarm and suppression systems have been tested and approved.



Requirements for Fire Alarm Systems



SYSTEM OPERATIONAL GUIDELINES

Systems out of service

Where a required fire protection system is out of service, the fire department and the fire code official shall be notified immediately.

- Contact MFD at (360) 363-8500 during business hours Monday-Friday 8am-5pm.
- Call 9-1-1 to report fire alarm systems out of service outside of business hours.

Where required by the fire code official, the building shall be either evacuated or an approved fire watch shall be provided for all occupants left unprotected by the shutdown until the fire protection system has been returned to service.

- Buildings that have been evacuated shall not be reoccupied without approval from the fire code official.
- MFD Fire Watch Guideline shall be followed, including a fire watch log maintained.

(Reference IFC 901.7 and MFD Fire Watch Guideline)

Removal of or tampering with equipment

A fire construction permit is required for any installation or modifications to systems.

- Obtain fire permits from the City of Marysville

It shall be unlawful for any person to remove, tamper with or otherwise disturb any fire detection and alarm system, except for the purposes of extinguishing a fire, training purposes, making necessary repairs, or where approved by the fire code official.

(Reference IFC 105.7.6 and IFC 901.8)

Change or termination of monitoring services

Fire alarm systems are required to be monitored when in service.

- The building owner and/or occupant shall notify the fire code official whenever alarm monitoring services are changed, suspended, out of service or terminated.
- Notice shall be made in writing, to the fire code official by the monitoring service provider being terminated.

(Reference IFC 901.9)



Requirements for Fire Alarm Systems



INSPECTION, TESTING AND MAINTENANCE GUIDELINES

A fire alarm system found not to be in good working order shall be shut down and taken out-of-service immediately, and a fire watch program shall be implemented, until appropriate corrections are made by professional personnel.

(Reference IFC 901.6)

Fire alarm systems shall be inspected, tested and maintained per NFPA 72

Systems and their components shall be serviced annually by a competent professional to ensure correct operation (NICET II alarm technician per IFC 907.10 WA amendment).

- Testing and maintenance of emergency alarm and detection systems shall be, at a minimum, tested and maintained according to manufacturer's specifications if not otherwise specified.
- All systems shall be checked for damage, wearing or missing components.
- The fire alarm control unit shall all be tested for correct operation.
- The alarm initiating devices shall all be tested for correct operation.
- The alarm indicating devices shall be tested for correct operation.
- The primary and secondary power supplies shall be tested for correct operation.
- System batteries shall be replaced per manufacturer guidelines and NFPA 72.
- The system shall be tagged to show all systems were inspected and in service.
- Records of work done shall be maintained on-site along with the device user manual for review by the code official.
- The maintenance record shall be submitted to the fire code official for review and approval via the *Tegris* reporting system.

(Reference IFC 901.6.1)

Permit required for panel replacement, repair or system modification

Modifications include addition to, alteration of, replacement or relocation of any fire alarm system- including the alarm communication method and signal transmission equipment.

- Obtain a fire construction permit from the City of Marysville for all such work.
- Not required for ordinary maintenance to equipment or systems.
- Where equipment replacement and repairs must be performed in an emergency situation, the permit application shall be submitted within the next business day.

(Reference IFC105.1.4, IFC 105.1.5 and IFC 105.7.6)



Requirements for Fire Alarm Systems



EQUIPMENT DESIGN AND INSTALLATION GUIDELINES

Permit required for fire alarm system installation or modification.

- Obtain fire construction permit from the City of Marysville

(Reference IFC105.7.6)

Construction documents and shop drawings

Construction documents shall conform to codes, ordinances, rules and regulations, as determined by the fire code official (with stamped NICET III or PE design review per IFC 907.11 WA amendment).

Shop drawings shall be submitted for review and approval prior to system installation, and shall include, but not be limited to, all of the following where applicable:

- A floor plan that indicates the use of all rooms.
- Locations of alarm-initiating devices.
- Locations of alarm notification appliances, including candela ratings for visible alarm notification appliances.
- Design minimum audibility level for occupant notification.
- Location of fire alarm control unit, transponders and notification power supplies.
- Annunciators.
- Power connection.
- Battery calculations.
- Conductor type and sizes.
- Voltage drop calculations.
- Manufacturers' data sheets indicating model numbers and listing information for equipment, devices and materials.
- Details of ceiling height and construction.
- The interface of fire safety control functions.
- Classification of the supervising station.

(Reference IFC 907.1.1 and IFC 907.1.2)

Additional system requirements

Provide occupant notification in accordance with IFC Section 907.5.

At least one manual fire alarm box shall be provided in an approved location.

Install approved protective covers over manual fire alarm pull stations prone to malicious false alarms, and where required for protection from physical damage.

Where a building fire alarm system is present kitchen hood systems shall be supervised.

Unoccupied building shell- provide a horn/strobe outside the sprinkler riser room on the building exterior, and inside the vacant shell space near the riser room, with minimum additional ceiling strobes every 100 feet centered in the building.