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## **Fire Alarm Plan Submittal Guide**

- This guide outlines the minimum requirements that must be met for Fire Alarm installation plans to be submitted for review by Gresham Fire & Emergency Services (GFES).
- Utilizing information in this guide will help to avoid incomplete plan review submittals that cause delays and effect permit approvals that may interfere with installation timelines. Installation, alterations or modifications to fire alarms systems may only be done under benefit of permit from the local building permit services. Stamped APPROVED drawings must be on site at all times work is being performed and available during inspections by GFES.
- The 2014 Oregon Fire Code (OFC) and the 2013 National Fire Protection Association (NFPA) 72 (National Fire Alarm Code) have been adopted by GFES as the authority having jurisdiction.

### **Plan Review Submittal Requirements:**

Plans submitted for review must comply with the applicable requirements in this guide.

### **General Plan Requirements:**

- Fire Alarm System design must be stamped by a (State of Oregon) Registered (and qualified in the area of practice) Professional Engineer or Architect as required by Oregon Revised Statutes 671.020 *or* as identified as Exempt from Engineering Requirements for Design of Fire Protection Systems in OARS 918-261-0015 (See Appendix I)
- In the City of Gresham, electronic plan submittal and review is currently required. Please refer to the following link for information: <http://www.greshamoregon.gov/eplan/>
- In Troutdale, Wood Village and Fairview, contact the individual building departments for the number of plans required and specific permit requirements (OFC 901.2).
- Permits are required for the replacement of any Fire Alarm Control Panel (FACP)
- All plans shall be drawn to 1/8" or 1/4" scale on sheets of uniform size, with a plan for each floor and include items identified in NFPA 72-7.2.1.
- Plans must include:
  1. Name of building or business owner/occupant, address and contact information.
  2. Name, address and contact information for system designer AND system installer.
  3. Type of building construction and occupancy.
  4. Floor plan including identification or description of use of each room.
  5. Floor and ceiling elevations, obstructions or architectural features that may interfere with device spacing or coverage. Include all walls, door and any partitions extending to within 15% of the ceiling height.
  6. Device legend.
  7. Manufacturer's specification sheets for each type of device or equipment used.

8. Type of fire alarm system, applicable codes, standards and other design criteria to which the system is required to comply.
9. Secondary power supply and voltage drop calculations.
10. Complete list of detection, evacuation signaling and annunciator zone coverage areas.
11. Complete list of fire safety control functions.
12. Complete sequence of operations detailing all inputs and outputs.
13. Input/output programming matrix.

**Specific Plan Requirements:**

- GFES requires installation of a UL listed exterior strobe located on the address (street) side of the building. Show location on plans.
- Plans must include typical wiring diagrams for all control equipment, power supplies, battery chargers and annunciators.
- Plans must include typical wiring diagrams for all initiating devices, notification appliances, remote light emitting diodes (LED"s) remote test stations and end of line power supervisory devices.
- Identify location of all devices-include type and number of all devices on each circuit and floor level.
  1. If applicable identify coverage area.
  2. Indicate candela rating marked next to each visual appliance
  3. If applicable identify signaling line circuits (Class A or B) NFPA 72-23.4.2
- If the building is protected by an automatic sprinkler system, fire alarm plans must include a riser diagram indicating location of all fire alarm devices.
  1. Tamper switches must be installed on all control valves (including those in the underground fire supply vault) and on the post indicating valve (PIV).
- When installed in buildings with fire alarm systems, HVAC duct detection devices shall initiate a supervisory alarm to the FACP.
- When emergency voice/alarm communications are installed, the system shall meet all requirements in NFPA 72.
- When gas detection systems in hazardous occupancies are required, the system shall meet all requirements in OFC 908 which includes specific details in OFC Chapters 23, 27, 60.
- All Fire Alarm records are required to be kept in a SYSTEM RECORD DOCUMENT cabinet per NFPA 72-7.7.2.2.
- Provide a Record of Completion per NFPA 72, Figures 7.8.2(a-f).

## Appendix I

Oregon Administrative Rule 918-261-0015

Exemption from Engineering Requirements for Design of Fire Protection Systems

(1) As used in this rule:

(a) “Fire protection system” has the meaning given that term in OAR 918-305-0110. 3

(b) “Customer” means a person who purchases the design and the service of having the electrical portion of a fire protection system installed.

(2) A general supervising electrician, general journeyman electrician, or class “A” limited energy technician licensee who is employed by a licensed contractor and acting both within the scope of the licensee’s license and a signing supervisor:

(a) May design, plan, layout the electrical portion of a fire protection system for the licensed electrical contractors customers and for an electrical contractor who purchases the design and the parts or equipment for the electrical portion of a fire protection system and installs all or part of the system.

(b) Is not subject to any requirements for an additional license, permit, certificate, or registration when designing, planning or laying out the electrical portions of a fire protection system as authorized by this rule.

(3) The electrical design documents for a fire protection system that are prepared by a general supervising electrician, general journeyman electrician, or class “A” limited energy technician licensee under subsection (2) of this rule are exempt from ORS 671.025 and do not require the stamp of an Oregon registered architect or professional engineer.

(4) For the purposes of ORS 479.860\*2), and the exemption created in subsection (2) of this rule, the electrical portion of any fire protection system is considered a noncomplex electrical installation.