City of Mountain View

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
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FIRE ALARM AND SPRINKLER MONITORING SYSTEM REQUIREMENTS

This information package shall be used in conjunction with NFPA 72, California Electrical Code and other applicable NFPA standards as adopted by the City of Mountain View. *(Refer to Mountain View City Code Chapter 8 for adopted editions of NFPA).* This information package is not intended for use as a stand-alone document.

ADMINISTRATIVE:

- Submittals are only accepted online via ePermitsMV. To submit please visit the following for instructions on submitting: https://www.mountainview.gov/depts/comdev/building/epermitsmv.asp
- **Provide associated building permit number on permit application if applicable.**
- Plan check turnaround time for each submittal is a **minimum** of three (3) weeks.
- Incorporate onto the drawings: the design and installation contractor's name, address, phone number, California contractor's license number and license type or P.E. license number.
- The contractor will be notified by email when the plans are approved. All plan check and permit fees will be collected when the plans are approved.
- Field inspections are conducted Monday, Wednesday, and Friday only. For inspection scheduling or for general information please call (650) 903-6313. Inspections will not be scheduled until a permit has been issued. **Allow 2-3 working days' advanced notice when requesting inspections.** The permit card and an approved set of plans must be kept at the project site until the permit is finaled. Failure to maintain the permit card and approved plans on site will result in the cancellation of the inspection.

FIRE ALARM EQUIPMENT:

- System components shall be California State Fire Marshal listed. Include California State Fire Marshal listing sheets for all new components and existing components as available.

- Equipment shall be listed for the purpose for which it is used. Submit complete manufacturer's specification sheets (i.e., Catalog cut sheet) for each system component. On cut sheets that include more than a single device, clearly indicate the specific item(s) to be installed by use of an arrow or similarly effective marking.

  NOTE: The City of Mountain View reserves the right to not approve a listed component or piece of equipment due to past performance.

DRAWINGS & CALCULATIONS:

(Drawings and Calculations requirements 5, 12, 13, and Inspection/ Testing requirement #4 are not mandatory for fire sprinkler monitoring systems).

1) The system shall be designed and installed in accordance with the City of Mountain View requirements, NFPA 72 and other applicable NFPA Standards as adopted by the City of Mountain View. *Incorporate this as a verbatim note onto the drawings.*
2) The primary power source for the FACP shall be from a dedicated circuit. This circuit shall be labeled at both the electrical subpanel and on the inside of the FACP door and provided with a circuit lock. *Incorporate this as a verbatim note onto the drawings.*
3) Rough wiring inspections are required to be conducted prior to closing of any ceiling. All mechanical, electrical, and plumbing shall be installed at the time of the rough wire inspection. *Incorporate as a verbatim note onto the drawings.*
4) A readily visible sign shall identify the location of the fire alarm control panel. *Incorporate as a verbatim note onto the drawings.*
5) Alarm-signaling devices shall produce a distinctive three-pulse temporal pattern fire alarm evacuation signal. Audible signals shall have a sound level of not less than 75dBA at 10' or at least 15 dBA above the average ambient sound level as measured 5' above the floor in every occupiable space, whichever is greater, but no more than 110 dBA at the minimum hearing distance from the audible appliance. *Incorporate this as a verbatim note onto the drawings.*

   Exception: Sprinkler monitoring systems shall be provided with an interior waterflow alarm on each floor to be located in a normally occupied location. (See Condition #30)
6) Provide an annunciator panel at the main entrance of the building or as directed by the Fire Protection Engineer. The panel shall be readily visible and identifiable when entering the building.
7) Identify the occupancy classification or specific use of the building.
8) Provide a detailed description of the work to be performed and indicate the reason for the fire alarm system installation. (i.e., Required by code, voluntary system installed at owner's request).
9) Specify the type of monitoring system being provided (i.e., Local, Central Station, Proprietary, Remote) and include the name, address and evidence of UL certification for the monitoring company.
10) The communications method for supervising station alarm system is required to be a Single Communications Path unless otherwise approved by the Fire Protection Engineer.
11) The minimum scale for fire alarm plans is 3/32" = 1'-0".
12) Identify the use of each room or area. For systems with devices located throughout the building, include the associated room numbers.
13) Provide roof/ceiling construction details for areas with heat/smoke detection. Information shall include, but shall not be limited to, a complete evaluation identifying all factors used in determining proper detector coverage/spacing. The evaluation shall include adjustments made for ceiling height(s), beam depth and spacing and high air-movement areas.
14) Provide a system operations matrix and include a complete sequence of events indicating all alarm, supervisory and trouble conditions.
15) Specify the wire types, sizes, and number of conductors between all devices.

16) Show the location of all end-of-line resistors devices.

17) Identify all devices tied into the fire alarm system and provide details describing all special features or operations. (i.e., air-moving systems shutdown, smoke detectors for door release, pre-action valves, elevator recall, duct detectors for fire/smoke dampers, sprinkler system monitoring, monitoring of kitchen hood extinguishing systems, and voice evacuation systems).

18) Smoke detectors for the control of smoke spread (i.e., fire/smoke dampers in ducted and non-ducted openings, door hold devices and shutdown of air-moving systems more than 2000cfm) shall be monitored for alarm, supervisory and trouble conditions by the fire alarm system.

19) Duct smoke detectors for fire/smoke damper control shall be located within five (5) feet on the upstream side of the damper. Branches, registers, or any other openings are NOT permitted to be located between the duct detector and the damper.

20) Smoke detectors for non-ducted fire/smoke damper openings shall be installed in accordance with NFPA 72.

21) Identify the mounting heights for all devices: (i.e., pull stations, horn/strobes, fire alarm control panels (FACP) and wall-mounted smoke detectors).

22) Provide a symbols legend identifying the specific manufacturer and model, the California State Fire Marshal listing number and the count for each device. Clearly indicate new devices and existing devices.

23) Identify wire runs between devices on the same floor and between floors.

24) Alarm zones shall be clearly identified on the drawings and labeled at the fire alarm panel.

25) Waterflow alarm devices, sprinkler supervisory devices, and readily accessible junction boxes shall be designed and installed so they cannot be readily tampered with, opened, or removed without initiating a signal. (i.e., Electric tamper switch on the cover or provided with tamper resistant screws).

26) Provide a voltage drop calculation for each circuit. The allowable voltage drop shall not exceed the manufacturer's minimum operating voltage for the device.

27) Provide battery calculations which include the required standby and alarm power requirements for the system. Indicate the size and number of batteries required and provided.

28) Electrical and IDF rooms (regardless of size) and storage rooms greater than 1,000 square feet shall meet the audibility requirements of the CFC. If the audible requirements cannot be met, the rooms shall be provided with both audible and visible notification appliances.

29) Exterior areas used for assembly where it is required to reenter the building shall be provided with audible and visible notification. Visible notification devices shall be spaced using the room spacing guidelines outlined in NFPA 72.

30) Any room or space designated for sleeping or napping that is not within an R-Occupancy building shall be provided with visible notification. The device shall have a minimum required intensity of 177 candela. Audibility is still required to be met for the space.

ADDITIONAL REQUIREMENTS FOR SPRINKLER MONITORING SYSTEMS:

31) An automatic smoke detector shall be provided at the location of each fire alarm control unit(s). Installation of detectors shall comply with NFPA 72.

32) An approved interior audible waterflow alarm shall be provided in a normally occupied location. In buildings more than one story in height an approved audible alarm shall be installed for each story.

33) A single manual fire alarm box, to initiate a fire alarm signal, shall be located adjacent to the fire alarm control unit.

34) A sign or placard stating "Waterflow Alarm" shall be mounted adjacent to the interior waterflow alarm. The minimum dimension for lettering shall not be less than the represented sample. Sample: Waterflow Alarm (36 Font) *Incorporate this as a verbatim note onto the drawings.*

INSPECTION/TESTING:

1) Provide an NFPA 72 Certificate of Completion at the time of final inspection.

2) It shall be the responsibility of the fire alarm contractor to make the necessary arrangements so those contractors whose equipment is involved in the testing are present. (I.e., mechanical contractor, electrical contractor, fire sprinkler contractor).

3) There shall be a minimum of two representatives from the fire alarm company present at the time of inspection. One representative shall be present at the fire alarm control panel at all times during the test with the second representative performing the required testing in the presence of the inspector. Representatives shall be equipped with two-way radios during testing.

4) All mechanical, electrical, and plumbing shall be installed prior to conducting a rough wire inspection.

Schedule wiring inspection prior to dropping ceiling tiles.