



These guidelines are to be followed when a fire alarm system within the City of Rockwall is to be installed or modified. These guidelines are not to be interpreted as containing all data required for proper design, installation, or approval.

All fire alarm systems shall conform to the 2021 International Fire Code, as adopted and amended by the City of Rockwall and current edition of NFPA 72. These guidelines are not intended to replace, nor supersede any codes and/or ordinances adopted by the City of Rockwall, or determinations and positions of the Rockwall Fire Marshal Division.

For fire sprinkler monitoring system see Fire Sprinkler Monitoring System Requirements.

### **Fire Alarm Panel / Notification Power Supplies**

- 1) Only one fire alarm panel is allowed per building.
- 2) New fire alarm systems shall be addressable.
- 3) The fire alarm control panel or an annunciator panel is required in the fire riser room and at the main entry unless otherwise approved.
- 4) Systems shall be resettable without any special knowledge or the use of an access code.

### **Wiring**

- 5) All initiating device circuits, and signal line circuits shall be Class "A" with a minimum of 4-foot separation horizontal and one foot vertical between supply and return circuit conductors
- 6) All notification appliance circuits shall be Class "B"
- 7) The Initiating Device Circuit from an addressable device used to monitor the status of a suppression system may be wired Class B, provided the distance from the addressable device is within 10-feet of the suppression system device.
- 8) Wiring may not be supported by the ceiling grid support wires.
- 9) Suspended wires added to support the fire alarm wiring must be painted red and attached to the above structure and to the ceiling grid.

### **Devices**

- 10) Waterflow switches must activate an alarm within 45-90 seconds and shall be non-silencable.
- 11) Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system.
- 12) Manual dry standpipe systems shall be supervised with a minimum of 10 psig and a maximum of 40-psig air pressure with a high/low air supervisory alarm.
- 13) In areas that are not continuously occupied, a single smoke detector shall be provided at the location of each fire alarm control unit, notification appliance circuit power extenders, and supervising station transmitting equipment.
- 14) Pull stations shall be a double action type.
- 15) A pull station is required to be located near the fire sprinkler riser.
- 16) Duct detectors shall be supervisory.



- 17) Duct detectors shall be provided a remote reset switch with LED accessible from the floor without a ladder, or have the ability to reset the duct detector from the fire alarm panel.
- 18) Tamper switches shall be individually addressed and labeled to match the description that is programmed in the fire alarm control panel. (Example: Tamper 1)
- 19) All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures, and water-flow switches on all sprinkler systems shall be electronically supervised. Exception: fire department hose connection valves
- 20) Where two or more strobes are visible, they shall be synchronized.
- 21) Provide a weatherproof horn strobe minimum 75-candela strobe rating, installed as close as practicable to the fire department connection.

### **Fire Pumps**

- 22) Fire pumps shall be monitored in accordance with NFPA 20 and NFPA 72.

### **Elevators**

- 23) Detectors shall not be located in the top of elevator shafts.
- 24) Elevator recall shall be from smoke detector activation in the elevator lobbies, or machine room.
- 25) Where the rooms are unconditioned, heat detectors shall be provided (135° to 165°).
- 26) Shunt tripping shall be initiated (only) from the elevator machine room. The shunt shall be tripped by the activation of a 165° to 200° heat detector located within 2 feet of each fire sprinkler.
- 27) If hydraulic elevators are used and sprinklers are required in the bottom of the pit, a 135-165 heat detectors shall be required within 2' of each sprinkler.

### **Fire Alarm Monitoring**

- 28) All alarm systems, new or replacement, shall transmit alarm, supervisory and trouble signals descriptively to the approved central station, remote supervisory station or proprietary supervising station as defined in NFPA 72, with the correct device designation and location of addressable device identification. Alarms shall not be permitted to be transmitted as a General Alarm or Zone condition.

### **Inspection Requirements**

- 29) Rough Wiring/ above ceiling: All fire alarm wiring will be inspected for proper installation and penetration of any firewalls. Fire alarm wiring shall not be tied to ceiling grid wire.
- 30) Audible Device Test: Ensure audible notification devices provide occupant notification for all areas without strobe devices.
- 31) Visual Device Test: Ensure that all areas that do not have audible notification have visual coverage.
- 32) Initiating Device Test: Test all fire alarm initiating devices for Alarm conditions.
- 33) Waterflow: The waterflow alarm will be tested by opening the inspectors test connection. The time delay feature on the flow switch switches must be set to a minimum delay of 45-90 seconds.
- 34) Central Station Monitoring: Verify Contact I D. Standard response to contact Rockwall Fire Marshal Division shall be within 3 minutes.
- 35) Device Address Test: All analog or addressable system will have all devices pulled and/or activated.
- 36) Final: Final inspection. Including all required documentation.



### Documentation

- 37) An installation certificate shall be provided.
- 38) A record of completion in accordance with NFPA 72 verifying that the system has been installed in accordance with the approved plans and specifications shall be provided.
- 39) Operating, testing and maintenance instructions and record drawings (“as-builts”) and equipment specifications shall be provided at an approved location.

**Fire Alarm System Modification Requirements-** Plan submittal is only required for the following modifications:

- Addition or modification to initiation devices (such as smoke, heat, pulls and water flow switches)
- Panel Replacement (requires acceptance test)
- Addition of Power Supply or Panel of any type

Minor fire alarm system modifications (such as adding horn/strobe for fire sprinkler monitoring or expanded notification coverage) do not require plan submittal. Work not requiring plans submittal: Contractors shall install a white service tag indicating location (i.e. Suite #) and scope of work (i.e. “Added horn/strobe”).

### Submittal Requirements

- 40) A APS signature and stamp, or signed and sealed by a registered Fire Protection Engineer (PE), is required on all plan drawings and calculations.
- 41) Plans shall be designed and will be reviewed based on the requirements in the International Fire Code, 2021 Edition and NFPA 72, most recent edition, and shall be indicated on the plan drawings as the code and standard or record.
- 42) Plans shall be clear, legible and in a common and appropriate scale.
- 43) Plans shall indicate all walls and rooms. Ceiling tiles shall not be shown unless needed for clarity.
- 44) Plans shall contain sufficient detail to enable the plan reviewer to accomplish a complete review. The following information shall be provided on the plans;
  - a) North arrow.
  - b) Floor plan.
  - c) Project name.
  - d) Project address.
  - e) Device location.
  - f) Site map inset.
  - g) Type of device.
  - h) Provide a “point-to-point” wiring configuration.
  - i) Fire alarm control panel.
  - j) Annunciators.
  - k) Square footage.
  - l) Location of doors.
  - m) Intended use of each room.
  - n) Location of all air handling units.
  - o) Show location of all fire sprinkler risers, flow switches, tamper switches and fire pumps (if equipped).



- p) Notification devices shall indicate candela rating.
  - q) Heat detectors shall indicate temperature rating.
  - r) Indicate the length of wiring between devices.
  - s) The notification device wiring shall be shown different than the initiating device wiring. When necessary, they shall be provided on different plan drawings.
- 45) Point ID/Addressable device list. Shall indicate how the devices will report to the monitoring company.
- 46) Specification booklet shall contain the following;
- a) A minimum of one (1) set of data specifications sheets for all devices and equipment.
  - b) Listing of the system design, operation and reset functions.
  - c) Specific materials are to be identified by an arrow or highlighter.
  - d) Battery discharge curves.
  - e) Wire specifications.
- 47) Please upload the following documents when submitting your permit online:
- a) Plans – including 3rd party stamp
  - b) Scope of Work.
  - c) Sequence of Operations.
  - d) Equipment List.
  - e) Point ID/Addressable device list.
  - f) Specifications Booklet
  - g) Third Party Review Letter
  - h) State License(s)