



ANNA FIRE MARSHAL'S OFFICE – PREVENTION DIVISION FIRE ALARM INSTALLATION

305 S. Powell Pkwy. Anna, TX 75409 | 972-924-2143

firecad@annatexas.gov

This guide is intended as a resource and policy statement for all commercial buildings, structures, or facilities (new and existing) within the City of Anna. These guidelines shall be followed whenever a fire alarm system is installed or modified. For the purposes of these instructions and any other guidelines or requirements of the Anna Fire Marshal's Office, fire alarms shall conform to the 2015 International Fire Code as adopted and amended by the City of Anna and current edition of NFPA 72. These guidelines do not replace or supersede any codes and/or ordinances adopted by the City of Anna, nor do they supersede any determinations, interpretations, and positions of the Anna Fire Marshal's Office. Questions can be directed to the Anna Fire Marshal's Office (Fire Prevention Division) at (214) 831-5342 or by emailing firecad@annatexas.gov

For fire sprinkler monitoring systems, see our *Fire Sprinkler Monitoring System Requirements Guide*.

Fire Alarm Panel / Notification Power Supplies

- 1) Only one (1) Fire Alarm Control Panel (FACP) is allowed per building
- 2) All new FACP's shall be addressable. Alarm systems serving more than 20 smoke detectors shall have analog initiating devices
- 3) The FACP or an annunciator panel is required in the fire riser room and at the main entry unless otherwise approved
- 4) A remote annunciator (if present) must include a sign or map indicating the location of main FACP
- 5) Systems shall be resettable without any special knowledge or the use of an access code.
- 6) Primary power shall be a dedicated circuit that is labeled both in the fire alarm panel / notification power supply (EX: panel A, circuit 2) and the circuit breaker in the electrical panel. Labels must state "Fire Alarm Circuit" in red. A breaker lock must be installed on the appropriate FACP circuit breaker
- 7) Spare keys for the FACP and pull stations must be provided for the Knox Box

Wiring

- 8) All initiating device circuits and signal line circuits shall be Class "A" with a minimum of 4-foot separation horizontal and 1-foot vertical between supply and return circuit conductors
- 9) All notification appliance circuits shall be Class "B"
- 10) 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
- 11) Adequate surge protection is required
- 12) Wiring may not be supported by the ceiling grid
- 13) 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

- 14) Waterflow switches must activate an alarm within 45-90 seconds and shall be programmed “non-silencable”
- 15) Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system
- 16) 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
- 17) A smoke detector is required over all FACP’s, notification power supplies, and monitoring transmitting equipment
- 18) Pull stations shall be double action type
- 19) *FireStopper II* covers with audible devices shall be installed on all publicly accessible pull stations
- 20) A pull station is required near the fire sprinkler riser
- 21) Duct detectors shall be programmed “supervisory”
- 22) Duct detectors shall be provided a remote reset switch with an LED accessible from the floor without a ladder or have the ability to reset the duct detector from the fire alarm panel
- 23) Tamper switches shall be individually addressed and labeled to match the description that is programmed in the fire alarm control panel (EX: Tamper 1)
- 24) 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*
- 25) Where two (2) or more strobes are visible, they shall be synchronized.
- 26) Provide a weatherproof horn strobe minimum 75-candela strobe rating, installed as close as practicable to the Riser Room.

Documentation

- 27) An installation certificate shall be provided
- 28) 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
- 29) Operating, testing, and maintenance instructions and record drawings (“as-builts”) and equipment specifications shall be provided at an approved location

Fire Pumps

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

Elevators

- 31) Smoke detectors shall not be located in the top of elevator shafts
- 32) Elevator recall shall be from smoke detector activation in the elevator lobbies, or machine room
- 33) Where the rooms are unconditioned, heat detectors may be provided (135° to 165°)
- 34) 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
- 35) If hydraulic elevators are used and sprinklers are required in the bottom of the shaft, a 135-165 degree heat detector shall be required within 2-feet of each sprinkler head

Fire Alarm Monitoring

- 36) 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

- 37) 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
- 38) Audible Device Test: Ensure audible notification devices provide occupant notification for all areas without strobe devices
- 39) Visual Device Test: Ensure that all areas that do not have audible notification have visual coverage
- 40) Initiating Device Test: Test all fire alarm initiating devices for alarm conditions
- 41) Waterflow: The waterflow alarm should be tested by opening the inspectors test connection. The time delay feature on the flow switch must be set to a minimum delay of 30 seconds
- 42) Central Station Monitoring: Verify contact I. D.
- 43) Device Address Test: Verify physical address and description of all devices

General Requirements

- 44) Any system capable of providing identification of each individual alarm-initiating device. The identification shall be in plain English and as descriptive as possible to specifically identify the location of the device in alarm. The system shall have the capability of alarm verification.
- 45) Emergency power shall be provided for emergency voice/alarm communications systems in the following occupancies, or as specified elsewhere in this code, as required in Section 907.5.2.2.5. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72. {Covered and Open Malls; Group A Occupancies; Special Amusement Buildings; High-rise Buildings; Atriums; Deep Underground Buildings}

Fire Alarm System Modification Requirements

Plan submittal is only required for the following modifications:

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

Minor fire alarm system modifications do not require plan submittal or fee payment, however, a scope of work letter shall be submitted. This includes alterations/modifications to the following: less than 10 horn/strobe notification devices.

Work not requiring plans submittal: Contractors conducting general maintenance or similar services shall install a white service tag indicating the location (i.e. Suite #) and scope of work (i.e. "Added horn/strobe").