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Cherokee County Fire Marshal Guidelines for Installation and Inspection of Elevator Fire Alarm Requirements

Note: NFPA 72 Requires that each elevator lobby, elevator hoistway, and elevator machine room smoke detector must be able to initiate elevator recall when all other devices on the same IDC have been manually or automatically placed in the alarm condition.

For plan review purposes elevator recall systems are defined as having the following components. The following elevator recall system components, whether existing or new, must be depicted on the plans:

- Smoke detector (s) at each elevator lobby within 21 feet of the centerline of each elevator door within the elevator bank under coverage of the detector.
- Smoke detectors in elevator machine rooms.
- Smoke detectors when sprinklers are provided @ the top of the elevator hoistway.
- Heat detectors for the purpose of shunt trip within 24” of all sprinklers @ top of hoistways, in elevator machine rooms, and sprinklers more than 24” above floor in elevator pits. Heat detectors and shunt trip must be deleted when sprinklers are not installed @ top of hoistway, in elevator machine room, and more than 24” above floor in elevator pit.
- Relays for primary elevator recall, alternate elevator recall, fireman’s hat and shunt trip if applicable. Indicate that a dedicated circuit is provided for the elevator recall system panel. The dedicated circuit shall be labeled “Elevator Recall System”.

NOTE: Fire sprinkler monitoring systems and elevator recall systems shall be submitted and permitted as separate systems unless the building is unsprinklered.

Elevator Recall for Fire Fighters’ Service (See Diagram on page 3)

3-9.3.1	System type smoke detectors shall be connected to the building fire alarm system. In buildings without a fire alarm system the detectors shall be connected to a dedicated fire alarm system control unit and shall be designated “elevator recall control and supervisory panel” permanently identified on the control unit and the record drawings.
1-5.6	If the fire alarm system control unit is located in an area not continuously occupied automatic smoke detection shall be provided at that location.
3-9.3.6	When actuated, each elevator lobby, elevator hoistway, and elevator machine room smoke detector shall initiate and alarm condition on the building fire alarm system and shall visibly indicate, at the control unit and required remote annunciators, the alarm initiation circuit or zone from which the alarm originated.
3-9.3.6	Actuation from elevator hoistway and/or elevator machine room smoke detectors shall cause separate and distinct visible annunciation at the control unit and required annunciators to alert the fire fighters and other emergency personnel the elevators are no longer safe to use.
3-9.3.7	For each group of elevator’s within a building, three separate elevator control circuits shall be terminated at the designated elevator controller within the group’s elevator machine room(s).

3-9.3.7(a)	The smoke detector located in the designated elevator recall lobby shall actuate the first elevator control circuit. The smoke detector shall be located within 15ft. of the elevator hoistway door. Comm. 18.31(2)
3-9.3.7(b)	The smoke detectors in the remaining elevator lobbies shall actuate the second elevator control circuit. The smoke detector shall be located within 15ft. of the elevator hoistway door. Comm. 18.31(2)
3-9.3.7(c)	The smoke detectors in elevator hoistways and/or elevator machine room(s) shall actuate the third elevator control circuit. In addition, if the elevator machine room is located at the designated level, its smoke detector shall also actuate the first elevator control circuit.
3-9.2.1	A listed relay or other listed appliance connected to the fire alarm system used to initiate control of protected premises fire safety functions shall be located within three feet of the controlled circuit or appliance.

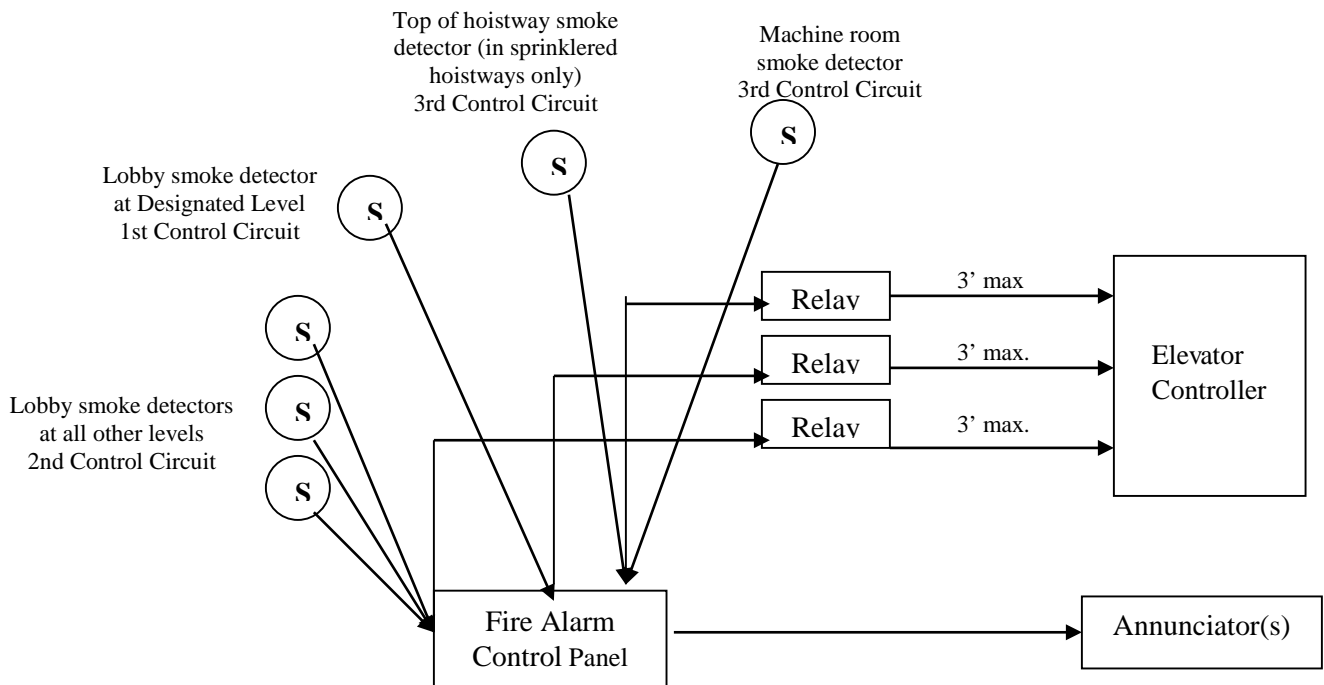
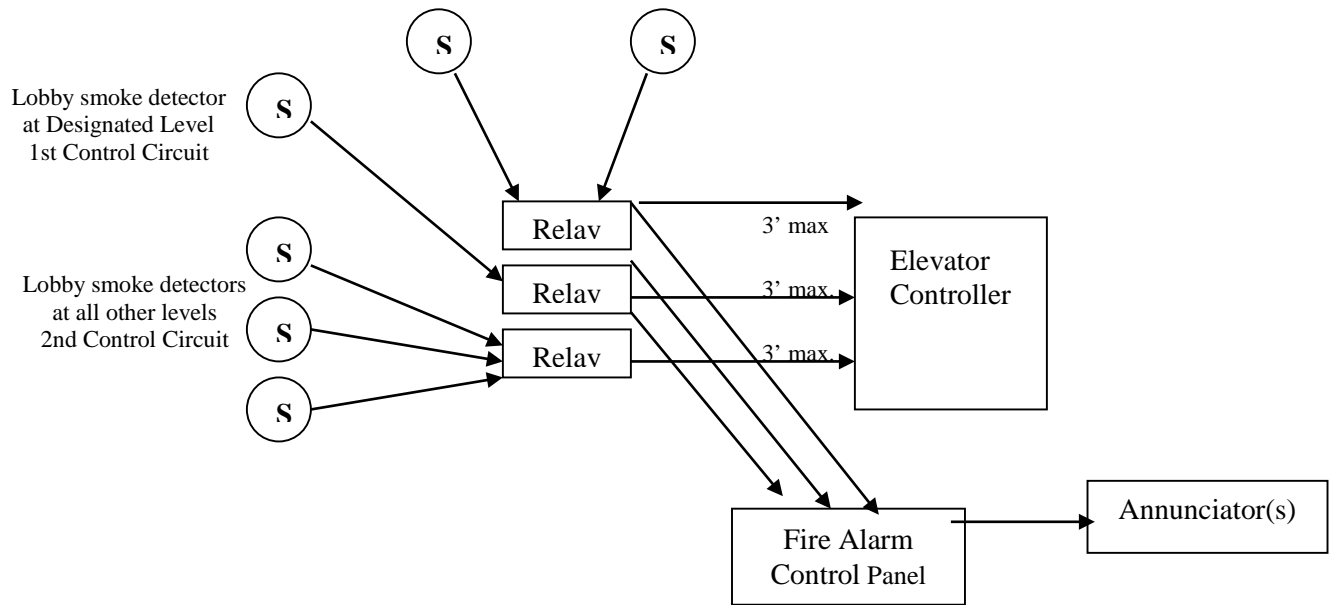
Elevator Shutdown (See Diagram on page 4)

3-9.4.1	Where heat detectors are used to shut down elevator power prior to sprinkler activation, the detector shall have both a lower temperature rating and a higher sensitivity as compared to the sprinkler. A sprinkler head rated at 212 deg. and a heat detector rated at 135 deg. is recommended.
3-9.4.2	Heat detectors used to shut down elevator power prior to sprinkler operation shall be placed within 2ft. of each sprinkler head.
3-9.4.4	Control circuits to shut down elevator power shall be monitored for presence of operating voltage. Loss of voltage to the control circuit for the disconnecting means shall cause a supervisory signal to be indicated at the control unit and required annunciators.

Fire Fighters Recall

Top of hoistway smoke
detector (in sprinklered
hoistways only)
3rd Control Circuit

Machine room
smoke detector
3rd Control Circuit



Elevator Shut Down

