



Fire Alarm Panel Replacement

It's reasonable to say that most fire alarm systems will not last the entire life of a building. They'll be replaced due to changes in building needs, failure, or lack of support for the product. In these situations, it is often asked what is required if the fire alarm control panel is replaced?

First, it's worth identifying what is replacement vs. repair or modification?



Repairs can be defined as work that does not require a permit or that does not include addition, **deletion**, alteration, replacement, or relocation in accordance with IFC 105.1.5. Repair work could include changing individual small pieces of the fire alarm system such as, defective pull station, notification appliance, or smoke detector with listed compatible devices.

Modifications could include addition, **deletion**, alteration, or relocation. ***This work would require a permit*** and be defined as tenant improvement type work, where system devices are added or deleted. Fire alarm system program changes would also fall under this work type. An existing fire alarm panel where cards or a central processing unit are changed could also be a modification. This could include updating from the existing version to a new one supported by the manufacturer. This does not however allow a wholesale change of fire alarm parts to ultimately create a new fire alarm system.

Changes to the alarm panels signal transmission method whether it is POTS, VoIP, Cellular, Radio etc. requires a permit through the Fire Marshals office.

Replacement is defined as specifically changing the fire alarm control panel with new. This could be changing from one brand to another, or a new model from the existing brand. A new fire alarm control panel from the same manufacturer and the same model number would also be a replacement if the entire panel was to be changed out and not just an individual part. ***This work would also require a permit*** through the Fire Marshal's Office.

In accordance with IFC 907.1, fire alarm control panels replaced in existing buildings could require system upgrades if the fire alarm system was a required system in accordance with IFC 907.2 and does not currently comply with the occupant notification requirements of IFC 907.5. It's likely that some notification additions or alterations will be needed, since previous versions of the code may not have required the level of notification that the current version does.



In some cases, there could also be tradeoffs, since initiation devices such as pull stations may no longer be required if the building has fire sprinklers. In that case it could be acceptable to remove those devices.

Any required upgrades by this code are specific to the fire alarm system and have no implications to upgrade other systems like, fire sprinkler, or smoke control. Any listings or special functions would be required to be maintained, but would not ensue a global upgrade.



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Understanding that some replacements are unforeseen, and that the costs and logistics to installed upgrades may be challenging. The code allows the Fire Official to approve a phased alarm system upgrade. An executed agreement between the applicant and City must be drafted and contain measurable milestones, insurance requirements, and indemnity provisions. The maximum duration of a phasing agreement must not exceed 5 years.

System Design must be by registered fire protection engineers or certified to National Institute for Certification and Engineering Technologies (NICET) Fire Protection—Fire Alarm Level III.

System Installation, Maintenance, and Testing. Fire alarm systems shall be installed by an electrician properly certified by the State of Washington or under the direct supervision of individuals that have factory training and certification on the system being installed or NICET Fire Protection-Fire Alarm Level II certification. Fire alarm systems shall be maintained and tested in accordance with this code by persons under the direct supervision of individuals that have factory training and certification on the system being maintained or NICET Fire Protection-Fire Alarm Level II certification.