



# Clark County Fire Department

## FIRE PREVENTION BUREAU

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### PERMIT GUIDE

### FIRE ALARM SYSTEM

## FOUR DEVICES OR LESS/ EMERGENCY PANEL REPLACEMENT

This guide is to assist in the permitting process for a fire alarm system with four devices or less or an emergency panel replacement. A permit is required for the installation or modification of a fire alarm system per section 105.7.7 of the IFC.

#### **APPLICABLE CODES:**

The following codes and standard apply to this permit:

- *National Fire Alarm and Signaling Code, NFPA 72, 2016 edition*
- *International Fire Code (IFC), 2018 edition*
- *Clark County Fire Code Amendments, (CCFC) 2018 edition*

Fire alarm systems shall be installed and/or modified in accordance with Section 907 of the IFC, as amended by the CCFC. The design shall be in accordance with NFPA 72.

**Link to CCFC** - See the amendments to codes and standards using the link below:

[https://cms8.revize.com/revize/clarknv/Building%20&%20Fire%20Prevention/Codes/ClarkCounty\\_FireCodeAmendments2018.pdf?t=1598331770575&t=1598331770575](https://cms8.revize.com/revize/clarknv/Building%20&%20Fire%20Prevention/Codes/ClarkCounty_FireCodeAmendments2018.pdf?t=1598331770575&t=1598331770575)

#### **SUBMITTAL REQUIREMENTS:**

**These submittal requirements are not all inclusive, nor are they a limit to the extent of the information, etc., which may be necessary to properly evaluate the submitted plans and documents. Not all items may apply to your project.**

1. **Letter of Intent:** A letter can be submitted to permit the installation or modification of a maximum four (4) fire alarm devices and the initial rough electrical inspections to occur. **A plan is required to be submitted and approved prior to final fire inspections (the letter shall state this).**

**A letter of intent for the intent to modify with up to four devices shall include:**

- Name and address of property
- Contractor's contact information and contractor's license numbers
- Building Permit number associated with the scope of work
- Detailed scope of work including input/output sequence associated with the device(s)
- Manufacturer's make and model number for all devices

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- 2. Letter for the Emergency Panel Replacement:** A letter can be submitted to permit the emergency replacement of an inoperative fire alarm panel and initial rough electrical inspections. This is allowed only when the existing panel is beyond repair. **A plan is required to be submitted and approved prior to final fire inspections.**

**A letter describing emergency replacement of a faulty fire alarm panel shall include:**

- Name and address of property
  - Contractor's contact information and contractor's license numbers
  - Building Permit number associated with the scope of work
  - Detailed scope of work and description the unresolvable fault of the existing panel
  - Manufacturer's make and model number for all equipment
  - The impairment procedures that shall be followed according to Appendix P of the CCFC
- 3. PLANS - Four devices or less:** to be designed to an indicated architectural scale, sized 30" x 42" and saved to a PDF file. Plans shall include all information applicable to project per NFPA 72, Section 7.4, as amended by the CCFC.
  - 4. PLANS -Panel replacement:** to be designed to an indicated architectural scale, sized 30" x 42" and saved to a PDF file. Plans shall include all information applicable to project per NFPA 72, Section 7.4, as amended by the CCFC. If existing system drawings cannot be provided, provide as-built plans. The as-built plans only need to show device locations for all areas served by the panel. As-built plans do not need to show circuiting, wire labels, or EOL locations. Battery calculations are required. Voltage drop and power loss calculations are not required.
  - 5. CALCULATIONS:**

The following calculations are required:

- Voltage Drop per section 18.3.2.4 of NFPA 72 with CCFC amendments
- Speaker Power Loss per section 23.8.6.5.1 of NFPA 72 with CCFC amendments
- Battery Calculations per section 7.4.10 of NFPA 72 with CCFC amendments

Note for Voltage Drop Calculations:

Provide these when new appliances are added to existing notification appliance circuits. Also provide these whenever the circuit is extended more than 10 feet in all cases. The corresponding plans for the entire modified circuit shall be revised accordingly and submitted. The voltage drops shall not exceed two (2) volts unless all new and existing appliances use the UL-listed current draw at 16 volts.

Note for Speaker Power Loss:

Speaker power loss calculations shall be provided when the circuit modifications increase the power demand or when a circuit is extended by more than 10 feet. The corresponding plans for the entire modified circuit shall be revised accordingly and submitted.

- 6. MATERIAL DATA:** Provide manufacturer's specification sheets for all components.

7. **SUPPORTING DOCUMENTS:** Provide supporting documents needed to evaluate the design. These would include the approved Fire Protection Report (FPR)/Alternative Material and Method Report (AMMR), the originally approved plans, requirements from the original design code of record, and existing component specification sheets that affect system performance.
  
8. **Plans are to be REVIEWED AND SIGNED** by a NICET Level 2 Designer in Fire Alarm Systems or a Nevada registered professional engineer working in the expertise of fire alarm design as per Section 901.2.2. of the CFCC. **Submittals shall include the designer's name, certification number and signature. Also include the licensee's name, contractor's license number, Nevada State Fire Marshal number, and signature.**