



Fire Alarm Systems

**City of Henderson
Development Services Center
Fire Safety Engineering**
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This checklist is provided for the convenience of our customers. Complete and accurate plan submittals help speed the plan review process. Attention to the completeness and accuracy of information at the beginning of the process generally leads to fewer delays and requests for revisions by City staff. Please use the following information to assure that your application includes all the information that is necessary for a complete review of your plans. Refer to the City of Henderson [PDF Standards for Electronic Plan Submittals](#).

Part. 1 Applicant's Responsibility

Applicants are responsible for ensuring applications submitted are complete. Incomplete applications will result in plans being rejected for acceptance or returned to the applicant during the review process. City service commitments will not apply to incomplete submissions.

Part. 2 Prerequisites

Plan Readability. Easily read; legible; a readable typeface. Vivid contrast or difference in brightness between the light and dark areas of the drawing. Minimum 8-point font size for legibility of printed plan set.

Consistent Design. Typical symbols, abbreviations, and nomenclature used throughout the plans.

Project Specific. Symbols, notes, details, and plan information shall be applicable to the project.

Part. 3 Applicable Codes

Plans shall meet the requirements of the currently adopted codes, ordinances, and regulations.

- 2021 International Building Code with local amendments
- 2019 National Fire Alarm and Signaling Code with local amendments
- 2021 International Fire Code with local amendments
- Nevada State Fire Marshal Regulations
- Life Safety Report, if applicable (reference on the plan set)

Part. 4 Submittal Package

Provide the following documents at the time you submit your application for a fire alarm permit. Each of these documents shall be uploaded as separate files to the DSC Online portal. (2021 IFC § 907 and 2019 NFPA 72 Section 7.2.1):

- A completed fire permit application (1 permit type per application)
- Fire Alarm Supplemental sheet or Fee Estimator printed
- Plans with calculations (1 digital set)
- Product data submittal, including a cover sheet, index sheet listing products used by make and model number, manufacturer data sheets (highlighted or marked) indicating alarm and standby current draws, listing information for all equipment, devices, materials, wire and cable, and maintenance instructions. (1 digital set)

Part. 5 Plan Contents

Plans must contain the following minimum content requirements. This list is not intended to be all inclusive of every detail required on a set of fire alarm plans. Rather, it is provided to give an overview of the basic plan contents needed for the review of plan sets.

General

Cover Sheet

- Provide general project information including project name and street address
- Provide Contractor's name, address, phone number, license numbers, license classification, and license limit
- Written narrative providing scope, intent, and system description
- Signature of the licensee (contractors Master or Qualified Employee)
- Signature of the NICET Level II, III, or IV designer or Professional Engineer (Fire, Electrical, or Mechanical within area of expertise). For plans prepared by NICET designers, the designers printed name and certificate number shall follow the signature. Professional Engineers signatures must be digitally signed. (this shall appear on all sheets)
- Applicable codes, height, and number of stories. *Nevada Blue Book*
- City of Henderson Fire Alarm General Notes (available at Cityofhenderson.com)
 - Occupancy classification. For all occupancies state the occupant load
 - Life Safety Report Permit Number and date (if applicable)
 - Alternate Method / Code Modification Permit Number (if applicable)
 - Fire alarm circuit classification (power limited or non-power limited)
- Class/style designation of all initiating device circuit (IDC), signaling line circuits (SLC) and notification appliance circuits (NAC)
- Wire/Cable Legend indicating conductor size, type, and quantity.
- Voice Evacuation Messages (if applicable)
- Sequence of operation input/output matrix as required by NFPA 72
- Symbol legend with equipment description (manufacture's name and model number), mounting description (surface, semi-flush, flush, and exterior), and device counts
- Symbols used shall comply with NFPA 170, 2018 edition*

Fire Protection

Fire Alarm Plans

- Site plan, indicating building orientation.
- Floor plan drawn to an indicated scale (1/8" minimum) on sheets of a uniform size showing (sufficient clarity for readability)
 - Point of compass (north arrow)
 - A graphic representation of the scale used on all plans
 - Walls, doors, windows, openings, stairs, elevators, passageways, high piled storage racks, etc., as applicable to depict the facility

Checklist Fire Alarm

- Room use identification labels
- Location of:
 - Alarm initiating devices:
 - Device Addresses or zone number
 - Notification appliances
 - Circuit and device number
 - Auxiliary controlled equipment
 - Auxiliary monitored equipment
 - Auxiliary systems
 - Annunciation equipment
 - Control equipment
 - Monitoring equipment
- Emergency voice alarm system intelligibility – acoustically distinguishable space designations (floor plan and table)
- Conduit / cable routing and size with type and quantity of conductors
- Location of end-of-line device
- Device addresses (Addressable Systems)
- Zone identification (conventional system)
- Electrical power panel and circuit connection
- Key plan
- Ceiling height (ceiling mounted device and/or appliance)
- Beam, joist, soffit or other projection extending below the ceiling or space that will affect initiating devices and notification appliances
- Mounting height detail for wall mounted device and/or appliance
- Riser Diagram including the following:
 - General arrangement of the system, in building cross-section
 - Wall/shaft/stairwell and/or cable ratings when survivability or class A requirements apply
 - Type and number of circuits in each riser
 - Type and number of fire alarm system components/devices on each circuit, on each floor or level
- Addressable Device list with descriptions
- Battery capacity and de-rating calculations (all panels)
- Circuit load calculation (all notification appliance & auxiliary circuits)

Checklist Fire Alarm

- Voltage drop calculations for all notification appliance circuits, including remote annunciators and auxiliary appliances
 - Speaker power loss calculations
 - Design number and detail of penetration fire stop system when required
 - Control equipment and device diagrams identifying all wiring terminals and connected circuits
 - Any additional information determined necessary
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