



HERNANDO COUNTY FIRE ALARM GUIDELINES

To be used for all commercial building fire alarm system plan review.

The procedures set forth in this document are the minimum requirements necessary to ensure a timely review of your proposed fire alarm system. The Commercial Development Division has outlined the following which need to be followed in order to expedite a plans review and system full acceptance. For convenience, the fire alarm guidelines are divided into four sections:

The building construction drawing should include four (4) complete sets of all drawings at permit application time.

Drawing Information:

1. System drawings shall be at least 24" x 36" minimum size.
2. It is preferred that floor plans depicting fire alarm components be separate from other floor plans and trades, in that they reflect only fire alarm related elements.
3. For each building, state the **OCCUPANCY CLASS** which specifically corresponds to the appropriate Chapter of NFPA 101, the Life Safety Code, 2003 edition.
4. State the SUB-CLASS (if any) for each building, which specifically corresponds to the appropriate Chapter of NFPA 101, the Life Safety Code, 2003 edition.
5. If the building contains MIXED OCCUPANCIES (per NFPA 101), drawings shall indicate with a line, properly labeled, the separation between each different occupancy class/sub-class within the same building. If the line of separation is a wall, and this wall is to be a firewall or smoke barrier, **note the walls "rating"**.
6. Sufficient labeling should be made in each room or area so as to adequately communicate the intended use of that space. Call attention to any room or space which is to present a level of hazard higher than normal or ordinary for its occupancy class.
7. If any portion of the fire alarm is "existing" and is NOT within the scope of the project being submitted, include sufficient information so that the "end result" can be evaluated as a whole.
8. For "Business" and "Assembly" occupancies, state the maximum allowable occupancy load for each floor or area, based upon the calculation methods in NFPA 101.
9. **BE VERY** specific when indicating the location of every device in the fire alarm system.
10. Indicate the location of every fire sprinkler control valve, air handling unit, emergency generator, fire pump, elevator and pre-engineered suppression system in, or to be installed within, the building. This is required even if these elements are not to be connected to the fire alarm, and even if they are not within the scope of any planned work.

11. Note the Cubic Foot per Minute (CFM) of every Air Handling Unit (AHU) in, or to be installed within, the building.
12. Include a "fire alarm riser diagram" indicating by FLOOR, and by ZONE/CIRCUIT, every device to be attached to the fire alarm system, including relays and end-of-line devices.
13. Clearly describe or diagram, in detail, ceilings over spaces to be protected by automatic detectors (smoke or heat), which are OTHER THAN ten feet (10') or less above floor level, or are other than both SMOOTH and FLAT.
14. Specify that the system will be a "local audible only", or specify the form of any "automatic emergency forces notification" that will be employed. (Direct –Dial to 9-1-1 not allowed.)
15. Provide the U.S. listed spacing or coverage specifications for each type of automatic detector to be installed, or if specific make/model is not yet known, specify the MINIMUM criteria under which the indicated spacing was determined in the system design.
16. Specify stand-by power and amp calculation.
17. Specify class/style of wire supervision.
18. **Plans submitted for fire alarm systems which will exceed \$5,000 in total costs, must be signed, sealed and dated by a professional engineer pursuant to 104.4.1.3 (5) Hernando County Ordinance 2001-22.**
19. "As Build" drawings, "Certificate of Compliance" per NFPA, and owner's/user's and installation manuals shall be provided to the owner at the time of the final on-site inspection.
In addition, if work was performed by a licensed fire alarm (EC or EF) contractor, all control panels must be "tagged" per SFM Rule 4A-48.
20. Any substantial changes ,which occur subsequent to plan approval by the Fire Marshal, shall require RE-SUBMITTAL and RE-APPROVAL in advance.

Additional Guideline Notes:

In the past, there has been some confusion as to the proper location of fire alarm devices, detectors, pull stations, alarm control panels, etc. The following recommendations should aid designers and installers of location(s) and requirements:

1. When required, manual pulls shall be provided at all exits. **Exception:** Initiation may be by means of an approved automatic sprinkler system, in accordance with NFPA 72,2002 ed., Chapter 9.6.2.5, providing protection throughout the building; however a minimum of one manual pull station is required per this section. Location to be determined by AHJ.
2. Refer to NFPA 72,2002ed., Chapter 5 for proper spacing of detection devices, especially for extremely high ceilings, sloped ceilings, and ceilings with beams and other obstructions. Always check manufacturer’s specifications and U.L. rating specifications.
3. In non-atmosphere controlled environments, smoke detectors are not recommended (i.e. warehouses, open shops, due to air flow and manufacturing processes.) Refer to NFPA72 and check manufacturer’s recommendations.
4. Heat detectors are not required in a fully protected fire sprinkler building per NFPA 101-9.7.1.3.
5. Per NFPA 72-4.4.6.1.1 – “All required annunciation means shall be readily accessible to responding personnel and shall be located as required by the authority having jurisdiction to facilitate an efficient response to the fire situation.” The preferred location is within 10 feet of the MAIN entrance. Should the main control panel/annunciator be located at the

COMMAND CENTER, usually at the security room or operators location, remote annunciators should be located at each entrance for larger complexes (i.e. Hospitals, hotels, warehouses and large manufacturing plants, large apartment complexes.) Locations must be approved by AHJ for each situation.

6. EXTERIOR fire control panels are not acceptable per NFPA 72.

Pre-Acceptance Testing:

1. Prior to acceptance test, contractor **shall** call Hernando County's building inspection line (352) 754-4050 at least **forty-eight (48) hours** in advance to notify the inspector.
2. Alarm contractor **shall** do a **complete test of system before** calling for the acceptance test.
3. Alarm contractor **shall** provide sufficient personnel to properly conduct system test.

Acceptance Testing/Inspector Checklist:

The following documents and/or information shall be provided to the fire inspector at the time of system test:

1. Are approved plans on the site?
2. Is the control panel wiring diagram inside the panel?
3. Is the operator's manual at the panel?
4. Fire alarm system certification and description documentation of the system is installed in accordance with NFPA codes.
5. Copy and/or documentation of license from a certified alarm system contractor as outlined by Florida Statutes 633 and the Department of Professional Regulation.

Control Panels, Annunciator and Transmitters:

1. Are the zones properly labeled and identified? (Control panel and annunciator panel) A clear concise zone map at the panel, color coded and under glass or protected in a manner approved by the A.H.J.?
2. Is the power light on? (Green Light)
3. Does the panel indicate normal conditions?
4. Are all the indicating lamps operational?
5. Does the trouble signal operate-visual light-audible? Is audible distinctly different from alarm signal?
6. Does the **trouble** silence switch silence the audible alarm while leaving the red alarm indicating lighting on until the system is reset?
7. Does the **alarm** silence switch silence the audible alarm while leaving the red alarm indicating lighting on until the system is reset?
8. Do alarm and trouble reset switches operate?
9. Do other optional control switches operate properly? Such as - Test switch to simulate alarm condition. Lamp test switch to test all control panel lamps. Disconnect switch for transmitter, release devices, etc. (Both a visual and audible alarm must sound if activated.)?
10. Are the miscellaneous supervisory circuits (valve, supervision, etc.) individually annunciated with proper visual and audible trouble signals?
11. Did the transmitter transmit alarm signal to outside monitoring facility?

12. Is all the circuitry, including the initiating and alarm circuits, properly protected with over current protection devices (fuses)?

Power Supply:

1. Is the system connected to a dedicated, locked circuit breaker as per NFPA 72A?
2. Is the system disconnect circuit breaker located so it is accessible only to authorized personnel and clearly marked "Fire Alarm Circuit Control"?
3. Does control panel show a trouble signal when the main power supply is disconnected?
4. Is there an auxiliary power source for the signal trouble circuit?
5. If secondary battery power supply is available, and is it sufficient to operate the system in alarm condition for five (5) minutes?

Alarm Initiating Circuit and Devices:

1. Did each circuit indicate trouble when an initiating device wire was removed from circuit?
2. Did **ALL** initiating devices, when activated, cause an alarm condition?
3. Are **ALL** initiating devices properly wired using all four (4) terminals?
4. For smoke detectors, is a trouble signal received if the power source is disconnected from the detector?
5. Are all initiating devices installed in a good, workmanlike manner and securely mounted?
6. Are pull stations properly spaced, visible, in the path of exit travel, and mounted at the proper height?
7. Are all smoke and heat detectors mounted and spaced according to the appropriate codes and standards?
8. Is all the wiring installed according to the appropriate codes and standards?
9. Did the control panel respond to each initiating device with a red alarm lamp, audible alarm and proper zone annunciation, if applicable?

Alarm Signaling Circuits and Devices:

1. Did each circuit indicate trouble when an alarm device wire was removed from the circuit?
2. Is the alarm distinct and clearly audible (15db above ambient noise level) throughout all normally occupied areas?
3. Did all alarm devices operate as designed and programmed per floor, building, zone, etc.?
4. Is all wiring installed according to the appropriate codes and standards?

Auxiliary Circuits:

1. Did all release devices operate as designed during an alarm condition (fire doors closed, HVAC systems shut down, etc.)?

Supervisory Circuits:

1. Did control panel respond with a trouble signal and appropriate annunciation when all supervisory devices were activated (valve tamper switch, low water alarm, etc.)?

Points to Check After Completion of Inspection(s) and Test(s):

1. Did the monitoring center (Fire Department, Central Station, etc.) receive the alarm(s)?
2. Did the time of receipt of alarm(s) reasonably correspond with the time of transmission? (maximum 2 minutes)
3. Is the system reset for normal conditions?
4. Is the system restored to operational service?
5. Have all parties who were earlier notified of the test, been notified that the test has been completed?

Special Considerations:

1. Alarm contractor and/or building owner **shall** arrange for a written service, repair maintenance/warranty contract covering:
 - a. Equipment and system emergency repairs.
 - b. Annual system inspection. (Per SFM Rules) A copy shall be provided to the Fire Inspector at time of acceptance test.
2. Alarm contractor or owner shall arrange for a monitoring agreement with a listed central station (if required) approved by the A.H.J. A copy of this agreement shall be provided to the Fire Inspector at time of system acceptance test.



HERNANDO COUNTY FIRE ALARM

CONTACT PERSONS NAME
Please Provide Your FAX #
e-mail address

Key # _____ Date : _____

Valuation Of Work To Be Done: \$ _____

Legal Description: Lot _____ Block _____ Subdivision _____ Unit _____

Address Of Job Site: No. _____ Street _____

Project Name _____ Shopping Center Name _____

Directions To Job Site: _____

Property Owner: _____ Phone: _____

Address _____ City _____ State _____ Zip _____

Interest In Property: _____

Name Of Fee Simple Titleholder: _____

Address _____ City _____ State _____ Zip _____

FIRE ALARM CONTRACTOR _____ Phone _____

Address _____ City _____ State _____ Zip _____ License Number _____

_____ (State Certification or Hernando County # Only)

Application is hereby made to obtain a permit to do the work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in this jurisdiction. I understand that a permit must be secured for ELECTRICAL WORK, PLUMBING, SIGNS, WELLS, POOLS, FURNACES, BOILERS, HEATERS, TANKS, and AIR CONDITIONERS, ETC.

