



# BOARD OF COUNTY COMMISSIONERS DEPARTMENT OF FIRE RESCUE

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Check List for  
Fire Alarm Permitting and Review Requirements  
Citrus County, including the Cities of Crystal River and Inverness.

## Resources

- Florida Fire Prevention Code (2007 Edition).
- NFPA 72-2002 edition, *National Fire Alarm Code*
- NFPA 70-2005 edition, *National Electrical Code*

## Licensing Requirements

- County Business Tax - Citrus County Courthouse (telephone number 341-6400).
- City Business Tax - When working inside of the city limits of Inverness or Crystal River.
  - Crystal River Building and Zoning Department - 795-6511.
  - City of Inverness Development Services - 726-3401.
- Appropriate Fire Alarm Competency Card. Contact Contractor Services at the County Building Division (527-5333) for more information.
- Appropriate State License.

## County Permitting and Review Process (Non-residential permit and review)

- Fill out the appropriate Building Division Application.
- Submit the application with fee, plans and all applicable information.
- The Non-residential Review Coordinator files, prepares and begins routing process.
- The information is distributed to each applicable county agency; usually, Building Division and the Citrus County Fire Marshal's Office.
- Once all of the information is returned to the Non-residential Review Coordinator, they contact you to purchase the permit.
- An alarm company installs the system, performs the acceptance test and completes the appropriate NFPA 72 form.
- After the alarm company performs the acceptance test of the system, they contact Citrus County Fire Rescue, Fire Marshal's Office (352) 527-5407 and request an inspection of the system.
- An inspection by a Fire Inspector **cannot** be performed prior to the Non-residential Review Coordinator entering the information into the Building Division's computer system.
- City permitting process is slightly different. Contact the appropriate City Building Department for their requirements.** However, all required information is transferred to the Citrus County Fire Marshal's Office for fire reviews and inspections.

## Information Required for a Plan Review.

- Building occupancy classification (examples: assembly, mercantile, business, industrial, institutional, residential, etc.).
- Building or project owner's name.
- Name of the State of Florida license holder and license number including mailing address and telephone number.

- Type of system or service involved. (examples: local, auxiliary, remote station, proprietary, etc.)(Power limited or non power limited).
- If the system is required or intended to be monitored, provide monitoring station's information.
- Provide fire alarm equipment information and manufacturer's specification sheets. Include a fire alarm control panel installation manual.
- Voice evacuation message(s) or language(s), if involved.
- Written sequence of operation or matrix table.
- Required placarding.
- Plans and Drawing

### **Information Needed on the Plans and Drawings**

- Three (3) sets of scaled floor plans and wiring diagrams, including north reference. 1/8" scale is preferred.
- If the fire alarm project exceeds \$5,000, the plans and each applicable page must be sealed by a Florida Registered Professional Engineer.
- Plans in which the fair market value of the fire alarm system is less than \$5,000 and bearing no seal must be accompanied with a copy of the signed contract or a notarized affidavit from the installing contractor. The contract or affidavit must contain the fair market value of the fire alarm system.
- A complete title block with site address and installing contractor's business information.
- Identify the use of each room.
- Location of all components, including end-of-line devices.
- Symbol legend, including quantities, manufacturers name, model, etc. NFPA 170 *Standard for Fire Safety Symbols* is preferred for symbols on plans, diagrams and risers. If NFPA 170 is used for the symbol legend, a note on plans designating it as the standard with the appropriate edition is sufficient.
- Description of zone assignments or device addresses.
- Ceiling type must be designated. If other than a smooth ceiling (by definition in NFPA 72), a diagram including a complete building cross section, including details of the attic, soffit, and ceiling are required.
- Indicate ceiling construction and heights.
- Location of any fire suppression indicating devices.
- Indicate device mounting heights for manual boxes and visible notification devices.
- Primary supply details.
- Type of secondary power supply with load calculations of all devices and equipment.
- Voltage drop calculations of all devices and equipment.
- Manufacturer's worksheets for all devices and equipment. Applicable alarm and stand-by current information, mounting locations (ceiling/wall).
- Compatibility index of the devices and the control panel.
- If strobe ratings are different, indicate candela ratings at each device on the plans. Strobe intensities and area coverage will be compared to the requirements of NFPA 72 (2002)
- Specify whether the system is "Power-Limited" or "Non-Power-Limited".
- Each device or component shall be identified on the plans with their own unique identification number/symbol.

### **Single Line (Riser) Diagram**

- Size and approximate lengths of conductors.
- Identification of circuit styles, designations and methods.

- Locate all equipment and devices including end-of-line resistors or relays.
- A note stating that the installation of the wiring, raceways, and devices will be in accordance with all applicable county/city codes, NFPA codes, appropriate Florida Administrative Codes, F.S.S. 633.01 and 633.701.

**Fire Alarm System Inspection for Compliance Will Include the Inspection of:**

- The locations and physical installations and conditions of all applicable equipment.
- Proper electrical connections, number of wires connected to the devices, and the appropriate end-of-line devices and their locations.
- Proper placarding of dedicated circuit at the electrical panel.
- The minimum amperage requirements for the battery or batteries indicated on the fire alarm control panel.
- All submitted information for permitting, owner's manual, and other supporting documentation. This information will be left with the owner at the completion of the inspection.

**Function Testing of the Fire Alarm System**

- 24/60 hours on secondary power may be required prior to the alarm condition test.
- Five minute constant alarm on secondary power.
- Temporal code audible alarm.
- Check for sound levels in all appropriate areas. A decibel meter may be used for accuracy.
- At the end of the five (5) minute time period, a check for proper strobe flash rate (between 2 flashes per second to once per second) will be performed.
- Be prepared for a complete function test of all devices. (Trouble, alarm etc.)
- When applicable, communications between the facility and the central station will be tested for proper notification.

**Post inspection requirements and procedures.**

- Supply the owner with all of the required information such as; permitting information, owners manual, manufacturer's information etc.
- Provide a copy of the completed System Test Certificate to the County Fire Marshal's Office and the owner.
- After a satisfactory inspection and test, the Fire Inspector enters the necessary information for the Certificate of Compliance into the Building Division's computer system or contacts the appropriate City Building Department. An unsatisfactory inspection and test may require another complete functional test and inspection.
- The Alarm Company contacts the Non-residential Review Coordinator (352) 527-5344 or the appropriate City Building Department for a Certificate of Compliance.

# Fire Alarm Battery Calculation

## Worksheet

**Project:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Alarm Co:** \_\_\_\_\_

Milliampere(MA) = .001 ampere / Microampere (uA = .000001)

Item	Description	Stand By Current per Unit (amps)	Quantity	=	Total Current per Item (amps)	Total Alarm Current Per Unit (amps)	Quantity	=	Total System Alarm Current (amps)	
1		X		=		X		=		
2		X		=		X		=		
3		X		=		X		=		
4		X		=		X		=		
5		X		=		X		=		
6		X		=		X		=		
7		X		=		X		=		
8		X		=		X		=		
9		X		=		X		=		
Total System Standby Current (amps)						Total System Alarm Current (amps)				

Required operating time of secondary power source from NFPA 72 (2002)

**24/60**

10 min. = .1666

5 min. = .0833

Required Standby Time (hours)	Total System Standby Capacity (amp-hours)	=	Required Standby Capacity (amp-hrs)	Required Alarm Time (hrs)	=	Total System Alarm Current (amps)	=	Required Alarm Capacity (amp-hrs)
X		=		X	=		=	

Required Standby Capacity (amp-hrs)	+	Required Alarm Capacity (amp-hrs)	=	Total Required Capacity (amp-hrs)	Total Required Capacity (amp-hrs)	X	=	Required Battery Capacity (amp-hrs)
	+		=			X	=	