North Collier Fire Control and Rescue District
NEW FIRE ALARM CHECKLIST

INSTRUCTIONS

The following is intended to assist in submitting for review a code compliant fire alarm system. This document in no way details all of the requirements that may be necessary for a complete code compliant system. Note: Systems shall be designed in accordance with the codes and standards adopted in Rule Chapter 69A-60, The Florida Fire Prevention Code 6th edition, NFPA 1 (2015 edition) the Florida specific version, NFPA 101 (2015 edition) the Florida specific version, NFPA 72 (2013 edition), NFPA 70 (2014 edition), NFPA 90A (2015 edition), NFPA 110 (2013 edition), and the North Collier Fire Control & Rescue District Policies & Procedures. Check items to indicate compliance.

PROJECT INFORMATION

Hover form fields for instructions.

Date _____ Project name _____ Occupancy (see pg. 6) Select _____

_____ PRBD- _____ PRFR- _____

Project address | Building permit number | Fire alarm permit number

Fire Sprinkler/Alarm System

Select _____ _____ Select _____

Fire sprinkler | (specify if other) | New alarm type

Fire Alarm/Monitoring

Select _____ Select _____ Select _____

Existing | New | Supervision

Select _____ _____ _____ Select _____ _____ _____

Communicator format | (specify if other) | Communicator make/model | FACP format | (specify if other) | FACU make/model

CHECKLIST

Required

- ☐ C-1 Compared approved 61G plan to the shop drawing and verified documents match.
- ☐ C-2 Project name and address on plan.
- ☐ C-3 Floor plans shall be to scale (1/8"scale is preferred). On electronic plans, provide graphic scale.
- ☐ C-4 Utilize NFPA 170 Symbols.
- ☐ C-5 Provide a comprehensive scope of work.
- ☐ C-6 Provide an input/output matrix and sequence of operations which shall include specific conditions being supervised, as well as detailed actions taken for trouble, supervisory, alarm conditions and any other emergency operations/functions.
- ☐ C-7 Highlight all device and component model numbers and identify the new, existing and relocated quantities on plan or bill of materials.
- ☐ C-8 Riser Diagram shall be provided delineating each floor, circuit and zone and all devices, appliances and/or components.
- ☐ C-9 Provide documentation that all components are "compatible" and "listed" for the specific fire alarm applications for which they are used. Provide verification of compatibility between components and the respective panel per manufacturer. Fire alarm system components shall be installed per their "listed" application for the ambient conditions (i.e., voltage, temperature and humidity) expected.
- ☐ C-10 Provide specification sheets for all equipment.

- ☐ C-11 Provide battery calculations in chart format with a 20% safety margin. Existing systems shall provide new and existing calculations.
- ☐ C-12 Provide wire legend, wire burial detail and installation method. All wiring located in wet or damp locations shall be listed for this use (Wet & Direct Burial). Include the location of the wiring method or circuit, the type of wiring method or circuit, the minimum cover requirements cut sheets.
- ☐ C-13 There shall be a minimum of one listed “weatherproof” audio/ visual appliance located in accordance with policy.
- ☐ C-14 Provide site plan.
- ☐ C-15 Verify that there are no expired or voided permits for this address.
- ☐ C-16 Provide a "SYSTEM RECORD DOCUMENTS" box.

Plans

- ☐ N-17 Scope of work shall include: design parameter regarding type of fire alarm system (power-limited, nonpower-limited, conventional, addressable analog, etc.), communication method or fire alarm signal transmission means, secondary supply capacity, voltage drop, wire type and size, IDCs, SLCs and NACs designated by class, interfacing of sub-panels and other systems, mass notification, outputs, inputs, etc.
- ☐ N-18 Label all exits, rooms and spaces clearly on the floor plan.
- ☐ N-19 Number each device, appliance, circuit and component on floor plan. The devices on the floor plan shall match the riser diagram for number, count, type, and etc.
- ☐ N-20 Ceiling elevations for all spaces shall be noted on plans. If all one height, note as such. If ceiling is higher than 10', note if they are not smooth or flat.

Monitoring

- ☐ N-21 A separate permit is required for monitoring the fire alarm system. If monitoring permit is not attached to this set of plans or submitted at the same time as this permit, a PERMIT hold will be placed on this permit.

Panel

- ☐ N-22 Smoke detection shall be provided for protection of the fire alarm control panel/unit, power supplies/extenders and supervising station transmitting equipment.
- ☐ N-23 Panel shall be located in accordance with Collier County Bulletin 24, and approved by AHJ, in an area where it is likely to be heard (trouble/supervisory signals).
- ☐ N-24 Relays for control devices shall be within 3' of the controlled circuit or appliance and is the installation wiring between the FACU and the relay, or other appliance, monitored for integrity or fail-safe.

Local Alarm ☐ Not applicable

- ☐ N-25 Local alarms shall have signs at each pull station "Local Alarm Only – In Case of Fire Call 911" Existing Apartment Buildings

Non-Addressable System ☐ Not applicable

- ☐ N-26 Indicate the number of zones on the submittal/drawings and provide a zone legend.

Campus Style ☐ Not applicable

- ☐ N-27 A fire alarm system that is part of a campus-style arrangement (it serves more than one building or is reporting to a master fire alarm control panel), with the purpose of having only one off-site premises connection, ensure compliance with local policy.
- ☐ N-28 Pull stations are installed in an unobstructed location.
- ☐ N-29 Each building shall be indicated separately and the alarm, supervisory and trouble signal for each building shall be transmitted to the supervising station.

Battery, Voltage, and Generator

- ☐ N-30 All voltage calculations shall be provided for each notification appliance circuit and/or for any circuits that draw power.
- ☐ N-31 Provide wattage calculations for each amplifier. Wattage tap shall be indicated for all speakers and circuits on riser and on floor plan.

Battery, Voltage, and Generator (cont'd)

☐ N-32 Voltage drop calculations shall correlate with the alarm and non-alarm current draws for the respective components in the Catalog/Specification sheets provided.

☐ N-33 Battery calculations shall be detailed in a "chart format" for each battery back-up power supply in the system. This shall include remotely located control equipment such as satellite control units, circuit interfaces, and other equipment essential to system operation.

☐ N-34 Battery calculations shall correlate with the alarm and non-alarm current draws for the respective components in the Catalog/ Specification sheets provided and current draws indicated/highlighted on plans.

☐ N-35 Protected Premises, which utilizes an automatic-starting, engine-driven generator for secondary power supply, shall indicate such on plan.

Electrical (acknowledge compliance for these items for field inspection on plan)

☐ N-36 Circuit breaker shall be mechanically protected and the disconnect means marked in red "Fire Alarm Circuit".

☐ N-37 Location of breaker shall be identified inside fire alarm panel.

☐ N-38 Indicate location of surge suppressors on both the wire riser diagram and floor plans. Specification sheets shall be included in the submittal package. If surge suppression is located in a concealed location (such as a drop ceiling) specify on plan. No installation of surges will be allowed inside electrical panel box.

Generator Monitoring

☐ N-39 NFPA 110 5.6.6 requires emergency generators (EPSS) to have an audible alarm (annunciator) in a work site observable by personnel. If a separate generator annunciator panel is not installed, please specify if fire alarm panel will be monitoring the generator functions.

Annunciator

☐ N-40 FACU or remote annunciator located at main entrance. If other location, this location shall be approved by the AHJ and a durable sign shall be installed at main entrance indicating its location.

Voice Evacuation ☐ Not applicable

N-41 The Emergency Voice Evacuation System shall have the required battery size to meet the following:

- ☐ N-41a Battery standby requirements must match the fire alarm system type used in the building and the alarm must sound for not less than 15 minutes.
- ☐ N-41b Additional panels and/or power supplies provided for control units, circuit interfaces, or other equipment essential to system operation, shall meet the same primary and secondary power supply requirements.

Initiating Devices

N-42 Pull stations

- ☐ N-42a Where required by the FFPC, Location shall be within 5' of the exit door.
- ☐ N-42b Horizontal distance shall not exceed 200'.
- ☐ N-42c If only one pull station required, please contact AHJ for location requirements.

☐ N-43 Plans shall reflect ceiling height and ceiling surface construction to ascertain that heat detectors are installed per spacing requirements.

N-44 Smoke detectors

- ☐ N-44a Smoke detectors that are located on solid joists or beams spaced per NFPA 72 and indicated on the plan.
- ☐ N-44b Smoke detectors that are installed on peaked or sloped ceilings located per NFPA 72 and indicated on the plan.
- ☐ N-44c Smoke detectors located 3' away from AC diffusers, kitchen and bathroom doors.
- ☐ N-44d Smoke detectors required for initiation of mechanical ventilation and/or pressurized stair enclosure shall be within 10' of the entrance to the smoke proof enclosure.

N-45 Duct detectors

- ☐ N-45a Duct smoke detectors shall be installed in HVAC system capable of producing 2000 cfm or greater NFPA 90A.
- ☐ N-45b At each story prior to the connection to a common return and prior to any recirculation or fresh air inlet connection in air return systems having a capacity greater than 7080 L/sec (15,000 ft3/min) and serving more than one story.

Initiating Devices (cont'd)

N-45 Duct detectors (cont'd)

- ☐ N-45c Duct smoke detectors, not part of a smoke control system and used solely for closing dampers or for heating, ventilating, and air-conditioning system shutdown, shall initiate a supervisory signal.
- ☐ N-45d Even when a licensed mechanical contractor is used to install duct smoke detectors - in lieu of licensed fire alarm contractors or certified electrical contractors - the final responsibility for ensuring that the sampling tube(s) and the smoke detector(s) have been installed correctly rests with the alarm system contractor, and to this end a manometer reading must be posted on the duct at the site of each respective duct smoke detector test.

Notification Appliances

N-46 Evacuation

- ☐ N-46a Clearly specify the occupant notification as general evacuation or selective evacuation. Indicate if this system has mass (distributed recipient) notification.
- ☐ N-46b Partial or selective evacuation or relocation of residents when fire alarm systems are designed for partial, selective evacuation or relocation of building occupants, what provisions been made that attack by fire within an evacuation signaling zone shall not impair control and operation of the notification appliances outside the evacuation signaling zone.

  Indicate this on the plan and select one Select

N-47 General

- ☐ N-47a Each audio/visual appliance have its candela rating listed on the floor plan, adjacent to each appliance.
- ☐ N-47b Every visual appliance shall be adequate for the area covered and located per NFPA 72 -18.5.
- ☐ N-47c Indicate on plans method used to determine spacing in corridors.
- ☐ N-47d Audio/visual appliances shall be placed no more than 100' apart in corridors and within 15' from each end of the corridor. (NOTE: when the concentrated viewing path is interrupted due to jogs in corridors, changes in elevation, corridor doors which close, or other such obstructions, the area shall be treated as a separate corridor).
- ☐ N-47e Fire alarm system shall be designed to comply with audibility and visual requirements.
- ☐ N-47f Visual signal appliances provided in each of the following areas: restrooms and any other general usage areas, meeting rooms, conference rooms, hallways, lobbies and any other area for common use (Examples of common use areas include classrooms, cafeterias, filing and photocopy rooms, employee break rooms, dressing rooms, examination rooms, treatment rooms, and similar spaces that are not used solely as an employee work areas).
- ☐ N-47g Audible public mode notification appliances that produce a sound level at least 15dB above the average ambient sound level or 5dB above the maximum sound level lasting at least 60 seconds, whichever is greater (dBA).
- ☐ N-47h Audible appliances shall provide a distinctive three-pulse temporal pattern fire alarm evacuation signal.
- ☐ N-47i Bathrooms accessible to the public shall have proper A/V appliance(s) installed. If stalls constitute individual rooms, visual appliances are required inside each stall. If Showers and/ or Saunas are present "weatherproof" appliances are required to be installed.
- ☐ N-47j Visible notification appliances within the same field of view shall flash in synchronization.
- ☐ N-47k Devices (via relays, circuits or other such interfaces) shall be installed to stop background ambient noise produced in areas such as theaters, dance halls, nightclubs, machine shops and other such high noise areas.
- ☐ N-47l Sleeping area notification appliances shall be least 75dBA measured at the pillow level as well as complying with low frequency requirements.

Emergency Control Functions

- ☐ N-48 General emergency control functions (e., door release, door unlocking, access controlled, elevator recall, emergency warning light illumination, smoke control, stair pressurization, other extinguishing system, HVAC shutdown and etc.) shall be indicated on floor plan and riser diagram and detailed in the sequence of operations/ input output matrix.

N-49 Access control

- ☐ N-49a Access controlled doors shall unlock.
- ☐ N-49b Access control systems shall be required to have a low voltage permit.

CHECKLIST (cont'd)

Emergency Control Functions (cont'd)

N-50 Elevator Recall

- ☐ N-50a Elevator Recall detectors shall be connected to the fire alarm system.
- ☐ N-50b Heat detectors that are used to shutdown elevator power shall be monitored for integrity by the building FACU.
- ☐ N-50c Consideration has been given to a "delay" in the activation of the power shunt trip, whereby the "delay" parallels the time it takes the elevator cab to travel from the top of the hoistway to the lowest recall level.
- ☐ N-50d Smoke detectors used for elevator recall and the heat detectors used to shutdown elevator power shall initiate an alarm condition and actuate the fire alarm system notification appliances.
- ☐ N-50e Control circuit used to shut down elevator power shall be monitored for presence of operating voltage. Loss of this voltage shall indicate a supervisory signal at the control unit and remote annunciators.
- ☐ N-50f Elevator warning lights complies with NFPA 72 (flashes from activation of initiating devices from machine space/ control room/shaft and steady state on Phase 1 recall).

N-51 Suppression Systems

- ☐ N-51a Control valves shall be monitored for integrity.
- ☐ N-51b All waterflow alarms shall be non-silenceable while water is flowing.
- ☐ N-51c Double detector check valves serving more than one building shall be monitored by every building fire alarm control panel it serves.
- ☐ N-51d Sprinkler valve tamper switches shall cause an audible and visual supervisory indication. (If a valve is installed in the connection between a sprinkler system and an initiating device, the valve shall be supervised)
- ☐ N-51e All other suppression systems (hood, FM200, Halon, Clean Agent, etc.) shall be connected to the fire alarm system.

N-52 Fire Pump

- ☐ N-52a Electric Fire Pump monitored for run, phase reversal & power failure (supervisory).
- ☐ N-52b Engine-driven Fire Pump monitored for run, failure to start, controller off "automatic," and trouble (e.g., low oil, high temperature, overspeed).

N-53 Interconnected Panels
(e.g., Elevator Recall Fire Alarm to Building Fire Alarm Panel, Clean Agent Fire Alarm Panel to Building Fire Alarm Panel, External (DACT to FACU).

- ☐ N-53a The satellite fire alarm control unit, interconnected to the master FACU, which experiences a trouble or supervisory condition shall report that condition to the master FACU indicating the interconnected fire alarm control unit is off-normal. If that circuit experiences a fault condition, a trouble condition for that circuit (zone or point) shall be indicated at the master fire alarm control unit.
- ☐ N-53b The interconnection between the satellite fire alarm control unit and the master FACU shall be monitored for integrity.
- ☐ N-53c Provide details, including relays/modules/contacts, on how interconnected panels are connected.
- ☐ N-53d Each interconnected control unit shall be separately monitored for alarm, supervisory, and trouble conditions in accordance with NFPA 72 Ch23.

Documents

- ☐ N-54 "SYSTEM RECORD DOCUMENTS" box is provided in accordance with NFPA 72.

ATTESTATION

I hereby attest that, to the best of my knowledge, the aforementioned checklist information and the battery calculation(s) are accurate and adequate for the fire alarm system being submitted.

Applicant name	State license #	Phone	Email address

Signature options: 1) Utilize electronic signature feature (will need to be configured if you do not already have an electronic signature; or 2) Print form and sign

Signature and date _____

Print Submittal Form (pages 1-5 only)

OCCUPANCY CLASSIFICATIONS

Chapter (new)	Chapter (existing)	Occupancy classification	Definition	Examples
11	11	Special Structures/ High Rise		
12	13	Assembly	An occupancy (1) used for a gathering of 50 or more persons for deliberation, worship, entertainment, eating, drinking, amusement, awaiting transportation, or similar uses; or (2) used as a special amusement building, regardless of occupant load.	Armories, Assembly halls, Auditoriums, Bowling lanes, Club rooms, College and university classrooms-50 persons or more, Conference rooms, Courtrooms, dance halls, Drinking establishments, Gymnasiums, Libraries, Mortuary chapels, Movie theaters, Museums, Passenger stations and terminals, places or religious worship, pool rooms, Recreation piers, Restaurants, Skating rinks, Theaters, Special amusement buildings-regardless of occupant load.
14	15	Education	An occupancy used for educational purposes through the twelfth grade by six or more persons for 4 or more hours per day or more than 12 hours per week.	Academies, Kindergartens, Schools
16	17	Day Care (Home)	A building or portion of a building in which more than 3 but not more than 12 clients receive care, maintenance, and supervision, by other than their relative(s) or legal guardians(s), for less than 24 hours per day.	Adult day care, Nursery schools, kindergarten classes incidental to a child day care occupancy (keep in mind -if they take naps-it's a day care and needs smoke detection)
16	17	Day Care (Facility)	An occupancy in which four or more clients receive care, maintenance, and supervision, by other than their relatives or legal guardians, for less than 24 hours per day.	Adult day care, Nursery schools, kindergarten classes incidental to a child day care occupancy (keep in mind -if they take naps-it's a day care and needs smoke detection)
18	19	Health Care	An occupancy used to provide medical or other treatment or care simultaneously to four or more patients on an inpatient basis, where such patients are mostly incapable of self-preservation due to age, physical or mental disability, or because of security measures not under the occupants' control.	Hospital, Limited care facility, Nursing Home
20	21	Ambulatory Health Care	An occupancy used to provide services or treatment simultaneously to four or more patients that provides, on an outpatient basis, one or more of the following: (1) treatment for patients that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (2) anesthesia that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (3) emergency or urgent care for patients who, due to the nature of their injury or illness, are incapable of taking action for self-preservation under emergency conditions without the assistance of others	Day surgery centers
22	23	Detention and Correctional	An occupancy used to house one or more persons under varied degrees of restraint or security where such occupants are mostly incapable of self-preservation because of security measures not under the occupants' control.	Adult and juvenile substance abuse center's, work camps, community residential center's, correctional institutions, detention facilities, juvenile training schools.

OCCUPANCY CLASSIFICATIONS (cont'd)

Chapter (new)	Chapter (existing)	Occupancy classification	Definition	Examples
24	24	One- and Two-Family Dwellings	One- and two-family dwellings include buildings containing not more than two dwelling units in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms.	
26	26	Lodging or Rooming Houses	A building or portion thereof that does not qualify as a one- or two-family dwelling, that provides sleeping accommodations for a total of 16 or fewer people on a transient or permanent basis, without personal care services, with or without meals, but without separate cooking facilities for individual occupants.	
28	29	Dormitory	A building or a space in a building in which group sleeping accommodations are provided for more than 16 persons who are not members of the same family in one room, or a series of closely associated rooms, under joint occupancy and single management, with or without meals, but without individual cooking facilities.	
28	29	Hotel	A building or groups of buildings under the same management in which there are sleeping accommodations for more than 16 persons and primarily used by transients for lodging with or without meals.	
30	31	Apartment Building	A building or portion thereof containing three or more dwelling units with independent cooking and bathroom facilities.	
32	33	Board and Care	An occupancy used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services.	Group housing for physically or mentally handicapped, Assisted living facilities (ALF's)
36	37	Mercantile (Class A)	An occupancy used for the display and sale of merchandise. All mercantile occupancies having an aggregate gross area of more than 30,000 ft2 (2800 m2) or occupying more than three stories for sales purposes.	
36	37	Mercantile (Class B)	An occupancy used for the display and sale of merchandise. All mercantile occupancies of more than 3000 ft2 (280 m2), but not more than 30,000 ft2 (2800 m2), aggregate gross area and occupying not more than three stories for sales purposes. Class B also includes all mercantile occupancies of not more than 3000 ft2 (280 m2) gross area and occupying two or three stories for sales purposes.	
36	37	Mercantile (Class C)	An occupancy used for the display and sale of merchandise. All mercantile occupancies of not more than 3000 ft2 (280 m2) gross area and used for sales purposes occupying one story only.	

OCCUPANCY CLASSIFICATIONS (cont'd)

Chapter (new)	Chapter (existing)	Occupancy classification	Definition	Examples
38	39	Business	An occupancy used for the transaction of business other than mercantile.	Air traffic control towers (also see special structures ch. 11), City halls, College and university classrooms for less than 50 people, Dentists' offices, Doctors' offices, General offices, Town Halls.
40	40	Industrial	An occupancy in which products are manufactured or in which processing, assembling, mixing, packaging, finishing, decorating, or repair operations are conducted.	Dry-cleaning plants, factories, food processing plants, Gas plants, Hangers for servicing/maintenance, laundries, Power plants, Pumping stations, Refineries, Sawmills, Telephone exchanges
40	40	Special Purpose Industrial	An industrial occupancy in which ordinary and low hazard industrial operations are conducted in buildings designed for, and suitable only for, particular types of operations, characterized by a relatively low density of employee population, with much of the area occupied by machinery or equipment.	(Car dealership with a service/repair shop with a combined occupant load over 100 people is special purpose industrial and requires a complete fire alarm system)
42	42	Storage	An occupancy used primarily for the storage or sheltering of goods, merchandise, products, or vehicles.	Barns, Bulk oil storage, Cold storage, Freight terminals, Grain elevators, Hangers (for storage only), Parking structures, Truck and marine terminals, Warehouses.

OTHER TERMS

Occupancy	The purpose for which a building or other structure, or part thereof, is used or intended to be used.
Mixed	A multiple occupancy where the occupancies are intermingled.
Multiple	A building or structure in which two or more classes of occupancy exist.
Separated	A multiple occupancy where the occupancies are separated by fire resistance–rated assemblies.