



## Miami-Dade Fire Rescue Two-Way Radio Communication Enhancement Systems

Based on NFPA 1221 2016 Ed, Florida Fire Prevention Code - Seventh Edition

**Plans shall be submitted for approval prior to installation. Have this form accompany your plans during submittal.  
All items below shall be identified on your plans by way of drawings, notes or both.**

Revised 12-2022

Building Dept. Process Number is (Begins with C or M): _____		Date: ____/____/____		
ALL OF THESE ITEMS MUST BE INDICATED ON THE PLANS:		YES	NO	N/A
1	Address in title block shall match address in "Building Dept. Computer System" and attached permit application. If address contains a specific building, floor, suite, or unit number or letter, it shall be provided in title block, to match Building Dept. Computer System.			
2	The total cost of the installation to the customer is \$ _____ and a copy of the contract or a notarized affidavit from the owner showing this amount is attached. The total number of DEVICES and COMPONENTS being installed is _____			
3	The building is "New" _____ or, "Existing" _____ and is indicated as such on the plans.			
4	A description of the building is included, including a description of the fire sprinkler protection systems and fire alarm systems. If there is an existing or planned fire alarm system, please indicate it on the plans.			
5	Indicate whether or not the building has an Emergency Command Center.			
6	All rooms and spaces are labeled indicating their use.			
7	Systems costing more than \$5,000 are sealed or stamped by a Florida Registered Professional Engineer.			
8	The system qualifier's state license # is (EC EF EH EY) _____ and a copy is attached to the plans.			
9	The system qualifier's FCC license # is _____ (if applicable) and a copy is attached to plans.			
10	Complete, current Manufacturer's Specification and Installation sheets are attached for all Control Units, Components, Appliances, Devices, Modules and Relays listed on Legend.			
11	Is this permit application for a Two-Way Radio Communication Enhancement System the result of a failed pre-test inspection conducted by Miami-Dade Fire Rescue? If yes, attach a copy of the MDR inspection result.			
12	Is this permit application for Two-Way Radio Communication Enhancement System work a result of a Notice Of Violation (NOV) issued by Miami-Dade Fire Rescue? If yes, attach a copy of the NOV.			
13	Is this an "Existing System" and stated as such on the plans? This authority having jurisdiction (AHJ) will require documentation of prior approval of the system, as a Two-Way Radio Communication Enhancement System, in the form of either the original Fire Dept. approved job copy set, or a certified microfilm copy of the same.			
14	Provide a site plan for projects with multiple buildings showing locations of all buildings with addresses.			
15	Construction documents must be of sufficient clarity to indicate the location, nature, and extent of the work proposed and show in detail that it will conform to the relevant laws, ordinances, rules and regulations. Please note that the complete tenant space, in its entirety, will be inspected for compliance with NFPA 1:1.14.2 or prior editions of these codes if applicable. Also outline scope of work with bolded dashed lines on floor plan and riser for existing systems.			
16	Are all applicable codes referenced on plans? (A) FLORIDA FIRE PREVENTION CODE (FFPC) 7TH EDITION (B) FLORIDA BUILDING CODE (FBC) 7TH EDITION (C) NFPA 1, 2018 EDITION, "FIRE CODE" (D) NFPA 101, 2018 EDITION, "LIFE SAFETY CODE" (E) NFPA 1221, 2016 EDITION, "STANDARD FOR THE INSTALLATION, MAINTENANCE, AND USE OF EMERGENCY SERVICES COMMUNICATIONS SYSTEMS" (F) NFPA 70, 2017 EDITION, "NATIONAL ELECTRICAL CODE" (G) NFPA 72, 2016 EDITION, "NATIONAL FIRE ALARM AND SIGNALING CODE"			

**THIS IS A REQUIRED DOCUMENT FOR  
TWO-WAY RADIO COMMUNICATION ENHANCEMENT SYSTEM SUBMITTALS**



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		YES	NO	N/A
17	Is a specific "Sequence of Operation" including all alarm, supervisory, trouble and control functions specified on the plan?			
18	Each device, module, appliance and component is identified with its own unique number and indicated on the floor plans and riser.			
19	Are all new, existing, replaced or relocated devices indicated on the floor plans and in the riser diagram?			
20	Are all devices and components located in areas in which the voltage, temperature, and humidity variations exceed those conditions stated in NFPA 72, listed for such conditions and are all these areas identified?			
21	Provide copies of evaluation documentation in accordance with NFPA 72: 7.3.9.			
22	Indicate the location of the Remote Communications Facility room and ensure it is climate controlled in accordance with NFPA 1221: 4.10.4.1.			
23	Is the Two-Way Radio Communication Enhancement System and all active controls located in a place that meets all environmental controls with regards to heating, ventilation, cooling, and humidity requirements of the manufacturer specifications in accordance with NFPA 72: 10.4.3?			
24	Is the Two-Way Radio Communication Enhancement System equipment connected to a dedicated circuit breaker marked "Emergency Communications" as per NFPA 72: 10.6.5.2.2?			
25	Show the location of each device, with its own unique number on floor plan and riser diagram.			
26	Are all components properly enclosed (i.e., repeaters, transmitters, receivers, signal booster components, external filters and battery system components) in a NEMA4- or 4X-type enclosure(s)? NFPA 1221: 9.6.11.2			
27	Is the Two-Way Radio Communication Enhancement System equipped with an FCC-compliant Class "A" narrowband signal booster (BDA/DAS) or systems otherwise approved? CFR Title 47, Part 90.219			
28	Does the Two-Way Radio Communication Enhancement System comply with both analog and digital communications simultaneously?			
29	Are there parameters in place to provide survivability from attack by fire in accordance with NFPA 72: 24.3.13.8?			
30	The Two-Way Radio Communication Enhancement System equipment is protected with a smoke detector.			
31	Is the Two-Way Radio Communication Enhancement System and all active controls located in an area free from hazards?			
32	Is the system upgradeable to allow for instances where the jurisdiction changes or adds system frequencies to maintain radio system coverage as it was originally designed per NFPA 1221; 9.6.10.2?			
33	If a signal booster has been installed, is it FCC certified and compatible with both analog and digital, as per NFPA 1221: 9.6.11.3?			
34	Are there at least two independent and reliable power supplies provided for all repeater, transmitter, receiver, and signal booster components, one primary and one secondary as per NFPA 1221: 9.6.12?			
35	Is the primary power source supplied from a dedicated branch circuit and does it comply with NFPA 72, as per NFPA 1221: 9.6.12.1?			
36	Does the secondary power source consist of the following (per NFPA 1221: 9.6.12.2)? 1) A storage battery dedicated to the system with 12 hours of 100 percent system operation capacity 2) An alternate power source of 12 hours at 100 percent system operation capacity as approved by the AHJ			
37	Does the integrity of the circuit monitoring power supply(ies) comply with NFPA 1221: 9.1.2.2?			

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		YES	NO	N/A
38	Are the Two-Way Radio Communication Enhancement Systems, signal boosters, and power supplies monitored by the Fire Alarm Panel as per NFPA 1221: 9.1.2.2 and 9.6.13.1?			
39	Does the system provide automatic supervisory signals that include the following per NFPA 1221: 9.6.13.1? (a) Donor antenna malfunction (b) Active RF emitting device failure (c) Low-battery capacity indication when 70 percent of the 12-hour operating capacity has been depleted (d) System component failure (e) Power supply supervisory signals for each RF emitting device and system component as follows: i. Loss of normal AC power ii. Failure of battery charger			
40	Is the communications link between the fire alarm system and the two-way radio communication enhancement system monitored for integrity in compliance with NFPA 72, Chapter 10? NFPA 1221: 9.6.13.1(4)?			
41	If there is a Fire Command Room, a dedicated monitoring panel shall be provided with in the fire command center to annunciate the status of all signal booster locations, as per NFPA 1221: 9.6.13.2. The monitoring panel shall provide visual and labeled indication of the following for each signal booster: (a) Normal AC power (b) Loss of normal AC power (c) Battery charger failure (d) Low-battery capacity (to 70% depletion) (e) Donor antenna malfunction (f) Active RF emitting device malfunction (g) System component malfunction			
42	Is the communications link between the dedicated monitoring panel and the two-way radio communication enhancement system monitored for integrity in compliance with NFPA 72, Chapter 10? NFPA 1221: 9.6.13.2(2)?			
43	Do all Critical Areas such as the fire command center(s), the fire pump room(s), exit stairs, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations, and other areas deemed critical by the AHJ, have a minimum of 99% floor area radio coverage in accordance with NFPA 1221: 9.6.7.4?			
44	Do all General Areas of the building have a minimum of 90% floor area radio converge in accordance with NFPA 1221: 9.6.7.5 stated on Plans?			
45	Is there a minimum inbound signal strength sufficient to provide usable voice communications, as specified by the AHJ, provided throughout the coverage area? State on the plans that the inbound signal level shall be sufficient to provide a minimum of DAQ 3.0 for analog or digital signals in accordance with NFPA 1221: 9.6.8.1.			
46	Is there a minimum outbound signal strength sufficient to provide usable voice communications, as specified by the AHJ, provided throughout the coverage area? State on the plans that the outbound signal shall be sufficient to provide a minimum of DAQ 3.0 for either analog or digital signals in accordance with NFPA 1221: 9.6.8.2.			
47	If a donor antenna exists, is there isolation between the donor antenna and all inside antennas at a minimum of 20 dB under all operating conditions in accordance with NFPA 1221: 9.6.9?			
48	Are all exterior antennas directional, high gain, vertical polarized and specified for the operating frequencies? (Yagi or corner reflector-type antennas are recommended.)			
49	Is lightning protection for the system that complies with NFPA 780 specified? See NFPA 1221:9.6.3			