

**Section 118 Emergency Responders Communications Enhancement Systems (ERCES)  
~~Two-Way Radio Communication Enhanced Public Safety Signal Booster Systems~~**

**118.1 General.**

**118.1.1** The Two-Way Radio Communication Enhancement Public Safety Signal Booster System shall be installed as per NFPA 1-11.10, NFPA 70, and NFPA 72. Any such system installed on or after April 1st, 2016 shall be adaptable for both 700/800 MHz p25 (association of public safety communication officials, project 25).

**118.1.2** The Authority Having Jurisdiction (AHJ), in Broward County, for the Two-Way Radio Communication Enhancement Public Safety Signal Systems has two (2) permitting entities and multiple frequency licenses as follows:

1. The Installation and Wiring shall comply with the local municipality Building and Fire Departments permitting process and shall be approved by the local and county FCC Licensee prior to installation.
2. The FCC Licensees are:
  - Broward County ORCAT
  - City of Coral Springs
  - City of Fort Lauderdale
  - City of Hollywood
  - City of Plantation

**118.1.3** The AHJ shall determine, if a new building or existing building shall require that a two-way radio communication enhanced public safety signal booster system be installed to comply with NFPA 1-11.10.1. The Building owner shall install a public safety signal booster to meet this requirement if so directed.

**118.1.4 Design.** For new buildings, a temporary, partial or certificate of occupancy shall not be issued until the AHJ determines that the building is in compliance with NFPA 1-11.10.1. It is recommended that the local Development Review Committee (DRC) notify the new building owner, architect, and engineers of this requirement in writing before the building is designed. At the time of BDA permitting, a design package, comprising of block level diagrams, materials submittals, coverage measurements and predictions are required. Sufficient and substantial engineering design and support information and data shall be submitted with the application. A sealed submittal from an Engineer, with verifiable training and experience in electrical engineering, shall also be required.

**118.1.5** To the extent authorized by law, Distributed Antenna Systems Integrators with Public Safety and/or Communication installation and repair experience, as a sub-contractor in association with qualified electrical contractors, ~~and Fire Alarm contractors,~~ or BDA Contractors may install or repair Two-Way Radio Communication Enhancement Systems. Should the contractor of record fail to have radio communications installation and repair experience with Distributed Antenna Systems, the contractor of record shall sub-contract the installation or repair of non-fire alarm function to a qualified company, having knowledge of Radio communications installation and repair.

**118.2 Permit Documentation.**

**118.2.1** The following documentation shall be required for permitting a ~~"Two-Way Radio Communication Enhancement System"~~: "Emergency Responders Communications Enhancement Systems (ERCES)".

1. City and County FCC Licensee shall approve proposed installation of Two-Way Radio Communicating Enhanced Systems prior to installation in writing or by sealing documents submitted for review.
2. City and County written approval or sealed documents shall be provided to the local Fire Prevention Bureau office at the time of plan submittal and prior to plan review.
3. Plans shall comply with the current adopted editions of FBC 107, NFPA 1, 1.7, NFPA 70, and NFPA 72.
4. Sealed floor plans showing radio coverage for critical and general areas using industry standard radio frequency computer generated propagation modeling.
5. Schedule of signal strength as per NFPA ~~72~~ 1221 or as agreed to by the Fire Code Official in consultation with the FCC licensee in writing.
6. Schedule of the system radio frequencies or band of frequencies.
7. Notation that the system is upgradable for frequency band coverage changes including at a minimum both 700/800 MHz
8. Plans shall show that the BDA enclosure shall be painted red. A sign affixed next to or stenciling on the enclosure shall be provided in high contrasting letters over a red background, weatherproof plaque and shall include the following information:
  - a) Fire Department Signal Booster.
  - b) Permit Number: \_\_\_\_\_.
  - c) Serviced by: Vendor name and telephone.
9. Elevator hoistways shall be deemed critical areas as stated in NFPA 1221 (2016) 9.6.7.4.

### **118.3 System Notifications.**

**118.3.1** The AHJ's for the FCC licensee and Broward County Office of Regional Communications and Technology (ORCAT) shall be notified in writing of the following events by the permit holder, the system vendor, and/or the building owner. The AHJ for the FCC Licensee shall approve the date and time and may request that the AHJ shall be present during the following events:

1. Initial system testing, with date and time start and finish.
2. Periodic system testing, with date and time start and finish.
3. System placed in operation with date and time.

### **118.4 Prior to the Initial Testing.**

1. The vendor shall provide the system's settings prior to the initial system testing as accepted by the AHJ, FCC Licensee and ORCAT. The AHJ may ask for additional information prior to testing.
2. The system shall remain "off the air" until the initial testing with AHJ, FCC Licensee, ORCAT, and the Fire Code Official are ready to begin and provide their approval.

### **118.5 Annual Test.**

**118.5.1** In addition to the annual fire alarm test, an annual test and report, in compliance with NFPA 72 Chapter 14, shall be completed by a qualified company having the knowledge of RF installation with training and experience of two-way radio communication enhanced radio systems to ensure that the original installed system is still in compliance.

**118.5.2 Annual Test Report.** The annual test report shall be maintained with the fire alarm log book and copies shall be submitted to the local AHJ and to City and ORCAT for review. All problems found, with any corrective action(s), shall be noted in the test report, along with the name and license number of the Fire Alarm Contractor and sub-contractor Inspection Company.

**118.6. System Monitoring and Maintenance.**

1. Any Public Safety Signal Booster system installed in a premise shall be tied into a fire alarm system for monitoring.
2. In case of failure, the building owner shall be notified within two (2) hours and he/she shall cause to occur an inspection of the system. If a trouble condition is found the system shall be repaired within forty-eight (48) hours of notification. If such repair proves to be longer in time or impossible to perform, a notification to the Fire Marshal shall be made indicating the failure of the system, so that in case of emergency the system shall not be relied upon by the First Responders.

Any system installed shall have a service level agreement with a responsible company. Once the system is repaired the service company shall notify both the building owner and the fire marshal.