

A QUICK GUIDE

EMERGENCY RESPONDER RADIO ANTENNA SYSTEMS

Requirements, Codes, and Products to Ensure a Certificate of Occupancy

The two-way Emergency Responder Radio Antenna System (ERRAS) works by distributing the available outside radio signal over a system of small interior antennas within the building. The interior antennas disperse the radio signal throughout the building to provide distributed coverage.

DID YOU KNOW?

International Fire Code (IFC) Requirement

95%

MINIMUM SIGNAL COVERAGE FOR ALL PORTIONS OF A BUILDING IN THE UNITED STATES.



99%

COVERAGE REQUIRED IN CRITICAL AREAS

90%

COVERAGE REQUIRED FOR GENERAL AREAS

National Fire Protection Association (NFPA) Requirement

-95 dB

BOTH THE NFPA AND IFC STATE YOU NEED A MINIMUM OF -95 DB (DECIBEL) SIGNAL STRENGTH THROUGHOUT THE COVERAGE AREA.



250,000+ SQ. FT.

BUILDINGS MAY REQUIRE A FIBER OPTIC BACKBONE TO PROPERLY DISTRIBUTE THE SIGNAL TO FIBER OPTIC REMOTE AMPLIFIERS.

KEEPING UP TO CODE

NFPA 72: National Fire Alarm and Signaling Code

The code includes requirements for mass notification systems used for weather emergencies, terrorist events, biological, chemical, and nuclear emergencies, among other threats.



24.5.2.2.1 Critical Areas

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 authority having jurisdiction



24.5.2.2.3 Amplification Components

Buildings that cannot support the required level of radio coverage shall be equipped with a radiating cable system or a DAS system with FCC-certified signal boosters, or both, or with a system that is otherwise approved, in order to achieve the required coverage.



24.5.2.4* System Radio Frequencies

The public safety radio enhancement system shall be capable of transmitting all public safety radio frequencies assigned to the jurisdiction and be capable of using any modulation technology.

NFPA 1221 - Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems

Local City and County Authorities are enforcing the Code Mandates for ERRAS systems prior to granting Certificate of Occupancy approvals.

IFC Section 5



510.1 Emergency responder radio coverage in new buildings.

New buildings shall have approved radio coverage for emergency responders within the building based on the existing coverage levels of the public safety communication systems utilized by the jurisdiction, measured at the exterior of the building.



510.3 and 105.7.5 Permits

Requires that a construction permit will be needed for the installation or modification to Public Safety DAS systems and related equipment. However, if maintenance is performed on an existing system construction permit will not be required.



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