

## Technical Bulletin



From: City of Salisbury Fire Marshal, Eric Cramer

Office of the Fire Marshal – City of Salisbury, Maryland

**Subject: Requirements for In-Building Emergency Responder Communication Enhancement Systems (ERCES)**

Reference Codes: NFPA 1 Fire Code; Wicomico County Code Chapter 117, Article II

### 1. Purpose

This bulletin establishes the requirements for the installation, performance, testing, and maintenance of Emergency Responder Communication Enhancement Systems (ERCES) within buildings located in the City of Salisbury. These requirements are derived from NFPA 1 as adopted and amended, as well as the mandates of Wicomico County Code Chapter 117, Article II.

### 2. Applicability

ERCES requirements apply to new commercial buildings where testing demonstrates insufficient radio coverage, and any building where the Fire Marshal determines ERCES is necessary to ensure reliable public safety communications.

### 3. General Performance Requirements

Minimum inbound and outbound radio signal strength must be -95 dBm or stronger throughout 90% of each floor. Critical areas must maintain 99% coverage. DAQ Level 3 is specified as the minimum performance level for public safety systems. Systems must support designated public safety frequencies and ensure compatibility with the Wicomico County public safety radio system.

### 4. System Design and Installation Requirements

Installers must hold FCC licensing or manufacturer certification. Systems must include donor antennas, distribution infrastructure, BDAs, annunciation panels, and 24-hour battery backup with 2 hours full operation. A minimum 20 dB isolation between donor and internal antennas must be verified. Systems must connect to the fire alarm system.

### 5. Acceptance Testing Requirements

Live testing must verify system compatibility with the Wicomico County public safety radio system. Documentation including as-builts, test data, and certification must be submitted to the Fire Marshal.

## **6. Annual Testing and Maintenance**

Annual inspection, testing, and recertification are required. Battery systems, donor antenna alignment, amplifier settings, and monitoring functions must be verified. Reports must be submitted to the Office of the Fire Marshal.

## **7. Existing Buildings and Upgrades**

Existing structures must comply when renovations impact RF propagation, when deficiencies are found, or when county radio system upgrades necessitate ERCES adjustments.

## **8. Prohibited Systems / Restrictions**

Systems may not amplify non-public safety frequencies, nor may consumer-grade cellular boosters be used. Unauthorized modifications are prohibited.

## **9. Enforcement and Penalties**

Non-compliance may result in withholding of Certificates of Occupancy, code violation notices, civil penalties, or required corrective actions.

## **10. Contact Information**

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