

DELAWARE ADMINISTRATIVE CODE

DEPARTMENT OF SAFETY AND HOMELAND SECURITY

DIVISION OF COMMUNICATIONS

2500 In-Building Communications Systems Regulation

1.0 Scope and Purpose

- 1.1 These rules and regulations ensure the quality of the State's emergency communications system by maintaining quality in-building communications to prevent "dead zone" areas and helping to protect the citizens of the State so emergency public safety personnel can communicate during a response to an emergency situation.
- 1.2 These rules and regulations apply to all newly constructed buildings of 25,000 square feet or more.

2.0 Definitions

"**Contiguous structures**" shall mean two structures that share a common wall or floor.

"**Newly constructed buildings**" shall not be construed as a renovation or modification of a building, or an expansion or addition to a building which is contiguous to an existing building.

3.0 In-Building System Architectures:

Systems can consist of, but are not limited to, simple passive systems or an internal antenna system with or without FCC certified Bi-Directional Amplifiers for multiple-band, multiple-carrier use.

4.0 Interference:

If a flaw in the system design causes interference to other systems the building owner or their representative will make necessary adjustments.

5.0 Alarm and Control:

- 5.1 Systems shall be capable of sensing a primary failure in the system, and reporting this failure to an approved monitoring company via auto-dialer devices over the public switched network. The alarm unit shall provide reporting, at a minimum, for the following conditions:
 - 5.1.1 Main power disruption
 - 5.1.2 Back-up power failure
 - 5.1.3 Transmitter/Receiver failure
- 5.2 The monitoring company must notify DE State Police Communication Headquarters at 302-659-2341 in the event of a BDA alarm.

6.0 Power Source:

- 6.1 All systems shall be connected to a dedicated power source from the building's AC power distribution panel.
- 6.2 If any part of the installed system or systems contains an electrically powered component, the system shall be capable of operating on an independent battery and/or generator system for a period of at least two (2) hours without external power input. The battery system shall automatically charge in the presence of external power input.
- 6.3 In the event that a bi-directional amplifier is employed, it shall be fully encased within a NEMA 4 (or equivalent) dust/waterproof case.

7.0 Environmental Controls:

- 7.1 Systems must have adequate environmental controls to meet the heating, ventilation, cooling and humidity requirements of the equipment that will be utilized to meet the coverage requirements.
- 7.2 All systems, cables and antenna systems shall be grounded with a single point ground system of five (5) ohms or less.
- 7.3 System transient suppression for the telephone circuits, ac power, radio frequency (RF) cabling are required.

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8.0 Initial Coverage Testing and Acceptance:

- 8.1 Initial testing and acceptance will be completed as described in Appendix A
- 8.2 A copy of the test shall be retained on the inspected premises. (Official testing form can be found within Appendix A.)
- 8.3 A copy of the test shall be sent to:
State of Delaware
Division of Communications
3050 Upper King Rd.
Dover, DE 19904

9.0 Annual Test:

- 9.1 When an in-building system is installed, the building owner or their representative shall test all active components of the system, including, but not limited to, the amplifier, power supplies, and back-up batteries, a minimum of once every twelve (12) months. Annual testing will include:
 - 9.1.1 Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.
 - 9.1.2 Back-up batteries and power supplies shall be tested under load for a period of one hour to verify that they will operate during an actual power outage.
 - 9.1.3 All other active components shall be checked to determine that they are operating within the manufacturers specifications for their intended purposes.
- 9.2 Sampling Coverage Test – A transmit / receive coverage testing of 10% of the building grid will be required. Tests will be conducted in a different area of the building each year so that every 10 years the building has been completely tested. The testing area must be spread out throughout the building randomly. In that way, we are testing every amplifier in the system.
 - 9.2.1 Test results tabulation form is attached.
 - 9.2.2 Test results must be completed within 30 days of the previous annual inspection.
- 9.3 A copy of the test shall be retained on the inspected premises.
- 9.4 A copy of the test shall be sent to:
State of Delaware
Division of Communications
3050 Upper King Rd.
Dover, DE 19904

10.0 Testing Authority:

All tests shall be conducted, by a company or technician with a valid FCC license or equivalent, for two-way radio.

11.0 Fire Department Inspections:

Fire Department personnel or their designated representatives, after providing reasonable notice (24 hours) to the owner or representative, shall have the right during normal business hours to enter onto the property to verify compliance and that the required level of coverage is present. This inspection will be performed at no cost to the owner. Any noted deficiencies shall be provided in an inspection report to the owner or the owner's representative.

12.0 Temporary Certificate of Occupancy

A recommendation for temporary (CofO) Certificate of Occupancy may be issued in the event that initial coverage testing fails. To receive a consideration for a temporary Certificate of Occupancy the facility owner must submit a plan of corrective action to the Delaware Division of Communications.

13.0 Maintenance Responsibilities:

The owner or their representative shall be responsible for maintenance of the system and upgrades or replacements should the system fail or no longer work in the future.

14.0 Effective Date