

**PENN TOWNSHIP
CUMBERLAND COUNTY, PENNSYLVANIA
ORDINANCE NO. 2020- 01**

**AN ORDINANCE OF THE SUPERVISORS OF PENN TOWNSHIP,
CUMBERLAND COUNTY, PENNSYLVANIA ESTABLISHING PROCEDURES
AND GUIDELINES FOR THE REQUIREMENTS, PROCEDURES AND
GUIDELINES FOR THE REQUIREMENT OF INSTALLING, TESTING,
AND MAINTAINING SIGNAL ENHANCING EQUIPMENT
ASSOCIATED WITH THE CUMBERLAND COUNTY EMERGENCY
COMMUNICATIONS NETWORK.**

ADMINISTRATION.

A. Penn Township will participate in an integrated and coordinated public safety radio system, involving police, fire, emergency medical services and other public safety users within the Cumberland County and many municipalities located within the said county.

B. In order for the radio equipment to be employed by Penn Township and other participating public safety personnel to communicate effectively when entering any structure, all buildings must have a minimum ninety-nine radio coverage. At a minimum signal strength of -95dbm in the 800 MHZ band or other frequency range required by the Cumberland County Department of Public Safety, Technical systems (CCDPS). The owner(s) and or building contractor shall provide Penn Township with a certification and test results demonstrating that the building has the minimum radio coverage meeting the requirements of this subsection.

C. Penn Township, in keeping pace with changes in building construction technology, has determined that there may be certain buildings located within Penn Township which due to the large size of the structure and/or other characteristics of the construction and/or design, may not be able to accommodate communications among public safety personnel who may be called to the premises of such buildings and structures to respond to public safety situations.

D. Whenever it is determined that the characteristics of a building are such that the signal strength is not sufficient to allow public safety personnel to communicate reliably with the ECD, Penn township shall require the owner(s) and or building contractor of said large building to install bidirectional amplifiers or distributed antenna system in or on the building to remedy the communications problem and reach the coverage criteria set forth in this ordinance or otherwise required by the integrated public safety radio system. Refer to process guidelines in Appendix A, Section 2.0 of Cumberland County Ordinance 2017-2 prior to installation of equipment.

E. Penn Township adopts Cumberland County's Ordinance 2017-2 regarding signal enhancing equipment.

1. Scope and Purpose

1.1 These rules and regulations ensure the quality of the Township's emergency system by maintaining quality in-building communications to prevent "dead zone" areas. This

helps to protect the citizens of the township so emergency public safety personnel can communicate during a response to an emergency situation.

1.2 These rules and regulations apply to all existing and new commercial and industrial buildings in excess of 32,000 square feet.

1.3 Where applicable reference shall be made to Cumberland County Ordinance 2017-2.

2. Definitions

2.1 800 MHZ Band – Radio frequencies between 806 and 870 MHz.

2.2 APPROVED VENDOR – Vendor has current FCC license (or equivalent) for two-way radio on file with the Department of Public Safety, Cumberland County, PA.

2.3 BDA – Bi-directional Amplifier.

2.4 CCDPS – Cumberland County Department of Public Safety.

2.5 COMMERCIAL/INDUSTRIAL BUILDING – Any large building or enclosure used or intended for use in the operation of (1) or more business enterprises for the sale and distribution of any product, commodity, article or service used or intended for use for any social, amusement, religious, educational, charitable or public purpose and shall include institutional dormitories, individual condominium units and integral units within a single structure (such as “flex-space offices”). Includes the gross floor area, including storage areas, basements, attics and stairwells.

2.6 DELIVERED AUDIO QUALITY (DAQ):

2.6.1 **DAQ1:** Speech present but not understandable.

2.6.2 **DAQ2:** Speech understandable with considerable effort. Requires frequent repetition due to noise or distortion

2.6.3 **DAQ3:** Speech understandable with slight effort. Requires occasional repetition due to noise or distortion.

2.6.4 **DAQ3.4** – Speech understandable without repetition. Some noise or distortion present.

2.6.5 **DAQ4** – Speech understandable. Little noise or distortion.

2.6.6 **DAQ4.5** – Speech easily understandable. Rare noise or distortion.

2.6.7 **DAQ5** – Perfect. No distortion or noise discernible.

2.7 ECC – Emergency Communications Center

2.8 FCC – Federal Communications Commission.

2.9 FREQUENCY RANGE – Frequency range(s) being used will be determined by the Cumberland County Department of Public Safety, Technical Systems (CCDPS).

2.10 IFC – International Fire Code

2.11 LARGE BUILDING – Buildings that meet one or more of the following characteristics.

2.11.1 - Gross building size of 32,000 square feet or more.

2.11.2 - Constructed of materials that block radio coverage or containing a high concentration of steel or machinery.

2.11.3 - Hospitals.

2.11.4 – Nursing Homes.

2.11.5 – Schools or colleges, including elementary, secondary, post-secondary, public and private.

2.12 MINIMAL SIGNAL STRENGTH FOR PUBLIC SAFETY – minus (-) 95 dBm (micro-volt) or as set forth by Cumberland County Department of Public Safety.

2.13 NFPA – National Fire Protection Association.

2.14 PUBLIC SAFETY PERSONNEL – Police, fire and emergency medical personnel and as set forth by the Penn Township Board of Supervisors.

3. In-building System Architectures:

Systems can consist of, but are not limited to, simple passive systems (an internal antenna system with a FCC certified B-Directional Amplifier).

4. Interference:

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

5. 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. 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 the Penn Township Office as well as the Cumberland County Communications Center within 24 hours in the event of a BOA alarm.

6. 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 for at least twelve (12) hours and/or generator 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. If a generator system is used, the back-up power should ensure the equipment remains operational during switch-over to the generator system in the event of primary AC failure.

6.3 All electrically powered components of the system shall be fully encased within a NEMA 4 (or equivalent) dust/waterproof case to protect against water damage (due to sprinkler activation or fire hose water spray).

6.4 Pathway survivability per NFPA & IFC

7. 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, AS power, radio frequency RF cabling is required.

8. Initial Coverage Testing and Acceptance:

8.1 All new and existing commercial buildings in excess of 32,000 square feet, including new additions and tenant fit-outs, and those that do not increase the total square feet, are required to be tested. Testing shall be conducted before and after installation.

8.2 Initial testing and acceptance will be completed as described in the Cumberland County, Pennsylvania Ordinance 2017-2 and in accordance with NFPA and IFC guidelines.

8.3 A copy of the test shall be retained on the inspected premises.

8.4 A copy of the test shall be sent to Penn Township and the Cumberland County Department of Public Safety.

9. Reliability and Coverage Level:

The building(s) must meet ninety-nine (99%) percent coverage at a minimum strength of -95 dbm in the 800 MHZ band.

10. Annual Test:

10.1 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, every antenna point, the amplifier, power supplies, and back-up batteries, a minimum of once every twelve (12) months or when structural changes in or around the complex that may change original field performance tests. Annual testing shall include:

10.1.1 Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance. In no case shall the amplifier be placed on air prior to approval by the Cumberland County Department of Public Safety or their designee.

10.1.2 Back-up batteries and power supplies shall be tested under load for a period of one (1) hour to verify that they will operate during an actual power outage.

10.1.3 All other active components shall be checked to determine that they are operating within the manufacturers specifications for their intended purposes.

10.1.4 Test results shall be reported using the attached tabulation form.

10.1.5 Test results must be completed within 395 days of the previous annual inspection.

10.1.6 An original, signed copy of the tabulated test results shall be sent to the Township.

10.1.7 If any area(s) of the system fail to meet the coverage requirements herein during the annual testing, the building owner or their representative will make necessary adjustments within thirty (30) days.

11. Testing Qualification:

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

12. Township or Public Safety Personnel Inspections:

12.1 Township or public safety 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 in any area of the building. The 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.

12.2 If any area(s) of the system fail to meet the coverage requirements herein during the Township inspection, the building owner or their representative will make necessary adjustments.

13. Temporary Certification of Occupancy for New Structures:

A Temporary Certificate of Occupancy (TCO) may be issued in the event the initial coverage test fails. To receive a consideration for a TCO the facility owner or designated representative must submit a plan of corrective action (PCA) to Penn Township, Codes Officer for review and approval. A TCO may be valid for up to six (6) months from the date of issue. The Township may extend the TCO with an approved PCA, in the event of extenuating circumstances outside the owner's control.

14. Maintenance Responsibilities:

The owner or their representative shall be responsible for the maintenance of the system and upgrades or replacements to the system should the system fail, or portion of the system fail at any time.

ENFORCEMENT; VIOLATIONS AND PENALTIES.

A. The Penn Township Codes Enforcement Officer and the Penn Township Fire Marshall and Assistant Fire Marshall are hereby appointed as the designated officials who are authorized to carry out all responsibilities and duties slated herein.

B. Upon determination by the appropriate Township officials that bidirectional amplifiers must be installed in a large building in accordance with this chapter, then said Township officials shall give notice to the owner(s) of such large building to install the said bidirectional amplifier. In the event the applicable large building owner(s) fails to install the required equipment within four (4) months of said notice, then the appropriate Township officials shall bring an enforcement action before the District Justice.

C. Liability for violation shall result in a civil judgement of not more than \$1,000.00 plus costs and attorney's fees incurred by the Township in enforcing this chapter, but no violation shall be deemed to have occurred nor any judgement be commenced, imposed or paid until a final determination is made. In case the defendant fails to pay or to appeal the judgment in a timely manner, the Township may enforce the judgement pursuant to applicable rules of civil procedure. Each day that the violation continues shall constitute a separate violation, unless it is determined that a good-faith basis existed for the violation, in which case there shall be deemed only one violation until the fifth day following the violation thereafter, each day shall constitute a separate violation.

DULY ENACTED AND ORDAINED this ____ day of _____, 2019, by the Board of Supervisors of Penn Township, Pennsylvania in public session duly assembled.

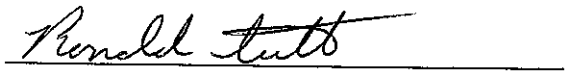
**PENN TOWNSHIP
CUMBERLAND COUNTY,
PENNSYLVANIA**



GARY MARTIN, Chairman




KENNETH SHEAFFER, Vice Chairman



RONALD TRITT, Supervisor

ATTEST:



, Secretary