

_____ TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA

ORDINANCE NO. _____ OF 20__

**AN ORDINANCE AMENDING CHAPTER _____, PART _____ OF THE
TOWNSHIP OF _____ CODE OF ORDINANCES, THE
BUILDING CODE OF THE TOWNSHIP OF _____, BY
ESTABLISHING MINIMUM REGULATIONS APPLICABLE TO
EMERGENCY COMMUNICATIONS SYSTEMS.**

AND NOW, this _____ day of _____, 20__, the Board of Supervisors of
_____ Township hereby enacts and ordains as follows:

Section 1. Preamble. The Board of Supervisors finds that the ability of police, fire, ambulance and other emergency providers and personnel to communicate with each other within buildings and structures, and to communicate from within structures and buildings to personnel and locations outside the building and structure, is of vital public importance. A breakdown in communications among emergency providers and personnel creates a serious risk of harm to and is a serious threat to the safety and welfare of emergency personnel, the citizens of _____ Township and the public in general. Therefore, pursuant to the police power, the Board enacts this Ordinance to protect the public health, safety and welfare.

Section 2. Chapter __, Part __, Section __ of the Township of _____ Code of Ordinances is hereby amended by inserting the following Section _____ as follows:

Add a new Section XXXX.0 as follows.

Section XXXX.0 Communications Amplification Systems.

Section XXXX.1 Definitions.

The following words and terms shall, for the purposes of this Section and as used elsewhere in this code, have the meanings shown herein.

APCO – Association of Public Safety Communications Officials International

NABER – National Association of Business and Education Radio

CCDES – Chester County Department of Emergency Services

PCIA – Personal Communications Industry Association

FCC – Federal Communications Commission

NPSPAC – National Public Safety Planning Advisory Committee

Section XXXX.2 General Provisions.

Except as otherwise provided, no person shall erect, construct, alter, refit, change the use of, or provide an addition of more than 20% of the existing floor area to, any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for CCDES, the _____ Township Fire Department, and the _____ Police Department. For the purposes of this Section, adequate radio coverage shall include all of the following:

1. A minimum signal strength of – 95dBm available in 90% of the area of each floor of the building when transmitted from the closest CCDES radio communications system site;

2. A minimum signal strength of -95dBm received at the closest CCDES radio communications site when transmitted from 90% of the area of each floor of the building;
3. The frequency range which must be supported shall be between 806.0125 MHz and 868.9875 MHz;
4. A 90% reliability factor;
5. Signal strength measurements, for the purpose of measuring the performance of a bi-directional amplifier, shall be based on one input signal adequate to obtain a maximum continuous operating output level.

The provisions of this Section shall become applicable upon notification to the property owner that unacceptable performance levels exist. The property owner shall have ninety (90) days from date of notification, to enhance radio coverage and bring it within the acceptable limits of these provisions.

Section XXXX.3 Amplification Systems Allowed.

Buildings and structures which cannot support the required level of radio coverage shall be equipped with either a radiating cable system or an internal multiple antenna system with or without FCC type accepted bi-directional 800 MHz amplifiers as needed. 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 twelve (12) hours without external power input. The battery system shall charge in the presence of an external power input. If used, bi-directional amplifiers shall include filters to reduce adjacent frequency interference at 35dB below the public safety band. Settings used should

not attenuate the re-banded public safety frequencies and further provided that they are not more than one (1) MHz from these frequencies.

Section XXXX.4 Testing Procedures.

XXXX.4.1 Acceptance Test Procedure.

When an in-building radio system is required, and upon completion of installation, it will be the building owner's responsibility to have the radio system tested to ensure that two-way coverage on each floor of the building is a minimum of 90%. Each floor of the building shall be divided into a grid of approximately twenty (20) equal areas. A maximum of two (2) nonadjacent areas will be allowed to fail the test. In the event that three (3) of the areas fail the test, in order to be more statistically accurate, the floor may be divided in forty (40) equal areas. In such event, a maximum of four (4) nonadjacent areas will be allowed to fail the test. After the forty (40) area test, if the system continues to fail, the building owner shall have the system altered to meet the 90% coverage requirement. The test shall be conducted using the most current E.F. Johnson portable radio or its equivalent, available to the _____ Township Police and/or Fire Department, talking through the CCDES as specified by the authority having jurisdiction. A spot located approximately in the center of a grid area will be selected for the test, then the radio will be keyed to verify two-way communications to and from the outside of the building through the CCDES. Once the spot has been selected, prospecting for a better spot within the grid area will not be permitted.

The gain values of all amplifiers shall be measured and the test measurement results shall be kept on file with the building owner so that the measurements can be verified each year during the annual tests. In the event that the measurements results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.

XXXX.4.2 Annual Tests.

When an in-building radio system is required, the building owner shall test all active components of the system, including but not limited to amplifiers, power supplies and backup batteries, a minimum of once every twelve (12) months. Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance. Backup batteries and power supplies shall be tested under load for a period of one (1) hour to verify that they will properly operate during an actual power outage. If within the one (1) hour test period, in the opinion of the testing technician, the battery exhibits symptoms of failure, the test shall be extended for additional one (1) hour periods until the testing technician confirms the integrity of the battery. All other active components shall be checked to determine that they are operating within the manufacturer's specifications for the intended purpose.

XXXX.4.3 Five Year Tests.

In addition to the annual test, the building owner shall perform a radio coverage test a minimum of once every five (5) years to insure that the radio system continues to meet the requirements of the original acceptance test. The procedure set forth above shall apply to such tests. A copy of accepted tests shall be provided to the Chester County Department of Emergency Services Technical Division.

XXXX.4.4 Qualifications of Testing Personnel.

All tests shall be conducted, documented and signed by a person in possession of a current FCC technician license, or a current technician certification issued by the APCO, NABER, or the PCIA. All test records shall be retained on the

inspected premises by the building owner and a copy submitted to the _____ Fire Company and the _____ Police Department.

Section XXXX.5 Field Testing.

Police and fire personnel, after providing reasonable notice to the owner or his representative, shall have the right to enter onto the property to conduct field testing to be certain the required level of radio coverage is present.

Section XXXX.6 Exemptions.

This section does not apply to: structures in Use Groups R-3 and R-4; any building constructed of wood frame; any building thirty-five (35) feet high or less; as long as none of the aforementioned buildings make use of any metal construction or any underground storage or parking areas. For the purposes of this Section, parking structures and stairwells are included in the definition of “building” and stair shafts are included in the definition of “all parts of a building” but elevators may be excluded.

Section XXXX.7 Existing Buildings and Structures.

Any non-exempt building or structure existing, under construction, or for which a building permit application is pending or has been approved as of the effective date of this Section shall comply with the requirements of this Section if the CCDES, _____ Fire Department or _____ or Police Department determines that adequate radio coverage as defined in Section XXXX.2 does not exist in the building or structure. The owner of the building or structure shall be notified in writing of the inadequacy of the coverage and shall have a period of ninety (90) consecutive calendar days from the date of notice to comply with this Section, including but not limited to enhancing radio coverage and bringing it within the acceptable limits of this Section.

Section 3. Severability. If any term, condition, or provision of this Ordinance shall, to any extent, be held to be invalid or unenforceable, the remainder hereof shall be valid in all other respects and continue to be effective.

Section 4. Effective Date. This Ordinance shall become effective five (5) days from the date of enactment.

BOARD OF SUPERVISORS