

## **RESOLUTION NO. 2017-27**

### **A RESOLUTION ENSURING ADEQUATE DIGITAL RADIO COVERAGE AVAILABLE IN NON-RESIDENTIAL BUILDINGS FOR EMERGENCY RESPONDERS AND TO REPEAL RESOLUTION 2003-04 AS IN CONFLICT THEREWITH.**

WHEREAS, the Township of Concord seeks to ensure that adequate digital radio coverage is available, but not limited to, firefighters, police officers, and other emergency response service providers, who serve to ensure the health, safety and welfare of business owners, their employees and visitors, and

WHEREAS, this resolution applies only to non-residential buildings of more than 5000 square feet, and

WHEREAS, except as otherwise noted, no person or entity shall erect a new building, construct an addition that adds more than 20% square feet of space, or the use of any building, structure or any part thereof that fails to support adequate radio coverage for the Lake County Digital Radio Communications System.

**NOW, THEREFORE BE IT RESOLVED** that we, the Trustees of Concord Township, hereby adopt the following guidelines for digital radio coverage that shall increase the effectiveness of Township safety forces:

#### **SECTION I: GENERAL**

Adequate radio coverage shall be defined as and include all of the following:

- a. A minimum signal strength of -95 dBm available in 95% of the area of each floor of the building, or as otherwise required by the Ohio Fire Code, when transmitted from the closest Lake County Digital Radio Communications System site;
- b. A minimum signal strength of -100 dBm received from 95% of the area of each building floor transmitted via a Motorola APX6000 portable radio or equivalent, or as otherwise required by the Ohio Fire Code, to the closest Lake County Digital Radio Communications System (LCDRCS) site authority having jurisdiction;
- c. The radio frequency range shall be supported at 768-775/778-805 MHz and 806-815/851-860 MHz;
- d. The bi-directional amplifier shall have a performance reliability of not less than 98% based on input signal strength adequate to obtain a continuous maximum operating output level.

#### **SECTION II: ALLOWABLE AMPLIFICATION SYSTEMS**

Buildings and structures that cannot support the required level of radio coverage shall be equipped as needed with either a radiating cable system, or an internal multiple antenna system with or without FCC-accepted bi-directional 800 MHz amplifiers. 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 automatically charge in the presence of an external power input. If used, bi-directional amplifiers shall include filters to reduce adjacent frequency interference at least 35 dB below the NPSPAC band. The filters shall be tuned to 806 MHz and to 870 MHz, so they will be 35 dB below the NPSPAC frequencies of 824 MHz and 869 MHz respectively. Other settings may be used, provided they do not attenuate the NPSPAC frequencies, and further provided they are not more than one (1) MHz from the NPSPAC frequencies.

### SECTION III: ACCEPTANCE TEST PROCEDURES

When an in-building radio system is required and installation of same is completed, it shall be the building owner's responsibility to request testing of the radio system to ensure that two-way coverage on each floor of the building meets the requirements of the rules listed above.

All tests shall be conducted and documented by a Motorola Certified Technician, or equivalent, and the building owner shall retain all test records on the inspected premise and a copy submitted to the Fire Department officials.

Tests shall be conducted using a Motorola APX6000 portable radio, or equivalent, communicating through the Lake County Digital Radio Communications System (LCDRCS) specified by the authority having jurisdiction. Testing shall be conducted by dividing each floor of the building into a grid of approximately twenty (20) equal parts. A location in the approximate center of a grid area will be selected for the test (once selected, this location within each grid area shall be the only one used for test).

In the next part of the test the radio shall be keyed in an attempt to verify two-way communications through the LCDRCS. A maximum of two (2) nonadjacent grid areas shall be allowed to fail the test. In the event that three (3) nonadjacent grid areas fail the floor may be divided into forty (40) equal areas, where a maximum of four (4) nonadjacent grid areas shall be allowed to fail the test. If the system fails at this point, the building owner shall have the system corrected to meet the 95% coverage requirement.

The gain values of all amplifiers shall be measured and the test measurement results shall be kept on file with the building owner. These measurements shall serve as a baseline and verified at the time of each annual test. In the event the measurement results are unavailable for any reason, the building owner shall be required to rerun the acceptance test to reestablish the gain values.

### SECTION IV: ANNUAL TESTING PROCEDURES

When a radio system is required, the building owner shall submit annually to a performance test of all active components of the system, including but not limited to amplifiers, power supplies and backup batteries.

Amplifiers shall be required to have the same gain as that registered at initial system installation and acceptance.

Backup batteries and power supplies shall be tested under load for a period of one (1) hour to verify they will operate properly during an actual power outage. If 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 whether they are operating within the manufacturer's specifications for the intended purpose.

#### SECTION V: FIVE-YEAR TESTING PROCEDURES

When an in-building radio system is required, the building owner shall agree to the performance of a radio coverage test a minimum of once every five (5) years to ensure that the system continues to meet the requirements of the original acceptance test. The procedure outlined above shall apply to such tests.

#### SECTION VI: FIELD TESTING PROCEDURES

Police and fire personnel, after providing reasonable notice to the property owner or his/her representative, shall have the right to enter onto the property to conduct field testing to ensure radio coverage is within stated guidelines.

**BE IT FURTHER RESOLVED** that Resolution No. 2003-04, previously passed by the Board of Trustees, is hereby repealed in its entirety as in conflict herewith.

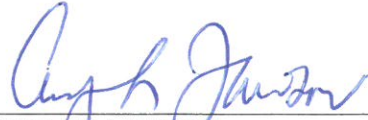
Adopted this 6th day of September, 2017.

  
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PAUL R. MALCHESKY  
Chairman  
\_\_\_\_\_  
CHRISTOPHER A. GALLOWAY  
Vice Chairman  
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CAROLINE N. LUHTA  
Trustee

### **CERTIFICATION**

I, the undersigned Amy L. Dawson, Fiscal Officer and Clerk of the Board of Trustees for Concord Township, Lake County, Ohio, do hereby certify that the foregoing Resolution No. 2017-27, is a true and accurate copy of the Resolution adopted by the Concord Township Board of Trustees at its meeting of September 6, 2017, and that I am duly authorized to execute this Certification.

Witness my hand this 6th day of September, 2017, in Concord Township, Ohio.



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AMY L. DAWSON  
Fiscal Officer