

City of Roseville CA

Revised ordinance

16.16.200 Public safety 800MHz radio building amplification system.

A. General. Except as otherwise provided, no person shall erect, construct, change the use of or provide an addition of more than 20 percent to, any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for the City of Roseville radio communications system, including but not limited to firefighters and police officers. For purposes of this section, adequate radio coverage shall include all of the following:

1. A minimum signal strength of -95 dbm available in 90 percent of the area of each floor of the building when transmitted from the closest City of Roseville radio communications system site;

2. A minimum signal strength of -95 dbm received at the closest City of Roseville radio communications system site when transmitted from 90 percent of the area of each floor of the building;

3. The frequency range which must be supported shall be the current band of frequencies used by the City of Roseville; and

4. A 100 Percent Reliability Factor. When measuring the performance of a bi-directional amplifier, signal strength measurements are based on one input signal adequate to obtain a maximum continuous operating output level.

B. Amplification Systems Allowed. Buildings and structures which cannot support the required level of radio coverage shall be equipped with any of the following in order to achieve the required adequate radio coverage: 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 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. These filters shall be tuned so that they will be 35 dbm below the City of Roseville frequencies.

C. Testing Procedures.

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 percent. Each floor of the building shall be divided into a grid of approximately 20 equal areas. A maximum of two nonadjacent areas will be allowed to fail the test. In the event that three of the areas fail the test, in order to be more statistically accurate, the floor may be divided into 40 equal areas. A maximum of four nonadjacent areas will be allowed to fail the test. After the 40-area test, if the system continues to fail, it will be the building owner's responsibility to have the system altered to meet the 90 percent coverage requirement. The test shall be conducted using a Motorola MTS 2000, or equivalent, portable radio, talking through the City of Roseville radio communications system 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 City of Roseville Radio Communications System. 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 measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.

As part of the installation, a spectrum analyzer or other suitable test equipment shall be utilized to insure that spurious oscillations are not being generated by the subject bi-directional amplifier (BDA) due to coupling (lack of sufficient isolation) between the input and output systems. This test will be conducted at time of installation and subsequent annual inspections.

2. Annual Tests. When an in-building radio system is required, it shall be the building owner's responsibility to have all active components of the system, such as amplifiers and power supplies and backup batteries tested to a minimum of once every 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 of a period of one hour to verify that they will properly operate during an actual power outage. If within the one hour test period, and in the opinion of the testing technician, the battery exhibits symptoms of failure, the test shall be extended for additional one hour periods until the integrity of the battery can be determined. All other active components shall be checked to determine that they are operating within the manufacturers specifications for the intended purpose.

3. Five Year Tests. In addition to the annual test, it shall be the building owner's responsibility to perform a radio coverage test a minimum of once every five (5) years to ensure that the radio system continues to meet the requirements of the original acceptance test.

4. Qualifications of Testing Personnel. Personnel conducting radio system tests shall be qualified to perform the work. All tests shall be conducted, documented and

signed by a person in possession of a current FCC license, or a current technician certification issued by the Associated Public-Safety Communications Officials International (APCO) or the Personal Communications Industry Association (PCIA). All test records shall be retained on the inspected premises by the building owner and a copy submitted to the fire department officials.

D. 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 that the required level of radio coverage is present.

E. Exemptions. This section shall not apply to: buildings less than 5000 square feet or any R-3 occupancy. (Ord. 3888 § 2 (part), 2002.)