

Chapter 13.06

PUBLIC SAFETY RADIO SYSTEM COVERAGE

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13.06.010 Intent and purpose.

The intent of this chapter is to set forth a regulatory framework to provide effective coverage throughout the city of Aliso Viejo for the countywide coordinated communication system utilized by police and fire personnel for public safety services. [Ord. 2010-126 § 1 (Exh. A); Ord. 2005-072 § 1 (7-1-846)].

13.06.020 Definitions.

The following words, terms, and phrases when used in this chapter shall have the meanings ascribed to them in this section, except where the context clearly indicates a differing meaning:

“Countywide coordinated communication system” means that radio system used by local law enforcement, fire, lifeguard and public works departments within the county of Orange for emergency and nonemergency radio communication on the 800 MHz radio band.

“Specifications” means the City of Aliso Viejo Public Safety Radio System Coverage Specifications, a copy of which is maintained in the office of the city clerk. [Ord. 2010-126 § 1 (Exh. A); Ord. 2005-072 § 1 (7-1-847)].

Cross-reference: definitions generally, AVMC [1.02.010](#).

13.06.030 Application and exemptions.

Except as otherwise provided in this chapter, no person shall own, erect, construct, maintain or occupy any building or structure, or any part thereof, or cause the same to be done, that fails to comply with the requirements of the Specifications. This chapter shall apply to every building and structure except the following:

- A. Existing buildings or structures for which a building permit has been issued;
- B. Elevators; and
- C. Buildings and structures that have three stories or less and that do not have subterranean storage or parking; provided, that this chapter shall apply to all subterranean storage or parking areas regardless of the height or number of stories of the building or structure; and
- D. Any building or structure where coverage consistent with the minimum level of service as set forth in the Specifications is naturally provided; and
- E. Any remodel, renovation, alteration or improvement of any commercial building or structure of less than 20 percent of the original footprint of the building or structure. [Ord. 2010-126 § 1 (Exh. A); Ord. 2005-072 § 1 (7-1-848)].

13.06.040 Costs.

The owner of any building or structure to which this chapter applies shall be responsible for all costs associated with compliance with the City of Aliso Viejo Public Safety Radio System Coverage Specifications. [Ord. 2010-126 § 1 (Exh. A); Ord. 2005-072 § 1 (7-1-849)].

13.06.050 Noncompliance.

Any person who owns, erects, constructs, maintains or occupies any building or structure to which this chapter applies, or any part thereof, or causes the same to be done, that fails to comply with this chapter, shall be guilty of a misdemeanor. [Ord. 2010-126 § 1 (Exh. A); Ord. 2005-072 § 1 (7-1-850)].

Cross-reference: violations and penalties generally, Chapter [1.06](#) AVMC.

13.06.060 Specifications adopted.

The City of Aliso Viejo Public Safety Radio System Coverage Specifications, attached to the ordinance codified in this chapter as Exhibit “A,” is hereby adopted and shall be applied to the buildings and structures specified in this chapter.

EXHIBIT “A”

CITY OF ALISO VIEJO

PUBLIC SAFETY RADIO SYSTEM COVERAGE SPECIFICATIONS

Definitions.

The following words, terms, and phrases when used in these specifications shall have the following meanings ascribed to them, except where the context clearly indicates a differing meaning:

“Amplification system” means an in-building public safety radio amplification system composed of FCC-certified bi-directional 800 MHz amplifier(s), associated distribution system, and subcomponents.

“FCC-certified technician” means an individual who is qualified with a general radiotelephone operator license (GROL/PG), or equivalent, to review design plans and perform tests in affected structures to measure compliance with the specifications set forth in this chapter.

“OCFA” means Orange County fire authority.

“Sheriff communications division” means the communications division of the Orange County sheriff-coroner department.

Required Specifications.

The following levels of coverage are required for public safety radio communication on the countywide coordinated communication system:

A. A delivered audio quality of level 3 on each floor of the building or structure, which constitutes audio quality that makes speech understandable with slight effort with occasional repetition required due to noise or distortion.

B. A minimum signal strength of (-95dBm) in 90 percent of the area of each floor of the building or structure from both the countywide coordinated communication system and from within the building or structure.

C. A frequency range supported from the countywide coordinated communication system of 851 to 869 MHz (base transmitter frequencies), and a frequency range supported to the

countywide coordinated communication system of 806 to 824 MHz (radio field transmit frequencies) on each floor of the building or structure.

D. All new buildings or structures shall be constructed with a two-inch conduit installed between the first floor or the bottom subterranean floor, as applicable, and said conduit shall extend along the center of the building to the roof. At each floor and the roof, an opening shall be made to afford easy access to the conduit from the ceiling. Access in either the form of drop ceiling or conduit shall be made available along hallways and through firewalls. All floors of subterranean parking garages shall have a similar conduit installation.

Options for Compliance.

Buildings and structures that cannot be constructed to provide the specifications set forth in AVMC [13.06.030](#) shall be equipped with an amplification system or an active device that complies with the following criteria or any other system approved in writing by the sheriff communications division:

A. Amplification System Specifications.

1. The amplification system shall include filters to reject frequencies below 851 MHz and frequencies above 869 MHz by a minimum of 35 dB.
2. All amplification system components must be 100 percent compatible with analog and digital modulations after installation without additional adjustments or modifications. The system must be capable of encompassing the frequencies stated above and capable of future modifications to a frequency range subsequently established by the city. If the system is not capable of modification to future frequencies, then a new system must be installed to accommodate the new frequency band.
3. All electrical components must be equipped with independent auxiliary battery power or generators to function at full capacity for at least 12 hours. The auxiliary battery systems shall be replaced per manufacturer's specifications at least every two years.
4. The amplification system shall be installed by a city-approved, manufacturer-trained and certified installer.

B. Active Device Specifications.

1. Active devices shall have a minimum of -50 dB third order intermodulation protection.
2. All active devices shall be FCC Part 90 Type Certified.
3. All electrical components must be equipped with independent auxiliary battery power or generators to function at full capacity for at least 12 hours. The auxiliary battery shall be replaced per manufacturer's specifications at least every two years.
4. Active devices shall be alarmed with a phone line that will provide dial tone to an alarm device. The alarm device will be programmed to activate a pager on the county of Orange's 900 MHz paging system. Access to the active device is required 24 hours a day by city and Orange County sheriff department technicians/engineers. The minimum alarms will indicate loss of AC failure and operational failure. The device shall also have modem access to allow remote monitoring.
5. Any AC operated power supplies shall have a UL listing.

Testing procedures.

A. Initial Tests.

1. Prior to issuance of a building permit for a building or structure to which these specifications apply, the applicant shall:
 - a. Retain an FCC-certified technician to review, sign, and stamp construction plans in order to ensure that such plans satisfy these specifications, and recommend, if needed, an amplification system or an active device for reliable radio communication;
 - b. Submit copies of plans certified by an FCC-certified technician to the city's chief building official, OCFA and the sheriff communications division.
2. Prior to the issuance of a certificate of occupancy for any building or structure to which these specifications apply, the applicant shall:
 - a. Retain an FCC-certified technician to test all areas of the building or structure in accordance with subsection (A)(2)(b) of this section, and certify by stamp and signature compliance with these specifications.

b. For purposes of testing, each floor of the building shall be divided into a grid of approximately 20 equal areas. A maximum of two nonadjacent areas will be permitted to fail the test on each floor. In the event that three of the areas fail the test, and to provide greater statistical accuracy, the floor may be divided into 40 equal areas. In such an event, a maximum of four nonadjacent areas will be permitted to fail the test. The test shall be conducted with a Motorola XTS 3000/XTS 5000 or equivalent portable radio talking through the countywide coordinated communication system. The test shall be conducted from a spot located approximately in the center of each grid area. The radio will then be keyed to verify two-way communication to and from the outside of the building through the countywide coordinated communication system. Once the spot has been selected and tested, prospecting for a better spot within the grid area is prohibited.

All auxiliary power systems shall be tested under load for a period of one hour to verify that the system will operate properly in the event of a power outage. The testing technician reserves the discretion to determine whether or not the battery exhibits symptoms of failure. The FCC-certified technician will ultimately decide if the auxiliary system needs to be replaced or upgraded.

B. Annual Tests. OCFA shall perform periodic tests, at a minimum on an annual basis, on each floor of each building or structure to which these specifications apply to confirm continued compliance with the specifications set forth in this chapter.

C. Record Retention. The owner of any building or structure to which these specifications apply shall retain all records of initial and annual tests performed pursuant to this section and shall submit copies to the city's chief building official, OCFA, and sheriff communications division within 30 days of completion of such tests. [Ord. 2005-072 § 2, Exh. A].