

## REGULATORY CHANGE FORM

(This form is to be used during the NORIA, PROPOSED and FINAL adoption stages to submit suggested changes. To PETITION a BOARD to develop a new regulation or amend an existing regulation, the "REGULATORY PETITION FORM" is be used.)

<b>SEND TO:</b> <b>Department of Housing and Community Development</b> <b>501 North 2nd Street</b> <b>Richmond, VA 23219-1321</b> <b>Email: grickman@dhcd.state.va.us</b> <b>Fax: (804) 371-7092</b>		<b>DOC. NO.</b> _____ <b>CMTE:</b> _____ <b>ACTION:</b> _____  <b>BOARD:</b> _____ <b>ACTION:</b> _____   
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SUBMITTED BY: Cheri Hainer  
 ADDRESS: 2405 Courthouse Drive Room 100 Virginia Beach, VA 23456  
 PHONE NUMBER: (757) 427 - 4211 REPRESENTING: City of Virginia Beach  
 REGULATION TITLE: USBC SECTION NUMBER: NEW 912 IBC & IFC

**PROPOSED CHANGE:**

**[F] SECTION 912 IN-BUILDING RADIO COVERAGE**

**Section 912.1 : A local governing body may enact an ordinance that requires all public buildings to be constructed to allow in-building coverage for emergency communications.**

**EXCEPTIONS:**

- 1. Buildings of Use Groups A-5, I-4, R-3, R-4, R-5, and U.**
- 2. Buildings of Type IV and V construction.**

**912.2 General. Where required, in-building radio coverage shall be designed, installed, inspected, tested, and maintained in accordance with the provisions of this section. 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.**

**912.2.1 A minimum signal strength of -95 dBm available in 95% of the area of each floor of the building when transmitted from the (name of public safety radio communications system).**

**912.2.2 A minimum signal strength of -95 dBm received at the (name of public safety radio communications system) when transmitted from 95% of the area of each floor of the building.**

**912.2.3 The frequency range which must be supported shall be 806 - 824 MHz and 850-869 MHz or adaptable to other appropriate emergency frequencies (700MHz or greater).**

**912.2.4 A 95% reliability factor.**

**912.3 Alternatives. 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.**

**912.3.1 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 the public safety carrier signal levels.

912.4 Acceptance Test Procedure. Upon completion of installation, the radio system shall be tested to ensure that two-way coverage on each floor of the building is a minimum of 95%.

912.4.1 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.

912.4.1.1 In the event that three (3) of the areas fail the test, in order to be more statistically accurate, the floor may be divided into forty (40) equal areas. In such event, a maximum of four (4) nonadjacent areas will be allowed to fail the test.

912.4.2 After the forty (40) area test, if the system continues to fail, the system shall be altered to meet the 90% coverage requirement.

912.4.2 The test shall be conducted using a public safety portable radio with speaker microphone, or equivalent portable radio, used on the (name of public safety 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 SRRCS. Once the spot has been selected, prospecting for a better spot within the grid area will not be permitted.

912.4.3 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 became lost, the building owner will be required to rerun the acceptance test to reestablish, the gain values.

912.5 Annual Tests. In-building radio system 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.