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An Act To Ensure the Reliability of Communications Equipment in Certain Buildings

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 35-A MRSA c. 94 is enacted to read:

CHAPTER 94

Radio and Cellular telephone amplification systems

§ 9301. Definitions

As used in this chapter, unless the context otherwise indicates, the following terms have the following meanings.

1. County communications center. "County communications center" means the communications center established pursuant to Title 30-A, section 453.

§ 9302. Scope

This chapter applies to:

- 1. New buildings.** The construction of a new building that is greater than 50,000 square feet;
- 2. Existing buildings.** The modification, alteration or repair of an existing building that is greater than 50,000 square feet if:
 - A.** The cost of the modification, alteration or repair exceeds 50% of the value of the building without modification, alteration or repair and is made within a 12-month period; or
 - B.** The usable floor area is expanded or enlarged by more than 50%;
- 3. Occupant load.** The basement of a building in which the occupant load is greater than 50 persons, regardless of the actual occupancy; and
- 4. Sublevel parking structures.** A sublevel parking structure that is greater than 10,000 square feet.

§ 9303. Radio coverage

1. Prohibition. Except as otherwise provided in this chapter, a person may not erect, construct or modify a building or structure or any part thereof that is subject to this chapter under section 9302 if that building or structure fails to support adequate radio coverage for firefighters, police officers or emergency medical services personnel.

2. Frequency range. The director or chief dispatcher of each county communications center, in consultation with the appropriate police, fire and emergency medical services personnel, shall determine the frequency range or ranges that must be supported under this section for that county.

3. Adequate radio coverage. For purposes of this section, "adequate radio coverage" means a successful communications test has been completed between the communications equipment in the building and the county communications center.

§ 9304. Cellular telephone service coverage

1. Prohibition. Except as otherwise provided in this chapter, a person may not erect, construct or modify a building or structure that is subject to this chapter under section 9302 or any part thereof if that building or structure fails to support adequate cellular telephone service coverage within the building or structure for the occupants or emergency medical services personnel.

2. Adequate cellular telephone service coverage. For purposes of this section, "adequate cellular telephone service coverage" means a communications test call has been successfully completed in a minimum of 85% of the area of each floor of the building or structure in communities in which normal cellular telephone service is provided.

§ 9305. Required radio field strength; inbound to the building or structure

1. Required minimum average radio field strength. Except as provided in subsection 2, for inbound communications, a minimum average radio field strength of one microvolt for analog systems and 5 microvolts for digital systems is required throughout 85% of the area of each floor of the building when transmitted from the county communications center that provides fire and emergency dispatch services to the building or structure.

2. Exception. If the radio field strength outside the building or structure where the receiving antenna system is located is less than one microvolt for analog systems and 5 microvolts for digital systems, the minimum average radio field strength for inbound communications must be equal to the radio field strength that is delivered to the receiving antenna of the building or structure.

§ 9306. Required radio signal strength; outbound from building or structure

1. Required minimum average radio signal strength. For outbound communications transmitted to the county communications center that provides fire and emergency dispatch services to the building or structure, a minimum average radio signal strength of one microvolt for analog systems and 5 microvolts for digital systems is required.

§ 9307. Amplification; authorization required

1. Authorization required. If amplification is used in the communications system of a building or structure, all necessary authorizations from the Federal Communications Commission must be obtained prior to the use of the system. Copies of such authorizations must be provided to the county communications center that provides fire and emergency dispatch services to the building or structure.

§ 9308. Enhanced amplification systems

1. Enhancements. If, in order to achieve adequate radio signal strength under this chapter, a building or structure must enhance its communications systems, the building or structure may use any of the following:

- A. A radiating cable system or systems;
- B. An internal multiple antenna system or systems;
- C. A voting receiver system or systems; or
- D. Any other system approved by the appropriate municipality.

2. Battery. If any part of the enhanced amplification system installed to achieve adequate radio signal strength under this chapter contains an electrically powered component, the system must be capable of operating an independent battery or generator system for a period of at least 8 hours without external power input or maintenance. Any independent battery system used pursuant to this subsection must automatically charge in the presence of external power.

3. Environmental controls. Amplification equipment installed pursuant to this section must have adequate environmental controls to meet applicable heating, ventilation, cooling and humidity requirements.

4. Physical location of equipment. Amplification equipment must be physically located in an area that:

- A. Is free of hazardous materials, including but not limited to fuel and asbestos; and
- B. Has access, 24 hours a day every day, for the telecommunications personnel of the county communications center that provides fire and emergency dispatch services to the building or structure.

5. Provision of information to telecommunications representative. The builder of a building or a structure subject to this chapter shall provide to the telecommunications personnel of the county communications center that will provide fire and emergency dispatch services to the building or structure the following:

- A. A blueprint indicating the location of the amplification equipment and associated antenna systems, including a view showing building access to the equipment; and
- B. Schematic drawings of the electrical equipment, backup power equipment, antenna system and any other equipment associated with the amplification equipment.

§ 9309. Ground system

1. Single point; internal tie. The communications system, including any amplification systems, cable and antenna systems, of a building or structure subject to this chapter must be grounded with a single-point ground system of 5 ohms or less. The ground system must include an internal tie point within 3 feet of any amplification equipment.

2. Protection. System transient suppression and grounding protection are required for the telephone circuits, alternating current circuits and radio frequency cabling in communications systems of buildings and structures subject to this chapter.

§ 9310. Testing

1. Testing procedures. Tests of the communications systems pursuant to this chapter must be coordinated with the county communications center that provides or will provide fire and emergency dispatch services to the building or structure. Such testing must be conducted on actual emergency services frequencies authorized by the Federal Communications Commission.

2. Measurement guidelines. Measurements for testing communications equipment pursuant to this chapter must be in accordance with the following guidelines.

- A. Measurements must be made with a service monitor using a unity gain antenna on a small ground plane.
- B. Measurements must be made with the antenna held in a vertical position at 3 to 4 feet above the floor.
- C. A calibrated service monitor may be used to conduct testing.
- D. The telecommunications personnel of the county communications center that provides or will provide fire and emergency dispatch services to the building or structure may make simultaneous measurements for purposes of verifying the accuracy of the measurements. A variance of 3 decibels between instruments is permissible.
- E. If varying measurements in one location are obtained, the measurement for that location is the average of those varying measurements.
- F. Signal strength must be measured on each floor, including those floors above and below ground, and must be measured in stairwells and parking areas. The building or structure must be divided into 50-foot grids, and measurements must be taken at the center of each grid.

3. Initial test. The initial test of the communications system of a building or structure subject to this chapter must be conducted, at no expense to the county communications center, in the presence of the telecommunications personnel of the county communications center that provides or will provide fire and emergency dispatch services to the building or structure.

4. Annual tests. The county communications center that provides fire and emergency dispatch services to the building or structure shall conduct annual tests of the communications system of the building or structure.

If the communications system of a building or structure fails to demonstrate adequate system performance, the owner of the building or structure shall remedy the problem and restore the functioning of the communications system consistent with the requirements of this chapter.

The county communications center shall retest the communications system at no expense to the county.

§ 9311. Violation

A person who violates the provisions of this chapter commits a civil violation for which a fine not exceeding \$500 may be adjudged. Each day the violation continues constitutes a separate offense.

SUMMARY

The purpose of this bill is to ensure the ability of emergency dispatch communications services to communicate with people who are inside buildings and structures. This bill establishes minimum requirements for radio and cellular telephone communications capabilities that apply to the construction and renovation of certain buildings and structures.