




BUILDING STANDARDS ADVISORY

Subject Wandering Patient Protection Systems	Approved by 	Advisory Number A-10 1 of 2
	Effective Date September 1996	NBC 1995 References(s) 3.4.6.15.

Compliance with *The Uniform Building and Accessibility Standards Act* (the UBAS Act) and regulations is addressed in this advisory. NBC 1995 means the National Building Code of Canada 1995 as adopted by regulations under the UBAS Act. Words in italics, other than Act titles, are defined in the NBC 1995.

Care or detention occupancies often provide care for patients with problems such as Alzheimer's or head trauma, who must be prevented for safety reasons from wandering away from supervised areas. Innovative systems are now available that allow frequently used doors to remain unlocked in normal use, but that lock when a wandering patient wearing a transmitting device attempts to pass through the door. These systems incorporate electromagnetic locks and an alarm that are activated when a wandering patient who has been fitted with a transmitting device (such as a bracelet or anklet) is within a specified distance of the door. When the patient moves away, the door returns to the normal unlocked position.

The NBC 1995 sets standards for locking, latching and other fastening devices in Article 3.4.6.15. With some exceptions, locking, latching and other fastening devices on a principal entrance door and every *exit* door must "permit the door to be readily opened from the inside with not more than one releasing operation and without requiring keys, special devices or specialized knowledge of the door opening mechanism." One of the exceptions to this requirement is for electromagnetic locking devices in accordance with Sentence 3.4.6.15.(4).

3.4.6.15.4) Electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on *exit* doors other than doors leading directly from a *high hazard industrial occupancy*, provided

- a) the *building* is equipped with a fire alarm system,
- b) the locking device, and all similar devices in the *access to exit* leading to the *exit* door, release upon actuation of the fire alarm signal,
- c) the locking device releases immediately upon loss of power controlling the electromagnetic locking mechanism and its associated auxiliary controls,
- d) the locking device releases immediately upon actuation of a manually operated switch readily accessible only to authorized personnel,
- e) a force of not more than 90 N applied to the door opening hardware initiates an irreversible process that will release the locking device within 15 s and not relock until the door has been opened,
- f) upon release, the locking device must be reset manually by the actuation of the switch referred to in Clause (d), and
- g) a legible sign is permanently mounted on the exit door to indicate that the locking device will release within 15 s of applying pressure to the door-opening hardware.

(See Appendix A.)

A-3.4.6.15.(4) Electromagnetic Lock. Electromagnetic locks are intended for use where there is a need for security additional to that provided by traditional exit hardware. They are not intended for indiscriminate use as alternative locking devices. The design of these devices requires evaluation to ensure that their operation will be fail-safe in allowing exiting in the event of foreseeable emergencies. If more than one locking device is used in a building, it is expected that one switch will release and reset all devices simultaneously.



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Use of wandering patient protection systems with electromagnetic locks that do not incorporate latches, pins or other similar devices in *care or detention occupancies* in which persons because of cognitive or physical limitations require special care or treatment (Group B Division 2 occupancies) can be considered to meet the intent of the NBC 1995 Sentence 3.4.6.15.(4) provided all the following provisions are met.

1. The *building* is equipped with a fire alarm system.
2. The locking device releases immediately
 - (a) upon initiation of a fire alarm signal,
 - (b) in the event of a power failure,
 - (c) upon actuation of a manually operated switch, button or key pad located adjacent to the door, and
 - (d) when the transmitting device is outside the detection zone.
3. The detection zone is set to cover a distance not greater than 4 m radius from the door.
4. A continuous audible alarm sounds for the entire time that the door is locked by the system.
5. A legible sign is permanently mounted on the door to indicate
 - (a) that the locking device will be activated when a patient wearing a transmitting device nears the door, and
 - (b) that the device will unlock when the patient wearing a transmitting device is moved away from the door.

Other applicable requirements of the NBC 1995 (i.e., for installation on a door that has a listed *fire-protection rating*) will apply.