




BUILDING STANDARDS ADVISORY

Subject Emergency Exit Hardware	Approved by 	Advisory Number A-9 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.

The NBC 1995 includes significant revisions to the following provision, in that the same restrictions apply to a principal entrance as well as exits and the door must be openable with only one releasing operation.

3.4.6.15.1) Except for devices on doors serving a *contained use area* or an *impeded egress zone* designed to be remotely released in conformance with Article 3.3.1.12., and except as permitted by Sentence (4) and Article 3.4.6.16., locking, latching and other fastening devices on a principal entrance door to a *building* as well as on every *exit* door shall 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. (See Appendix A.)

A-3.4.6.15.(1) Fastening Device. Turnpieces of a type which must be rotated through an angle of more than 90° before releasing a locking bolt are not considered to be readily openable. The release of a locking bolt should allow the door to open without having to operate other devices on the door.

This sentence clearly indicates that fastening devices on a principal entrance and on all required exits, unless excepted, must be readily operable from the inside without requiring keys, special devices or specialized knowledge of the door opening mechanism. Locksets with the inside knob always operable in both directions, commonly referred to as “quick-acting” or “classroom-type function,” comply with this section. Similar locksets that require the knob to be pushed in and turned to lock, and turned in the other direction to unlock, do not comply. Deadbolts with key operation on the inside are prohibited by this section. Deadbolts with turn button operation on the inside are not acceptable as the operating mechanism is too small and does not comply with the *barrier-free* requirements of Sentence 3.8.3.3.(3). Any configuration that requires two or more actions to release fastening devices on a door is not acceptable because the door could not be “readily opened” and the user would require “specialized knowledge” to be aware that more than one action is required to release the fastening devices on this particular door.

Required *exit* doors in certain *buildings* and locations are subject to additional requirements. Sentences 3.4.6.15.(2) and (3) of the NBC 1995 as amended by the UBAS regulations state:

3.4.6.15.2) If a door is equipped with a locking or latching mechanism, a device that complies with ULC-S132 “Standard for Emergency Exit and Emergency Fire Exit Hardware” and that will release the lock or latch and allow the door to swing wide open when a force of not more than 90 N is applied to the device in the direction of travel to the *exit* shall be installed on

- a) every *exit* door from a *floor area* containing an *assembly occupancy* having an *occupant load* more than 100,
- b) every door leading to an *exit* lobby from an *exit* stair shaft, and every exterior door leading from an *exit* stair shaft in a *building* having an *occupant load* more than 100, and
- c) every *exit* door from a *floor area* containing a *high hazard industrial occupancy*.



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3.4.6.15.3) Except as required by Sentence 3.8.3.3.(7), every *exit* door shall be designed and installed so that, when the lock or latch is released, the door will open under a force of not more than 90 N, applied at the knob or other lock or latch releasing device.

Sentence (2) requires that emergency *exit* hardware or emergency fire *exit* hardware, commonly referred to as “panic hardware” or “crash bars,” be installed in these locations. Underwriters’ Laboratories of Canada standard ULC-S132-93 “Standard for Emergency Exit and Emergency Fire Exit Hardware” is referenced. The exit hardware must meet these requirements, which include provisions regarding construction, performance, endurance and opening force. A significant feature required by the standard is the need for the actuating mechanism (bar, panel or paddle) to extend across at least one-half of the width of the door. Many exit devices that comply with these standards are listed by recognized testing agencies. Where hardware is to be installed on exit doors that are required to be fire rated closures (i.e., on doors into exit stair enclosures, on doors in *fire separations*), the hardware must meet the fire test requirements of the standard and be labelled as such. The door fastening device must not only be capable of being operated by the occupants as required in Sentence (1), it also must be released when a force of not more than 90 N is applied to the device in the direction of *exit* travel. Sentence (3) extends the opening force limitation to the door operation, in addition to the lock or latch releasing operation.

The NBC 1995 includes some additional requirements for door release hardware. Mounting height of door operating devices is limited to a maximum of 1200 mm above the floor. *Sprinklered floor areas* used exclusively for a bank or for the sale of retail merchandise are allowed to have otherwise unacceptable exit door locking devices, subject to an extensive list of conditions set out in Article 3.4.6.16.

The NBC 1995 does not authorize any deviation for exit hardware based on whether the *building* is occupied or not, or whether fastening devices are intended to be unlocked when the *building* is occupied.

For other requirements related to door release hardware, the full text of Subsection 3.4.6. should be reviewed.