
BULLETIN 2008-002-BU/EL

July 07, 2008

Revised December 1, 2011

AUTOMATIC EMERGENCY RECALL OF ELEVATORS

This Bulletin is intended to clarify the requirements of Article 3.2.6.4. in respect to the automatic emergency operation of elevators in a high building. This Bulletin is also to clarify the requirements for automatic emergency operation of elevators in other buildings as a result of recent changes to the CSA B44-07 standard referenced in the Vancouver Building By-law. The intent of the changes is to provide for the continued operation of elevators in a fire emergency as long as possible until the safety of the occupants in the building could be jeopardized by fire or smoke in the vicinity of the elevators or the elevator equipment.

BACKGROUND:

For high buildings, the VBBL Clause 3.2.4.11.(1)(g) mandates the installation of at least one smoke detector in each floor area in front of any elevator where required by Sentence 3.2.6.4.(5). For all buildings (high buildings and non-high buildings), at least one smoke detector is required in each elevator lobby and in the machine room by reference to the B44 standard.

The intent of this requirement is to activate an automatic emergency recall of an elevator (or elevators) upon actuation of a smoke detector that is located in the machine room and in each elevator lobby on each storey of a building for this specific purpose.

Provision of at least one smoke detector in each floor area of the building in front of the elevator(s) is crucial, as a smoke condition may occur in the elevator lobby on each floor of a building. Therefore, the elevator lobby of **each floor** must be equipped with at least one smoke detector, so upon activation of that smoke detector, the elevator(s) served by this lobby will be homed immediately.

Sentence 3.2.6.4.(6) of the VBBL, and also the B44 standard, requires that upon activation of a smoke detector (or smoke detectors) located in front of the elevators **at the recall level**, the elevator(s) will be directed to an alternate floor level. It is intended by this requirement that if the smoke detector located in the lobby of a recall level is activated, then all elevators **served by this particular lobby** must return to the alternate recall floor. If the machine room is located on the recall level, actuation of the smoke detector in this room must send the elevator to the alternate recall floor.

The B44 standard and Sentence 3.2.6.4.(5) of the VBBL mandates that the elevators' homing must also be provided by "**the building fire alarm system.**" This requirement means that actuation of a fire detector in the elevator lobbies, in the machine room, and in the elevator hoistways, must initiate the elevator recall operation through the building fire alarm system. Fire detectors located elsewhere in the building must not initiate the elevator recall. Sprinkler zones that serve the elevator lobbies, hoistway, or the machine room shall also initiate the elevator recall through the building fire alarm system. Sprinkler zones serving other floor areas shall not initiate recall.

The previous option that enabled the emergency operation of the elevator on the 2nd stage (instead of 1st stage) of a 2-stage fire alarm system is no longer permitted.

Note: As the smoke detectors described in Clause 3.2.6.4.(5)(a) are mandated to be designed as part of the building fire alarm system in accordance with Sentence 3.2.6.4.(7), and as fire alarm initiating

AUTOMATIC EMERGENCY RECALL OF ELEVATORS

devices, where applicable, are to be used to initiate recall, actuation of each such smoke detector, heat detector, or sprinkler will trigger activation of the fire alarm system's audible signal devices.

RULING:

1. For a new or existing high building, a fire alarm system is required for the emergency operation of elevators.
2. For a new building other than a high building, if a fire alarm system is provided or is required by the Building By-law, it must be used in the emergency operation of the elevators. If a fire alarm system is not required by the Building By-law, a Dedicated Detection and Recall System is permitted to be used.
3. For an existing building other than a high building with an existing fire alarm system that is not being upgraded, a Dedicated Detection and Recall System is permitted to be used in the emergency operation of the elevators.
4. Smoke detectors located in each floor area in front of the elevator(s) must be represented by a separate fire alarm initiating zone in addition to the zone indication requirements of Sentence 3.2.4.8.(2) of the VBBL.
5. The number of smoke detectors required to be installed in accordance with Clause 3.2.4.11.(1)(g) of the VBBL is dependent on a maximum area protected by a spot type smoke detector as prescribed by ULC S524.
6. The elevator machine room must be provided with smoke detectors.
7. Actuation of smoke detector installed in conformance with Clause 3.2.4.11.(1)(g) or in the elevator machine room must activate a building fire alarm system (must initiate alert or alarm signal to sound) and must initiate automatic emergency recall of the elevator or group of elevators that serve the floor area where the actuated smoke detector, heat detector, or sprinkler, is located.
8. Manual stations of a fire alarm system are not permitted to initiate recall.

PERMIT SUBMISSION REQUIREMENTS:

Every new elevator in a building and every elevator that is undergoing an upgrade must comply with both the requirements of CSA-B44 and the Vancouver Building By-law. Therefore, an alteration (voluntary or mandatory) to an elevator in a building regulated by the Building By-law shall require a building permit and an electrical permit.

For all proposed elevator and fire alarm upgrades, the following documents will be required at the time of application for a building and electrical permit:

1. Architectural floor plans and electrical plans (3 sets) drawn to an indicated scale which shows the location of elevators and the devices that are used to initiate emergency operation, the location of the fire alarm annunciator panel and the fire alarm control panel, or the dedicated detection and recall system panel, whichever is applicable.
2. A statement that the design complies to the applicable Vancouver Building By-law and the applicable B44 standard shall be shown on the plans.

AUTOMATIC EMERGENCY RECALL OF ELEVATORS

3. A letter to the Chief Building Official describing the full extent of the fire alarm system upgrade; the proponent of such proposal must spell out the scope of the project, for the purpose of Bulletin 2006-004-BU/EL;
4. The plans for the intended FAS upgrade are required to include a complete and detailed description of the following:
 - a) sequence of operation;
 - b) design requirements to appropriate Standard;
 - c) one or two stage system(s);
 - d) signal to Fire Department via an acceptable central monitoring station;
 - e) activation of ancillary devices; and
 - f) F.A. system zoning required in Sentence 3.2.4.8.(2) of Division B of the VBBL;
5. The plans for the intended FAS upgrade are required to include a separate wiring block diagram showing the interconnection of field devices, control unit, transponders, annunciators and power supplies external to control units or transponders (where required).
6. The architectural and electrical plans are to be sealed by registered professionals responsible for the elevator and electrical design, c/w schedules B1 and B2 letters of assurance for Architectural and Electrical disciplines.

(Sgd.) "W.M. Johnston, P.Eng."
DIRECTOR, LICENCES & INSPECTIONS
CHIEF BUILDING OFFICIAL AND
CITY ELECTRICIAN

(Sgd.) "J. McMahon"
PROGRAM MANAGER AND
DEPUTY CITY ELECTRICIAN