
BULLETIN 2006-004-BU/EL

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VOLUNTARY UPGRADE OF EXISTING FIRE ALARM SYSTEMS IN BUILDINGS

This Bulletin clarifies the application of the Vancouver Building By-Law (VBBL) with respect to a voluntary upgrade of an existing fire alarm system (FAS) in a building.

Background

When a FAS is required to be installed in a building, all applicable provisions of the VBBL must be met. These provisions include the requirements of Subsection 3.2.4., Article 3.2.5.19., Subsection 3.2.6. and Article 3.2.7.10. of Division B of the VBBL. This also means that the components of a fire alarm system must be installed in conformance with the CAN/ULC-S524 and that the wiring methods must comply with Section 32 of the Canadian Electrical Code (CEC, Part I).

Application of the Voluntary Upgrade of Fire Alarm Systems

When a standalone voluntary upgrade of an existing fire alarm system is contemplated by a building owner and where the scope of work does not include other work in conjunction with the voluntary upgrade, the following options should be considered by an applicant:

1. When a modification of (or addition to) an existing FAS is undertaken, all modified or added components must be compatible with the existing FAS, and these components must be installed in accordance with the CAN/ULC-S524 and wired as required by the CEC. These added or modified components must conform to the applicable provisions of Subsection 3.2.4., Subsection 3.2.6. and Article 3.2.7.10. of Division B of the VBBL. Building and electrical permits are required for such work and upon completion of the installation the modified / added components of the FAS must be verified according to Bulletin 2000-021-BU/EL.
2. When an existing FAS is completely replaced by a new fire alarm system, the new fire alarm system must meet provisions of the VBBL, CEC and CAN/ULC-S524. Such work must be done under respective building and electrical permits, and upon completion of the installation the entire FAS must be verified in conformance with the CAN/ULC-S537.
3. If a FAS upgrade is limited to the complete replacement of all existing field devices (i.e. detectors, audible / visual devices, and manual stations) and / or control units / annunciators without altering existing wiring and existing outlet boxes, then such work is considered to be a straight replacement of the electrical equipment. In this case, the intended work must be undertaken upon the issuance of the building and electrical permits and a complete verification of the FAS would be required in conformance with CAN/ULC-S537. When a minor or partial replacement of the existing field device(s) with the same type of new field device(s) which will be compatible with the existing FAS, an Electrical Permit is required for such work (no Building Permit is required), the FAS must be verified in accordance with Bulletin 2000-021-BU/EL.

Notes:

- a) Where a building permit is required under the provisions of option 1, 2 or 3 above, the application of building permit must be accompanied by a letter 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 this Bulletin. The building permit will be processed and issued through the Enquiry Centre without any formal plan review, provided that the entire scope of the intended work is limited to a standalone voluntary FAS upgrade. Where an option 1 or 2 is contemplated, two sets of electrical plans and corresponding Letter of Assurance (Schedule B), sealed and signed by a Registered Professional of record will also be required as part of the application submission to the City.

- b) Where a fire safety plan is required to be provided as a part of the voluntary FAS upgrade or where a new annunciator / CACF is intended to be installed or where the existing annunciator / CACF is intended to be relocated, the fire safety plan and/or the location of the annunciator will be subject to the review and acceptance by the VF&RS prior to the issuance of a building permit.
- c) Where site inspections under the above referenced building and electrical permits reveal any unsafe and / or hazardous condition within the building, then these unsafe and / or hazardous conditions will need to be rectified before the permits are finalized.
- d) Where a voluntary upgrade of the existing FAS is included in the scope of other work within the building alterations, additions, change of use, etc., then the provisions of this bulletin do not apply and the applicant must follow the established process in order to obtain a building permit.
- e) The proponent must be aware that all existing VBBL equivalencies and alternative solutions accepted for the building which are related to the building fire alarm system, must not be compromised by the intended FAS upgrade.
- f) An existing FAS installed in a building ceases to function due to the failure of the control unit must be provided with Fire Watch acceptable to the VF&RS. If as the result of electrical work under the building and electrical permits the existing fire alarm system is disabled, an alternative fire safety means acceptable to the VF&RS must also be provided in the building.
- g) For a building with an existing fire alarm system that is being upgraded to accommodate the automatic emergency recall for the emergency operation of elevator(s), Bulletin 2008-002-BU/EL should be consulted.

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