

BULLETIN 2020-006-BU/EL

February 19, 2020

VERIFICATION OF FIRE ALARM SYSTEMS SIGNALS TO FIRE DEPARTMENT

The intent of this bulletin is to clarify the requirements of Sentence 3.2.4.5.(1) and Sentence 3.2.4.7.(4) of the VBBL, for the verification of fire alarm systems and signals to fire department.
This bulletin replaces Bulletin 2000-021-BU/EL, Bulletin 2000-019-BU/EL and Bulletin 2003-009-BU/EL.

3.2.4.5. Installation and Verification of Fire Alarm Systems

- 1) Fire alarm systems, including the voice communication capability where provided, shall be installed in conformance with CAN/ULC-S524, "Installation of Fire Alarm Systems."
- 2) Fire alarm systems shall be verified in conformance with CAN/ULC-S537, "Verification of Fire Alarm Systems," to ensure they are operating satisfactorily.

Direction

Upon completion of the verification procedure, a verification report must be submitted to the building and electrical inspection groups by an acceptable fire alarm verification organization. The fire alarm system (FAS) verification report must be provided with the Appendix C form (C1 FAS Verification Report) completed and signed by a qualified person employed by the acceptable FA verification organization. The referenced Appendix C form is a part of the CAN/ULC-S537, and it has been amended for use in the City. When a FAS is connected to a ULC listed fire signal receiving facility, a ULC Certificate must be completed as a part of FA verification report (See attachments for the Appendix C form and a Sample of ULC Certificate).

When a FAS in an existing building that is subjected to the additions, alterations or modifications, then the extent of the FAS verification must be provided as follows (Refer to System Modifications CAN/ULC-S537):

- 1) When a control unit, transponder or an annunciator has been replaced with a new control unit, transponder or an annunciator, the entire FAS must be verified in accordance with CAN/ULC-S537.
- 2) When a control unit or transponder has been modified, the control unit or transponder, and those affected circuits must be verified in accordance with CAN/ULC-S537.
- 3) In an existing control unit or transponder, when a unit assembly of electrical parts or module has been replaced, it must be functioning according to the intent of its design; and must be verified in accordance with CAN/ULC-S537.
- 4) When an existing single-zone FAS has been subjected to an addition or alteration, the entire FAS must be verified.
- 5) When field devices, water flow devices, audible signal devices or components of voice communication have been added or modified in a FAS circuit, the entire FA zone/circuit must be verified, for conventional field device, Subsection 7.2 of the CAN/ULC-S537 is deemed to be acceptable to the City Electrician when only a minor modification is made to an existing FA circuit (i.e. replacement, relocation or addition of not more than 10% of conventional field devices in the circuit). Conventional Field Device is defined by both of the CAN/ULC-S537 and CAN/ULC-S524.

- 6) When an existing FAS component has been replaced with a different manufacturer's component, all components in the FAS must be compatible in conformance with CAN/ULC-S524. The ULC Test Report for such compatibility must be accompanied with the completed Appendix C form.

FAS Verification - By Qualified Personnel

The PREFACE of the CAN/ULC-S537 states that verification is to be carried out by qualified personnel in the employ of an organization acceptable to the authority having jurisdiction. Maintenance, evaluation and verification of electrical equipment is electrical work. These requirements mean that qualified persons involved in a verification procedure must have sufficient technical knowledge of FAS components, their function and performance, and must have necessary electrical qualification for evaluating conformance of these components and devices with installation provisions mandated by the CAN/ULC-S524, and Section 32 of the Canadian Electrical Code, Part I.

The following acceptance criteria have been established by the City for organizations involved in verification of fire alarm systems:

- 1) A qualified person employed by a ULC listed manufacturer of a FAS (i.e. qualified persons employed by Simplex, Edwards, Honeywell, Mircom, Notifier, etc.). Presently (in accordance with Section 4(1)(e) of the BC Electrical Safety Regulation) employees of an electrical equipment manufacturer are deemed to be qualified for the purpose of doing electrical work of commissioning of the equipment supplied by that manufacturer. Notes:
 - a) Acceptance of technicians employed by these manufacturers is based on the fact that these technicians have respective factory training and relevant electrical qualifications.
 - b) Manufacturers must provide the City Electrician with detailed substantiation in this regard.
- 2) A Registered Professional Engineer in BC (Electrical or Fire Protection), who is not involved in the installation of the FAS subjected to this engineer's verification.
- 3) A technologist in the electrical technology area recognized by ASTTBC who in addition has successfully completed the relevant FAS courses.
- 4) A qualified person employed by a FA service company, provided this person possesses sufficient documentation indicating a successful completion of relevant factory training on FA equipment and possesses a provincial certificate of qualification to do electrical work on FAS, i.e. Electrical TQ, Class A/B/C. Also, a qualified person is deemed to be a person in the employ of the verification organization (proof of qualification-training courses and relevant fire alarm and electrical certificates, etc., is required).

Notes

- 1) The City has been using a List of Acceptable Organizations/Qualified Persons, all FA verification reports are permitted to be signed only by qualified persons employed by verification organizations accepted by the City for this purpose; as per the List of Acceptable Organizations/Qualified Persons. This List is primarily for staff use, and will be updated approximately twice a year. The City's inspectors accept FA verification reports only from the List of Acceptable Organizations/Qualified Persons for purpose of the CAN/ULC-S537.

- 2) To be listed in the City as an acceptable verification organization and qualified persons for purpose of the CAN/ULC-S537, the organizations and qualified persons must meet the foregoing criteria. Deputy City Electricians must be contacted directly for evaluation of listing criteria.

3.2.4.7. Signals to Fire Department

- 4) Notification of the fire department, as required by Sentences (1), (2) and (3), shall be provided in conformance with CAN/ULC-S561, "Installation and Services for Fire Signal Receiving Centres and Systems." (See Note A-3.2.4.7.(4).)

CAN/ULC-S561 which is referenced in Sentence 3.2.4.7.(4) and CAN/ULC-S524 which is referenced in Sentence 3.2.4.5.(1) go hand-in-hand; CAN/ULC-S524 requires that interconnection of the FAS with the fire signal receiving centres shall be in accordance with CAN/ULC-S561; conformity to CAN/ULC-S561 entails conformity with the construction and operation of a signal receiving centre; the installation, inspection and testing, and maintenance of the signal transmitting unit; listed components, disposition of signals, and communication method.

UL category [DAYIC](#) covers signal receiving centres that provide fire protective signalling services, where a listed alarm (monitoring) company issues a "Full Service Central Station Fire Protective Signalling System Certificate," the listed company are authorized to install, monitor, and maintain Protective Signaling Fire Alarm Systems in compliance with the requirements in CAN/ULC-S561. (Fire Protective Signalling Systems, Signal Receiving Centres, Full and Shared Service)

UL category [DAYYC](#) covers signal receiving centres that provide shared service fire protective signalling services, where a listed alarm (monitoring) company issues a "Shared Service Central Station Fire Protective Signalling System Certificate" to a system that has been installed by a listed fire protective signalling system installation company, a contract exists between the two companies to share the installation, maintenance and signal monitoring services associated with the particular installation. [Fire Protective Signalling Systems, Signal Receiving Centres, Full and Shared Service] (Fire Protective Signalling Systems, Installation Companies, Shared Service)

Direction

Each FAS installation requires connection to the fire department conforming to Sentence 3.2.4.7. (4) of the VBBL must be completed with the ULC Certificate. This Certificate must be completed as a part of the FAS verification report. The alarm (monitoring) company ([DAYIC](#)) issues the certificate, and where required and applicable the installation company ([DAYYC](#)) included by the certificate, must be ULC listed, under the [Certificate Service of Underwriters Laboratories of Canada](#).

Annual permits are required for the operation and maintenance of fire alarm systems, and for the inspection, testing and maintenance of the signal transmitting units. See [BULLETIN 2019-003-EL](#).

(Original signed by)

P. Ryan, M.Sc., P.Eng.
Chief Building Official
Director, Building Code and Policy

(Original signed by)

W. White
Deputy City Electrician
Manager, Electrical Inspection Branch

VERIFICATION OF FIRE ALARM SYSTEMS

CAN/ULC-S537-13 - APPENDIX C (INFORMATIVE) – (FAS) FIRE ALARM SYSTEM VERIFICATION RECORDS

(Amended for use in the City of Vancouver) (Reference: Subsection 4.1, Clauses 4.1.7, 4.2.1, 4.2.2)

C1. FIRE ALARM SYSTEM VERIFICATION REPORT (Reference: Clause 4.1.6, 4.2.2)

Address: _____ **Date:** _____

System Manufacturer: _____ **New FAS:** ☐ **Electrical Permit #:** _____

Model Number: _____ **Existing FAS:** ☐ **Building Permit #:** _____

A.	System provides single-stage operation.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	-
B.	System provides two-stage operation.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	-
C.	The entire fire alarm system has been verified in accordance with CAN/ULC-S537, Standard for Verification of Fire Alarm Systems.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	-
D.	This is a partial verification for a partial occupancy. (see scope of electrical permit and Note 1)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
E.	Components of the existing fire alarm system have been modified or replaced with components from a different manufacturer and are compatible with the existing fire alarm system components. (ULC Test Report must be attached with FAS verification report)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
F.	This is a partial verification for a fire alarm system that has been replaced in stages. (see Note 1)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
G.	This is a verification of a portion of an existing fire alarm system verified in accordance with Section 7, System Modifications of CAN/ULC-S537. (See Note 1)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
H.	Installed in accordance with the design and CAN/ULC-S524, Standard for the Installation of Fire Alarm Systems.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
I.	The fire alarm system documentation is on site and includes a description of the system.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
J.	The fire alarm system is fully functional without deficiencies. (see Note 2)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
K.	The fire alarm system is connected to a ULC-listed fire signal receiving centre: if “yes” - the ULC Fire Protective Signaling Certificate No: _____ Specify the monitoring company name and location: _____ A copy of the ULC Fire Protective Signaling Certificate is submitted to City.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
L.	Comments: _____ _____			
M.	A copy of this report will be given to the following, who is the owner or owner’s representative for this building: _____	Yes <input type="checkbox"/>	No <input type="checkbox"/>	-

This is to certify that the information contained in this Fire Alarm System Verification Report is correct and complete.

Name of qualified person conducting verification Company Telephone

Notes:	
1. Please, elaborate on the extent of verification of the existing F.A.S.: _____	
2. Identified deficiencies relate to:	
a) the existing portion of the FAS is not covered by the scope of work under electrical permit: _____	Yes <input type="checkbox"/> No <input type="checkbox"/>
b) the newly installed FAS (or modified/added portion of the existing FAS.)	Yes <input type="checkbox"/> No <input type="checkbox"/>



**Underwriters
Laboratories**

Certificate No: PSXXXXX
File No: PXX CCN: DAYIC
Service Center No: 1
Expires: 05/12/2024
Issued: 02/19/2020

FIRE PROTECTIVE SIGNALING CERTIFICATE (CAN/ULC-S561)

This Certifies that the Alarm Companies whose names appear below are Listed by ULC and are authorized to install, monitor, and maintain Protective Signaling Fire Alarm Systems in compliance with the requirements in CAN/ULC-S561 for Protective Signaling Systems.

The assignment of responsibilities as indicated shall be set out in a contract between the companies involved.

The Alarm Monitoring Company named on this certificate bears the responsibility for the monitoring of the status of signals generated by the system and for the keeping of records respecting these activities.

The Alarm Installation Company named on this certificate bears the responsibility for the correctness of the system installation, periodic testing, maintenance repair, as well as the keeping of records respecting these activities.

It is also the responsibility of the Alarm Installation Company to confirm that the equipment used in the installation is ULC Labelled and is suitable for the application. All required service is provided for in the care contract between the Alarm Installation Company and the Occupant.

ULC makes no representations or warranties, expressed or implied, that the alarm system will prevent any loss by fire, smoke, water damage, or otherwise, or that the system will in all cases provide the protection for which it is installed or intended. The certificate is evidence that the signaling devices are monitored by a ULC Listed Alarm Monitoring Company and that the installation, maintenance and service is provided by a ULC Listed Alarm Installation Company, which are subject to countercheck field inspections by ULC Representatives. This certificate is to be posted at the Subscriber's site and is valid only with a current maintenance contract.

ULC is not an insurer and does not assume any obligation or undertake to discharge any liability of the Alarm Companies or any other party for any loss, which may result from failure of equipment, incorrect installation, non-conformity with requirements, cancellation of this certificate or withdrawal of the Alarm Company from Listing by ULC prior to the expiration date appearing on this certificate.

SN: PS112XXXXXX

Protected Property:

VANCOUVER, BC V5Y 1X4

Alarm Monitoring Company:

CANADA

Alarm Service Company:

Vancouver, BC
CANADA

Alarm System Description: This system is installed and operated in accordance with STANDARD CAN/ULC-S561,2013 edition.

System Number: SXX17

System Type: Fire Protective Signaling

Authority Having Jurisdiction: CITY OF VANCOUVER

Responding Fire Department: VANCOUVER FIRE DEPARTMENT

System Deviations from Referenced Standards: No deviations from Standards

System Type: Fire Panel

Alarm Transmission Method: Cellular Digital Alarm Communicator

Local F/A Interconnection: Yes

Line Security: Passive

Control or Transmitter Unit: DSC,NEO HS-XXXX

(City of Vancouver BULLETIN 2020-006-BU/EL - Sample of ULC Certificate)