

Integrated Systems Testing (IST) Guide

An integrated testing coordinator (ITC) must be a licensed engineer or ULC certified.

When Integrated Testing is Required

Buildings with two or more life safety systems shall be integrated with each other and tested as a whole in accordance with CAN/ULC-S1001, "Standard for Integrated Systems Testing of Fire Protection and Life Safety Systems."

Integrated Testing Planning Phase

The integrated testing plan shall include the project description, location, building design, construction type, etc. The design professional(s) shall provide documentation detailing each interconnection between fire protection and life safety systems to the integrated testing coordinator (ITC). This documentation shall be sufficient for the ITC to prepare the integrated testing plan. Such documentation shall include but not be limited to the following, as applicable:

- 1) Building Floor plan(s)
- 2) Fire protection and life safety system designs (drawings and specifications)
- 3) Manufacturer operating and testing instructions
- 4) Documentation of any alternative solutions and/or deviations from the requirements of Codes and Standards.

The ITC shall prepare an integrated testing plan for the testing of the life safety systems. The plan shall consist of a report submitted to the building department for review outlining the following:

- 1) Functional objectives of the system integrations
- 2) The sequence of operations of the systems under normal operating conditions and under fire conditions.
- 3) Test protocol and procedures for integrated fire protection and life safety systems
- 4) A procedure for notifying building occupants of integrated systems testing
- 5) Safety protocols for ensuring occupant safety during testing.

Where the building is intended to be occupied in phases, the integrated testing plan shall be developed for the entire building with testing identified for each occupancy phase.

Where design professional(s) make changes to the systems that impact the integrated testing plan, revisions shall be submitted to the building department for review.

Documentation checklist and sample testing plan provided below.

Failure to accurately complete the Pre-Testing Documentation and provide written confirmation from contractors and design professionals may delay Occupancy.

The plan shall also include the dates for the subsequent testing as per CAN/ULC 1001 Section 8.2 for Integrated testing frequency.

Integrated Systems Testing Phase

Design professionals and installing contractor(s) shall provide the ITC with written confirmation and documentation that all systems have been installed in accordance with the design and are ready for testing.

Upon successful completion of the IST, documentation shall be provided to the Building Owner, Building Department and maintained on site. Integrated Testing Completion: The following checklist must be completed or included with the Integrated Testing Report. Failure to do so may delay occupancy.

Integrated Systems Testing (IST) Documentation

This is a guide of the information to be provided within the IST Plan and included with the testing report.

Date: _____

Integrated Testing Plan Prepared by: _____

Integrated Testing Coordinator: _____

Email: _____

Project Description: _____

Business Name: _____

Address: _____

No. of Storeys: _____

Construction Type: _____

Occupancy classification: _____

Written Confirmation from Design professionals that they have conducted an evaluation of their associated fire protection and life safety system that the system is installed in accordance with its design must be included in the testing report or included with this document.

Sprinkler/Standpipe System Design Professional	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Mechanical System Design Professional	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Electrical System Design Professional	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Fire Alarm System Design Professional	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Fire Pump Design Professional	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Emergency Generator Design Professional	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Elevator Design Professional	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No

Written confirmation from the installing contractors that the fire protection and life safety systems, or parts thereof, have been installed in accordance with the design and are ready for Integrated Systems Test. The written confirmation from the design professionals must be included in the testing report or included with this document.

Sprinkler/Standpipe System Contractor	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Mechanical System Contractor	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Electrical Contractor	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Fire Alarm Contractor	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Fire Pump Contractor	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Emergency Generator Contractor	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Elevator Contractor	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Other:		<input type="radio"/> Yes	<input type="radio"/> No
Other:		<input type="radio"/> Yes	<input type="radio"/> No

Documentation for the verifying parties confirming that the fire protection and life safety systems, or parts thereof, have been installed in accordance with the design. This documentation must be included with the testing report.

Test Certificate Sprinkler/Standpipe Under Ground Piping	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Test Certificate Sprinkler/Standpipe Above Ground Piping	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Fire Alarm Verification Report	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No

Fire Pump Test Certificate	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Fire Suppression System acceptance test report	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Emergency Generator CSA C282 Test Certificate	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
TSSA Elevating Device Test Certificate	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Fire Signal Receiving Centre Test Certificate	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Fire Suppression Systems	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Hold Open Devices	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Electromagnetic Locks	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Smoke control systems	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Other:	<input type="radio"/> N/A	<input type="radio"/> Yes	<input type="radio"/> No
Other:		<input type="radio"/> Yes	<input type="radio"/> No
		<input type="radio"/> Yes	<input type="radio"/> No

The table below must be filled out and signed by the Integrated Testing Participants as required by CANULC 1001 upon completion of the test protocol and procedures confirming that the participants in the Integrated Systems Testing concur with the results of the tests. This form must be complete and submitted with the final report or included in the testing report.

IST Coordinator	
Name	
Date	
Company	
Signature	
Owner	
Name	
Date:	
Signature	
Sprinkler/Standpipe Contractor	
Name	
Date	
Company	
Signature	
Fire Alarm Contractor	
Name	
Date	
Company	
Signature	

Electrical Contractor	
Name	
Date	
Company	
Signature	
Mechanical Contractor	
Name	
Date	
Company	
Signature	
Fire Pump Contractor	
Name	
Date	
Company	
Signature	
Emergency Generator Contractor	
Name	
Date	
Company	
Signature	
Elevating Device Contractor	
Name	
Date	
Company	
Signature	
Other:	
Name:	
Date:	
Company:	
Signature	
Other:	
Name:	
Date:	
Company:	
Signature	