NOTICE
NEW ALBERTA BUILDING, FIRE AND ENERGY CODES

<table>
<thead>
<tr>
<th>Codes</th>
<th>Coming into force or Implementation Date</th>
<th>Transition Period End Date</th>
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<tr>
<td>Alberta Building Code 2014</td>
<td>May 1, 2015</td>
<td>November 1, 2015</td>
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<tr>
<td>Alberta Fire Code 2014</td>
<td>May 1, 2015</td>
<td>No transition required</td>
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APPLICABLE FIRE CODE PRIOR TO MAY 1/15

ALBERTA FIRE CODE 2006

CAN-ULC-S536-04
APPLICABLE FIRE CODE PRIOR TO MAY 1/15

ALBERTA FIRE CODE 2014

CAN-ULC-S536-13
QUALIFIED FIRE ALARM SERVICE PROVIDERS

2.2.4.3. Fire Alarm and Voice Communication Systems

1) Only qualified persons shall install, test or perform maintenance on fire alarm and voice communication systems when they have acquired an approved certificate of training from
   a) a public post-secondary educational institution, or
   b) the Canadian Fire Alarm Association (CFAA).

(See Appendix A.)

A-2.2.4.3.1 The types of training provided and other provincial legislation may limit the scope of activities a qualified person may perform on such systems.

Persons are considered qualified to make operational, inspect, test and maintain fire alarm and voice communication systems when they have acquired a certificate of training in this area of study from
   (a) a public post-secondary educational institution, including:
       (i) an Alberta Journeymen's Electrician certificate on or after September 1, 1991,
       (ii) an Alberta Journeymen's Electrician certificate prior to September 1, 1991 and a fire alarm course recognized by the Chief Fire Administrator,
       (iii) a Canadian Red Seal Journeymen's Electrician certificate and a fire alarm course recognized by the Chief Fire Administrator, or
   (b) Fire Alarm Technician certification issued by the Canadian Fire Alarm Association (CFAA) or the Northern & Southern Alberta Institutes of Technology.

Persons are considered qualified in the installation of fire alarm and voice communication systems when they have acquired
   (a) an Alberta Journeymen's Electrician certificate on or after September 1, 1991,
   (b) an Alberta Journeymen's Electrician certificate prior to September 1, 1991 and have completed a fire alarm course recognized by the Chief Fire Administrator, or
   (c) a Canadian Red Seal Journeymen's Electrician certificate and have completed a fire alarm course recognized by the Chief Fire Administrator.

Fire alarm verifications are generally the responsibility of a registered engineering professional. In Alberta, this must be the registered professional who will complete a Schedule “C” under the Alberta Building Code.
4.2 For the purposes of this Standard, an annual inspection shall be held within a period not exceeding 12 months from the date of the previous inspection.
Appendix C1

C1 FIRE ALARM SYSTEM ANNUAL TEST AND INSPECTION REPORT

(Reference: 6.1.1)

<table>
<thead>
<tr>
<th>Item</th>
<th>YES</th>
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This is to certify that the information contained in this Fire Alarm System Annual Test and Inspection Report is correct and complete.

Printed Name of Primary or Supervising Technician Conducting the Test and Inspection

Signature of Primary or Supervising Technician Conducting the Test and Inspection

Printed Name of Technician Conducting the Test and Inspection

Signature of Technician Conducting the Test and Inspection
Appendix C2

Control Unit and Transponders

Which forms are to be completed?

- C2.1 Control Unit or Transponder Test
- C2.2 Voice Communication Test
- C2.3 Control Unit or Transponder Inspection
- C2.4 Power Supply Inspection
- C2.5 Emergency Power Supply Test

ALL OF THESE FORMS ARE REQUIRED FOR EVERY CONTROL UNIT OR TRANSPONDER REGARDLESS OF WHETHER THEY ARE APPLICABLE.
Appendix C2.1
Appendix E

APPENDIX E (INFORMATIVE) — DESCRIPTION OF FIRE ALARM SYSTEM FOR INSPECTION AND TEST PROCEDURES

(After references 4.5, 4.5.2, I.3, G.1, B.1, D.1, F.1, H.1, I.4, I.5.1, I.5.2, and I.4.2.1, C.1, G.1, G.2, C.2, M.1, C.2, M.2, C.2, M.2.1)

NOTE: If the building is provided with a fire safety plan, the services of an engineer should be obtained from this document.

E.1. Manufacturer name and model number.
E.2. System operation (conventional, loop, or two-stage) — supervised circuits.
E.3. Location of control unit or transmitter, display and control center, annunciators, and remote manual alarm station.
E.4. Description of operational mode-capacity-operational. If applicable.
E.5. Sequence of operation, including, but not limited to, the following briefly described:
   A. Alarm signal and alarm signal sequence (i.e., second stage on the fire floor, floor above and floor below and first stage on remaining floor(s));
   B. Procedure for restating alarm system, silencing alarm signals and acknowledging trouble conditions;
   C. Identifying function of each可分为 switch or push button on the control unit or transmitter;
   D. Smoke alarm system for fan shutdown-messages present;
   E. Elevator hoists activated by fire alarm;
   F. Magnetic door lock release activated by fire alarm;
   G. Door hold release activated by fire alarm;
   H. Fire alarm system activated by fire alarm;
   I. Transmission of signals to remote monitoring connection.
E.6. General description of location and devices connected to control unit or transmitter, i.e.:
   A. Speaker boxes and voice supervisory equipment on a floor-by-floor basis;
   B. Manual stations at exits;
   C. Smoke detectors in stairwells and corners;
   D. Heat detectors at the top of elevator shafts and in service and storage rooms;
   E. Duct-type smoke detection in air handling systems;
   F. Ancillary systems (kitchen venting, basement electric, etc.).
Appendix C2.2
Voice Communication Tests
Appendix C2.3
Control Unit or Transponder Inspections
Appendix C2.4
Power Supply Inspections
Appendix C2.5
Emergency Power Supply Test and Inspection
Appendix F3

BATTERY CAPACITY METER TEST

F3.1 The capacity should not be less than the calculated A·h requirements of the system after the test, otherwise, replace batteries.
Appendix F4

F4 BATTERY CAPACITY CALCULATION

F4.1 Perform battery capacity calculation as follows:

A. \([\text{Supervisory current as per Appendix C2.5 Item D}] \times [\text{Supervisory Requirement (h)}] = \text{A} \times \text{h}\)

B. \([\text{Full load current (A)} \text{ as per Appendix C2.5 Item E}] \times [\text{Alarm Requirement (h)}] = \text{A} \times \text{h}\)

C. \(\text{System Battery Capacity Requirement} = (\text{F4.1 Item A result}) + (\text{F4.1 Item B result})\)

Enter the result into Appendix C2.5 Item Q of the report.
Appendix F5
F5 EMERGENCY POWER FOR FIRE ALARM SYSTEMS – NBC 2010

SUPERVISORY POWER
• 24 h Supervisory power, regardless of the building type

FULL LOAD
• 2 h High Rise Buildings
• 1 h Hospital or Correctional Facility that isn’t a High Rise
• 5 min Most small and medium buildings that have an all in one Fire Alarm Control Panel installed at the principal Entrance
• 30 min for any other building.
**EXAMPLE 1:**
a non highrise building with an annunciator installed at the front door with a pair of 12V 13Ah batteries that were installed in 2014.

**Battery Capacity Test**
Results are 90% and 85%  
Using the lower value of the two;  
85% x 13Ah = **11.05** Ah available capacity

**Battery Capacity Calculation**
Supervisory load: [0.25A] x [24h] = 6Ah  
Full Alarm Load: [3.0A] x [0.5h] = 1.5Ah  
Battery Requirement: [6Ah] + [1.5Ah] = **7.5Ah**

**11.05 Ah > 7.5 Ah**  
✓
EXAMPLE 2:
a highrise building transponder with a pair of 12V 26Ah batteries that were installed in 2012.

Battery Capacity Test
Results are 75% and 80%
Using the lower value of the two;
75% x 26Ah = 19.5 Ah available capacity

Battery Capacity Calculation
Supervisory load: [0.65A] x [24h] = 15.6Ah
Full Alarm Load: [3.5A] x [2h] = 7Ah
Battery Requirement: [15.6Ah] + [7Ah] = 22.6Ah

19.5 Ah < 22.6 Ah  ×
EXAMPLE 3:
a hospital transponder with a pair of 12V 55Ah batteries that were installed in 2010.

Batteries are greater then 5 years ✗
ANNUNCIATOR, REMOTE TROUBLE SIGNAL UNIT, DISPLAY AND CONTROL CENTRE TEST AND INSPECTION

Which forms are to be completed?

- C2.6 Annunciator, Remote Trouble Signal Unit, Display and Control Centre Test and Inspection
- C2.7 Annunciator or Sequential Displays
- C2.8 Remote Trouble Signal Unit Test and Inspection
- C2.9 Printer Test

ALL OF THESE FORMS SHALL BE PRODUCED REGARDLESS OF WHETHER THEY ARE APPLICABLE
Appendix C2.6
ANNUNCIATOR, REMOTE TROUBLE SIGNAL UNIT, DISPLAY AND CONTROL CENTRE TEST AND INSPECTION
Appendix C2.7
Annunciators or Sequential Display
Appendix C2.8
Remote Trouble Signal Unit Test and Inspection
Appendix C2.9

Printer Test
Appendix C2.10
Operation Test for Data Communication Link
Field Devices
3.35 MANUAL STATION – A device designed to initiate a signal when operated manually.
3.30 HEAT DETECTOR - A fire detector designed to operate at a predetermined temperature or rate of temperature rise.
Heat Detectors
Smoke Detectors

3.48 SMOKE DETECTOR – A fire detector designed to operate when the concentration of airborne combustion products exceed a predetermined level.
Smoke Detectors

2014 Alberta Fire Code

6.3.1.2. Inspection and Testing

1) Fire alarm systems shall be inspected and tested in conformance with CAN/ULC-S536, “Inspection and Testing of Fire Alarm Systems.”

2) Fire alarm and detection system components shall be accessible for purposes of inspection or maintenance.

3) The requirements for annual smoke detector sensitivity testing outlined in Subsection 6.7.4. of CAN/ULC-S536, “Inspection and Testing of Fire Alarm Systems,” shall not apply until a smoke detector has been in place for 10 years. (See Appendix A.)

4) Smoke detectors, other than those which are automatically tested by the fire alarm system, shall be:
   a) replaced within ten years of their manufacture with a smoke detector listed for use with the fire alarm system and appropriate for the location, or
   b) from the time they reach ten years of age and onward, tested annually for sensitivity in conformance with the methods prescribed in Subsection 6.7.4. of CAN/ULC-S536, “Inspection and Testing of Fire Alarm Systems.” (See Appendix A.)
Smoke Detectors
2014 Alberta Fire Code

**A-6.3.1.2.(3)** Addressable fire alarm systems may already conduct this testing automatically and this provision will not apply to those systems.

**A-6.3.1.2.(4)** In instances where smoke detectors are already older than ten years, the owner must conduct annual successful sensitivity tests or replace all such detectors.
Duct type Smoke Detectors
Waterflow Detection
Supervisory Devices
Supervisory Devices

LOW PRESSURE
Supervisory Devices

GENERAL – LOSS OF POWER
Signals

GENERAL
In Suite Signals
Emergency Telephones
Circuit End of Line
Thank You for your Valuable Time

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