
Part 1 General

1.1 RELATED SECTIONS

- .1 Division 01 – General Requirements.
- .2 Section 26 05 00 – Common Work Results for Electrical.

1.2 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 26 05 00 – Common Work Results for Electrical.
- .2 Submit certificate of proof of performance.

1.3 OPERATION AND MAINTENANCE DATA

- .1 Provide data for incorporation into maintenance manual specified in Division 01 – General Requirements and Section 26 05 00.

1.4 SYSTEM OVERVIEW

- .1 Provide new access control devices to match existing access control system.
- .2 Connect new access control devices to existing access control system.

Part 2 Products

2.1 ACCESS CONTROL DEVICES

- .1 Provide the following access control devices (match existing):
 - .1 Network Controller: RBH #NC-100.
 - .2 Door Controllers: RBH #RC-2.
 - .3 Transformer: 16 Vac, 150 VA.
 - .4 Power supply for door strikes.
 - .5 Card Readers: HID #6005.
 - .6 Door Contacts: GE #1078.
 - .7 Egress Motion Detectors: Kantech # T-Rex.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

3.2 INSTALLATION

- .1 Install access control devices as indicated.
- .2 Locate access control devices as indicated and make interconnections in accordance with manufacturer's requirements.
- .3 Connect new devices to existing access control system.
- .4 All wiring shall be in conduit.
- .5 Program software to function in accordance with the Owner's requirements.
- .6 The final programming and/or identification shall use room identifications which will be provided to the Contractor. The room numbers used on the contract drawings shall not be used unless advised otherwise.

3.3 FIELD QUALITY CONTROL

- .1 The complete system shall be tested and verified to confirm that it is operating in conformance with the manufacturer's requirements and the intentions of this specification.
- .2 Provide a certificate from the manufacturer verifying that each component is functioning properly and that the system is functioning as intended.
- .3 Notify Departmental Representative two weeks prior to testing so that they may be present during testing and verification.

3.4 TRAINING

- .1 Provide sufficient training to ensure that operating personnel are capable of proper operation of the system.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Division 01 – General Requirements.
- .2 Section 26 05 00 – Common Work Results for Electrical.
- .3 Section 26 05 32 – Outlet Boxes, Conduit Boxes and Fittings.
- .4 Section 26 05 34 – Conduits, Conduit Fastenings and Conduit Fittings.

1.2 REFERENCES

- .1 Underwriter's Laboratories of Canada (ULC):
 - .1 CAN/ULC-S524-2006, Installation of Fire Alarm Systems.
 - .2 CAN/ULC-S525-2007, Audible Signal Appliances for Fire Alarm.
 - .3 CAN/ULC-S526-2007, Visual Signal Appliances, Fire Alarm.
 - .4 CAN/ULC-S527-2011, Control Units.
 - .5 CAN/ULC-S528-2005, Manual Pull Stations.
 - .6 CAN/ULC-S529-2009, Smoke Detectors.
 - .7 CAN/ULC-S530-M91, Heat Actuated Fire Detectors.
 - .8 CAN/ULC-S531-2002, Smoke Alarms.
 - .9 CAN/ULC-S536-2004, Inspection and Testing of Fire Alarm Systems.
 - .10 CAN/ULC-S537-2004, Verification of Fire Alarm Systems.

1.3 SUBMITTALS

- .1 Submit Shop Drawings in accordance with Section 26 05 00 – Common Work Results for Electrical.
- .2 Shop Drawings shall include:
 - .1 Detailed assembly and internal wiring diagrams for control units.
 - .2 Overall system riser wiring diagram.
 - .3 Details for devices.
 - .4 Details and performance specifications for control, annunciation and peripherals.
- .3 Fire Alarm System Verification Report and Certificate of Verification.

1.4 OPERATION AND MAINTENANCE DATA

- .1 Provide operation and maintenance data for fire alarm system for incorporation into Operation and Maintenance Manual specified in Division 01- General Requirements.
- .2 Include:
 - .1 Technical data - illustrated parts lists with parts catalogue numbers.
 - .2 Copy of approved Shop Drawings.
 - .3 List of recommended spare parts for system.

Part 2 Products

2.1 INITIATING/ INPUT CIRCUITS

- .1 Receiving circuits for alarm initiating devices such as manual pull stations, smoke detectors, heat detectors and water flow switches, wired to central control unit.
- .2 Alarm receiving circuits (active and spare): compatible with smoke detectors and open contact devices.

2.2 ALARM OUTPUT CIRCUITS

- .1 Alarm output circuits: connected to signal devices, wired to central control unit.

2.3 WIRING

- .1 Twisted copper conductors: rated 120V.
- .2 To initiating circuits: 18 AWG minimum, and in accordance with manufacturer's requirements.
- .3 To signal circuits: 14 AWG minimum, and in accordance with manufacturer's requirements.
- .4 To control circuits: 14 AWG minimum, and in accordance with manufacturer's requirements.
- .5 All wiring shall be installed in EMT conduit.

2.4 AUTOMATIC ALARM INITIATING DEVICES

- .1 Smoke detectors:
 - .1 Match existing.

2.5 AUDIBLE SIGNAL DEVICES

- .1 Notification speakers to match existing.

2.6 VISUAL SIGNAL DEVICES

- .1 Strobes to match existing.

2.7 END-OF-LINE DEVICES

- .1 End-of-line devices to control supervisory current in alarm circuits and signalling circuits, sized to ensure correct supervisory current for each circuit. Open, short or ground fault in any circuit will alter supervisory current in that circuit, producing audible and visible alarm at main control panel and remotely as indicated.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 INSTALLATION

- .1 Install systems in accordance with CAN/ULC-S524.
- .2 Locate and install detectors and connect to alarm circuit wiring. Do not mount detectors within 1 m of air outlets. Maintain at least 600 mm radius clear space on ceiling, below and around detectors.
- .3 Install speakers and strobes and connect to signalling circuits.
- .4 Install end-of-line devices at end of alarm and signalling circuits.
- .5 Splices are not permitted.
- .6 Ensure that wiring is free of opens, shorts or grounds, before system testing and handing over.
- .7 Identify circuits and other related wiring at central control unit and annunciators.
- .8 All fire alarm system wiring shall be run in conduit as per Section 26 05 34.
- .9 All fire alarm devices shall be installed in outlet boxes as per Section 26 05 32.
- .10 Update main fire alarm passive graphic to reflect updates.

3.3 FIELD QUALITY CONTROL

- .1 Perform tests in accordance with Section 26 05 00 - Common Work Results for Electrical and CAN/ULC-S537.
- .2 Fire alarm system:
 - .1 Test each new and relocated device and alarm circuit to ensure manual pull stations, smoke detectors and sprinkler system devices transmit alarm to control panel and actuate general alarm and ancillary devices.
 - .2 Check annunciator panels to ensure zones are shown correctly.
 - .3 Simulate grounds and breaks on alarm and signalling circuits to ensure proper operation of systems.

3.4 DEMONSTRATION AND TRAINING

- .1 Provide on-site lectures and demonstration by fire alarm equipment manufacturer to train operational personnel in use and maintenance of fire alarm system.

END OF SECTION