PART 1 - GENERAL

1.1 REFERENCE STANDARDS

.1 Underwriters Laboratories of Canada (ULC)
- .1 CAN/ULC-S306-03, Intrusion Detection Units.

.2 Underwriters' Laboratories (UL)
- .1 UL 603-08, Power Supplies For Use With Burglar-Alarm Systems.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:
- .1 Submit manufacturer's instructions, printed product literature and data sheets for control panels, detection accessory devices and include product characteristics, performance criteria, physical size, finish and limitations.
- .2 Submit:
  - .1 Functional description of equipment.
  - .2 Technical data for devices.
  - .3 Device location plans and cable lists.
  - .4 Devices mounting location detail drawings.
  - .5 Typical devices connection detail drawings.

.3 Shop Drawings:
- .1 Submit drawings stamped and signed by professional engineer registered or licensed in Newfoundland and Labrador, Canada.

.4 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .1 Submit UL Product Safety Certificates.
- .2 Submit verification Certificate that service company is ULC/UL List alarm service company.
- .3 Submit verification Certificate that intrusion alarm system is Certified Alarm System.

.5 Test and Evaluation Reports:
- .1 Submit certified test reports from approved independent testing laboratories indicating compliance with specifications for specified performance characteristics and physical properties.

.6 Manufacturer's Instructions: submit manufacturer's installation instructions.

.7 Manufacturer's Field Reports: submit manufacturer's written reports within [3] days of review, verifying compliance of Work, as described in PART 3 - FIELD QUALITY CONTROL.

1.3 CLOSEOUT SUBMITTALS

.1 Operation and Maintenance Data: submit maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

.1 Include:

.1 System configuration and equipment physical layout.
.2 Functional description of equipment.
.3 Instructions of operation of equipment.
.4 Illustrations and diagrams to supplement procedures.
.5 Operation instructions provided by manufacturer.
.6 Cleaning instructions.

1.4 WARRANTY

.1 Manufacturer's Warranty: submit, for Departmental Representative's acceptance, manufacturer's standard warranty document executed by authorized company official stating that system is warranted against defects in operation, material and workmanship for a period of 12 months after substantial completion of the project.

.1 Include manufacturer/dealer recommendations, information and support services for 2 years.

PART 2 - PRODUCTS

2.1 MATERIALS

.1 Control Panel: ULC approved, expandable and designed to have patition for two groups with same common area as down on drawings.

.1 Zones (protection inputs): 8.
.2 Fixed zones: 8.
.3 Expandable: 8 - 32 zones.
.4 Number of user codes required: Confirm with Departmental Representative.
.5 Number of areas/partitions required: As per drawings.
.6 Keypads: LCD (liquid crystal display).
.7 Alarm: monitored.
.8 System: wired.
.9 Integrated with sub systems access control.
.10 Number of programmable outputs required: 5.
.11 System supervision: telephone line battery AC power.
.12 Siren output.
.13 Number of devices per zone: As required.

.2 Detection Accessories:

.1 Passive Infrared Detectors (PIR's): ULC approved, digital.
- .1 Coverage pattern: as indicated/as required.
- .2 Temperature requirement: As required.
- .3 Tamper switch.
- .4 Mounting: wall or ceiling.

.2 Dual passive infrared and microwave: ULC approved, complete with tamperproof switch, and be designed to meet temperature and mounting requirements of project.
- .1 Coverage pattern: As required/as indicated.

.3 Contacts: ULC approved.
- .1 Mounting: surface.
- .2 Mounting locations: door, window or overhead door.
- .3 Operating gap: 9.5 mm.
- .4 Security level: high security.
- .5 Type: magnetic biased.

.4 Vibration or shock sensors: As required.

.5 Photo electric beams: As required.

.6 Notification devices:
- .1 Siren: 15 watt.
- .2 Speaker complete with driver voice annunciator.

.3 Communications: telephone line digital dialer.

.4 Environmental monitoring: design system for detection of smoke/heat, temperature, humidity, and flood.

.5 Connectors and switches: to ULC-C634.

.6 Power supplies: to ULC-S318 or UL 603.

PART 3 - EXECUTION

3.1 INSTALLATION

.1 Install panels, intrusion detection system and components in accordance with manufacturer's written installation instructions to locations, heights and surfaces shown on reviewed shop drawings.

.2 Install panels, intrusion detection system and components secure to walls, ceilings or other substrates.

.3 Install required boxes in inconspicuous accessible locations.

.4 Conceal conduit and wiring.

3.2 SITE TEST AND INSPECTION

.1 Perform verification inspections and test in the presence of Departmental Representative.
- .1 Provide necessary tools, ladders and equipment.
- .2 Ensure appropriate subcontractors , and manufacturer's representatives are present for verification.

.2 Visual verification: objective is to assess quality of installation and assembly and overall appearance to ensure compliance with Contract Documents. Visual inspection to include:
- .1 Sturdiness of equipment fastening.
- .2 Non-existence of installation related damages.
- .3 Compliance of device locations with reviewed shop drawings.
- .4 Compatibility of equipment installation with physical environment.
- .5 Inclusion of all accessories.
- .6 Device and cabling identification.
- .7 Application and location of ULC approval decals.

.3 Technical verification: purpose to ensure that all systems and devices are properly install and free of defects and damage. Technical verification includes:
- .1 Measurements of coverage patterns
- .2 Connecting joints and equipment fastening.
- .3 Compliance with manufacturer's specification, product literature and installation instructions.

.4 Operational verification: purpose to ensure that devices and systems' performance meet or exceed established functional requirements. Operational verification includes:
- .1 Operation of each device individually and within its environment.
- .2 Operation of each device in relation with programmable schedule and or/specific functions.

3.3 FIELD QUALITY CONTROL

.1 Manufacturer's Field Services:
- .1 Obtain written reports from manufacturer verifying compliance of Work, in handling, installing, applying, protecting and cleaning of product.
- .2 Submit manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
- .3 Ensure manufacturer's representative is present before and during testing.

3.4 ADJUSTING

.1 Adjust all components for correct function.

END OF SECTION