



Section 28 16 43

PERIMETER SECURITY SYSTEMS

PART 1 – GENERAL

1.1 SUMMARY

- A. Provide and install a perimeter security system as herein specified for the purpose of detecting entry into a designated security area. The perimeter security system is to be installed complete with appropriate controls, wiring and mounting hardware per the manufacturer's recommendations. All installation work shall be accomplished in a professional manner by manufacturer approved installers.

1.2 SUBMITTALS

A. Product Data:

1. Catalog cut sheets, specifications, and installation instructions.
2. Bill of materials.
3. Detailed description of system operation procedures.

B. System Drawings:

1. Composite wiring and/or schematic diagrams of the complete system as proposed to be installed.
2. Conduit placement and installation plan.

C. Test Plan:

1. A complete plan detailing test procedures for final check out and testing of the complete system.

D. Detection System Installation Certification:

1. Affidavit signed by the Detection System manufacturer's representative certifying that the complete system meets the contract requirements and is fully operational per

manufacturer's recommendations.

1.3 TRAINING AND DOCUMENTATION

- A. A training program produced specifically for the installed system. The content of the training program shall allow facility personnel to become familiar with the safety, operation, and routine maintenance of their complete system. At a minimum training shall include:
 - 1. Safety.
 - 2. General care, maintenance, and operation.
 - 3. Sensor care, maintenance, and operation.
 - 4. Gateway care, maintenance, and operation.
 - 5. Antenna, care, maintenance, and operation

1.4 WARRANTY

- A. Integrated Security Corporation ("ISC") warrants that under normal use and service, all equipment, and materials manufactured by ISC ("equipment") shall be free from defects in material and workmanship for a period of two (2) years from the date the equipment is delivered, or if installed by ISC from the date placed in operation. Equipment supplied by ISC but not manufactured by ISC shall be subject to the manufacturer's warranty for that equipment. Equipment damaged due to neglect, abuse, act of God or otherwise not owing to a defect in material or workmanship shall be repaired or replaced at purchaser's expense. Labor and other expenses are not covered. **THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE FOR PARTICULAR PURPOSE AND ANY OTHER WARRANTIES EXPRESS OR IMPLIED.**

1.5 FENCE DETECTION SYSTEM DESCRIPTION

- A. The perimeter security system shall be the Hydra Asset Protection System as manufactured by Integrated Security Corporation of Novi, Michigan.
 - 1. The perimeter detection system shall act as an electronic barrier to detect disturbances on the fence. The system sensor shall be a dual sensor consisting of a passive infrared (PIR) sensor and an accelerometer.
 - 2. The sensor may be programmed to send an alarm signal only if both the PIR sensor and the accelerometer are triggered or if either sensor is triggered.

3. The sensor may have an internal or external antenna. A sufficient quantity of sensors with external antennas shall be installed to provide adequate communication to the gateway.
4. The sensors shall communicate via an encrypted, frequency hopping, wireless mesh that allows sensors to communicate to each other or to the gateway via the Gateway antenna.
5. An external antenna connected to the gateway shall be mounted in close proximity with line of sight to the sensors.
6. The system shall provide relay outputs for each zone, power/communication failure and sensor low battery from the system Gateway to other site monitoring systems.
7. The field sensors shall be installed on the fence material, concertina, razor ribbon, barbed wire, rigid fence and other such media as required.
8. The sensors may be attached on every fence panel, typically 10 foot (3 meter) or every other fence panel, 20 foot (6 meter) intervals depending on level of security required.
9. Either U/V resistant plastic ties or stainless steel ties shall be used to attach to media.
10. Sensitivity shall be software adjustable individually by zone from a field laptop connected to the Gateway. No field sensitivity adjustments shall be required.
11. The Gateway unit shall include the Gateway board and shall contain all required electronics, standby battery, power supply and other accessories as necessary.
12. The electronic barrier shall consist of a fence mounted electronic sensor to detect fence disturbances associated with an attempted breach of security. Sensors shall be configured in zones as shown on the drawings.
13. Climbing over or cutting the fence causes an alarm condition. The sensor shall be attached to either side of the fence fabric depending on local site conditions.
14. The gateway shall be connected to an outside antenna. The Gateway Board shall analyze the data from the sensor and determine alarms.
15. System set-up software shall reside on the Gateway Board and accessed via a PC or laptop.

PART 2 - PRODUCTS

2.1 GENERAL

A. The Fence System shall be as follows.

1. Integrated Security Corporation's Hydra Asset Protection System.

B. Sensors shall be complete with Gateway, antennas, antenna cables, cable ties, and other components as required for an operational system.

2.2 SENSORS

A. The sensor device shall be a dual detection incorporating a PIR with a 20 foot detection range and an accelerometer. The sensor will have an encrypted, frequency hopping radio that uses wireless mesh that allows sensors to communicate to each other or to the gateway via the Gateway antenna. The sensor shall be Integrated Security Corporation Hydra HS10 or HS10E.

2.3 GATEWAY

A. The HG-16 will include a Gateway Board, a relay module and either an AC or POE power source.

B. The system HG100 gateway board shall monitor electronic signals from the perimeter sensors and continually analyze and evaluate these signals. The Processor shall require no field calibration and or routine maintenance and adjustment. The Processor shall indicate alarms to a relay output.

2.4 ANTENNA AND ANTENNA CABLE

A. The Antenna shall be an Integrated Security Corporation HA-10 Antenna.

B. The Antenna Cable shall be an Integrated Security Corporation HAC- xxFT Antenna Cable that is long enough to reach from the HA-10 Antenna and the HG-16 Gateway. The xx refers to the length of cable required.

2.5 CABLE TIES

A. Cable ties shall be provided to fasten the sensor cable wire to the fence. Cable ties shall meet the following requirements.

1. 16 gauge Stainless Steel.

2. Double loop-ends.

3. Length shall be as recommended by fence system manufacturer.

or

4. U/V resistant plastic ties.