SECTION 28 26 00
ELECTRONIC PERSONAL PROTECTION SYSTEM (EPPS)

PART 1 – GENERAL

1.1 DESCRIPTION

Provide and install complete Duress-Panic Alarms System, hereafter referred to as EPPS System.

1.2 RELATED WORK

A. For firestopping application and use, Section 07 84 00, FIRESTOPPING.

B. For infrastructure, Section 26 05 33, RACEWAY AND BOXES FOR ELCTRICAL SYSTEMS.

C. For infrastructure, Section 26 05 36, CABLE TRAYS FOR ELECTRICAL SYSTEMS.

D. For cabling requirements, Section 27 15 00, COMMUNICATIONS HORIZONTAL CABLING.

E. For grounding of equipment, Section 28 05 26, GROUNDING AND BONDING FOR ELECTRONCI SAFETY AND SECURITY.

F. For connections, Section 26 05 13, CONDUCTORS AND CABLES FOR ELECTRIC SYSTEMS.

G. For Warranty of Construction see GENERAL CONDITIONS.

H. For General Requirements, Section 01 00 00, GENERAL REQUIREMENTS.

1.3 QUALITY ASSURANCE

A. The Contractor shall be responsible for providing, installing, and the operation of the EPPS System as shown. The Contractor shall also provide certification as required.

B. The EPPS system shall be installed and tested to ensure all components are fully compatible as a system and can be integrated with all associated security subsystems, whether the security system is stand-alone or a part of a complete Information Technology (IT) computer network.

C. The Contractor or security sub-contractor shall be a licensed security Contractor as required within the state or jurisdiction of where the installation work is being conducted.

1.4 SUBMITTALS

A. Submit below items in conjunction with Master Specification Sections 01 33 23, SHOP DRAWING, PRODUCT DATA, AND SAMPLES, and Section 02 41 00, DEMOLITION.

B. Provide certificates of compliance with Section 1.3, Quality Assurance.

C. Provide a pre-installation and as-built design package in both electronic format and on paper, minimum size 48 x 48 inches (1220 x 1220 millimeters); drawing submittals shall be per the established project schedule.

D. Pre-installation design and as-built packages shall include, but not be limited to:

1. Index Sheet that shall:
   a. Define each page of the design package to include facility name, building name, floor, and sheet number.
   b. Provide a list of all security abbreviations and symbols.
   c. Reference all general notes that are utilized within the design package.
   d. Specification and scope of work pages for all security systems that are applicable to the design package that will:
      1) Outline all general and job specific work required within the design package.
      2) Provide a device identification table outlining device Identification (ID) and use for all security systems equipment utilized in the design package.
2. Drawing sheets that will be plotted on the individual floor plans or site plans shall:
   a. Include a title block as defined above.
   b. Define the drawings scale in both standard and metric measurements.
   c. Provide device identification and location.
   d. Address all signal and power conduit runs and sizes that are associated with the design of the electronic security system and other security elements (e.g., barriers, etc.).
   e. Identify all pull box and conduit locations, sizes, and fill capacities.
   f. Address all general and drawing specific notes for a particular drawing sheet.
3. A riser drawing for each applicable security subsystem shall:
   a. Indicate the sequence of operation.
   b. Relationship of integrated components on one diagram.
   c. Include the number, size, identification, and maximum lengths of interconnecting wires.

d. Wire/cable types shall be defined by a wire and cable schedule. The schedule shall utilize a lettering system that will correspond to the wire/cable it represents (example: A = 18 AWG/1 Pair Twisted, Unshielded). This schedule shall also provide the manufacturer's name and part number for the wire/cable being installed.

4. A system drawing for each applicable security system shall:
   a. Identify how all equipment within the system, from main panel to device, shall be laid out and connected.
   b. Provide full detail of all system components wiring from point-to-point.
   c. Identify wire types utilized for connection, interconnection with associate security subsystems.
   d. Show device locations that correspond to the floor plans.
   e. All general and drawing specific notes shall be included with the system drawings.
5. A schedule for all of the applicable security subsystems shall be included. All schedules shall provide the following information:
   a. Device ID.
   b. Device Location (e.g. site, building, floor, room number, location, and description).
   c. Mounting type (e.g. flush, wall, surface, etc.).
   d. Power supply or circuit breaker and power panel number.
6. Detail and elevation drawings for all devices that define how they were installed and mounted.

E. Pre-installation design packages shall be reviewed by the Contractor along with a VA representative to ensure all work has been clearly defined and completed. All reviews shall be conducted in accordance with the project schedule. There shall be four (4) stages to the review process:
   1. 35 percent
   2. 65 percent
   3. 90 percent
   4. 100 percent

F. Provide manufacturer security system product cut-sheets. Submit for approval at least 30 days prior to commencement of formal testing, a Security System Operational Test Plan. Include procedures for

operational testing of each component and security subsystem, to include performance of an integrated system test.

G. Submit manufacture's certification of Underwriters Laboratories, Inc. (UL) listing as specified. Provide all maintenance and operating manuals per the VA General Requirements, Section 01 00 00, GENERAL REQUIREMENTS.

1.5 PUBLICATIONS

A. The publications listed below (including amendments, addenda, revisions, supplement, and errata) form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. Department of Justice American Disability Act (ADA)
28 CFR Part 36.....ADA Standards for Accessible Design

C. National Fire Protection Association (NFPA):
70-05.....National Electrical Code

D. Underwriters Laboratories, Inc. (UL):
305-00.....Standard for Panic Hardware
444-02.....Communications Cables

E. Uniform Federal Accessibility Standards (UFAS), 1984

1.6 WARRANTY OF CONSTRUCTION.

Warrant EPPS System work subject to the Article "Warranty of Construction" of FAR clause 52.246-21.

PART 2 – PRODUCTS

2.1 EQUIPMENT AND MATERIALS

A. General:

1. All equipment shall be rated for continuous operation. Environmental conditions (i.e. temperature, humidity, wind, and seismic activity) shall be taken under consideration at each facility and site location prior to installation of the equipment.
2. The EPPS systems shall be designed, installed, and programmed in a manner that will allow for easy of operation, programming, servicing, maintenance, testing, and upgrading of the system.
3. The Contractor shall provide the Contracting Officer with written verification, that the type of wire/cable being provided is recommended and approved by the OEM. Cabling shall meet the interconnecting wiring requirements of NFPA 70, National Electrical Code. The Contractor is responsible for providing the correct protection cable duct and/or conduit and wiring.

4. When interfacing with other communications or security subsystems the Contractor shall utilize interfacing methods that are approved by the Contracting Officer. At a minimum, an acceptable interfacing method requires not only a physical and mechanical connection; but also a matching of signal, voltage, and processing levels with regard to signal quality and impedance. The interface point must adhere to all standards described herein. The new system provided shall be capable interfacing with the VANS/Athoc Emergency Notification System that will be installed in this facility in the future.
5. Systems shall be scalable and allow expansion as required.
6. All hardwired alarms, switches, and junction boxes shall be protected from tampering and include line supervision.

2.2 EQUIPMENT ITEMS

A. All systems shall be designed to provide continuous electrical supervision of the complete and entire system.

B. All alarm and initiating and signaling circuits shall be supervised for open circuits, short circuits, and system grounds.

C. Duress-Panic Alarms:

1. General:
   a. Housing shall be a rugged corrosion-resistant housing of stainless steel or Acrylonitrile Butadiene Styrene (ABS) molded plastic or similar material is dust proof.
2. Network Hardwired Panic Button **(BASE BID)**:
   a. Plunger type pushbutton, fully supervised.
   b. Suitable for surface mount applications.
   c. Connects to panic/duress system server via network cabling. Once depression of pushbutton occurs, signal is first routed through single channel hardwire input box before being sent to the server via connection from input box to local telecom outlet.
   d. Push button requires single channel hardwired input box to communication with hospitals network. Input box is fully supervised.
3. USB Hardwired Buttons **(DE-DUCT BID E-1)**:
   a. Plunger type pushbutton, fully supervised.
   b. Suitable for surface mount applications.
   c. Connects to local PC via USB cable. Once a depression of pushbutton occurs, duress signal is sent to server via local

computer even if computer it is logged off. Requires computer to be established, via software, as a client seat with regards to panic/duress system server.

2.3 INSTALLATION KIT

A. General: A kit shall be provided that, at a minimum, includes all connectors and terminals, labeling systems, barrier strips, wiring blocks or wire wrap terminals, heat shrink tubing, cable ties, solder, hangers, clamps, bolts, etc., required to accomplish a neat and secure installation. Unfinished or unlabeled wire connections will not be allowed. Contractor shall turn over to the Contracting Officer all unused and partially opened installation kit boxes, coaxial cable reels, conduit, cable tray, and/or cable duct bundles, wire rolls, and physical installation hardware. This is an acceptable alternate to the individual spare equipment requirement as long as the minimum spare items are provided in this count. The following installation sub-kits are required as a minimum:

B. System Grounding:

1. The grounding kit shall include all cable in accordance with UL 444 Communications Cables, and installation hardware required. All grounding will be according to the NEC.
2. This includes, but is not limited to:
   a. Control Cable Shields
   b. Data Cable Shields
   c. Conduits
   d. Cable Duct
   e. Cable Trays

C. Wire And Cable: The wire and cable kit shall include all connectors and terminals, barrier straps, wiring blocks, wire wrap strips, heat shrink tubing, tie wraps, solder, hangers, clamps, labels etc., required to accomplish a neat and orderly installation.

D. Equipment Interface: The equipment interface kit shall include any item or quantity of equipment, cable, mounting hardware and materials needed to interface Systems and Subsystems according to the OEM requirements and this specification.

E. Labels: The labeling kit shall include any item or quantity of labels, tools, stencils, and materials needed to label each subsystem according to the OEM requirements, as-installed drawings, and this specification.

F. Documentation: The documentation kit shall include any item or quantity of items, computer discs, as installed drawings, equipment, maintenance, and operation manuals, and OEM materials needed to correctly provide the system documentation as required by this document and explained herein.

PART 3 – EXECUTION

3.1 INSTALLATION

A. System installation shall be installed in accordance with NFPA 731 Standards for the Installation of Electric Premises Security Systems and appropriate installation manual for each type of subsystem designed, engineered, and installed.

B. The location and type of duress device to be installed will be in accordance with physical security requirements unique to each VA facility.

C. Concealed duress/panic devices shall be mounted in such a way that their location is only known by the person having knowledge of the activating device location.

D. Cleaning: Subsequent to installation, clean each system component of dust, dirt, grease, or oil incurred during installation in accordance to manufacture instructions.

E. Adjustment/Alignment/Synchronization: Contractor shall prepare for system activation by following manufacturer’s recommended procedures for adjustment, alignment, or programming. Prepare each component in accordance with appropriate provisions of the component’s installation, operations, and maintenance instructions.

3.2 TESTS AND TRAINING

All testing and training shall be compliant with the VA General Requirements, Section 01 00 00, GENERAL REQUIREMENTS.

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