

SECTION 28 60 00
SECURITY EQUIPMENT
(Part of the Work for Section 260001)

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the GENERAL REQUIREMENTS AND COVENANTS - DIVISION I, and the SPECIAL PROVISIONS - DIVISIONS IIA and IIB, which are hereby made a part of this Specification Section.
- B. Examine all Drawings and all Sections of the Specifications for requirements and provisions affecting the Work of this Section.

1.2 TRADE CONTRACT REQUIREMENTS

- A. Work of this Section is part of the Electrical Trade Contract. Refer to Section 26 00 00 "Electrical Trade Contract Requirements" for additional information about this Trade Contract.

1.3 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.4 SUMMARY

- A. This section provides specifications for the installation of the security rack, console and equipment.
- B. Related Sections include:
 - 1. Section 08 71 00 Door Hardware
 - 2. Division 21 Fire Suppression
 - 3. Division 26 Electrical
 - 4. Division 27 Communications
 - 5. Division 28 Electronic Safety and Security
- C. Provide labor, materials, inspections and supervision necessary for the complete installation and operation the equipment specified herein. Work includes providing items and accessories required or necessary for the correct operation of the vehicular control equipment as shown on plans and/or specified herein.

1.5 REFERENCES

- A. Comply with the Electronic Industry Association (E.I.A) specifications for rack mounting ANSI/E standard RS-310.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
- B. Product Data: Manufacturer's data sheets on each product to be used, including.
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.

3. Installation methods.

1.7 DESCRIPTION OF WORK

A. General Requirements

1. Provide labor, materials, tools, equipment, and services for a complete security system as indicated and in accordance with provisions of the contract documents.
2. Although such work is not specifically indicated, provide supplementary or miscellaneous items, and devices incidental to or necessary for a sound, secure and complete installation.
3. System devices and components included shall be compatible.
4. Units of the same type of equipment shall be products of a single manufacturer. Material and equipment shall be new and currently in production. Each major component of equipment shall have the manufacturer's model and serial number in a conspicuous place.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 2 years experience installing similar equipment.
- B. Units of the same type of equipment will be products of a single manufacturer. Material and equipment will be new and currently in production. Each major component of equipment will have the manufacturer's model and serial number in a conspicuous place.

1.9 WARRANTY

- A. Manufacturer's Warranty: Submit manufacturer's standard warranty.

1.10 DELIVERY, STORAGE, AND HANDLING

- B. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- C. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
- D. Handling: Protect materials during handling and installation to prevent damage.

1.11 PROJECT CONDITIONS

- A. Inspect locations where installation work will be performed and verify that conditions found are in accordance with the Contract Drawings and are acceptable for installation work. Report discrepancies in writing to the Engineer requesting clarification.
- B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.12 SYSTEM COMPONENTS

A. Workstations

1. The workstations shall be provided as indicated herein and on the Contract Drawings.
2. Workstations shall include a keyboard, mouse and monitor.
3. Workstations/ Servers of multiple systems can be provided in lieu of individual workstations barring they include the installed software minimum requirements and appropriate number video cards for each system.
4. Each workstation shall include a floor mounted uninterruptable power supply (UPS).

5. Workstations shall be provided for the following:
 - a. Access Control System Client Workstation
 - b. Video Management System Client Workstation
 - c. Photo Identification Badging Workstation
 - d. Visitor and Employee Management System
 - e. Student Management System
 - f. Rack mounted KVM Switch
 - i. One (1) KVM Switch shall be provided at every closet in a the rack where an network switch is located.

B. Monitors

1. The monitors shall be provided as indicated herein and on the Contract Drawings.
2. The desktop video monitors shall be a 24" flat panel color monitors and shall be located as stated in the contract drawings.
3. The wall mounted video monitors shall be a 50" flat panel color monitors and shall be located as stated in the contract drawings.
 - a. Wall mounted monitors shall be supplied with wall mounting brackets and required accessories.
4. Shall be VESA Compliant.
5. Minimum resolution shall be 1280 X 1024 pixels at 60hz with an aspect ratio of 16:9.
6. Full high definition LCD.
7. VGA and Digital Visual Interface (DVI) inputs.
8. Have a panel life of 50,000+ hours
9. Have a contrast ratio of 5000:1
10. Be of commercial grade to withstand 24hr x 7day/week use

C. UPS

1. The UPS shall power the security equipment that is rack mounted for a period of thirty (30) minutes. This UPS shall be mounted in the vertical equipment rack.
2. The UPS shall power the client workstations and CCTV monitors for a period of thirty (30) minutes. This UPS shall be floor mounted.
3. The UPS shall power the field panels for a period of thirty (30) minutes. This UPS shall be cabinet mounted.
4. Functions shall be maintained 100% during this time.
5. Batteries shall be rechargeable and appropriately sized for equipment supported and for the backup time stated within the Contract Documents.
6. Battery control panel shall display battery overload, replace battery and bypass indicators.
7. An audible and visual alarm shall sound when the battery is low and upon overload.

1.13 WARRANTY

- A. Warranty: Manufacturers standard warranty of two years for commercial installation.

1.14 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
- C. Handling: Protect materials during handling and installation to prevent damage.

1.15 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 - PRODUCTS

2.1 WORKSTATIONS

- A. Manufacturers: Subject to compliance with specified requirements, provide products of one of the following, or equal:
 - 1. Dell
 - 2. Hewlett Packard
 - 3. Toshiba
 - 4. or Approved Equal

2.2 KVM Switch

- B. Manufacturers: Subject to compliance with specified requirements, provide products of one of the following, or equal:
 - 1. Tripp Lite
 - 2. Dell
 - 3. Raloy
 - 4. or Approved Equal

2.3 MONITORS

- A. Manufacturers: Subject to compliance with specified requirements, provide products of one of the following, or equal:
 - 1. Panasonic
 - 2. Pelco
 - 3. VIEWZ
 - 4. or Approved Equal

2.4 RACK / FLOOR MOUNTED UNINTERRUPTIBLE POWER SUPPLY (UPS)

- 1. APC
- 2. Powersonic
- 3. Altronix
- 4. Or Approved Equal

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive equipment.
 - B. Notify Architect of conditions that would adversely affect installation or subsequent use.
 - C. Do not begin installation until unacceptable conditions are corrected.
- 3.2 INSTALLATION
- A. Install equipment in accordance with manufacturer's instructions at locations indicated on the Drawings.
 - B. Mount equipment plumb, level, square, and secure.
- 3.3 ADJUSTING
- A. Adjust equipment for proper operation in accordance with manufacturer's instructions.
- 3.4 DEMONSTRATION AND TRAINING
- 1. Demonstration:
 - 1. Demonstrate equipment functions properly.
 - 2. Perform demonstration at final system inspection by qualified representative of manufacturer.
 - B. Instruction and Training:
 - 1. Provide instruction and training of Owner's personnel as required for operation of the equipment.
 - 2. Provide hands-on demonstration of operation of the components and complete system, including user-level program changes and functions.
 - 3. Provide instruction and training by qualified representative of manufacturer.
- 3.5 PROTECTION
- 1. Protect installed equipment from damage during construction.

END OF SECTION