SECTION 13825:
CARD ACCESS SECURITY SYSTEM

Part 1 General

1.1 System Design Guidelines

1.1.1. The University uses a decentralized card access security system using the “On Guard” security software as manufactured by Lenel Inc. All new buildings and renovation projects will have the card access system installed as part of the project.

1.1.2. The security system shall be a completely operational Lenel brand system control panel and subpanels completely compatible with the existing WMU Security System. The building control panel shall be capable of full operation of the building or area in a mode involving loss of communications with the system computer located in the Police Department. Card Reader control panels shall be located in electrical rooms as required and indicated. Provisions shall be included to receive a signal from the existing fire alarm panel in the area to lock or unlock any necessary doors or other equipment in accordance with the life safety code.

1.2 Power

1.2.1. The system shall operate from standard 120 volt AC power. It is the intent of the system philosophy that active devices be powered from the master control cabinet and be compatible in voltage, current, logic levels, impedance, etc. with the control cabinet and with other elements of the system.

1.2.2. All power supplies shall supply an output voltage of not less than 12.0 Vdc and not more than 13.5 Vdc when under full designed load. Voltage measurements shall be made from the protected side of the circuit fuse while the system is fully operational. All devices used in conjunction with the system shall be designed to operate at 12 Vdc.

1.2.3. All equipment shall be battery backed up for full operation for eight hours after loss of normal power. An alarm shall be generated at the security console to indicate the loss of AC power and/or the loss of battery back-up power to any system control panel. Fans shall be provided to all power supply cabinets and battery cabinets.

1.3 Wire Supervision

1.3.1. All systems and circuits shall be supervised. Wiring shall be accomplished in such manner that tamper wiring is continuously supervised. An alarm shall occur if any system wiring is cut or shorted to the other wires in the system and if the system devices are tampered with. The system shall detect tampering on a line and annunciate open and short conditions even if the device has been shunted (disarmed).

1.4 Tamper Protection

1.4.1. Detectors and sensors, the control cabinet, signal transmission equipment and lines and auxiliary devices shall be so designed, constructed and installed as to resist attack and to minimize vulnerability to countermeasures. The system shall be so designed that it will be difficult to “jumper out” or by-pass sections, loops or devices of the system.

1.4.2. All electronic components and points-of-connection shall be contained within a metal cabinet suitable for wall mounting. All cabinet doors shall have locks, keyed to match other portions of the system already in use. All cabinet doors shall be protected by a tamper switch that will indicate an alarm at Public Safety.
1.5 Location of Equipment

1.5.1. Equipment shall be located within 10' of the indicated location on the contract documents, within the same room. Deviations from this shall be approved by the University prior to the installation.

1.5.2. Locate control panels and components within Electrical Rooms. All system control panels, power supplies or other control components shall be mounted below 6'-0" to allow maintenance and service without the use of a ladder.

1.6 Testing

1.6.1. Final acceptance tests shall be performed in the presence of representatives from WMU, the contractor, WMU’s public Safety Department. Acceptance testing and training shall include discussion on the system design with the building user, testing of all individual components, programming of the system software and acceptance of the installation.

1.7 Warranty

1.7.1. Provide warranty on both product and installation for a period of one year from the date of acceptance in writing from the University.

Part 2 Products

2.1 University Standard Equipment

2.1.1. When the following items of equipment are used they shall be by the following University approved manufacturers:

a) Delayed egress maglocks shall be Locknetics 101+ series delayed egress system locks with anti-tamper cover alarm, door status monitor options.

b) Card readers shall be Dorado Systems part #31107401 model 740 ruggedized pass through reader with the card slot left.

c) Electric door strikes shall be Folger Adam Co., Series 300, or Von Duprin Series 6000, of the appropriate model for the associated door’s lock. Any other substitution shall be submitted to WMU for approval.

d) The door monitor switches shall be flush mounted magnetic door status switches as manufactured by Locknetics Security Engineering Co. or approved equal.

e) The motion sensors shall be passive infrared detectors mounted above the door on the exit side and shall be DS model DS150i (putty) or DS151i (black) as appropriate, or approved equal.

f) Request to exit buttons shall be Securitron model PB2 series with green lighted button and red indicator lamp.

g) Key switches shall be Securitron model MK able to accept Best brand key cores (cores are furnished by the University).

h) Annunciators shall be Designed Security, Inc series ES600 with zone shunt, zone relay, and EOL supervision options. Provide clear “Lexan” cover for the annunciator panel.
i) Tamperproof screws shall be Torks with center pin. They shall be provided whenever a fastener is exposed.

2.2 Submittals

2.2.1. Shop drawings and equipment cut sheets indicating the complete system design, and all components shall be submitted as a package for approval prior to release of order or installation. As a minimum the shop drawings shall include a floor plan of the installation area, a wiring diagram indicating all components connected and the number type and size of the conductors between each component. Cut sheets of each piece of equipment shall be included in the shop drawing submittal package.

2.2.2. Three copies and one set of electronic files of the "as built" record drawings shall be provided to the University upon completion of the work. The drawings shall reflect the final "as built" arrangement and configuration of the system. They shall be accompanied by illustrated technical supporting literature on all equipment comprising the installation including operating and maintenance instructions for all components.

2.2.3. As built drawings and wiring diagrams shall be produced by AutoCad and supplied to WMU on disk.

Part 3 Installation

3.1 University Standard Designs

3.1.1. Door hardware equipment shall be located as follows:

a) Maglocks - shall be mounted per the manufacturers' instructions on the top of the door.

b) Card Readers - shall be mounted per the manufacturers' instructions on entrance side of the door as close as possible to the door pull handle.

c) Monitor switch - shall be mounted per the manufacturers' instructions on the top of the door.

d) Electric strike - shall be mounted per the manufacturers' instructions at the door latch. Door frames shall be reinforced for the strike mounting screw threads.

e) Motion Sensor - for alarm shunting, they shall be mounted per the manufacturers' instructions on the exit side of the door above the door; for area security, they shall be mounted as necessary to cover the identified area.

f) Request to Exit Button - shall be mounted per the manufacturers' instructions on the exit side of the door closest to the latch.

g) Annunciators - shall be mounted per manufacturers' instructions at the location show on the plans.

END OF SECTION