

SECTION 28 13 00
ACCESS CONTROL

PART 1 - GENERAL

1.1 STIPULATIONS

- A. The specifications sections "General Conditions to the Construction Contract", "Special Conditions" and "Division 01 – General Requirements" form a part of the Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

1.2 SUMMARY

- A. The contractor shall provide an electric door locking Access Control System as required to accommodate all doors and associated equipment as detailed within the project documents to provide a fully functional solution as detailed here and within the project documentation.
- B. Provide labor, materials, equipment, and licensing necessary to complete the work of this Section, including but not limited to the following:

1.3 REFERENCES

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.
- B. Related Documents and Sections:
 - 1. Division 01 – General Requirements
 - 2. Division 08 - Openings
 - 3. Division 27 – Communications
 - 4. Division 26 – Fire Alarm System
- C. The following codes, associations, acts and agencies, as required by law:
 - 1. UL listed as per UL 325 – Standard for door, Drapery, Gate, Louver, and Window Operators and Systems.
 - 2. The Security Entrance Lane must be certified per CAN / CSA - C22.2 no. 247-92 (R 2008) – Standards for Operators and Systems of Doors, Gates, Draperies, and Louvers.
 - 3. American National Standards Institute/Electronic Industries Association/Telecommunication Industries Association (ANSI/EIA/TIA)
 - 4. Federal Communications Commission (FCC)
 - 5. National Fire Protection Association (NFPA)
 - 6. NFPA-70, 2011 (National Electric Code)
 - 7. National Electrical Safety Code (NESC)
 - 8. National Electrical Manufacturers Association (NEMA)
 - 9. Occupational Safety and Health Administration (OSHA)
 - 10. UL Standard for Safety
 - 11. International Building Code

12. International Fire Code
13. Any additional applicable local codes or amendments

D. When a discrepancy arises between the above-mentioned codes, standards or guidelines and the standards contained in this document, it shall be brought to the attention of the Owner immediately for resolution. The more stringent of the two guidelines shall be implemented.

1.4 SYSTEM DESCRIPTION

A. The Access Control System (ACS) shall provide an electronic means for the customer access certain doors in the building. Resident call and Intercom systems do not tie into the ACS and will each be stand alone.

1.5 SYSTEM OPERATION

A. Residence Bedroom Doors

1. Each Residence Door shall have maglocks at the top and bottom of the unsecured side/corridor side of the door. Using a key in a key switch, from the unsecured side, will break power to the maglocks to allow access. A door monitoring station LED on the staff's desk, will light showing that door has been opened.

B. Secured Doors

C. The secured doors shall have maglocks at the top and bottom of the secured side of each door. Using a key in a key switch, from either side, will break power to the maglocks to allow access.

1.6 PRINCIPLE WORK OF THIS SECTION

A. The Work includes the supply and installation of all components, specified or not, for a complete and working ACS systems. The Work includes, but is not limited to, the supply and installation of:

1. Access Control System hardware.
2. Access Control System power supplies and accessories.

B. The Work also includes, but is not limited to:

1. Training (System Administration and System Operator).
2. The supply and installation of system cabling as needed.
3. The termination of system cabling as needed.
4. Identification and labelling of all system cables.
5. Testing of all devices and cables.
6. As-built drawings.

1.7 SYSTEM REQUIREMENTS

A. This ACS shall be capable of integrating with

1. Fire Alarm
2. Remote annunciator and monitoring panel

1.8 ACCESS CONTROL SYSTEM DESCRIPTION

- A. The Access Control System consists of security equipment such as, magnetic door hardware, magnetic door contacts, power supplies, keyed by-pass switches, and remote annunciator panel.
- B. Access control will be provided on selected doors.
- C. GC shall be responsible for ensuring that all doors receiving access control security equipment are properly aligned, have necessary door closing equipment, are fully functional and operate properly.

1.9 RELATED WORK SPECIFIED IN OTHER SECTIONS

- A. All conduit, raceway, sleeves, back boxes and NEMA enclosures shall be provided by electrical contractor in accordance with Electrical specifications. All grounding and bonding cables, bus bars, hardware and terminations shall be by the electrical contractor in accordance with Electrical specifications.
- B. It shall be the responsibility of the Fire Alarm or Electrical contractor to supply and install all relays and connections required for the ACS system to interface with the fire alarm system to abide by any and all Local, State, or National Codes
 - 1. The following shall be provided by others:
 - 2. Plywood backboards
 - 3. Electrical Power
 - 4. Fire Alarm Relays

1.10 SUBMITTALS

- A. Refer to Division 1 and the General Provisions of the Contract for exact submittal procedures.
- B. Work shall not proceed without the Owner and Technology Consultant approval of all submitted items.
- C. Shop Drawings shall include plans, elevations, sections, details, and attachments to other work. Detail equipment assemblies and indicate dimensions, required clearances, method of field assembly, components, and location and size of each field connection.
- D. Shop drawings shall be submitted in advance of construction to cause no delay in other Contractors' work. Shop drawings shall be submitted at such time to allow the Engineer reasonable time to review shop drawings to make necessary corrections.
- E. It will be assumed that the Contractor has examined the shop drawings and equipment brochures prior to submission and that materials and equipment depicted will readily fit into the construction. Contractor shall also review all completed work related to materials or equipment depicted to ensure that it has been installed properly.
- F. No materials or equipment subject to prior review by the Engineer shall be fabricated or installed by the Contractor, without such review and approval. The Engineer's review of such drawings and brochures shall not relieve the Contractor of responsibility for deviations from the requirements of the drawings and specifications unless they have notified the Engineer in writing.

1.11 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. All materials furnished shall be new, unused, clean, and free from damage, defects, or corrosion.
- C. Equipment and materials of the same type shall be a product of the same manufacturer throughout unless specifically exempted in advance.

1.12 COORDINATION

- A. Coordinate installation of anchorages for pedestrian control equipment. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- B. Electrical System Roughing-in: Coordinate layout and installation of pedestrian control devices with connections to power supplies and security access control system.

1.13 WARRANTY

- A. Shall adhere to all warranty requirements for all installations.
- B. Manufacturer's Warranty
 - 1. Equipment and materials required for installation under these standards shall be the current model and new (less than one (1) year from date of manufacture), unused and without blemish or defect, and are to be guaranteed to be free from defect for a minimum of two (2) years from the date of project's substantial completion.
 - 2. When a defect or problem is observed within the first year after substantial completion, the appropriate subcontractor then will have 48 hours to fix the defect or furnish and install a replacement part/system, all at no cost to the project or the Owner.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Materials and equipment furnished shall be of current production by manufacturers regularly engaged in the manufacture of such items, for which replacement parts are available.
- B. When more than one unit of the same class of equipment or material is required, such units shall be the products of a single manufacturer and part number.
- C. All products and materials shall be new and unused prior to their installation as part of this project. Refurbished items are not allowed.
- D. Alternates may be proposed but shall meet or exceed specifications for the items listed. Acceptance shall be at the sole discretion of the owner.

2.2 MANUFACTURES

- A. The Access Control System shall be designed and manufactured by:

1. Keyed Bypass Switch
 - 1) Basis of design: Assa Abloy
 - 2) Approved equal
2. Maglocks
 - 1) Basis of Design: Securitron M62-FG-BD
 - 2) Approved equal
3. Power Supply
 - 1) Basis of Design: Altronix
 - 2) Approved equal
4. Annunciator Panel
 - 1) Cornell
 - 2) Approved equal

2.3 ELECTRIFIED DOOR HARDWARE

A. General

1. All electrified door hardware, mortise keylocks, and keys shall be provided by the Door Hardware Contractor or Head Contractor.
2. Specific electrified door hardware shall be installed as per the door schedule.
3. The Contractor shall perform all other works which are required to deliver a fully operational, fit for purpose system. This includes coordination with others, as well as the configuration, integration with access control system and testing of any equipment supplied or installed by others.
4. The Contractor shall coordinate in relation to connection of electrical power, network connection and the like.
5. The Contractor shall provide final termination of cabling to all door hardware including wiring down each door.

B. Fire Alarm Interface

1. A Signaling Line Circuit (SLC) shall be provided under the Fire Alarm Contract. The Contractor shall interface the SLC to the Power Supplies directly, or indirectly through the ACP (whichever is acceptable by Local Authorities).
2. Unlocking specified security-controlled doors, from both directions, in the event of a determined signal from the fire alarm system. The signal required from the fire alarm system (trouble, alarm, double knock, etc.) shall be verified under the Fire Alarm scope and coordinated by the Contractor. Locks shall stay shunted until the fire alarm is reset or acknowledged by the operator.

2.4 POWER SUPPLY

- A. Power supply: 120 Volts AC 60 Hz

PART 3 - EXECUTION

3.1 GENERAL

- A. Contractor shall coordinate with all other trades prior to installation. Meeting with the Electrical and General Contractors to identify pathways and infrastructure space requirements.

3.2 DIMENSIONS AND DEFINITE LOCATIONS

- A. The Project Drawings depicting work show approximate locations. The exact location of equipment and devices shall be established in the field in accordance with instructions from the owner. Consideration shall be given to construction features, equipment of other trades, and requirements of the equipment proper
- B. The Contractor shall refer to shop drawings and submittal drawings for equipment requiring electrical connections to verify rough-in and connection locations.
- C. Unless specifically stated to the contrary, no drawings by scale shall be used as a dimension to work by. Dimensions noted on the drawings are subject, in each case, to measurements of adjacent or previously completed work and all such measurements necessary shall be taken before undertaking any work dependent upon them.

3.3 INSTALLATION

- A. Install all devices and components to strict accordance with manufacturer's instructions.

3.4 IDENTIFICATION

- A. In addition to requirements in this article, comply with applicable requirements in Section 270553 "Identification for Communications Systems" and with TIA 606-B.
- B. Label each terminal strip and screw terminal in each cabinet, rack, or panel.
 - 1. All wiring conductors connected to terminal strips shall be individually numbered, and each cable or wiring group being extended from a panel or cabinet to a building-mounted device shall be identified with the name and number of the particular device as shown.
 - 2. All cables labels shall be machine printed heat shrink type. Hand -written labels are not acceptable. Labels shall indicate device number and destination. Labels shall be located on both ends of each cable.
 - 3. Install and dress all devices wiring neatly.
 - 4. At the Telecom Room, install all appropriate access control system equipment in such a manner that all control functions on the front of each unit shall be accessible. All cable connections shall be made from the rear of the units. At completion, cable and asset management software shall reflect as-built conditions.
 - 5. Install the access control system workstation and all peripheral equipment.
 - 6. At each System Controller location, install auxiliary equipment, power supplies, field panels and all other appropriate access control system equipment.
 - 7. Install access control system field devices, including card readers, panic buttons, and door contacts in accordance with the manufacturer's instructions and recommendations. Assure all devices maintain signal continuity throughout entire system.
 - 8. Install all devices in accordance with the manufacturer's instructions recommendations. Assure all devices maintain signal continuity throughout entire system.
 - 9. Install all mounting brackets to the structure.
 - 10. The Contractor shall provide the connection of the console racks to the power outlet.

3.5 ADJUSTMENTS

- A. Installer must adjust optical turnstiles for proper performance after installation.

3.6 INSTRUCTIONS

- A. A factory trained installer must demonstrate to the owner's maintenance crew the proper operation and the necessary service requirements of the equipment, including exterior maintenance.

3.7 CLEANING

- A. Clean turnstile and area carefully after installation to remove excess caulk, dirt, and labels.

3.8 MAINTENANCE

- A. Maintain the equipment according to the manufacturer's instructions.

END OF SECTION