SECTION 084230
IMPACT RATED SLIDING AUTOMATIC ENTRANCES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes the following types of automatic entrances:
   1. Exterior bi-parting, impact rated, sliding automatic entrances.

B. Related Sections:
   1. Division 7 Sections for caulking to the extent not specified in this section.
   2. Division 8 Section "Aluminum-Framed Entrances and Storefronts" for entrances furnished and installed separately in Division 8 Section.
   3. Division 8 Section "Door Hardware" for hardware to the extent not specified in this Section.
   4. Division 8 Section Glazing for materials and installation requirements of glazing for automatic entrances.
   5. Division 26 Sections for electrical connections provided separately in Division 26 including conduit and wiring for power to sliding automatic entrances.

1.03 REFERENCES

A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.

B. Underwriters Laboratories (UL):
   1. UL 325 – Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.

C. American National Standards Institute (ANSI) / Builders' Hardware Manufacturers Association (BHMA):
   1. ANSI/BHMA A156.10: Standard for Power Operated Pedestrian Doors.
   2. ANSI/BHMA A156.5: Standard for Auxiliary Locks and Associated Products

D. American Society for Testing and Materials (ASTM):
   1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
   2. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate

E. American Welding Society (AWS):
   1. AWS A5.10/A5.10M - Specification For Bare Aluminum And Aluminum-Alloy Welding Electrodes And Rods.

F. American Association of Automatic Door Manufacturers (AAADM):

G. National Fire Protection Association (NFPA):
   1. NFPA 101 – Life Safety Code.
   2. NFPA 70 – National Electric Code.

H. International Code Council (ICC):
   1. IBC: International Building Code

I. Building Officials and Code Administrators International (BOCA), 1999:

J. International Organization for Standardization (ISO):
   1. ISO 9001 - Quality Management Systems

K. Miami-Dade County Building Code Compliance Office
   1. Product Control Division, Notice of Acceptance

L. Florida Building Code, current edition.

M. Florida Administrative Code (FAC)

N. National Association of Architectural Metal Manufacturers (NAAMM):
   1. Metal Finishes Manual for Architectural and Metal Products.

O. American Architectural Manufacturers Association (AAMA):
   1. AAMA 607.1 - Clear Anodic Finishes for Architectural Aluminum.
   2. AAMA 611 Voluntary Specification for Anodized Architectural Aluminum.
   3. AAMA 701 Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals.

1.04 DEFINITIONS

A. Activation Device: Device that, when actuated, sends an electrical signal to the door operator to open the door.

B. Safety Device: Device that prevents a door from opening or closing, as appropriate.

1.05 PERFORMANCE REQUIREMENTS

A. General: Provide automatic entrance door assemblies capable of withstanding loads and thermal movements based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.

B. Thermal Movements: Provide automatic entrances that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

C. Operating Range: Minus 30 deg F (Minus 34 deg C) to 130 deg F (54 deg C).

D. Opening-Force Requirements for Egress Doors: Not more than 50 lbf (222 N) required to manually set door in motion in the direction of egress if power fails, and not more than 15 lbf (67 N) required to open door to minimum required width.

E. Closing-Force Requirements: Not more than 30 lbf (133 N) required to prevent door from closing.

F. Air Infiltration: Maximum air leakage through fixed glazing and framing areas of 1.25 cfm/sf. (6.4 L/s-m2) of fixed entrance system area when tested according to ASTM E 283 at a minimum static-air-pressure difference of 6.24 lbf/sf (299 Pa).

G. Design Pressures: Impact rated sliding automatic entrance systems shall be designed to withstand up to +/- 75 psf (3591 Pa) wind force in both the positive and negative direction, and be large and small missile impact rated in accordance with Florida Building Code.

H. Sliding automatic entrances specified with access control locking shall be designed to function as follows:
   1. Secure Mode:
      a. Entrances shall be normally closed and locked by access control locking system with exterior motion activation system disabled. Interior motion activation system to remain enabled; free egress.
      b. Upon signal from exterior secure activation device, sliding automatic entrances will unlock and open enabling motion activation system. Entrance will be held open as long as an object or pedestrian remains in the activation or safety zones.
      c. Once all activation and safety zones have cleared the entrance will close and re-lock, returning to normal state.
      d. At any time during the cycle emergency egress can be achieved by utilizing the emergency breakaway feature.
      e. Provide enhanced security function to prevent unauthorized entry by sensor manipulation. Interior motion sensor shall be disabled when exterior presence sensor

is triggered.

2. Automatic Mode:
   a. Entrances shall be normally closed with motion activation system enabled and access control locking system disabled.
   b. Sliding automatic entrances open when an object or pedestrian remains in the activation or safety zones. Entrance will be held open as long as an object or pedestrian remains in the activation or safety zones.
   c. Once all activation and safety zones have cleared the entrance will close, returning to normal state.
   d. At any time during the cycle emergency egress can be achieved by utilizing the emergency breakaway feature.

1.06 SUBMITTALS

A. General: Submit the following in accordance with Conditions of the Contract and Division 1 Specification Sections.

B. Shop Drawings: Include plans, elevations, sections, details, hardware mounting heights, and attachments to other work.

C. Color Samples for selection of factory-applied color finishes.

D. Closeout Submittals:
   1. Owner’s Manual.
   2. Warranties.

E. Design Certifications:
   1. Product Control Division, Notice of Acceptance from Miami-Dade County Building Code Compliance Office.
   2. Product Approval in accordance with FAC 9B-72.

1.07 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative, with certificate issued by AAADM, who is trained for installation and maintenance of units required for this Project.

B. Manufacturer Qualifications: A qualified manufacturer with a manufacturing facility certified under ISO 9001.

C. Manufacturer shall have in place a national service dispatch center providing 24 hours a day, 7 days a week, emergency call back service.

D. Certifications: Automatic sliding door systems shall be certified by the manufacturer to meet performance design criteria in accordance with the following standards:
   1. ANSI/BHMA A156.10.
   2. NFPA 101.
   3. UL 325 listed.
   4. IBC 2009
   5. BOCA
   6. Miami-Dade County Building Code Compliance Office
   7. Florida Building Code, current edition.

E. Source Limitations: Obtain automatic entrance door assemblies through one source from a single manufacturer.

F. Product Options: Drawings indicate sizes, profiles, and dimensional requirements of automatic entrance door assemblies and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."

G. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

H. Emergency-Exit Door Requirements: Comply with requirements of authorities having jurisdiction for automatic entrances serving as a required means of egress.

1.08 PROJECT CONDITIONS

A. Field Measurements: General Contractor shall verify openings to receive automatic entrance door assemblies by field measurements before fabrication and indicate measurements on Shop Drawings.

B. Mounting Surfaces: General Contractor shall verify all surfaces to be plumb, straight and secure; substrates to be of proper dimension and material.

C. Other trades: General Contractor shall advise of any inadequate conditions or equipment.

1.09 COORDINATION

A. Templates: Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing automatic entrances to comply with indicated requirements.

B. Electrical System Roughing-in: Coordinate layout and installation of automatic entrance door assemblies with connections to power supplies.

C. System Integration: Integrate sliding automatic entrances with other systems as required for a complete working installation. Provide electrical interface control capability for operation of sliding automatic entrances by secure activation system on doors with electric locking.

1.10 WARRANTY

A. Automatic Entrances shall be free of defects in material and workmanship for a period of one (1) year from the date of substantial completion.

B. During the warranty period the Owner shall engage a factory-trained technician to perform service and affect repairs. A safety inspection shall be performed after each adjustment or repair and a completed inspection form shall be submitted to the Owner.

C. During the warranty period all warranty work, including but not limited to emergency service, shall be performed during normal working hours.

PART 2 PRODUCTS

2.01 AUTOMATIC ENTRANCES

A. Manufacturer: Stanley Access Technologies; Dura-Storm™ 2000 Series sliding automatic entrances.

2.02 MATERIALS

A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
   1. Headers, stiles, rails, and frames: 6063-T6.
   2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
   3. Sheet and Plate: ASTM B 209.

B. Sealants and Joint Fillers: Performed under Division 7 Section "Joint Sealants".

2.03 AUTOMATIC ENTRANCE DOOR ASSEMBLIES

A. General: Provide manufacturer's standard automatic entrance door assemblies including doors, sidelights, framing, headers, carrier assemblies, roller tracks, door operators, activation and safety devices, and accessories required for a complete installation.

B. Sliding Automatic Entrances:
   1. Bi-Parting Entrances:
      a. Configuration: Two sliding leaves and two full sidelights.
      b. Traffic Pattern: Two-way.
      c. Emergency Breakaway Capability: Sliding leaves only
      d. Mounting: Between jambs.

2.04 COMPONENTS

A. Framing Members: Manufacturer's standard extruded aluminum reinforced as required to support imposed loads.
   1. Nominal Size: 1 3/4 inch by 6 inch.

2. Concealed Fastening: Framing shall incorporate a concealed fastening pocket, and continuous flush insert cover, extending full length of each framing member.
3. Frames shall be prepped for an exterior access card reader.

B. Stile and Rail Doors and Sidelights: Manufacturer's standard 1 3/4 inch (45 mm) thick glazed doors with extruded-aluminum tubular stile and rail members. All door corners, including intersections of stiles and rails or stiles and muntin bars, shall be welded secure.
1. Glazing Stops and Gaskets: Snap-on, extruded-security aluminum inboard stops with preformed glazing gaskets. Mechanically fastened outboard gutter stop with approved structural glazing tape.
2. Stile Design: Narrow stile; 2 inch nominal width.
3. Bottom Rail Design: Minimum 10 inch nominal height.
4. Muntin Bars: Horizontal tubular rail member for each door; 4 1/4 inch nominal width.

C. Glazing: Performed under Division 8 Section “Glazing” in accordance with product approvals and the following:
1. Glass: 9/16 inch laminated impact rated glass as specified in product approvals.
2. Glazing: Outboard stop with approved structural tape.

D. Headers: Fabricated from extruded aluminum and extending full width of automatic entrance door units to conceal door operators, carrier assemblies, and roller tracks. Provide hinged or removable access panels for service and adjustment of door operators and controls. Secure panels to prevent unauthorized access.
1. Mounting: Concealed, with one side of header flush with framing.
2. Capacity: Capable of supporting up to 220 lb (100 kg) per panel, up to four panels, over spans up to 14 feet (4.3 m) without intermediate supports.

E. Carrier Assemblies and Overhead Roller Tracks: Manufacturer's standard carrier assembly that allows vertical adjustment of at least 1/8 inch (3 mm); consisting of urethane with precision steel lubricated ball-bearing wheels, operating on a continuous roller track. Support panels from carrier assembly by load wheels and anti-riser wheels with factory adjusted cantilever and pivot assembly. Minimum two ball-bearing load wheels and two anti-rise rollers for each active leaf. Minimum load wheel diameter shall be 2 1/2 inch (64 mm); minimum anti-rise roller diameter shall be 2 inch (51 mm).

F. Thresholds: Manufacturer's standard thresholds as indicated below:
1. Continuous standard tapered extrusion double bevel.
2. All thresholds to conform to details and requirements for code compliance.

G. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, non-bleeding fasteners and accessories compatible with adjacent materials.

H. Signage: Provide signage in accordance with ANSI/BHMA A156.10.

2.05 DOOR OPERATORS

A. General: Provide door operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; and for long-term, operation under normal traffic load for type of occupancy indicated.

B. Electromechanical Operators: Self-contained overhead unit powered by a minimum of 1/4 horsepower, permanent-magnet DC motor with gear reduction drive, microprocessor controller; and encoder.
1. Operation: Power opening and power closing.
2. Features:
a. Adjustable opening and closing speeds.
b. Adjustable latch-check and back-check.
c. Adjustable acceleration and braking.
d. Adjustable hold-open time between 0 and 30 seconds.
e. Obstruction recycle.
f. On/Off switch to control electric power to operator.
g. Energy conservation switch that reduces door-opening width.

h. Closed loop speed control with active braking and acceleration.
i. Adjustable obstruction recycle time delay.
j. Self adjusting stop position.
k. Self adjusting closing compression force.
l. Onboard sensor power supply.
m. Onboard sensor monitoring.
n. Optional Switch to open/Switch to close operation.

3. Mounting: Concealed.
4. Drive System: Synchronous belt type.

C. Electrical service to door operators shall be provided under Division 16 Electrical. Minimum service to be 115 VAC, 5 amps.

2.06 ELECTRICAL CONTROLS

A. Electrical Control System: Electrical control system shall include a microprocessor controller and position encoder. The encoder shall monitor revolutions of the operator shaft and send signals to microprocessor controller to define door position and speed. Systems utilizing external magnets and magnetic switches are not acceptable.

B. Performance Data: The microprocessor shall collect and store performance data as follows:
1. Counter: A non-resettable counter to track operating cycles.
2. Event Reporting: Unit shall include event and error recording including number of occurrences of events and errors, and cycle count of most recent events and errors.
3. LED Display: Display presenting the current operating state of the controller.

C. Controller Protection: The microprocessor controller shall incorporate the following features to ensure trouble free operation:
1. Automatic Reset Upon Power Up.
2. Main Fuse Protection.
3. Electronic Surge Protection.
4. Internal Power Supply Protection.
5. Auto-Resetting sensor supply protection.
6. Motor Protection, over-current protection.

D. Soft Start/Stop: A “soft-start” “soft-stop” motor driving circuit shall be provided for smooth normal opening and recycling.

E. Obstruction Recycle: Provide system to recycle the sliding panels when an obstruction is encountered during the closing cycle. If an obstruction is detected, the system shall search for that object on the next closing cycle by reducing door closing speed prior to the previously encountered obstruction location, and will continue to close in check speed until doors are fully closed, at which time the doors will reset to normal speed. If obstruction is encountered again, the door will come to a full stop. The doors shall remain stopped until obstruction is removed and operate signal is given, resetting the door to normal operation.

F. Programmable Controller: Microprocessor controller shall be programmable via standard push button controls, or by connection to a local configuration tool. Local configuration tool shall be a software driven handheld interface. The following parameters may be adjusted via the configuration tool.
1. Operating speeds and forces as required to meet ANSI/BHMA A156.10.
2. Adjustable and variable features as specified in 2.5, B., 2.
3. Reduced opening position.
4. Fail Safe/Secure control.
5. Firmware update.
6. Trouble Shooting
a. I/O Status.
b. Electrical component monitoring including parameter summary.
7. Software for local configuration tool shall be available as a free download from the sliding automatic entrance manufacturer’s internet site. Software shall be compatible with the following operating system platforms: Palm®, Android®, and Windows Mobile®.

G. Annual Event Timer: Provide annual event timer suitable for installation in sliding automatic entrance header as follows:
   1. Design: 24 hour, 365 day with daily and/or weekly event scheduling
   2. Electrical: 12/24 VAC/VDC operation at 50ma maximum.
   3. Relays: Form “C” rated 10 amp at 120VAC/28VDC, momentary and maintained action.
   4. Event Capacity: 350 Events per week; 10 holiday dates.
   5. Display: LCD
   6. Battery back-up.
   7. Annual event timer shall be equal to or better than Altronix PT724A.

2.07 ACTIVATION AND SAFETY DEVICES

A. Motion Sensors: Motion sensors shall be mounted on each side of door header to detect pedestrians in the activating zone, and to provide a signal to open doors in accordance with ANSI/BHMA A156.10. Units shall be programmable for bi-directional or uni-directional operation and shall incorporate K-band microwave frequency to detect all motion in both directions.

B. Presence Sensors: Presence sensors shall be provided to sense people or objects in the threshold safety zone in accordance with ANSI/BHMA A156.10. Units shall be self-contained, fully adjustable, and shall function accordingly with motion sensors provided. The sensor shall be enabled simultaneously with the door-opening signal and shall emit an elliptical shaped infrared presence zone, centered on the doorway threshold line. Presence sensors shall be capable of selectively retuning to adjust for objects which may enter the safety zone; tuning out, or disregarding, the presence of small nuisance objects and not tuning out large objects regardless of the time the object is present in the safety zone. The door shall close only after all sensors detect a clear surveillance field.

C. Enhanced Security Sensor: Enhanced security sensor sensors shall be active infrared type capable of sensing moving or stationary targets within the exterior activation zone. Sensors shall be designed to function at mounting heights up to 9 feet and shall be mounted on exterior side of sliding automatic entrances. Sensors detection patterns shall be programmable to accommodate various door and environmental conditions. Supporting relays shall be provided for a complete working system. Enhanced security sensors shall be equal to or better than Optex OA-203C.

D. Photoelectric Beams: In addition to the threshold sensor include a minimum of two (2) doorway holding beams. Photoelectric beams shall be pulsed infrared type, including sender receiver assemblies for recessed mounting. Beams shall be monitored by electrical controls for faults and shall fail safe.

2.08 HARDWARE

A. General: Provide units in sizes and types recommended by automatic entrance door and hardware manufacturers for entrances and uses indicated.

B. Emergency Breakaway Feature: Provide release hardware that allows panel(s) to swing out in direction of egress to full 90 degrees from any position in sliding mode. Maximum force to open panel shall be 50 lbf (222 N) according to ANSI/BHMA A156.10. Interrupt powered operation of panel operator while in breakaway mode.
   1. Emergency breakaway feature shall include at least two adjustable detent devices mounted in each breakaway panel; one top mounted and one bottom mounted, to control panel breakaway force.
   2. Wind Resistant Damper: Provide factory installed concealed gas dampers in each breakaway panel to protect door panels from wind damage. Dampers shall be designed to slow panel movement after breakout.

C. Access Control Locking System: Provide access control locking hardware on sliding automatic entrances as follows:
   1. System shall include:
      a. A fail-secure electric solenoid locking device with a self contained solid state electronic control factory mounted inside the header.

b. Vertical rod exit devices incorporated into the sliding door panels that prevent breakout until rod is released.

2. The automatic sliding door(s) shall self latch in the closed position preventing door panels from sliding manually, returning the system to its locked status.
3. During a power interruption:
   a. The solenoid lock shall be engaged, preventing the doors from sliding manually.
   b. Means of egress shall be accomplished by exit device. Exit device shall be concealed vertical rod tamper proof exit device with recessed flush mounted interior release hardware that shall prohibit manual breakout of door(s) from exterior. Flush mounted release hardware shall be concealed within the 4 1/4 inch (108 mm) horizontal muntin bar.

D. Uninterruptible Power Supply (UPS): Provide UPS on designated sliding automatic entrances in accordance with the following:
1. UPS shall be a fully integrated unit designed to fit within the door header and shall be UL listed for operation with the automatic door system provided herein.
2. Upon main power interruption to the door:
   a. The UPS shall supply power to the operator, controls, activation, and safety systems of the sliding automatic entrance door.
   b. The UPS shall provide up to 1.5 hours of normal operation.
3. UPS unit shall include a low battery shut down feature to safely open or close the door prior to complete battery discharge.
4. UPS unit shall include an audible battery replacement alarm to indicate that the battery will no longer accept a charge and replacement is required.

E. Control Switch: Provide manufacturer’s standard rotary switch mounted on the interior jamb and door position switch to allow for full control of the automatic entrance door. Controls to include, but are not limited to:
1. Mode Control.
2. One-way traffic
3. Reduced Opening
4. Open/Closed/Automatic

F. Power Switch: Sliding automatic entrances shall be equipped with a two position On/Off rocker switch to control power to the door.

G. Weather Stripping: Manufacturer's standard replaceable components complying with AAMA 701; made of wool, polypropylene, or nylon woven pile with nylon-fabric or aluminum-strip backing.
1. Provide double pile weather stripping on lead stiles of sliding panels and stiles adjacent to jambs.
2. Provide single pile weather stripping between carrier and header, lead stiles of sidelights, and on pivot stiles of sliding panels.

H. Weather Sweeps: Adjustable, dual brush, nylon brush sweep mounted to underside of door bottom.

2.09 FABRICATION

A. General: Factory fabricates automatic entrance door assembly components to designs, sizes, and thickness indicated and to comply with indicated standards.
1. Form aluminum shapes before finishing.
2. Use concealed fasteners to greatest extent possible.
   a. Where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration, use self-locking devices.
   b. Reinforce members as required to receive fastener threads.

B. Framing: Provide automatic entrances as prefabricated assemblies.
1. Fabricate tubular and channel frame assemblies with manufacturer's standard mechanical or welded joints. Provide sub-frames and reinforcement as required for a complete system to support required loads.

2. Perform fabrication operations in manner that prevents damage to exposed finish surfaces.
3. Form profiles that are sharp, straight, and free of defects or deformations.
4. Prepare components to receive concealed fasteners and anchor and connection devices.
5. Fabricate components with accurately fitted joints with ends coped or mitered to produce hairline joints free of burrs and distortion.

C. Doors: Factory fabricated and assembled in profiles indicated. Reinforce as required to support imposed loads and for installing hardware.

D. Door Operators: Factory fabricated and installed in headers, including adjusting and testing.

E. Welding: Comply with AWS A5.10/A5.10M - Specification for Bare Aluminum and Aluminum-Alloy Welding Electrodes and Rods.

F. Glazing: Fabricate framing with minimum glazing edge clearances for thickness and type of glazing indicated.

G. Hardware: Factory install hardware to the greatest extent possible; remove only as required for final finishing operation and for delivery to and installation at Project site.

2.10 ALUMINUM FINISHES

A. General: Comply with NAAMM Metal Finishes Manual for Architectural and Metal Products for recommendations for applying and designing finishes. Finish designations prefixed by AA comply with system established by Aluminum Association for designing finishes.

B. Class II, Clear Anodic Finish: AA-M12C22A31 Mechanical Finish: as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.40 mils minimum complying with AAMA 611-98, and the following:
1. AAMA 607.1
2. Applicator must be fully compliant with all applicable environmental regulations and permits, including wastewater and heavy metal discharge.

PART 3 EXECUTION

3.01 INSPECTION

A. Examine conditions for compliance with requirements for installation tolerances, header support, and other conditions affecting performance of automatic entrances. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. General: Do not install damaged components. Fit frame joints to produce joints free of burrs and distortion. Rigidly secure non-movement joints.

B. Entrances: Install automatic entrances plumb and true in alignment with established lines and grades without warp or rack of framing members and doors. Anchor securely in place.
1. Install surface-mounted hardware using concealed fasteners to greatest extent possible.
2. Set headers, carrier assemblies, tracks, operating brackets, and guides level and true to location with anchorage for permanent support.

C. Door Operators: Connect door operators to electrical power distribution system as specified in Division 16 Sections.

D. Glazing: Performed under Division 8 Section "Glazing" in accordance with sliding automatic entrance manufacturer’s instructions.

E. Sealants: Comply with requirements specified in Division 7 Section "Joint Sealants" to provide weather tight installation.

3.03 FIELD QUALITY CONTROL

A. Testing Services: Factory Trained Installer shall test and inspect each automatic entrance door to determine compliance of installed systems with applicable ANSI standards.

3.04 ADJUSTING

A. Adjust door operators, controls, and hardware for smooth and safe operation, for tight closure, and complying with requirements in ANSI/BHMA A156.10.

3.05 CLEANING AND PROTECTION

A. Clean glass and aluminum surfaces promptly after installation. Remove excess glazing and sealant compounds, dirt, and other substances. Repair damaged finish to match original finish. Comply with requirements in Division 8 Section “Glazing”, for cleaning and maintaining glass.

END OF SECTION