SECTION 08 42 29 - Automatic Entrances

AUTOMATIC SLIDING DOORS

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\*\* NOTE TO SPECIFIER \*\* DORMA; Automatic sliding entrance door products.  
This section is based on the products of DORMA, which is located at:  
Dorma Dr. Drawer AC  
Reamstown, PA 17567-0411  
Toll Free Tel: 800-523-8483  
Tel: 717-336-3881  
Fax: 800-274-9724  
Email: [request info (paul.licata@dorma.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=DORMA&coid=48160&rep=&fax=800-274-9724&message=RE:%20Spec%20Question%20(08461dor):%20%20&mf=)  
Web: [www.dorma.com](http://www.dorma.com)   
 [ [Click Here](http://www.arcat.com/arcatcos/cos48/arc48160.html) ] for additional information.  
DORMA incorporates Safety, Innovation, Functionality, and Superior Design into each automatic door system it produces. From its world-class manufacturing plant in Lake Bluff, Illinois, DORMA designs and markets an extensive and innovative line of sliding, swinging, folding and revolving door systems that meet and exceed industry standards.  
Each product offers exclusive features such as advanced microprocessor control for precision performance and long lasting reliability. A variety of sensors all engineered to provide optimum safety are available to meet every application. Other features setting DORMA apart from competitors include a handheld CPU for quick commissioning and diagnostic servicing, as well as sound-dampening designs to reduce noise.  
This specification includes DORMA doors and controls for sliding door systems to cover a wide range of applications and finishes. DORMA also manufactures equipment for automatic swing doors and manual sliding doors that are not contained in this specification. DORMA are widely recognized for displaying attractive looks, superior functionality, and design versatility. Contact DORMA for any additional information required.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Automatic Sliding Doors and Sidelights.
    2. Operators and Control Devices for Automatic Sliding Doors.
    3. Automatic Telescopic Sliding Door System.
    4. Operators and Control Devices for Automatic Telescopic Sliding Doors.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 07 90 00 - Joint Protection
    2. Section 08 32 13 - Sliding Aluminum-Framed Glass Doors.
    3. Section 08 41 00 - Entrances and Storefronts.
    4. Section 08 42 29 - Automatic Entrances.
    5. Section 08 71 53 - Security Door Hardware.
    6. Section 08 83 13 - Mirrored Glass Glazing.
    7. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables.
    8. Section 26 05 00 - Common Work Results for Electrical.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ANSI A117.1 - American National Standard for Accessible and Useable Buildings and Facilities.
    2. ANSI A156.10 - Power Operated Pedestrian Doors.
    3. ANSI-Z97.1.2 - Safety Performance Specifications and Methods of Test for Safety Glazing Materials Used in Buildings.
    4. ASTM A 36 / A36 M - Standard Specification for Carbon Structural Steel.
    5. ASTM A 924 / A 924M - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
    6. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
    7. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
    8. ASTM E 283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
    9. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls By Uniform Static Air Pressure Difference.
    10. ASTM F 842 - Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact.
    11. Aluminum Association Standard AA DAF-45 - Designation System for Aluminum Finishes.
    12. PA 201-94 - Large and Small Missile Impact Test. Dade County Code Compliance Protocols.
    13. PA 202-94 - Uniform Static Pressure Test. Dade County Code Compliance Protocols.
    14. PA 203-94 - Cyclic Wind Pressure Loading Test. Dade County Code Compliance Protocols.
    15. NFPA 70 - National Electric Code.
    16. NFPA 101 - Life Safety Code.
    17. UL 325 - Door, Drapery, Gate, Louver, and Window Operators and Systems - (UL) listed.
  1. DESIGN / PERFORMANCE REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* The following paragraphs apply to ESA200-HP and ESA300-HP Hurricane sliding doors only. Delete Large Missile testing paragraph below for non-impact applications. Delete paragraph entirely if not relevant to this project.

* + 1. Automatic sliding door system shall be certified by the manufacturer to meet performance design requirements according to criteria for conducting impact, static, cyclic, air and water tests as set forth by the Miami-Dade County Building Code Compliance Office (BCCO), Product Control Division.
       1. Air Infiltration: Tested in accordance with FBC, PA-202-94, ANSI A156.10, and ASTM E 283 at a pressure differential of 1.57 psf for pairs of doors.
       2. Uniform Static Pressure: Tested in accordance with FBC, PA-202-94, and ASTM E-283.
       3. Forced Entry: Tested in accordance with FBC, TAS 203-94.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph for impact applications only. Delete if not relevant to this project.

* + - 1. Large Missile: Tested in accordance with FBC, TAS PA-201-94, and ASTM E 1886 at a door opening of 16 feet wide by 8 feet 8 inches and a maximum door leaf size of 40-1/2 inches wide and a maximum height of 93 inches.
      2. Cyclic Wind Pressure Loading: Tested in accordance with FBC, TAS PA 203-94.
    1. Accessibility Requirements: Comply with requirements of Local building code, and Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities.

\*\* NOTE TO SPECIFIER \*\* Coordinate with mechanical engineer to determine if artificially induced air pressure and suction loads in building interior will adversely affect requirements of the following paragraph.

* + 1. System Design: Operate, hold open, and close doors under design wind and suction loads calculated in accordance with applicable building code.
    2. Operating Temperature Range: Minus 35 to plus 130 degrees F (minus 37 to plus 55 degrees C) ambient.
    3. Operators: Fully adjustable for opening and closing speeds, checking speeds, hold open time, and cancellation on activation of fire alarm and smoke detection system.
    4. Electrical: 120 VAC, 60 Hz, 5 Amp service provided to the header.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. 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.
        4. Operation and maintenance data.
     3. Shop Drawings: Indicate layout and dimensions; head, jamb, and sill conditions; elevations; components, anchorage, adjacent construction interface, recesses, materials, and finishes, electrical characteristics and connection requirements.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
    2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
    3. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
    4. Manufacturers warranties.
    5. Contract Closeout: Submit
       1. As-Built Record Documents showing actual installation conditions and wiring.
       2. Manufacturer's Warranty.
       3. Parts lists and maintenance instructions including data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
       4. American Association of Automatic Door Manufacturers (AAADM) inspection form completed and signed by certified AAADM inspector prior to doors being placed into operation.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Manufacturer to have minimum five years documented experience in the fabrication of automatic doors of the type required for this project and be capable of providing field service representation during installation.
     2. Installer Qualifications: Installer to be experienced in the work of this section who has specialized in the installation of work similar to that required for this project.
     3. Certified Inspector: Copy of current AAADM Certification for AAADM inspector prior inspection.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of installation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
       3. Refinish mock-up area as required to produce acceptable work.
       4. Accepted mock-up may become part of the Work.
    2. Automatic sliding door system shall be certified by the manufacturer to meet performance design criteria according to the following test standards: [select, if applicable]:
       1. ANSI A156.10.
       2. NFPA 101.
       3. Underwriter's Laboratories 325 (UL) listed.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Package hardware items individually with necessary fasteners and installation templates when necessary; label and identify each package with door opening code to match door schedule.
     2. Store products in manufacturer's unopened packaging until ready for installation.
     3. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.
     4. Store materials in a dry, warm, ventilated weathertight location.
  2. PROJECT CONDITIONS
     1. 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.
  3. MAINTENANCE MATERIALS
     1. Provide special wrenches and tools applicable to each different or special hardware component.
  4. COORDINATION
     1. Coordinate work with other directly affected components involving manufacture or fabrication of reinforcement for door hardware and recessed items.
     2. Coordinate work with other directly affected components involving electrical wiring and components.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: DORMA, which is located at: Dorma Dr. Drawer AC; Reamstown, PA 17567-0411; Toll Free Tel: 800-523-8483; Tel: 717-336-3881; Fax: 800-274-9724; Email: [request info (paul.licata@dorma.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=DORMA&coid=48160&rep=&fax=800-274-9724&message=RE:%20Spec%20Question%20(08461dor):%20%20&mf=); Web: [www.dorma.com](http://www.dorma.com)

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. COMPONENTS
     1. Extruded Aluminum: ASTM B 221; 6063 alloy, T5 temper typical, 6061 alloy, T6 temper for extruded structural members.
     2. Sheet Aluminum: ASTM B 209, 5005 alloy, H15 or H34 temper.
     3. Sheet Steel: ASTM A 924/A 924M; galvanized to minimum G90.
     4. Steel Sections: ASTM A 36/A3 6M; shaped to suit mullion sections, galvanized.

\*\* NOTE TO SPECIFIER \*\* Select one of the following glass paragraphs; coordinate with requirements specified for each door required. Laminated glass is required for hurricane resistant impact doors.

* + 1. Glass: Glass shall be in accordance with Safety Glazing standard ANSI-Z97.1.2.
       1. Single pane of fully tempered select glazing quality clear float glass, safety glass, minimum 1/4 inch (6 mm) thick, conforming with requirements in Section 08 83 13 - Mirrored Glass Glazing.
       2. Single pane of laminated glass, minimum 1/4 inch (6 mm) thick laminated glass.
       3. Sealed double pane units, consisting of fully tempered select glazing quality clear float glass, safety glass, total thickness 1 inch (25 mm), conforming with requirements in Section 08 83 13 - Mirrored Glass Glazing.
    2. Glazing Materials: Entrance manufacturer's standard types to suit application and conforming with requirements specified in Section 08 83 13 - Mirrored Glass Glazing.
    3. Weatherstripping: Entrance manufacturer's standard types to suit application.
    4. Fasteners: Stainless steel or corrosion resistant steel.

\*\* NOTE TO SPECIFIER \*\* Select one of the following automatic sliding door systems as required for the project and delete the ones not required. DORMA's ESA system is available in a variety of frame stiles that include narrow stile, medium stile and fine frame. Additional options include non-breakout, fixed and full breakout. For upscale applications that require a high degree of transparency, the fine frame design or the all glass design is the perfect solution. Consult with DORMA for additional information on sizes and installation limitations.

* 1. AUTOMATIC SLIDING DOOR SYSTEM

\*\* NOTE TO SPECIFIER \*\* DORMA ESA100 is a non-breakout design for applications that do not require emergency breakout panels.

* + 1. Automatic Sliding Door System: DORMA ESA100 (non-breakout design) consists of aluminum door(s) with sideliite(s). Provide to dimension heights and widths indicated on the Drawings.
       1. Sliding Aluminum Doors:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two stile paragraphs and delete the one not required.

* + - * 1. Narrow stile.
        2. Medium stile.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two glazing paragraphs and delete the one not required.

* + - * 1. Glazing 1/4 inch (6 mm) tempered glass.
        2. Glazing 1 inch (25 mm) tempered glass.
        3. Intermediate muntin 3.25 inches (83 mm) including glass stops.
        4. Bottom Rail:

\*\* NOTE TO SPECIFIER \*\* Select one of the following rail size paragraphs and delete the one not required.

7.5 inches (190.5 mm) including glass stops.

10 inches (254 mm) including glass stops.

* + - * 1. Bi-part sliding door system includes a one-point lock: secured at the lead edge(s) of the door panel(s).
        2. Active sliding door provided with a maximum security hookbolt lock, with provisions for a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.
      1. Door Operation: Slide panel(s) shall slide open automatically, and return to the closed position in compliance with ANSI 156.10.

\*\* NOTE TO SPECIFIER \*\* Select one or more of the following paragraphs as required for the project and delete the one not required.

* + - * 1. Single slide.
        2. Bi-part slide.
      1. Aluminum Frame and Extrusions:
         1. Door panels 1.75 inches (44 mm) deep.
         2. Framing materials including jambs and header shall be 4.5 inches (114mm) deep.
         3. Structural sections shall be .125 inches thickness.
         4. Bi-part transom packages contain one vertical transom tube centered in the opening.
      2. Header: 4.5 inches wide by 7.5 inches high (114 mm wide by 190.5 mm high) with a minimal wall thickness of .125 inch (32 mm), capable of supporting door panels of 400 lbs. (181 kg) single slide or 325 lbs. (147 kg) bi-part slide.
         1. Header contains the door operator and door mounting components.
         2. Provide header cover with a continuous self-locking hinge design and open flush with the top of the header.
         3. Roller track shall be a separate extrusion from the header and sound dampened by separating the track from the header with an extruded EPDM rubber gasket.
         4. Operator components are factory assembled within the header. Minimal field wiring is required. Door functions provided in accordance with ANSI A156.10.
      3. Sidelites:
         1. Provide sidelite door panel(s) to dimension height(s) and width(s) as indicated on the Drawings with corresponding glazing.
         2. Sidelites provided with standard intermediate 3.25 inch (82.5 mm) overall muntin.
         3. Sidelites shall remain fixed or stationary.
      4. Door Hanger Wheels: 1.5 inches (38 mm) diameter Delrin wheels with self lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by 1.4 inches (36 mm) diameter anti-riser wheels. Assembly shall allow the sliding doors to freely swing outward for emergency egress. Door height shall have an upward or downward adjustment of 3/16 inches plus or minus (5 mm).
      5. Threshold Track:
         1. Track is required adjacent to the sidelite panels.

\*\* NOTE TO SPECIFIER \*\* Select the following optional threshold paragraph as required for the project and delete if not required.

* + - * 1. Provide with continuous threshold is available.
      1. Door Operator and Controller: DORMA ESA system with an electro-mechanical operator and microprocessor controller. Components consist of a DC permanent magnet motor, a self lubricating drive system and a wear-free digital rotary encoder all linked to a fully integrated digital microprocessor controller.
      2. Microprocessor Controller: DORMA microprocessor controller is a fully integrated digital design that is self-learning and self-monitoring.
         1. Performance parameters shall not exceed applicable ANSI A156.10 and/or UL standards.
         2. Controller shall continuously monitor all critical door functions and safety sensors.
         3. All door functions such as opening speed, closing speed, check locations, partial open dimensions, etc., shall be fully programmable without the use of limit switches by utilizing a portable hand terminal connected to the microprocessor controller.
      3. Threshold Sensors: Self-monitored active infrared safety sensors. Sensors shall be self-contained and fully functioning during the opening and closing cycle of the door.
      4. Activation Sensor: Motion sensor utilizes K-band frequency (24.125 GHz) for improved detection of slow-moving pedestrian traffic, and shall be switchable between bi-directional and uni-directional operation. Circuitry is included to eliminate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Relay hold time is adjustable from 0.5 seconds to 9 seconds.
         1. Mount motion sensor to the header at 120 inches (3,048 mm) maximum above the finished floor. Using the adjustable antenna the detection pattern is semi-circular.
         2. When installed at a height of 96 inches (2,438mm) and set at the highest sensitivity, the sensor can provide a "wide pattern set-up " of approximately 12 feet wide by 6 feet 6 inches deep (3,658 by 1,981 mm) or a "narrow pattern set-up" of approximately 6 feet 6 inches wide by 8 feet deep (1,981 by 2,438 mm).
         3. Location of the detection zone shall be adjustable by moving the antenna. Vertical antenna adjustments are possible from 0 degrees to 90 degrees in 15 degrees increments and lateral adjustment from 30 degrees left to 30 degrees right and anywhere in between.
         4. Power is provided by the microprocessor control. Electrical adjustments can be made with a universal coded infrared remote control.
      5. Accessories: ESA100 automatic sliding door system shall include the following accessories to reduce energy loss:
         1. Track-in pile weather-stripping on the bottom of sliding door(s).
         2. Track-in double pile weather-stripping on the sliding door lead edges.
         3. Track-in single pile weather-stripping between the carrier and the header on the sliding door(s).
         4. Track-in double pile weather-stripping at the interlock rails between sliding door(s) and sidelite door(s).
         5. Track-in double pile weather-stripping on the edges between sidelite door(s) and jamb(s).

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph for cleanroom applications as required for the project and delete standard pile weather-stripping specified above.

* + - * 1. Track-in vinyl weatherstripping: For clean room applications, weather-stripping shall be Santoprene.
        2. Interior side jamb mounted program switches consisting of:

Main Switch = AUTO-CLOSE-OPEN (operates door in fully automatic mode or turns it off or keeps it fully open).

Exit Only Switch = OFF - ON (only the exit side motion detector will initiate door opening).

Partial Open Switch = OFF - ON (reduces the opening width according to weather and traffic conditions).

\*\* NOTE TO SPECIFIER \*\* DORMA ESA200 is a fixed sidelite design for applications requiring emergency egress through sliding panels only. A self-closing device comes standard with our ESA200 model to return the active door panel to its fully closed position after an emergency or incidental breakout.

* + 1. Automatic Sliding Door System: DORMA ESA200 (fixed sidelite design) consists of aluminum door(s) with sidelite(s). Door opening restrictor arms shall be provided for "SX" break away panels to control and limit the opening angle of the door(s) as they swing in the direction of egress. Provide to dimension heights and widths indicated on the Drawings.
       1. Sliding Aluminum Doors:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two stile paragraphs and delete the one not required.

* + - * 1. Narrow stile.
        2. Medium stile.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two glazing paragraphs and delete the one not required.

* + - * 1. Glazing 1/4 inch (6 mm) tempered glass.
        2. Glazing 1 inch (25 mm) tempered glass.
        3. Intermediate muntin 3.25 inches (83 mm) including glass stops.
        4. Bottom rail 7.5 inches (190.5 mm) including glass stops.
        5. Bi-part sliding door system includes a two-point lock: one secured at the lead edge(s) of the door panel(s) and the other to the carrier assembly above the locking stile.
        6. Active sliding door provided with a maximum security hookbolt lock, with provisions for a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.
      1. Door Operation: Slide panel(s) shall slide open and position to provide egress at any point in the door's movement or position in compliance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Select one or more of the following slide paragraphs as required for the project and delete the one not required.

* + - * 1. Single slide.
        2. Bi-part slide.
        3. Slide panel(s) allow "breakout" to the full and open position providing egress at any point in the door's movement or position. Automatic operation is discontinued when any panel is in the "breakout" mode by way of a non-contact cut-off switch, or self-closing device in accordance with ANSI A156.10.
        4. Size door(s) and sidelite(s) and positioned to provide a minimum 0.75 inch (19 mm) finger protection to prevent pinch points at the meeting stiles when fully opened.

\*\* NOTE TO SPECIFIER \*\* Select the following optional paragraph as required for the project. Delete if not required.

* + - * 1. Battery Back-Up: Provide automatic locking system, with battery back-up system.
      1. Aluminum Frame and Extrusions:
         1. Door panels 1.75 inches (44 mm) deep.
         2. Framing materials including jambs and header shall be 4.5 inches (114mm) deep.
         3. Structural sections shall be .125 inches thickness.
         4. Bi-part transom packages contain one vertical transom tube centered in the opening.
      2. Sidelites:
         1. Provide sidelite door panel(s) to dimension height(s) and width(s) as indicated on the Drawings with corresponding glazing.
         2. Sidelites provided with standard intermediate 3.25 inch (82.5 mm) overall muntin.
         3. Sidelites shall remain fixed or stationary, yet allow the sliding doors to break away to the full open position for egress at any point in the door's movement per NFPA 101.
      3. Header: 4.5 inches wide by 7.5 inches high (114 mm wide by 190.5 mm high) with a minimal wall thickness of .125 inch (32 mm), capable of supporting door panels of 400 lbs. (181 kg) single slide or 325 lbs. (147 kg) bi-part slide.
         1. Header contains the door operator and door mounting components.
         2. Provide header cover with a continuous self-locking hinge design and open flush with the top of the header.
         3. Roller track shall be a separate extrusion from the header and sound dampened by separating the track from the header with an extruded EPDM rubber gasket.
         4. Operator components are factory assembled within the header. Minimal field wiring is required. Door functions provided in accordance with ANSI A156.10.
      4. Door Hanger Wheels: 1.5 inches (38 mm) diameter Delrin wheels with self lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by 1.4 inches (36 mm) diameter anti-riser wheels. Assembly shall allow the sliding doors to freely swing outward for emergency egress. Door height shall have an upward or downward adjustment of 3/16 inches plus or minus (5 mm).
      5. Threshold Track:
         1. Track is required adjacent to the Sidelites and panels.

\*\* NOTE TO SPECIFIER \*\* Select the following optional threshold paragraph as required for the project and delete if not required.

* + - * 1. Provide with continuous threshold is available.
      1. Door Operator and Controller: DORMA ESA system with an electro-mechanical operator and microprocessor controller. Components consist of a DC permanent magnet motor, a self lubricating drive system and a wear-free digital rotary encoder all linked to a fully integrated digital microprocessor controller.
      2. Microprocessor Controller: DORMA microprocessor controller is a fully integrated digital design that is self-learning and self-monitoring.
         1. Performance parameters shall not exceed applicable ANSI A156.10 and/or UL standards.
         2. Controller shall continuously monitor all critical door functions and safety sensors.
         3. All door functions such as opening speed, closing speed, check locations, partial open dimensions, etc., shall be fully programmable without the use of limit switches by utilizing a portable hand terminal connected to the microprocessor controller.
      3. Threshold Sensors: Self-monitored active infrared safety sensors. Sensors shall be self-contained and fully functioning during the opening and closing cycle of the door.
      4. Activation Sensor: Motion sensor utilizes K-band frequency (24.125 GHz) for improved detection of slow-moving pedestrian traffic, and shall be switchable between bi-directional and uni-directional operation. Circuitry is included to eliminate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Relay hold time is adjustable from 0.5 seconds to 9 seconds.
         1. Mount motion sensor to the header at 120 inches (3,048 mm) maximum above the finished floor. Using the adjustable antenna the detection pattern is semi-circular.
         2. When installed at a height of 96 inches (2,438mm) and set at the highest sensitivity, the sensor can provide a "wide pattern set-up " of approximately 12 feet wide by 6 feet 6 inches deep (3,658 by 1,981 mm) or a "narrow pattern set-up" of approximately 6 feet 6 inches wide by 8 feet deep (1,981 by 2,438 mm).
         3. Location of the detection zone shall be adjustable by moving the antenna. Vertical antenna adjustments are possible from 0 degrees to 90 degrees in 15 degrees increments and lateral adjustment from 30 degrees left to 30 degrees right and anywhere in between.
         4. Power is provided by the microprocessor control. Electrical adjustments can be made with a universal coded infrared remote control.
      5. Accessories: ESA200 automatic sliding door system shall include the following accessories to reduce energy loss:
         1. Track-in pile weather-stripping on the bottom of sliding door(s).
         2. Track-in double pile weather-stripping on the sliding door lead edges.
         3. Track-in single pile weather-stripping between the carrier and the header on the sliding door(s).
         4. Track-in double pile weather-stripping at the interlock rails between sliding door(s) and sidelite door(s).
         5. Track-in neoprene weather-stripping between sidelite door(s) and jamb(s).

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph for cleanroom applications as required for the project and delete standard pile weather-stripping specified above.

* + - * 1. Track-in vinyl weatherstripping: For clean room applications, weather-stripping shall be Sanoprene.
        2. Interior side jamb mounted program switches consisting of:

Main Switch = AUTO-CLOSE-OPEN (operates door in fully automatic mode or turns it off or keeps it fully open).

Exit Only Switch = OFF - ON (only the exit side motion detector will initiate door opening).

Partial Open Switch = OFF - ON (reduces the opening width according to weather and traffic conditions).

\*\* NOTE TO SPECIFIER \*\* DORMA ESA200-HP is a hurricane resistant fixed sidelite design for applications requiring emergency egress through sliding panels only. A self-closing device comes standard with our ESA200-HP model to return the active door panel to its fully closed position after an emergency or incidental breakout.

* + 1. Automatic Sliding Door System: DORMA ESA200-HP hurricane resistant (fixed sidelite design) consists of aluminum door(s) with sidelite(s). Door opening restrictor arms shall be provided for "SX" break away panels to control and limit the opening angle of the door(s) as they swing in the direction of egress. Provide to dimension heights and widths indicated on the Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph if hurricane rated wind resistant doors are required. Delete if not required.

* + - 1. System shall withstand a uniform design pressure as required by the South Florida Building Code.
         1. Design Pressure: plus 55 psf, minus 55 psf.
         2. Miami-Dade County Building Code Compliance Office (BCCO), Product Control Division, NOA 06-0518.02.

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph if hurricane rated wind and impact resistant doors are required. Delete if not required.

* + - 1. System shall withstand a uniform design pressure and impact resistance as required by the Miami-Dade Building Code.
         1. Design Pressure: plus 45 psf, minus 45 psf.
         2. Impact resistant.
         3. Miami-Dade County Building Code Compliance Office (BCCO), Product Control Division, NOA 06-0519.02.
      2. Sliding Aluminum Doors:
         1. Medium stile.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two glazing paragraphs and delete the one not required. Laminated glass is required for impact resistant doors.

* + - * 1. Glazing 1/4 inch (6 mm) tempered glass.
        2. Glazing 1/4 inch (6 mm) laminated glass.
        3. Intermediate muntin 3.25 inches (83 mm) including glass stops.
        4. Bottom rail 7.5 inches (190.5 mm) including glass stops.
        5. Bi-part sliding door system includes a five-point lock: one secured at the lead edge(s) of the door panel(s) and the other to the carrier assembly above the locking stile and the floor below the locking stile.
        6. Active sliding door provided with a maximum security hookbolt lock, with provisions for a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.
      1. Door Operation: Slide panel(s) shall slide open and position to provide egress at any point in the door's movement or position in compliance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Select one or more of the following slide paragraphs as required for the project and delete the one not required.

* + - * 1. Single slide.
        2. Bi-part slide.
        3. Slide panel(s) allow "breakout" to the full and open position providing egress at any point in the door's movement or position. Automatic operation is discontinued when any panel is in the "breakout" mode by way of a non-contact cut-off switch, or self-closing device in accordance with ANSI A156.10.
        4. Size door(s) and sidelite(s) and positioned to provide a minimum 0.75 inch (19 mm) finger protection to prevent pinch points at the meeting stiles when fully opened.

\*\* NOTE TO SPECIFIER \*\* Select the following optional paragraph as required for the project. Delete if not required.

* + - * 1. Battery Back-Up: Provide automatic locking system, with battery back-up system.
      1. Aluminum Frame and Extrusions:
         1. Door panels 1.75 inches (44 mm) deep.
         2. Framing materials including jambs and header shall be 4.5 inches (114mm) deep.
         3. Structural sections shall be .125 inches thickness.
      2. Sidelites:
         1. Provide sidelite door panel(s) to dimension height(s) and width(s) as indicated on the Drawings with corresponding glazing.
         2. Sidelites provided with standard intermediate 3.25 inch (82.5 mm) overall muntin.
         3. Sidelites shall remain fixed or stationary, yet allow the sliding doors to break away to the full open position for egress at any point in the door's movement per NFPA 101.
      3. Header: 4.5 inches wide by 7.5 inches high (114 mm wide by 190.5 mm high) with a minimal wall thickness of .125 inch (32 mm), capable of supporting door panels of 400 lbs. (181 kg) single slide or 325 lbs. (147 kg) bi-part slide.
         1. Header contains the door operator and door mounting components.
         2. Provide header cover with a continuous self-locking hinge design and open flush with the top of the header.
         3. Roller track shall be a separate extrusion from the header and sound dampened by separating the track from the header with an extruded EPDM rubber gasket.
         4. Operator components are factory assembled within the header. Minimal field wiring is required. Door functions provided in accordance with ANSI A156.10.
      4. Door Hanger Wheels: 1.5 inches (38 mm) diameter Delrin wheels with self lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by 1.4 inches (36 mm) diameter anti-riser wheels. Assembly shall allow the sliding doors to freely swing outward for emergency egress. Door height shall have an upward or downward adjustment of 3/16 inches plus or minus (5 mm).
      5. Threshold Track:
         1. Track is required adjacent to the Sidelites and panels.
         2. Provide with continuous reinforced threshold is required.
      6. Door Operator and Controller: DORMA ESA system with an electro-mechanical operator and microprocessor controller. Components consist of a DC permanent magnet motor, a self lubricating drive system and a wear-free digital rotary encoder all linked to a fully integrated digital microprocessor controller.
      7. Microprocessor Controller: DORMA microprocessor controller is a fully integrated digital design that is self-learning and self-monitoring.
         1. Performance parameters shall not exceed applicable ANSI A156.10 and/or UL standards.
         2. Controller shall continuously monitor all critical door functions and safety sensors.
         3. All door functions such as opening speed, closing speed, check locations, partial open dimensions, etc., shall be fully programmable without the use of limit switches by utilizing a portable hand terminal connected to the microprocessor controller.
      8. Threshold Sensors: Self-monitored active infrared safety sensors. Sensors shall be self-contained and fully functioning during the opening and closing cycle of the door.
      9. Activation Sensor: Motion sensor utilizes K-band frequency (24.125 GHz) for improved detection of slow-moving pedestrian traffic, and shall be switchable between bi-directional and uni-directional operation. Circuitry is included to eliminate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Relay hold time is adjustable from 0.5 seconds to 9 seconds.
         1. Mount motion sensor to the header at 120 inches (3,048 mm) maximum above the finished floor. Using the adjustable antenna the detection pattern is semi-circular.
         2. When installed at a height of 96 inches (2,438mm) and set at the highest sensitivity, the sensor can provide a "wide pattern set-up " of approximately 12 feet wide by 6 feet 6 inches deep (3,658 by 1,981 mm) or a "narrow pattern set-up" of approximately 6 feet 6 inches wide by 8 feet deep (1,981 by 2,438 mm).
         3. Location of the detection zone shall be adjustable by moving the antenna. Vertical antenna adjustments are possible from 0 degrees to 90 degrees in 15 degrees increments and lateral adjustment from 30 degrees left to 30 degrees right and anywhere in between.
         4. Power is provided by the microprocessor control. Electrical adjustments can be made with a universal coded infrared remote control.
      10. Accessories: ESA200-HP automatic sliding door system shall include the following accessories to reduce energy loss:
          1. Track-in Sanoprene weather-stripping on the bottom of sliding door(s).
          2. Track-in double Sanoprene weather-stripping on the sliding door lead edges.
          3. Track-in single Sanoprene weather-stripping between the carrier and the header on the sliding door(s).
          4. Track-in double Sanoprene weather-stripping at the interlock rails between sliding door(s) and sidelite door(s).
          5. Track-in Sanoprene weather-stripping between sidelite door(s) and jamb(s).
          6. Interior side jamb mounted program switches consisting of:

Main Switch = AUTO- CLOSE -OPEN (operates door in fully automatic mode or turns it off or keeps it fully open).

Exit Only Switch = OFF - ON (only the exit side motion detector will initiate door opening).

Partial Open Switch = OFF - ON (reduces the opening width according to weather and traffic conditions).

\*\* NOTE TO SPECIFIER \*\* DORMA ESA300 is a full breakout design for applications requiring emergency egress through sliding and fixed door panels.

* + 1. Automatic Sliding Door System: DORMA ESA300 (full breakout design) consists of aluminum door(s) with sidelite(s). Door opening restrictor arms shall be provided for all panels to control and limit the opening angle of the door(s) as they swing in the direction of egress. Provide to dimension heights and widths indicated on the Drawings.
       1. Sliding Aluminum Doors:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two stile paragraphs and delete the one not required.

* + - * 1. Narrow stile.
        2. Medium stile.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two glazing paragraphs and delete the one not required.

* + - * 1. Glazing 1/4 inch (6 mm) tempered glass.
        2. Glazing 1 inch (25 mm) tempered glass.
        3. Intermediate muntin 3.25 inches (83 mm) including glass stops.
        4. Bottom rail 7.5 inches (190.5 mm) including glass stops.
        5. Bi-part sliding door system includes a two-point lock: one secured at the lead edge(s) of the door panel(s) and the other to the carrier assembly above the locking stile.
        6. Door package includes interlock clips that latch the sliding panel(s) to the sidelite panel(s) when the door system is in the fully closed position.
        7. Active sliding door provided with a maximum security hookbolt lock, with provisions for a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* The following two devices are optional, select the paragraph(s) and delete those not required.

* + - * 1. Exit Device: Adams Rite Model 8600 narrow stile concealed vertical rod exit device.
        2. Autolock: Conceal carrier lock, head mounted.
      1. Door Operation: Slide panel(s) shall slide open and position to provide egress at any point in the door's movement or position in compliance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Select one or more of the following slide paragraphs as required for the project and delete the one not required.

* + - * 1. Single slide.
        2. Bi-part slide.
        3. Slide panel(s) allow "breakout" to the full and open position providing egress at any point in the door's movement or position. Automatic operation is discontinued when any panel is in the "breakout" mode by way of a non-contact cut-off switch, or self-closing device.
        4. Size door(s) and sidelite(s) and positioned to provide a minimum 0.75 inch (19 mm) finger protection to prevent pinch points at the meeting stiles when fully opened.

\*\* NOTE TO SPECIFIER \*\* Select the following optional paragraph as required for the project. Delete if not required.

* + - * 1. Battery Back-Up: Provide automatic locking system, with battery back-up system.
      1. Aluminum Frame and Extrusions:
         1. Door panels 1.75 inches (44 mm) deep.
         2. Framing materials including jambs and header shall be 4.5 inches (114mm) deep.
         3. Structural sections shall be .125 inches thickness.
         4. Bi-part transom packages contain one vertical transom tube centered in the opening.
      2. Sidelites:
         1. Provide sidelite door panel(s) to dimension height(s) and width(s) as indicated on the Drawings with corresponding glazing.
         2. Sidelites provided with standard intermediate 3.25 inch (82.5 mm) overall muntin.
         3. Sidelites shall swing out and allow the sliding doors to break away to the full open position for egress at any point in the door's movement per NFPA 101.
      3. Header: 4.5 inches wide by 7.5 inches high (114 mm wide by 190.5 mm high) with a minimal wall thickness of .125 inch (32 mm), capable of supporting door panels of 400 lbs. (181 kg) single slide or 325 lbs. (147 kg) bi-part slide.
         1. Header contains the door operator and door mounting components.
         2. Provide header cover with a continuous self-locking hinge design and open flush with the top of the header.
         3. Roller track shall be a separate extrusion from the header and sound dampened by separating the track from the header with an extruded EPDM rubber gasket.
         4. Operator components are factory assembled within the header. Minimal field wiring is required. Door functions provided in accordance with ANSI A156.10.
      4. Door Hanger Wheels: 1.5 inches (38 mm) diameter Delrin wheels with self lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by 1.4 inches (36 mm) diameter anti-riser wheels. Assembly shall allow the sliding doors to freely swing outward for emergency egress. Door height shall have an upward or downward adjustment of 3/16 inches plus or minus (5 mm).
      5. Threshold Track:
         1. Track is required adjacent to the Sidelites and panels.

\*\* NOTE TO SPECIFIER \*\* Select the following optional threshold paragraph as required for the project and delete if not required.

* + - * 1. Provide with continuous threshold is available.
      1. Door Operator and Controller: DORMA ESA system with an electro-mechanical operator and microprocessor controller. Components consist of a DC permanent magnet motor, a self lubricating drive system and a wear-free digital rotary encoder all linked to a fully integrated digital microprocessor controller.
      2. Microprocessor Controller: DORMA microprocessor controller is a fully integrated digital design that is self-learning and self-monitoring.
         1. Performance parameters shall not exceed applicable ANSI A156.10 and/or UL standards.
         2. Controller shall continuously monitor all critical door functions and safety sensors.
         3. All door functions such as opening speed, closing speed, check locations, partial open dimensions, etc., shall be fully programmable without the use of limit switches by utilizing a portable hand terminal connected to the microprocessor controller.
      3. Threshold Sensors: Self-monitored active infrared safety sensors. Sensors shall be self-contained and fully functioning during the opening and closing cycle of the door.
      4. Activation Sensor: Motion sensor utilizes K-band frequency (24.125 GHz) for improved detection of slow-moving pedestrian traffic, and shall be switchable between bi-directional and uni-directional operation. Circuitry is included to eliminate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Relay hold time is adjustable from 0.5 seconds to 9 seconds.
         1. Mount motion sensor to the header at 120 inches (3,048 mm) maximum above the finished floor. Using the adjustable antenna the detection pattern is semi-circular.
         2. When installed at a height of 96 inches (2,438mm) and set at the highest sensitivity, the sensor can provide a "wide pattern set-up " of approximately 12 feet wide by 6 feet 6 inches deep (3,658 by 1,981 mm) or a "narrow pattern set-up" of approximately 6 feet 6 inches wide by 8 feet deep (1,981 by 2,438 mm).
         3. Location of the detection zone shall be adjustable by moving the antenna. Vertical antenna adjustments are possible from 0 degrees to 90 degrees in 15 degrees increments and lateral adjustment from 30 degrees left to 30 degrees right and anywhere in between.
         4. Power is provided by the microprocessor control. Electrical adjustments can be made with a universal coded infrared remote control.
      5. Accessories: ESA300 automatic sliding door system shall include the following accessories to reduce energy loss:
         1. Track-in pile weather-stripping on the bottom of sliding door(s).
         2. Track-in double pile weather-stripping on the sliding door lead edges.
         3. Track-in single pile weather-stripping between the carrier and the header on the sliding door(s).
         4. Track-in double pile weather-stripping at the interlock rails between sliding door(s) and sidelite door(s).
         5. Track-in neoprene weather-stripping between sidelite door(s) and jamb(s).

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph for cleanroom applications as required for the project and delete standard pile weather-stripping specified above.

* + - * 1. Track-in vinyl weatherstripping: For clean room applications, weather-stripping shall be Sanoprene.
        2. Interior side jamb mounted program switches consisting of:

Main Switch = AUTO- CLOSE -OPEN (operates door in fully automatic mode or turns it off or keeps it fully open).

Exit Only Switch = OFF - ON (only the exit side motion detector will initiate door opening).

Partial Open Switch = OFF - ON (reduces the opening width according to weather and traffic conditions).

\*\* NOTE TO SPECIFIER \*\* DORMA ESA300-HP is a hurricane resistant full breakout design for applications requiring emergency egress through sliding and fixed door panels.

* + 1. Automatic Sliding Door System: DORMA ESA300-HP hurricane resistant (full breakout design) consists of aluminum door(s) with sidelite(s). Door opening restrictor arms shall be provided for all panels to control and limit the opening angle of the door(s) as they swing in the direction of egress. Provide to dimension heights and widths indicated on the Drawings.

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph if hurricane rated wind resistant doors are required. Delete if not required.

* + - 1. System shall withstand a uniform design pressure as required by the South Florida Building Code.
         1. Design Pressure: plus 55 psf, minus 55 psf.
         2. Miami-Dade County Building Code Compliance Office (BCCO), Product Control Division, NOA 06-0518.03.

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph if hurricane rated wind and impact resistant doors are required. Delete if not required.

* + - 1. System shall withstand a uniform design pressure and impact resistance as required by the Miami-Dade Building Code.
         1. Design Pressure: plus 45 psf, minus 45 psf.
         2. Large Missle Impact resistant.
         3. Miami-Dade County Building Code Compliance Office (BCCO), Product Control Division, NOA 06-0518.04, (NOA 07-0625.03 with panic bars).
      2. Sliding Aluminum Doors:
         1. Medium stile.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two glazing paragraphs and delete the one not required. Laminated glass is required for impact resistant doors.

* + - * 1. Glazing 1/4 inch (6 mm) tempered glass.
        2. Glazing 1/4 inch (6 mm) laminated glass.
        3. Intermediate muntin 3.25 inches (83 mm) including glass stops.
        4. Bottom rail 7.5 inches (190.5 mm) including glass stops.
        5. Bi-part sliding door system includes a two-point lock: one secured at the lead edge(s) of the door panel(s) and the other to the carrier assembly above the locking stile.
        6. Door package includes interlock clips that latch the sliding panel(s) to the sidelite panel(s) when the door system is in the fully closed position.
        7. Active sliding door provided with a maximum security hookbolt lock, with provisions for a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* The following two devices are optional, select the paragraph(s) and delete those not required.

* + - * 1. Exit Device: Adams Rite Model 8600 narrow stile concealed vertical rod exit device.
        2. Autolock: Conceal carrier lock, head mounted.
      1. Door Operation: Slide panel(s) shall slide open and position to provide egress at any point in the door's movement or position in compliance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Select one or more of the following slide paragraphs as required for the project and delete the one not required.

* + - * 1. Single slide.
        2. Bi-part slide.
        3. Slide panel(s) allow "breakout" to the full and open position providing egress at any point in the door's movement or position. Automatic operation is discontinued when any panel is in the "breakout" mode by way of a non-contact cut-off switch, or self-closing device.
        4. Size door(s) and sidelite(s) and positioned to provide a minimum 0.75 inch (19 mm) finger protection to prevent pinch points at the meeting stiles when fully opened.

\*\* NOTE TO SPECIFIER \*\* Select the following optional paragraph as required for the project. Delete if not required.

* + - * 1. Battery Back-Up: Provide automatic locking system, with battery back-up system.
      1. Aluminum Frame and Extrusions:
         1. Door panels 1.75 inches (44 mm) deep.
         2. Framing materials including jambs and header shall be 4.5 inches (114mm) deep.
         3. Structural sections shall be .125 inches thickness..
      2. Sidelites:
         1. Provide sidelite door panel(s) to dimension height(s) and width(s) as indicated on the Drawings with corresponding glazing.
         2. Sidelites provided with standard intermediate 3.25 inch (82.5 mm) overall muntin.
         3. Sidelites shall swing out and allow the sliding doors to break away to the full open position for egress at any point in the door's movement per NFPA 101.
      3. Header: 4.5 inches wide by 7.5 inches high (114 mm wide by 190.5 mm high) with a minimal wall thickness of .125 inch (32 mm), capable of supporting door panels of 400 lbs. (181 kg) single slide or 325 lbs. (147 kg) bi-part slide.
         1. Header contains the door operator and door mounting components.
         2. Provide header cover with a continuous self-locking hinge design and open flush with the top of the header.
         3. Roller track shall be a separate extrusion from the header and sound dampened by separating the track from the header with an extruded EPDM rubber gasket.
         4. Operator components are factory assembled within the header. Minimal field wiring is required. Door functions provided in accordance with ANSI A156.10.
      4. Door Hanger Wheels: 1.5 inches (38 mm) diameter Delrin wheels with self lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by 1.4 inches (36 mm) diameter anti-riser wheels. Assembly shall allow the sliding doors to freely swing outward for emergency egress. Door height shall have an upward or downward adjustment of 3/16 inches plus or minus (5 mm).
      5. Threshold Track:
         1. Track is required adjacent to the Sidelites and panels.

\*\* NOTE TO SPECIFIER \*\* Select the following optional threshold paragraph as required for the project and delete if not required.

* + - * 1. Provide with continuous threshold is available.
      1. Door Operator and Controller: DORMA ESA system with an electro-mechanical operator and microprocessor controller. Components consist of a DC permanent magnet motor, a self lubricating drive system and a wear-free digital rotary encoder all linked to a fully integrated digital microprocessor controller.
      2. Microprocessor Controller: DORMA microprocessor controller is a fully integrated digital design that is self-learning and self-monitoring.
         1. Performance parameters shall not exceed applicable ANSI A156.10 and/or UL standards.
         2. Controller shall continuously monitor all critical door functions and safety sensors.
         3. All door functions such as opening speed, closing speed, check locations, partial open dimensions, etc., shall be fully programmable without the use of limit switches by utilizing a portable hand terminal connected to the microprocessor controller.
      3. Threshold Sensors: Self-monitored active infrared safety sensors. Sensors shall be self-contained and fully functioning during the opening and closing cycle of the door.
      4. Activation Sensor: Motion sensor utilizes K-band frequency (24.125 GHz) for improved detection of slow-moving pedestrian traffic, and shall be switchable between bi-directional and uni-directional operation. Circuitry is included to eliminate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Relay hold time is adjustable from 0.5 seconds to 9 seconds.
         1. Mount motion sensor to the header at 120 inches (3,048 mm) maximum above the finished floor. Using the adjustable antenna the detection pattern is semi-circular.
         2. When installed at a height of 96 inches (2,438mm) and set at the highest sensitivity, the sensor can provide a "wide pattern set-up " of approximately 12 feet wide by 6 feet 6 inches deep (3,658 by 1,981 mm) or a "narrow pattern set-up" of approximately 6 feet 6 inches wide by 8 feet deep (1,981 by 2,438 mm).
         3. Location of the detection zone shall be adjustable by moving the antenna. Vertical antenna adjustments are possible from 0 degrees to 90 degrees in 15 degrees increments and lateral adjustment from 30 degrees left to 30 degrees right and anywhere in between.
         4. Power is provided by the microprocessor control. Electrical adjustments can be made with a universal coded infrared remote control.
      5. Accessories: ESA-HP 300 automatic sliding door system shall include the following accessories to reduce energy loss:
         1. Track-in pile weather-stripping on the bottom of sliding door(s).
         2. Track-in double pile weather-stripping on the sliding door lead edges.
         3. Track-in single pile weather-stripping between the carrier and the header on the sliding door(s).
         4. Track-in double pile weather-stripping at the interlock rails between sliding door(s) and sidelite door(s).
         5. Track-in neoprene weather-stripping between sidelite door(s) and jamb(s).
         6. Interior side jamb mounted program switches consisting of:

Main Switch = AUTO- CLOSE -OPEN (operates door in fully automatic mode or turns it off or keeps it fully open).

Exit Only Switch = OFF - ON (only the exit side motion detector will initiate door opening).

Partial Open Switch = OFF - ON (reduces the opening width according to weather and traffic conditions).

\*\* NOTE TO SPECIFIER \*\* DORMA ESA400 is a thin face frame with a high degree of visibility and a full breakout design for applications requiring emergency egress through sliding and fixed door panels.

* + 1. Automatic Sliding Door System: DORMA ESA400 (fine frame full breakout design) consists of aluminum door(s) with sidelite(s). Door opening restrictor arms shall be provided for all panels to control and limit the opening angle of the door(s) as they swing in the direction of egress. Provide to dimension heights and widths indicated on the Drawings.
       1. Sliding Aluminum Doors:
          1. All visible aluminum door stiles shall have a face dimension of: pivot stiles 1-5/16 inch (33 mm), interlock stiles 1-3/16 inch (30 mm), and lock stiles 31/32 inch (24.6 mm) plus an 11/32 inch (8.7 mm) neoprene nosing for weather sealing.
          2. All visible door rails shall have a face dimension of: bottom rails 3-7/16 inches (87 mm) and tapered top rails 6-3/8 inches (162 mm) including the breakout assembly and be full height of door.
          3. Glazing 3/8 inch (9.5 mm) tempered glass.
          4. Each sliding door panel shall have a single-point lock on the bottom rail. Door is provided with a continuous interlock rail that latches the sliding panel(s) to the sidelite panel(s) when the door system is in the fully closed position.
          5. Each active sliding door provided with a maximum single-point floor lock, with provisions for a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.
       2. Door Operation: Slide panel(s) shall slide open and position to provide egress at any point in the door's movement or position in compliance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Select one or more of the following slide paragraphs as required for the project and delete the one not required.

* + - * 1. Single slide.
        2. Bi-part slide.
        3. Slide panel(s) allow "breakout" to the full and open position providing egress at any point in the door's movement or position. Automatic operation is discontinued when any panel is in the "breakout" mode by way of a non-contact cut-off switch, or self-closing device.

\*\* NOTE TO SPECIFIER \*\* Select the following optional paragraph as required for the project. Delete if not required.

* + - * 1. Battery Back-Up: Provide automatic locking system, with battery back-up system.
      1. Aluminum Frame and Extrusions:
         1. Framing materials including jambs and header shall be 4.5 inches (114 mm) deep.
         2. Structural sections shall be .125 inches thickness..
         3. Bi-part transom packages contain one vertical transom tube centered in the opening.
      2. Sidelites:
         1. Provide sidelite door panel(s) to dimension height(s) and width(s) as indicated on the Drawings.
         2. Glazing 3/8 inch (9.5 mm) tempered glass.
         3. Sidelites shall swing out and allow the sliding doors to break away to the full open position for egress at any point in the door's movement per NFPA 101.
      3. Header: 4.5 inches wide by 7.5 inches high (114 mm wide by 190.5 mm high) with a minimal wall thickness of .125 inch (32 mm), capable of supporting door panels of 400 lbs. (181 kg) single slide or 325 lbs. (147 kg) bi-part slide.
         1. Header contains the door operator and door mounting components.
         2. Provide header cover with a continuous self-locking hinge design and open flush with the top of the header.
         3. Roller track shall be a separate extrusion from the header and sound dampened by separating the track from the header with an extruded EPDM rubber gasket.
         4. Operator components are factory assembled within the header. Minimal field wiring is required. Door functions provided in accordance with ANSI A156.10.
      4. Door Hanger Wheels: 1.5 inches (38 mm) diameter Delrin wheels with self lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by 1.4 inches (36 mm) diameter anti-riser wheels. Assembly shall allow the sliding doors to freely swing outward for emergency egress. Door height shall have an upward or downward adjustment of 3/16 inches plus or minus (5 mm).
      5. Threshold Track:
         1. Track is required adjacent to the Sidelites and panels.

\*\* NOTE TO SPECIFIER \*\* Select the following optional threshold paragraph as required for the project and delete if not required.

* + - * 1. Provide with continuous threshold is available.
      1. Door Operator and Controller: DORMA ESA system with an electro-mechanical operator and microprocessor controller. Components consist of a DC permanent magnet motor, a self lubricating drive system and a wear-free digital rotary encoder all linked to a fully integrated digital microprocessor controller.
      2. Microprocessor Controller: DORMA microprocessor controller is a fully integrated digital design that is self-learning and self-monitoring.
         1. Performance parameters shall not exceed applicable ANSI A156.10 and/or UL standards.
         2. Controller shall continuously monitor all critical door functions and safety sensors.
         3. All door functions such as opening speed, closing speed, check locations, partial open dimensions, etc., shall be fully programmable without the use of limit switches by utilizing a portable hand terminal connected to the microprocessor controller.
      3. Threshold Sensors: Self-monitored active infrared safety sensors. Sensors shall be self-contained and fully functioning during the opening and closing cycle of the door.
      4. Activation Sensor: Motion sensor utilizes K-band frequency (24.125 GHz) for improved detection of slow-moving pedestrian traffic, and shall be switchable between bi-directional and uni-directional operation. Circuitry is included to eliminate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Relay hold time is adjustable from 0.5 seconds to 9 seconds.
         1. Mount motion sensor to the header at 120 inches (3,048 mm) maximum above the finished floor. Using the adjustable antenna the detection pattern is semi-circular.
         2. When installed at a height of 96 inches (2,438mm) and set at the highest sensitivity, the sensor can provide a "wide pattern set-up " of approximately 12 feet wide by 6 feet 6 inches deep (3,658 by 1,981 mm) or a "narrow pattern set-up" of approximately 6 feet 6 inches wide by 8 feet deep (1,981 by 2,438 mm).
         3. Location of the detection zone shall be adjustable by moving the antenna. Vertical antenna adjustments are possible from 0 degrees to 90 degrees in 15 degrees increments and lateral adjustment from 30 degrees left to 30 degrees right and anywhere in between.
         4. Power is provided by the microprocessor control. Electrical adjustments can be made with a universal coded infrared remote control.
      5. Accessories: ESA400 automatic sliding door system shall include the following accessories to reduce energy loss:
         1. Track-in pile weather-stripping on the bottom of sliding door(s).
         2. Track-in EPDM rubber weather-stripping on the sliding door lead edges.
         3. Track-in single pile weather-stripping between the carrier and the header on the sliding door(s).
         4. Track-in EPDM rubber weather-stripping at the interlock rails between sliding door(s) and sidelite door(s).
         5. Track-in single pile weather-stripping between sidelite door(s) and jamb(s).
         6. Interior side jamb mounted program switches consisting of:

Main Switch = AUTO- CLOSE -OPEN (operates door in fully automatic mode or turns it off or keeps it fully open).

Exit Only Switch = OFF - ON (only the exit side motion detector will initiate door opening).

Partial Open Switch = OFF - ON (reduces the opening width according to weather and traffic conditions).

\*\* NOTE TO SPECIFIER \*\* DORMA ESA500 provides the maximum degree of visibility and a full breakout design at sliding panels.

* + 1. Automatic Sliding Door System: DORMA ESA500 (All glass fixed sidelite design) consists of top and bottom rails for glass door(s) with sidelite(s). Door opening restrictor arms shall be provided for "SX" break away panels to control and limit the opening angle of the door(s) as they swing in the direction of egress. Provide to dimension heights and widths indicated on the Drawings.
       1. Sliding All Glass Doors:
          1. Provide top and bottom rails and glass sizes to dimension heights and widths with corresponding glazing as shown on construction documents.
          2. Each active sliding door provided with a miximum single-point lock, with a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.
       2. Door Operation: Slide panel(s) shall slide open and position to provide egress at any point in the door's movement or position in compliance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Select one or more of the following slide paragraphs as required for the project and delete the one not required.

* + - * 1. Single slide.
        2. Bi-part slide.
        3. Slide panel(s) allow "breakout" to the full and open position providing egress at any point in the door's movement or position. Automatic operation is discontinued when any panel is in the "breakout" mode by way of a non-contact cut-off switch, or self-closing device.

\*\* NOTE TO SPECIFIER \*\* Select the following optional paragraph as required for the project. Delete if not required.

* + - * 1. Battery Back-Up: Provide automatic locking system, with battery back-up system.
      1. Aluminum Frame and Extrusions:
         1. Door panels 1.75 inches (44 mm) deep.
         2. Framing materials including jambs and header shall be 4.5 inches (114 mm) deep.
         3. Structural sections shall be .125 inches thickness.
         4. Bi-part transom packages contain one vertical transom tube centered in the opening.
      2. Sidelites:
         1. Provide sidelite door panel(s) to dimension height(s) and width(s) as indicated on the Drawings with corresponding glazing.
         2. Sidelites shall remain fixed or stationary, yet allow the sliding doors to break away to the full open position for egress at any point in the door's movement per NFPA 101.
      3. Header: 4.5 inches wide by 7.5 inches high (114 mm wide by 190.5 mm high) with a minimal wall thickness of .125 inch (32 mm), capable of supporting door panels of 400 lbs. (181 kg) single slide or 325 lbs. (147 kg) bi-part slide.
         1. Header contains the door operator and door mounting components.
         2. Provide header cover with a continuous self-locking hinge design and open flush with the top of the header.
         3. Roller track shall be a separate extrusion from the header and sound dampened by separating the track from the header with an extruded EPDM rubber gasket.
         4. Operator components are factory assembled within the header. Minimal field wiring is required. Door functions provided in accordance with ANSI A156.10.
      4. Door Hanger Wheels: 1.5 inches (38 mm) diameter Delrin wheels with self lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by 1.4 inches (36 mm) diameter anti-riser wheels. Assembly shall allow the sliding doors to freely swing outward for emergency egress. Door height shall have an upward or downward adjustment of 3/16 inches plus or minus (5 mm).
      5. Threshold Track:
         1. Track is required adjacent to the Sidelites and panels.

\*\* NOTE TO SPECIFIER \*\* Select the following optional threshold paragraph as required for the project and delete if not required.

* + - * 1. Provide with continuous threshold is available.
      1. Door Operator and Controller: DORMA ESA system with an electro-mechanical operator and microprocessor controller. Components consist of a DC permanent magnet motor, a self lubricating drive system and a wear-free digital rotary encoder all linked to a fully integrated digital microprocessor controller.
      2. Microprocessor Controller: DORMA microprocessor controller is a fully integrated digital design that is self-learning and self-monitoring.
         1. Performance parameters shall not exceed applicable ANSI A156.10 and/or UL standards.
         2. Controller shall continuously monitor all critical door functions and safety sensors.
         3. All door functions such as opening speed, closing speed, check locations, partial open dimensions, etc., shall be fully programmable without the use of limit switches by utilizing a portable hand terminal connected to the microprocessor controller.
      3. Threshold Sensors: Self-monitored active infrared safety sensors.
         1. Sensors shall be self-contained and fully functioning during the opening and closing cycle of the door.
      4. Activation Sensor: Motion sensor utilizes K-band frequency (24.125 GHz) for improved detection of slow-moving pedestrian traffic, and shall be switchable between bi-directional and uni-directional operation. Circuitry is included to eliminate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Relay hold time is adjustable from 0.5 seconds to 9 seconds.
         1. Mount motion sensor to the header at 120 inches (3,048 mm) maximum above the finished floor. Using the adjustable antenna the detection pattern is semi-circular.
         2. When installed at a height of 96 inches (2,438mm) and set at the highest sensitivity, the sensor can provide a "wide pattern set-up " of approximately 12 feet wide by 6 feet 6 inches deep (3,658 by 1,981 mm) or a "narrow pattern set-up" of approximately 6 feet 6 inches wide by 8 feet deep (1,981 by 2,438 mm).
         3. Location of the detection zone shall be adjustable by moving the antenna. Vertical antenna adjustments are possible from 0 degrees to 90 degrees in 15 degrees increments and lateral adjustment from 30 degrees left to 30 degrees right and anywhere in between.
         4. Power is provided by the microprocessor control. Electrical adjustments can be made with a universal coded infrared remote control.
      5. Accessories: ESA500 automatic sliding door system shall include the following accessories:
         1. Interior side jamb mounted program switches consisting of:

Main Switch = AUTO- CLOSE -OPEN (operates door in fully automatic mode or turns it off or keeps it fully open).

Exit Only Switch = OFF - ON (only the exit side motion detector will initiate door opening).

Partial Open Switch = OFF - ON (reduces the opening width according to weather and traffic conditions).

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph for automatic telescoping sliding door applications as required for the project. DORMA's telescoping sliding doors meet all ADA requirements and features a variety of sensors that can detect obstacles and pause door operation until the path has cleared. Consult with Dorma for additional information on sizes and installation limitations.

* 1. AUTOMATIC TELESCOPIC SLIDING DOORS
     1. Automatic Telescopic Sliding Door System: DORMA ESA300 TELESCOPIC (full breakout design) consists of aluminum doors with Sidelites where indicated. Provide to dimension heights and widths indicated on the Drawings.
        1. Sliding Aluminum Doors:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two stile paragraphs and delete the one not required.

* + - * 1. Narrow stile.
        2. Medium stile.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two glazing paragraphs and delete the one not required.

* + - * 1. Glazing 1/4 inch (6 mm) tempered glass.
        2. Glazing 1 inch (25 mm) tempered glass.
        3. Intermediate muntin 3.25 inches (83 mm) including glass stops.
        4. Bottom rail 7.5 inches (190.5 mm) including glass stops.
        5. Provide door opening restrictor arms to control and limit the opening angle of the door(s) as they swing in the direction of egress.
        6. Provide interlock clips to latch the sliding panel(s) to the sidelite panel(s) when the door system is in the fully closed position.
        7. Active sliding door provided with a maximum security hookbolt lock, with provisions for a key cylinder on the exterior and a thumb turn on the interior in accordance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Select the following sidelite paragraph if required for the project. Delete if not required.

* + - 1. Sidelites: Provide Sidelites with standard intermediate muntin 3.25 inches (83 mm) including glass stops. Sidelites swing out and allow the sliding doors to break away to the full open position for egress at any point in the door's movement per NFPA 101.
      2. Door Operation: Slide panel(s) shall slide open and position to provide egress at any point in the door's movement or position in compliance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Select one or more of the following slide paragraphs as required for the project and delete the one not required.

* + - * 1. Single slide.
        2. Bi-part slide.
        3. Automatic operation is discontinued when any panel is in the "breakout" mode by way of a non-contact cut-off switch, or self-closing device in accordance with ANSI A156.10.
        4. Door(s) and sidelite(s) sized and positioned to provide a minimum 0.75 inch (19 mm) finger protection to prevent pinch points at the meeting stiles when fully opened.
      1. Aluminum Frame and Extrusions:
         1. Door panels 1.75 inches (44 mm) deep.
         2. Framing materials, jambs are 6 inches (152 mm) deep, headers are 6-5/8 inches (168 mm)deep.
         3. Structural sections shall be .125 inches thickness.
         4. Bi-part transom packages contain one vertical transom tube centered in the opening.
      2. Header: 6-5/8 inches wide by 7.5 inches high (168 mm wide by 190.5 mm high), with a minimum wall thickness of .125 inch (32 mm), capable of supporting door panels of 400 lbs. (181 kg) single slide or 325 lbs. (147 kg) bi-part slide.
         1. Header contains the door operator and door mounting components.
         2. Provide header cover with a continuous self-locking hinge design and open flush with the top of the header.
         3. Roller track shall be a separate extrusion from the header and sound dampened by separating the track from the header with an extruded EPDM rubber gasket.
         4. Operator components are factory assembled within the header. Minimal field wiring is required. Door functions provided in accordance with ANSI A156.10.
      3. Door Hanger Wheels: 1.5 inches (38 mm) diameter Delrin wheels with self lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by 1.4 inches (36 mm) diameter anti-riser wheels. Assembly shall allow the sliding doors to freely swing outward for emergency egress. Door height shall have an upward or downward adjustment of 3/16 inches plus or minus (5 mm).
      4. Threshold Track:
         1. Track is required adjacent to the Sidelites and intermediate sliding panels.

\*\* NOTE TO SPECIFIER \*\* Select the following optional threshold paragraph as required for the project and delete if not required.

* + - * 1. Provide with continuous threshold is available.
      1. Door Operator and Controller: DORMA ESA system with an electro-mechanical operator and microprocessor controller.
         1. Components consist of a DC permanent magnet motor, a self lubricating drive system and a wear-free digital rotary encoder all linked to a fully integrated digital microprocessor controller.

\*\* NOTE TO SPECIFIER \*\* Select the following optional paragraph as required for the project. Delete if not required.

* + - * 1. Battery Back-Up: Provide automatic locking system, with battery back-up system.
      1. Microprocessor Controller: DORMA microprocessor controller is a fully integrated digital design that is self-learning and self-monitoring.
         1. Performance parameters shall not exceed applicable ANSI A156.10 and/or UL standards.
         2. Controller shall continuously monitor all critical door functions and safety sensors.
         3. All door functions such as opening speed, closing speed, check locations, partial open dimensions, etc., shall be fully programmable without the use of limit switches by utilizing a portable hand terminal connected to the microprocessor controller.
      2. Threshold Sensors: Self-monitored active infrared safety sensors. Sensors shall be self-contained and fully functioning during the opening and closing cycle of the door.
      3. Activation Sensor: Motion sensor utilizes K-band frequency (24.125 GHz) for improved detection of slow-moving pedestrian traffic, and shall be switchable between bi-directional and uni-directional operation. Circuitry is included to eliminate Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Relay hold time is adjustable from 0.5 seconds to 9 seconds.
         1. Mount motion sensor to the header at 120 inches (3,048 mm) maximum above the finished floor. Using the adjustable antenna the detection pattern is semi-circular.
         2. When installed at a height of 96 inches (2,438 mm) and set at the highest sensitivity, the sensor can provide a "wide pattern set-up " of approximately 12 feet wide by 6 feet 6 inches deep (3,658 by 1,981 mm) or a "narrow pattern set-up" of approximately 6 feet 6 inches wide by 8 feet deep (1,981 by 2,438 mm).
         3. Location of the detection zone shall be adjustable by moving the antenna. Vertical antenna adjustments are possible from 0 degrees to 90 degrees in 15 degrees increments and lateral adjustment from 30 degrees left to 30 degrees right and anywhere in between.
         4. Power is provided by the microprocessor control. Electrical adjustments can be made with a universal coded infrared remote control.
      4. Accessories: ESA TELESCOPIC automatic sliding door system shall include the following accessories to reduce energy loss:
         1. Track-in pile weather-stripping on the bottom of sliding door(s) and sidelite(s).
         2. Track-in single pile weather-stripping on the sliding door lead edges.
         3. Track-in single pile weather-stripping between the carrier and the header on the sliding door(s).
         4. Track-in double pile weather-stripping at the interlock rails between sliding door(s) and sidelite door(s).

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph for cleanroom applications as required for the project and delete standard pile weather-stripping specified above.

* + - * 1. Track-in vinyl weatherstripping: For clean room applications, weather-stripping shall be Santoprene.
        2. Interior side jamb mounted program switches consisting of:

Main Switch = AUTO- CLOSE -OPEN (operates door in fully automatic mode or turns it off or keeps it fully open).

Exit Only Switch = OFF - ON (only the exit side motion detector will initiate door opening).

Partial Open Switch = OFF - ON (reduces the opening width according to weather and traffic conditions).

* 1. ELECTRICAL CHARACTERISTICS AND COMPONENTS
     1. Section 26 05 00 - Common Work Results for Electrical.
     2. Electrical: 120 VAC, 60 Hz, 5 Amp service.
     3. Section 26 05 00 - Common Work Results for Electrical.
     4. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.

\*\* NOTE TO SPECIFIER \*\* Select the finish required from the following paragraphs as required for the project and delete the finishes not required.

* 1. FACTORY FINISH
     1. Provide aluminum finishes in accordance with Aluminum Association Standard AA DAF-45.

\*\* NOTE TO SPECIFIER \*\* Select one of the following 4 paragraphs for the finish required for the project and delete the finishes not required.

* + 1. Clear Anodized Aluminum Surfaces: 204-R1 Class-II anodized aluminum coating.
    2. Dark Bronze Color Anodized Aluminum Surfaces: 313-R1 Class-II Dark Bronze anodized aluminum coating.
    3. Other Anodized Color: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    4. Painted Aluminum Surfaces: As fabricated mechanical finish, chemically cleaned, and prepared for applied coating; with organic coating.

\*\* NOTE TO SPECIFIER \*\* Select one of the following 2 paragraphs for the coating finish required and delete the finish not required.

* + - 1. Organic Coating:

\*\* NOTE TO SPECIFIER \*\* Select one of the following paragraphs for the organic finish required and delete the one not required.

* + - * 1. Manufacturer's standard power coat finish.
        2. Thermosetting modified acrylic enamel.
      1. High Performance Organic Coating:
         1. Fluoropolymer coating system with minimum 70 percent polyvinylidene fluoride resin.
      2. Color:

\*\* NOTE TO SPECIFIER \*\* Select one of the following color paragraphs and delete those not required.

* + - * 1. As selected from manufacturer's standard range.
        2. Custom color as selected by the Architect.
        3. To match glazed aluminum curtain wall.
    1. Exposed Operator and Components: Finish

\*\* NOTE TO SPECIFIER \*\* Select one of the following paragraphs for the finish required and delete the one not required.

* + - 1. To match door and door hardware finish.
      2. As selected from manufacturer's standard range.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.
      2. Verify that other trades are complete with their required work before installing the automatic swing door operating system.
      3. Mounting surfaces shall be plumb, straight and secure; substrates shall be of proper dimension and material; material which door is anchored to shall be capable of supporting the automatic door system and associated loads.
      4. Verify electric power is available and has correct characteristics.
      5. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions.
      2. Set all units plumb, level and secure.
      3. Provide all fasteners required for installation of the automatic sliding door system.
      4. After repeated operation of the completed installation, inspect door operators and controls for optimum operating condition and safety.
      5. Adjust door equipment for correct function and smooth operation.
      6. Clean all metal surfaces promptly after installation.
      7. Remove temporary protection, clean exposed surfaces.
   4. FIELD QUALITY CONTROL
      1. Manufacturers representative to verify that installation of doors and controls are in conformance to the manufacturer's recommendations.
      2. Installation of doors and controls shall be inspected and certified by an AAADM Certified Inspector prior to doors being placed into operation.
      3. Provide a completed AAADM inspection form signed by a certified AAADM inspector after the door system is completely installed and tested including glazing.
   5. PROTECTION
      1. Protect installed products until completion of project.
      2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION