SECTION 08463

AUTOMATIC SLIDING DOORS

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\*\* NOTE TO SPECIFIER \*\* ASSA ABLOY Entrance Systems; entrance doors.  
This section is based on the products of ASSA ABLOY Entrance Systems, which is located at:  
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Web: <https://www.assaabloyentrance.us/en/aaes/assaabloyentranceus/products/automatic-doors/>   
  
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ASSA ABLOY Entrance Systems is the world's most comprehensive supplier of entrance automation solutions. We take an integrative approach to the flow of people and goods, creating solutions with the best possible balance of cost, quality and lifetime performance.  
At our disposal is a strong portfolio of well-established brands that have been the market leaders in their fields for decades to form a complete offering for the front, back and interior of your building.  
For pedestrian door solutions, look to the ASSA ABLOY Entrance Systems brand for a complete line of automatic sliding, swing, revolving and manual ICU/CCU doors. Contact the ASSA ABLOY Entrance Systems architectural SpecDesk for assistance with plan review, spec development, code clarification and CEU programs. Our team also provides nationwide installation as well as service of all brands of automatic doors, planned maintenance contracts and AAADM inspections.

1. GENERAL
   1. SECTION INCLUDES

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

* + 1. Automatic Sliding Doors and Operators:
       1. Sliding door power operators.
       2. Automatic sliding doors.
       3. Telescopic sliding automatic entrances.
       4. Telescopic automatic sliding doors.
       5. All glass automatic sliding doors.
       6. Full-impact hurricane-resistant automatic sliding doors.
       7. Full-impact, Miami-Dade NOA hurricane-resistant automatic sliding doors.
       8. Non-impact hurricane-resistant automatic sliding doors.
       9. Clean room automatic sliding doors.
       10. Intensive care unit / coronary care unit ICU/CCU swing doors.
       11. Intensive care unit / coronary care unit ICU/CCU sliding doors.
       12. Intensive care unit / coronary care unit manual telescopic sliding doors.
       13. Intensive care unit / coronary care unit ICU/CCU power operated sliding doors
       14. ADA retrofit swing door operators.
       15. ADA or pedestrian swing door operator - electrohydraulic.
       16. Surface mounted full duty plug-n-play swing door operators.
       17. Operator activation by smoke evacuation system.
       18. Swing door entrances with operators.
  1. RELATED SECTIONS

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

* + 1. Section 08410 - Aluminum-Framed Storefronts.
    2. Section 08700 - Hardware.
    3. Section 07920 - Joint Sealants.
    4. Section 08800 - Glazing.
    5. Section 16000 - 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. American Association of Automatic Door Manufacturers (AAADM).
    2. American Architectural Manufacturers Association (AAMA).
       1. AAMA 611 Voluntary Specification for Anodized Architectural Aluminum.
       2. AAMA 1303.5 - Voluntary Specifications for Forced Entry Resistant Aluminum Sliding Glass Doors.
    3. American National Standards Institute (ANSI):
       1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
       2. ANSI Z97.1 - Safety Glazing Material Used in Buildings.
       3. ANSI/BHMA A156.10 - Power Operated Pedestrian Doors.
       4. ANSI/BHMA A156.19 - Power Assist and Low Energy Power Operated Doors.
       5. ANSI/BHMA A156.38 American National Standard for Low Energy Power Operated Sliding and Folding Doors.
    4. Underwriters Laboratories Inc. (UL):
       1. UL 325 - Door, Drapery, Gate, Louver, and Window Operators and Systems.
       2. UL 991 - Tests for Safety-Related Controls Employing Solid-State Devices.
    5. ASTM International (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.
       3. ASTM E 283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences.
       4. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
       5. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
       6. ASTM E 1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.
       7. ASTM F 588 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact.
       8. ASTM F 842 - Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact.
    6. Canadian Standards Association (CSA).
       1. CAN/CSA-C22.2 No. 247 - Operators and Systems of Doors, Gates, Draperies, and Louvers.
    7. National Association of Architectural Metal Manufacturers (NAAMM).
       1. Metal Finishes Manual for Architectural Metal Products.
    8. National Fire Protection Association (NFPA):
       1. NFPA 70 - National Electrical Code.
       2. NFPA 101 - Life Safety Code.
    9. International Code Council (ICC).
       1. IBC: International Building Code Building Code.
       2. CBC: California Building Code.
  1. DEFINITIONS
     1. Activation Device: Device that, when actuated, sends an electrical signal to the door operator to activate the operation of the door.
        1. Knowing act:Consciously initiating the opening of a power operated door using acceptable methods including wall mounted switches such as push plates and controlled access devices such as keypads, card readers and key switches.
     2. Safety Device: A device that detects the presence of an object or person within a zone where contact could occur and provides a signal to stop the movement of the door.
  2. SUBMITTALS
     1. Submit under provisions of Section 01300.
     2. Product Data: Submit manufacturer's product data, including description of materials, components, fabrication, finishes, and installation. 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.
     3. Shop Drawings: Submit manufacturer's shop drawings, including elevations, sections, and details, indicating dimensions, materials, and fabrication of doors, frames, sidelites, operator, motion/presence sensor control device, anchors, hardware, finish, options, and accessories.
     4. Samples: Submit manufacturer's samples of aluminum finish.
     5. Test Reports: Submit certified test reports from UL, CUL, and ICBO indicating doors comply with specified performance requirements.
     6. Informational Submittals: Manufacturer's product information and applicable sustainability program credits that are available to contribute towards a LEED rated project certification.
        1. Credit MR 4.1 and 4.2: Manufacturer's or fabricator's certificate indicating percentage of post-consumer recycled content by weight and pre-consumer recycled content by weight for each Product specified under this Section.
     7. Manufacturer's Project References: Submit list of successfully completed projects including project name and location, name of architect, and type and quantity of doors manufactured.
     8. Manufacturer's Field Reports: Submit manufacturer's field reports from AAADM certified technician of inspection and approval of doors for compliance with ANSI/BHMA 156.10 after completion of installation.
     9. Operation and Maintenance Manual: Submit manufacturer's operation and maintenance manual. Include spare parts list.
  3. QUALITY ASSURANCE
     1. Manufacturer's Qualifications:
        1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 10 years successful experience.
        2. Member: American Association of Automatic Door Manufacturers (AAADM).
        3. Door, frame, operator, and sensor components from same manufacturer.
     2. Installer's Qualifications:
        1. Minimum of 2 years successful experience in installation of similar doors.
        2. Local certified ASSA ABLOY Entrance Systems distributor.
        3. Approved by manufacturer.
        4. AAADM certified.
  4. DELIVERY, STORAGE, AND HANDLING
     1. Delivery: Deliver materials to site protected from damage.
     2. Storage: Store materials in clean, dry area indoors in manufacturer's unopened packaging until ready for installation and in accordance with manufacturer's instructions.
     3. Handling: Protect materials and finish from damage during handling and installation.
  5. 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.
  6. MAINTENANCE SERVICE
     1. The manufacturer shall offer a dispatch procedure that shall be available 24 hours per day, 365 days per year to facilitate proper service capability.
        1. A manufacturer's designated service contact shall obtain malfunction information and dispatch appropriate service provider to project location.
        2. Toll free phone number, 1-877-237-2687, shall be prominently displayed on header of each operator.
        3. A geographically assigned installation provider shall be trained and certified to provide maintenance service.
  7. WARRANTY
     1. Warranty: Provide manufacturer's standard warranty. Warranty shall be one year from date of installation.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: ASSA ABLOY Entrance Systems, which is located at: 1900 Airport Rd.; Monroe, NC 28110; Toll Free Tel: 877-SPEC-123 ; Fax: 704-290-5555; Email: [request info (specdesk@besam-usa.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=ASSA+ABLOY+Entrance+Systems&coid=30906&rep=&fax=704-290-5555&message=RE:%20Spec%20Question%20(08463bes):%20%20&mf=); Web: <https://www.assaabloyentrance.us/en/aaes/assaabloyentranceus/products/automatic-doors/>

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

* + 1. Substitutions: Requests for substitution and product approval in compliance with the specifications must be submitted in writing and in accordance with the procedures outlined in Division 1, Section "Substitution Procedures". Approval of requests is at the discretion of the architect, owner, and their designated consultants.
    2. Substitutions: Not permitted.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* 1. SLIDING DOOR POWER OPERATORS
     1. Provide operators that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
        1. ANSI/BHMA 156.10.
        2. ANSI/UL 325 listed.
        3. UL Canada approved.
        4. Automatic door equipment shall accommodate medium to heavy pedestrian traffic.
     2. Doors Powered to Open Position:
        1. Doors powered by DC electric motor and mechanical gear assembly transmitted to active leaves by fiberglass-reinforced tooth drive belt for silent operation. Doors using roller chain, cable, or hydraulic devices shall not be accepted.
        2. Power door to open position by signals received by microprocessor from the actuation controls.
        3. The last portion of the opening cycle shall be controlled by a microprocessor generated signal that electronically reduces voltage to motor until door is fully open. Door systems that use micro switches shall not be accepted.
        4. To permit safe passage if an obstruction is detected between opening doors and surrounding walls or interior fittings, the doors shall immediately stop and after a delay go to the full closed position. Door systems that only monitor the door travel while closing shall not be acceptable.
     3. Doors Powered to Closed Position:
        1. The active leaf will only be powered to closed position when all actuating devices are cleared and after remaining in the open position for a preset time delay (per ANSI 156.10).
        2. The last portion of the closing cycle shall be controlled by a microprocessor generated signal that electronically reduces voltage to the motor until door is fully closed.
        3. To permit safe passage between closing doors, the doors immediately reverse to open position if an obstruction is detected, then resume their interrupted movement at low speed to check whether the obstruction has disappeared or not. Door systems that only monitor the door travel while opening shall not be acceptable.
     4. Emergency Breakaway:

\*\*NOTE TO SPECIFIER\*\* Delete one of the two following paragraphs to specify full breakout system or fixed sidelite system. All-glass and Clean Room sliders have fixed sidelights. Consult ASSA ABLOY Entrance Systems for additional information.

* + - 1. Full Breakout System: Interior sliding active leaves and sidelites swing out from any position in sliding mode.
      2. Fixed Sidelite System: Exterior sliding active leaves swing out from any position in sliding mode.
      3. Breakaway Pressure: Field adjustable to building code requirements and in accordance with ANSI/BHMA 156.10 maximum of 50 pounds (23 kg).
    1. Watchdog Monitoring:
       1. Microprocessor Software: Constantly monitor drive train system operations.
       2. Watchdog Control Circuit: Assume command of system and shut down automatic function by holding doors open, should door speed, motor function, or drive train operations deviate from design criteria ranges.
       3. Secondary Supervisory Circuit: Monitor main Watchdog control circuit every 255 door cycles, ready to perform as a backup. Door systems that do not monitor control circuits every 255 cycles will not be accepted.
    2. Energy Saving Device:
       1. Position Switch: Interior jamb mounted.
       2. Door Opening Settings: Off, exit only, 2-way traffic, partial opening, and hold fully open.
       3. Partial Opening Mode: Switch reduces total door opening to reduce conditioned air loss.
       4. Heavy Weather Pile: Between doors and sidelites and between emergency breakaway hardware and door stiles.

\*\*NOTE TO SPECIFIER\*\* Delete if specifying curved glass sliding doors.

* + 1. Electrical Requirements:
       1. High-Efficiency DC Motor: Maximum of 3 A current draw. Allow for 5 operators to run on one 20 Amp line.
       2. Power: Self-detecting line voltage capable control. 120 V through 240V, 50/60 Hz, 3 A incoming power with solid-earth ground connection for each door system. 5 door systems on one 20 A circuit.
       3. Wiring: Separate channel raceway free from moving parts.
       4. Brown out/high voltage capability: System has capability to operate at full performance well beyond brown out and high line voltage conditions (85V - 265V) sensing changes and adjusting automatically.

\*\*NOTE TO SPECIFIER\*\* The battery pack is an optional accessory. Delete if not required.

* + - 1. Convenience Battery: Shall be concealed in header and capable of full operation with blackout conditions, including sensor capabilities for typically 100 cycles.

\*\*NOTE TO SPECIFIER\*\* Delete if specifying curved glass sliding doors.

* + 1. Motion and Presence Sensor Control Device:
       1. Shall be a sliding door sensor utilizing K-band microwave technology to detect motion and focused active infrared technology to detect presence, combined in a single housing surface mounted on each side of the header.
          1. The motion detecting microwave portion of the sensor shall be capable of bi-directional and uni-directional sensing capability.
          2. Presence sensor shall remain active at all times.
          3. The sensor shall communicate with the automatic door operator through a self-monitoring connection that allows the door to go into a fail safe mode preventing the door from closing in the event of a sensor failure.
       2. Motion/presence detecting sensors to be field installed and adjusted.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. AUTOMATIC SLIDING DOORS
     1. Automatic Sliding Door System: Provide Besam SL500 System automatic sliding doors as specified herein. Door systems that do not employ a fail-safe self-monitoring system will not be acceptable.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs.

* + - 1. Overhead-concealed, electro-mechanical, microprocessor-controlled, sliding door operator.
      2. Surface-applied, electro-mechanical, microprocessor-controlled, sliding door operator.
    1. Door Operator: Provide Besam SL500 Door System for bi-part or single slide directional operation. In compliance with NFPA 101, all panels shall allow "breakout" to the full open position to provide instant egress at any point in the door's movement. To allow safe egress, automatic operation shall be discontinued when any panels are in the "breakout" mode. Doors and sidelites shall be sized to prevent pinch points at meeting stiles.
       1. Automatic door equipment accommodates up to following weights for active leaf doors:
          1. Bi-Part Doors: 220 pounds (100 kg) per active leaf.
          2. Single Slide Doors: 330 pounds (150 kg) per active leaf.
       2. Operating Temperature Range: -31 degree F to 122 degree F (-35 degree C to 50 degree C).
    2. Emergency Breakaway:

\*\*NOTE TO SPECIFIER\*\* Delete one of the two following paragraphs to specify full breakout system or fixed sidelite system. Consult ASSA ABLOY Entrance Systems for additional information.

* + - 1. Full Breakout System: Interior sliding active leaves and sidelites swing out from any position in sliding mode.
      2. Fixed Sidelite System: Exterior sliding active leaves swing out from any position in sliding mode.
      3. Breakaway Pressure: Field adjustable to building code requirements and in accordance with ANSI/BHMA 156.10 maximum of 50 pounds (23 kg).
    1. Construction:
       1. Provide operator housing, floor rollers, and door carriers.
       2. Doors and Frames: Extruded aluminum, Alloy 6063-T5.
       3. Glass: Glazing material - ANSI Z97.1.
       4. Aluminum Frame and Extrusions: Structural wall thickness shall not be less than 0.125 inch (3 mm). Glass wall stops shall have 0.062 inch (1.57 mm) wall thickness.
       5. Sidelites: Provide sidelites to dimension heights and widths as shown on construction documents with corresponding glazing. All sidelites shall have interlocking, nested intermediate rails to prevent twisting and separation. The sidelites shall swing out and allow the sliding doors to "breakout" to the full open position for instant egress at any point in the door's movement per NFPA 101.
       6. Header Case: Provide Besam 7 inch by 6-5/8 inch (178 mm by 168 mm) architecturally enhanced extruded aluminum profile with activation sensors on each side to meet ANSI A156.10. Header shall be capable of supporting bi-parting doors of 220 pounds (100 kg) per leaf over a span of 14 feet (4267 mm) without intermediate supports when using 1/4 inch (6 mm) glass. Operator shall be capable of handling doors up to 220 pounds (100 kg). It shall contain door operator and door mounting components. The header shall be a "closed design" to reduce infiltration of airborne contaminants and debris which may inhibit proper operation and facilitate increased service requirements. Headers with visible underside carrier openings of 1/2 inch (13 mm) or greater, whether in the open or closed positions, shall not be accepted.
       7. Composition: Provide two (2) steel roller wheels per door leaf having a 1-3/4 inch (44 mm) diameter with single journal sealed oil-impregnated bearings to ensure roller life on a "replaceable" Delrin track to reduce service cost from normal usage and incorporate self-aligning anti-risers to ensure proper panel positioning. Rollers of any urethane composition shall not be accepted. The assembly shall allow the sliding doors to swing outward and facilitate emergency egress in accordance with NFPA 101.

\*\* NOTE TO SPECIFIER \*\* Note that increased vertical stile widths affects clear door opening. Consult Drawings for dimensions. Delete stile widths not required.

* + - 1. Narrow Stiles - 2-1/8 inches (54 mm).
      2. Medium Stiles- 4 inches (102 mm)
      3. Wide Stiles - 5 inches (127 mm).
      4. Pivots: Top and bottom concealed pivots, extruded aluminum.
      5. Exterior Glazing Stop Extrusion: Provide nonremovable, security-type glazing bead to prevent unauthorized entry. Doors utilizing removable exterior stops will not be accepted.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. TELESCOPIC SLIDING AUTOMATIC ENTRANCES
     1. Exterior and interior, single and bi-parting, telescopic sliding automatic entrance doors with sidelites.
     2. Model: Besam SL500 T67 Telescopic sliding automatic doors.
        1. Aluminum doors and frames with sidelites and active door leaves.
        2. Overhead concealed, electro-mechanical, microprocessor controlled, sliding door operator.
        3. Operator housing, guide system and door carriers.
     3. Performance Requirements:
        1. Provide doors that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
        2. Compliance:
           1. ANSI/BHMA A156.10 American National Standard for Power Operated Pedestrian Doors.
           2. UL 325 listed.
        3. Automatic door equipment accommodates medium to heavy pedestrian traffic.
        4. Automatic Door equipment accommodates up to the following weights for active leaf doors:
           1. Bi-part doors: 80 lbs (36 kg) per active leaf.
        5. Operating Temperature Range: -31 degrees F to 122 degrees F (-35 degrees C to 50 degrees C).
        6. Entrapment Force Requirements:
           1. Power Operated Sliding Doors: Not more than 30 lbf (133 N) required to prevent stopped door from closing.
           2. Sliding doors provided with a breakaway device shall require no more than 50 lbf (222N) applied 1 inch (25 mm) from the leading edge of the lock stile for the breakout panel to open.
     4. Telescopic Sliding Automatic Entrance Door Configuration:

\*\* NOTE TO SPECIFIER \*\* Select door configuration(s) as required for the project.

* + - 1. Telescopic bi-parting, full breakout door system.
         1. Configuration: Bi-parting, six equal panel door unit with four operable leaves and two sidelite units.

\*\* NOTE TO SPECIFIER \*\* Select traffic pattern as required for the project.

* + - * 1. Traffic Pattern: Two-way.
        2. Traffic Pattern: One-way.
        3. Emergency Breakaway Capability: Interior sliding leaves and sidelite units.
        4. Mounting: Overhead header installed between jambs.
      1. Telescopic bi-parting, surface mounted full breakout door system.
         1. Configuration: Bi-parting, six equal panel door unit with four operable leaves and two sidelite units.

\*\* NOTE TO SPECIFIER \*\* Select traffic pattern as required for the project.

* + - * 1. Traffic Pattern: Two-way.
        2. Traffic Pattern: One-way.
        3. Emergency Breakaway Capability: Interior sliding leaves and sidelite units.
        4. Mounting: Interior mount surface applied to existing horizontal door head.
      1. Dimensions:Confirm door package dimensions as indicated on Architectural drawings.
    1. Doors and Frames: Extruded Aluminum, Alloy 6063-T5.
       1. Door panels shall have a minimum 0.125 inch (3.2 mm) structural wall thickness.
       2. Door Construction shall be by means of an internal locking self-centering corner block with 3/8 inch (9.5 mm) all-thread through bolt from each stile.
       3. Glass Stops shall be .062 inch (15.8 mm) wall thickness and shall provide security function as a standard by means of a fixed non-removable exterior section with glazing to be performed from the interior only. Glazing stops that allow for glass removal from the exterior shall not be deemed as equivalent.
       4. The sliding door system shall include two interlocks per moving panel securing all door panels when in the closed position.
       5. Vertical Stiles:
          1. Vertical Lock Stiles shall be narrow stile 2-1/8 inches (53.98 mm) x 2-1/4 inches (57.15 mm).
          2. Vertical Intermediate Stiles shall be 3/4 inch (19.05 mm) x 1-3/4 inches (44.5 mm).
          3. Vertical Sidelite Heal Stiles shall be 2-1/8 inches (53.98 mm) x 1-3/4 inches (44.5 mm).

\*\* NOTE TO SPECIFIER \*\* Select bottom rail as required for the project.

* + - 1. Bottom Rails shall be 4 inch (102 mm).
      2. Bottom Rails shall be 7 inch (178 mm).
      3. Bottom Rails shall be 10 inch (254 mm).

\*\* NOTE TO SPECIFIER \*\* Select muntin rail as required for the project.

* + - 1. Intermediate Muntin shall be 1-3/4 inches (44.5 mm).
      2. Intermediate Muntin shall be 4 inches (102 mm).
      3. Weather-stripping shall be slide-in type, replaceable pile mohair seals retained by the aluminum extrusions. The following types of weather-stripping are required: complementing weather-stripping on the joining vertical stiles of the sidelite and sliding door panels, complementing weather-stripping on the lead edge of the lock stiles of bi-parting doors, single pile weather-stripping between the carrier and the header, single pile weather-stripping on the lead edge stile of single slide door panels, dual pile weather-stripping on the pivot stile of breakout sidelite panels. Bottom rails shall be provided with an adjustable nylon sweep.
      4. Besam EcoDoor Package:
         1. EcoDoor Seals: High pile mohair weather stripping on the lock stile of the sliding doors, integrated mohair weather stripping with vinyl fin on the joining vertical stiles of the sidelite and sliding door panels Bottom rails shall be provided with a concealed adjustable nylon sweep.
         2. Glazing Active Door and Sidelite Panels: Insulating glass, thickness as indicated.
    1. Glass: Glazing shall comply with ANSI Z97.1, GANA Section 10. (Thickness as indicated).
       1. Glazing Door Panels 1-1/4 inches (31.75 mm) insulated tempered glass with 3M B90F glazing tape for back bedding and dry glaze vinyl glazing stops for access.,
       2. Glazing Installation: See Division 8 Section Glazing for requirements.
    2. Door Carriers: Manufacturer's standard carrier assembly that allows vertical adjustment.
       1. Carriage Assembly: Carriage bar with two wheel assemblies on active leaf two and one wheel assembly on active leaf one. Each assembly shall have tandem roller wheels.
       2. Roller Wheels: two heavy duty Delrin roller wheels per wheel assembly, 1-7/16 inches (36.51 mm) diameter; four roller wheels for active leaf two, and two roller wheels for active leaf one for operation over a replaceable aluminum track. Roller wheels single journal with sealed oil impregnated bearings.
       3. Minimum of two heavy duty anti-risers per leaf, minimum of two redundant derailment guards per leaf.
       4. Active leaf one to have impact absorption bar between anti-risers for clear door opening collisions.
    3. Framing Members: Provide automatic entrances as complete assemblies. Manufacturer's standard extruded aluminum framing reinforced as required to support loads.

\*\* NOTE TO SPECIFIER \*\* Only the 1 inch (25.4 mm) jamb is available with the surface mounted entrance. Delete jamb not required.

* + - 1. Vertical Jambs shall be 1-3/4 inches (44.5 mm) by 6 inches (152.4 mm).
      2. Vertical Jambs shall be 1 inch (25.4 mm) by 6 inches (152.4 mm).
      3. Vertical Jambs shall be 1/4 inch (6.4 mm) by 6-5/8 inches (167.1 mm).
    1. Header: Manufacturer's standard extruded aluminum header unit extending full width of entrance unit to conceal door operators, carrier assemblies, and roller track, complete with hinged access panel for service of door operator, and controls.
       1. Span: Maximum 103 inch (2616 mm) using 1-3/4 inch (44.5 mm) jambs for full breakout entrances with equal door leafs.
       2. Capacity: Capable of supporting active breakout leafs up to maximum of 80 lb (36 kg) per leaf when header is supported per manufacturer's recommendations.
       3. Size: 6-5/8 inches (165.1 mm) wide by 7 inches (177.8 mm) high.
       4. Header height including the sensor plate cap which spans the clear door opening width is 8 inches (203.2 mm) high.
       5. Hinge Point: Continuous hinge at top of header allows for complete access to operator and internal electronic and mechanical assemblies.
       6. Height: Maximum overall height not to exceed 92 inches (2337 mm).
       7. Design: Manufacturer's standard closed header when door in closed position.
    2. Hardware: Provide manufacturer's standard hardware as required for operation indicated.
       1. Breakaway arms and bottom pivot assemblies shall be supplied by the manufacturer and shall be adjustable to comply with applicable codes.
          1. Magnetic catch(s) to retain breakout door and sidelite panels in the closed position.

\*\* NOTE TO SPECIFIER \*\* Retain the following if locking is required. Electrified slide lock and exit devices are not available.

* + - 1. Locking Hardware:
         1. Mortise type hookbolt latch, fully concealed in vertical rail. Lock indicators shall be provided if required by code.

\*\* NOTE TO SPECIFIER \*\* Delete interior lock not required.

Interior Side: Thumbturn.

Interior Side: Keyed cylinder.

\*\* NOTE TO SPECIFIER \*\* Delete exterior lock not required.

Exterior Side: Keyed cylinder.

Exterior Side: No cylinder.

* + - * 1. Armored strikes, both internally and externally mounted, shall be provided to protect the lock.
        2. Keyed cylinders shall be provided as indicated.

Yale cylinder with 6 or 7 pin core.

* + - 1. Alignment wheels shall be provided to maintain proper door spacing.
    1. Guide Track/Threshold: Manufacturer's threshold as indicated.
       1. 1/2 inch (12.7 mm) high by 6 inch (152.4 mm) width continuous aluminum threshold with integral track shall span the entire width of the sliding door header and fit between the vertical framing members. Threshold design shall allow for optional extruded ramps to securely interlock to flat section to meet ADA requirements.

\*\* NOTE TO SPECIFIER \*\* Delete threshold not required.

* + - * 1. Surface mounted threshold with interlocking ADA accessible ramps.
        2. Recessed mounted threshold.
    1. Door Operator and Controller:
       1. Electro-mechanical controlled unit utilizing a high-efficiency, energy efficient, DC motor requiring a maximum of 3 amp current draw, allowing 5 operators on one 20 amp circuit. The supplied system shall have the capability to operate at full performance well beyond a brown out and high line voltage conditions (85V - 265V) sensing changes and adjusting automatically. The operator shall allow an adjustable hold open time delay of 0 to 60 seconds and have internal software to incorporate a self-diagnostic system.
    2. Microprocessor Control Box:
       1. Modular control unit to allow for changing technology. Factory-adjusted configuration with opening and closing speeds set to comply with ANSI/BHMA A156.10 requirements and electronic dampening to reduce wear on drive train. Should the drive train operations deviate from design criteria ranges, Watchdog Control Circuit Monitoring will assume command of the system and shut down the automatic function allowing a secondary supervisory circuit to perform as a backup. Control unit shall allow the following functions:
          1. Diagnostics with the ability to produce application data.
       2. Mode Selector Control:

\*\* NOTE TO SPECIFIER \*\* The standard mode selector control is the rotary knob switch. Delete selector control mode not required.

* + - * 1. Multi-position mode selector control shall allow selection of the indicated functions to be engaged when switch is turned to the appropriate setting.

\*\* NOTE TO SPECIFIER \*\* Delete selector control not required.

Rotary knob selector.

Keyed cylinder selector.

* + - * 1. Touch pad mode selector control with the following visual indication and trouble shooting.

Touch pad mode selector with selection indication, to allow selection of the indicated functions.

Touch pad security code to prevent accidental change of settings.

Multi-colored, trouble shooting LED indicator for the following conditions: inspection is required, service is required, or error condition such as door in breakout position.

* + - * 1. Mode Selector Control Mount:

\*\* NOTE TO SPECIFIER \*\* The jamb mounted mode selector control is only available with 1-3/4 inches (44.5 mm) jambs for overhead concealed entrances or 1 inch (25.4 mm) jambs for surface mounted entrances. Delete position not required.

Jamb mounted.

Header cover mounted.

Remote mounted.

* + - * 1. Mode selector control to allow the following functions:

"Off"

"Exit Only" one way traffic with automatic operation from the interior.

"Two Way Traffic" allowing automatic operation from exterior and interior.

"Partial Opening" energy saving door position allows door to automatically adjust opening width based on amount of usage, that is, full open during high use and partial open during low use. The control for this setting is programmable allowing adjustment to both the usage setting and the opening width.

"Hold Open" doors activated and held in the full open position.

* + 1. Activation and Safety Control Devices:
       1. General: Provide the types of activation and safety devices specified in accordance with ANSI/BHMA standards, for the condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate activation and safety devices with door operation and door operator mechanisms.
       2. Combination Activation Motion Sensor/Safety Presence Sensor:
          1. Shall be a sliding door sensor utilizing K-band microwave technology to detect motion and focused active infrared technology to detect presence, combined in a single housing surface mounted on each side of the header.

Presence sensor shall remain active at all times.

The sensor shall communicate with the automatic door operator through a self-monitoring connection that allows the door to go into a failsafe mode preventing the door from closing in the event of a sensor failure.

* + - * 1. Motion/presence detecting sensors to be field installed and adjusted.
    1. Electrical:
       1. High-Efficiency DC Motor: Maximum of 3 amp current draw, allowing 5 operators to run on one 20 Amp circuit.
       2. Power: Self-detecting line voltage capable control. 120 VAC through 240 VAC, 50/60 Hz, 3 amp minimum incoming power with solid earth ground connection for each door system.
       3. Key Impulse Input: Input for card readers or remote activation with independent adjustable hold open delay.
       4. Wiring: Separate channel raceway free from moving parts utilizing plug and play cables for sensors.
       5. Brown out / high voltage capability: System has capability to operate at full performance well beyond brown out and high voltage line conditions (85 V - 265 V) sensing changes and adjusting automatically.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Convenience Battery: Shall be concealed in header and capable of full operation with blackout conditions, including sensor capabilities for minimum of 100 cycles.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* 1. TELESCOPIC AUTOMATIC SLIDING DOORS
     1. Automatic Sliding Door System: Provide Besam SL500 Telescopic System automatic sliding doors as specified herein. Door systems that do not employ a fail-safe self-monitoring system will not be acceptable.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs.

* + - 1. Overhead-concealed, electro-mechanical, microprocessor-controlled, sliding door operator.
      2. Surface-applied, electro-mechanical, microprocessor-controlled, sliding door operator.
    1. Door Operator:
       1. Automatic door equipment accommodates up to following weights for active leaf doors:
          1. Bi-Part Doors: 150 pounds (52 kg) per active leaf.
          2. Single Slide Doors: 150 pounds (104 kg) per active leaf.
       2. Operating Temperature Range: -35 degrees F to 131 degrees F (-30 degrees C to 55 degrees C).
    2. Emergency Breakaway:

\*\*NOTE TO SPECIFIER\*\* Delete one of the two following paragraphs to specify full breakout system or fixed sidelite system. Consult ASSA ABLOY Entrance Systems for additional information.

* + - 1. Full Breakout System: Interior sliding active leaves and sidelites swing out from any position in sliding mode.
      2. Fixed Sidelite System: Exterior sliding active leaves swing out from any position in sliding mode.
      3. Breakaway Pressure: Field adjustable to building code requirements and in accordance with ANSI/BHMA 156.10 maximum of 50 pounds (23 kg).
    1. Construction:
       1. Provide operator housing, floor rollers, and door carriers.

\*\*NOTE TO SPECIFIER\*\* Active leaf dampeners are available for the 1st and 2nd active leaf on single slide packages. It is also available on for both leafs on bi-part packages in the following parameters: 14 foot and up if narrow stile, 15 foot and up if medium stile. 16 foot if wide stile.

* + - 1. Aluminum Doors and Frames: Aluminum doors and frames with sidelite and active door leaves.
         1. Doors and Frames: Extruded aluminum, Alloy 6063-T5.

\*\* NOTE TO SPECIFIER \*\* Delete hydraulic dampers if not required.

* + - * 1. Hydraulic dampers: Provide 90 degree stop and cushion door upon opening and closing during emergency breakout conditions.
        2. Glass: Glazing material - ANSI Z97.1.
      1. Door Carriers:
         1. Roller Wheels: 2 steel roller wheels, 1-3/4 inch (44 mm) diameter, per active door leaf for operation over replaceable Delrin track. Single journal with sealed oil-impregnated bearings.
         2. 2 self-aligning anti-risers per leaf.
      2. Vertical Jambs: 1-3/4 inches (44 mm) by 6 inches (152 mm) for overhead concealed. 1-3/4 inches by 4-1/2 inches (44 mm by 114 mm) for surface mounted.
      3. Header:
         1. Span: Maximum 14 feet (4,267 mm) without intermediate supports when using 1/4-inch (6 mm) glass. For oversize packages, consult factory.
         2. Size: 10-1/16 inches (255 mm) wide by 6-7/8 inches (175 mm) high.
         3. Hinge Point: Allows access for adjustments.
         4. Design: Closed header.

\*\* NOTE TO SPECIFIER \*\* Note that increased vertical stile widths affects clear door opening. Consult Drawings for dimensions. Delete stile widths not required.

* + - 1. Narrow Stiles - 2-1/8 inches (54 mm).
      2. Medium Stiles - 4 inches (102 mm)
      3. Wide Stiles - 5 inches (127 mm).
      4. Hardware: Breakaway.
      5. Exterior Glazing Stop Extrusion: Nonremovable, security-type glazing bead to prevent unauthorized entry.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* 1. ALL GLASS AUTOMATIC SLIDING DOORS
     1. Automatic Sliding Door System: Provide Besam SL500 CGL All Glass System automatic sliding doors as specified herein. Door systems that do not employ a fail-safe self-monitoring system will not be acceptable.
        1. Overhead-concealed, electro-mechanical, microprocessor-controlled, sliding door operator.
     2. Door Operator:
        1. Automatic door equipment accommodates up to following weights for active leaf doors:
           1. Bi-Part Doors: 220 pounds (100 kg) per active leaf.
           2. Single Slide Doors: 330 pounds (150 kg) per active leaf.
        2. Operating Temperature Range: -35 degrees F to 122 degrees F (-30 degrees C to 50 degrees C).
     3. Construction:
        1. Provide operator housing, floor rollers, and door carriers.

\*\*NOTE TO SPECIFIER\*\* Active leaf dampeners are available.

* + - 1. Aluminum Doors and Frames: Frame system, fixed top and bottom sidelite and active leaf rails to accommodate 1/2 inch tempered glass.
         1. Doors and Frames: Extruded aluminum, Alloy 6063-T5.

\*\* NOTE TO SPECIFIER \*\* Delete hydraulic dampers if not required.

* + - * 1. Hydraulic dampers: Provide 90 degree stop and cushion door upon opening and closing during emergency breakout conditions.
        2. Glass: Glazing material - ANSI Z97.1.
      1. Door Carriers:
         1. Roller Wheels: 2 steel roller wheels, 1-3/4-inch (44- mm) diameter, per active door leaf for operation over replaceable Delrin track. Single journal with sealed oil-impregnated bearings.
         2. 2 self-aligning anti-risers per leaf.
      2. Vertical Jambs: 1-3/4 inches (44 mm) by 4-1/2 inches (114 mm).
      3. Header:
         1. Span: Maximum 14 feet (4267 mm) without intermediate supports when using 1/2 inch (13 mm) glass.
         2. Size: 7 inches (178 mm) wide by 6-5/8 inches (168 mm) high.
         3. Hinge Point: Allows access for adjustments.
         4. Design: Closed header.
      4. Hardware: Breakaway at active leaf only. Sidelights shall be fixed.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* 1. FULL-IMPACT HURRICANE-RESISTANT AUTOMATIC SLIDING DOORS
     1. Automatic Sliding Door System: Provide Besam Resilience automatic sliding doors as specified herein. Door systems that do not employ a fail-safe self-monitoring system will not be acceptable.
        1. Overhead-concealed, electro-mechanical, microprocessor-controlled, sliding door operator.
     2. Door Operator:
        1. Automatic door equipment accommodates up to following weights for active leaf doors:
           1. Bi-Part Doors: 220 pounds (100 kg) per active leaf.
           2. Single Slide Doors: 220 pounds (100 kg) per active leaf.
        2. Operating Temperature Range: -35 degrees F to 131 degrees F (-30 degrees C to 55 degrees C).
     3. Emergency Breakaway:

\*\*NOTE TO SPECIFIER\*\* Delete one of the two following paragraphs to specify full breakout system or fixed sidelite system. Consult ASSA ABLOY Entrance Systems for additional information.

* + - 1. Full Breakout System: Interior sliding active leaves and sidelites swing out from any position in sliding mode.
      2. Fixed Sidelite System: Exterior sliding active leaves swing out from any position in sliding mode.
      3. Breakaway Pressure: Field adjustable to building code requirements and in accordance with ANSI/BHMA 156.10 maximum of 50 pounds (23 kg).
    1. Performance:
       1. Air Infiltration per ASTM E 283.
       2. Structural Performance (wind load) per TAS 202, ASTM E 330. Testing conducted at positive and negative loads.
       3. Forced Entry Resistance per FBC TAS 202, ASTM F 842 and ASTM F588.
       4. Impact, Large Missile Test per TAS 201, ASTM E 1886, ASTM E 1996 - Standard Test Method that simulates the act of debris being carried by the violent, unpredictable winds of a hurricane. In the test, a 2x4x9 wooden projectile is fired from a canon at the door, three times, at various positions.
       5. Cyclical Test per TAS 203, ASTM E 1996.
       6. State of Florida Approval Numbers:
          1. Full Breakout, Large and Small Missile Impact - 14324.
          2. Fixed Sidelite, Large and Small Missile Impact - 5436.4 R3.
    2. Construction:
       1. Provide operator housing, floor rollers, and door carriers.

\*\*NOTE TO SPECIFIER\*\* Active leaf dampeners are available.

* + - 1. Aluminum Doors and Frames: With sidelite and active door leaves.
         1. Doors and Frames: Extruded aluminum, Alloy 6063-T5.
         2. Hydraulic dampers: Provide 90 degree stop and cushion door upon opening and closing during emergency breakout conditions.
         3. Glass: Glazing material - ANSI Z97.1.
      2. Door Carriers:
         1. Roller Wheels: 2 steel roller wheels, 1-3/4 inch (44 mm) diameter, per active door leaf for operation over replaceable Delrin track. Single journal with sealed oil-impregnated bearings.
         2. 2 self-aligning anti-risers per leaf.
      3. Vertical Jambs: 1-3/4 inches (44 mm) by 4-1/2 inches (114 mm). No exposed screws will be acceptable.
      4. Header:
         1. Span: Maximum 14 feet (4267.2 mm)
         2. Size: 7-3/4 inches (187 mm) wide by 6-7/8 inches (175 mm) high.
         3. Hinge Point: Allows access for adjustments.
         4. Design: Closed header.

\*\* NOTE TO SPECIFIER \*\* Note that increased vertical stile widths affects clear door opening. Consult Drawings for dimensions. Delete stile widths not required.

* + - 1. Narrow Stiles - 2-1/8 inches (54 mm).
      2. Medium Stiles - 4 inches (102 mm)
      3. Wide Stiles - 5 inches (127 mm).
      4. Pivots: Top and bottom concealed pivots, extruded aluminum.
      5. Hardware: Breakaway.
      6. Exterior Glazing Stop Extrusion: Nonremovable, security-type glazing bead to prevent unauthorized entry. No exposed screws in the snaps will be acceptable.

\*\* NOTE TO SPECIFIER \*\*. Delete if not required.

* + - 1. Structural Performance and Forced Entry Resistance:
         1. Locking shall be independent 2 pt- locking system in each active leaf and include exterior key cylinder and interior thumb turn and armored steel protection. Multiple locks per door leaf will not be acceptable. Locks on sidelites will not be acceptable.
         2. Threshold shall be aluminum, 1/2 inch by 4-1/2 inches (13 mm by 114 mm) running full width of package. Threshold shall be solid where lock rods meet floor. Hollow portions of lock rods are not acceptable.

\*\* NOTE TO SPECIFIER \*\*. Delete if not required.

* + - 1. Hardware: Provide panic hardware.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* 1. FULL-IMPACT MIAMI-DADE NOA HURRICANE-RESISTANT AUTOMATIC SLIDING DOORS
     1. Automatic Sliding Door System: Provide Besam SL500 Resilience automatic sliding doors as specified herein. Door systems that do not employ a fail-safe self-monitoring system will not be acceptable.
        1. Overhead-concealed, electro-mechanical, microprocessor-controlled, sliding door operator.
     2. Door Operator:
        1. Automatic door equipment accommodates up to following weights for active leaf doors:
           1. Bi-Part Doors: 220 pounds (100 kg) per active leaf.
           2. Single Slide Doors: 220 pounds (100 kg) per active leaf.
        2. Operating Temperature Range: -35 degrees F to 131 degrees F (-30 degrees C to 55 degrees C).
     3. Emergency Breakaway:

\*\*NOTE TO SPECIFIER\*\* Delete one of the two following paragraphs to specify full breakout system or fixed sidelite system. Consult ASSA ABLOY Entrance Systems for additional information.

* + - 1. Full Breakout System: Interior sliding active leaves and sidelites swing out from any position in sliding mode.
      2. Breakaway Pressure: Field adjustable to building code requirements and in accordance with ANSI/BHMA 156.10 maximum of 50 pounds (23 kg).
    1. Performance:
       1. Air Infiltration per ASTM E283.
       2. Structural Performance (wind load) per TAS 202, ASTM E330. Testing conducted at positive and negative loads.
       3. Forced Entry Resistance per FBC TAS 202, ASTM F842 and ASTM F588.
       4. Impact, Large Missile Test per TAS 201, ASTM 1886, ASTM E 1996 - Standard Test Method that simulates the act of debris being carried by the violent, unpredictable winds of a hurricane. In the test, a 2x4x9 wooden projectile is fired from a canon at the door, three times, at various positions.
       5. Cyclical Test per TAS 203, ASTM E 1996.
       6. State of Florida Approval Numbers:
          1. Full Breakout, Large and Small Missile Impact - 14324.
       7. Miami Dade Product Control Approved:
          1. Full Breakout, Large and Small Missile Impact - NOA No. 13-0924.07, expires 11/04/2015.
    2. Construction:
       1. Provide operator housing, floor rollers, and door carriers.

\*\*NOTE TO SPECIFIER\*\* Active leaf dampeners are available.

* + - 1. Aluminum Doors and Frames: With sidelite and active door leaves.
         1. Doors and Frames: Extruded aluminum, Alloy 6063-T5.
         2. Hydraulic dampers: Provide 90 degree stop and cushion door upon opening and closing during emergency breakout conditions.
      2. Glass: Glazing material - ANSI Z97.1:
         1. 15/32 inch (12 mm) overall thickness, laminated impact glass consisting of an approved interlayer laminated between two pieces of 3/16 inch (5 mm) heat strengthened glass panes.
         2. Approved Interlayers: .090 inch (2.3 mm) SentryGlas Plus by Dupont, .090 inch (2.3 mm) Saflex PVB by Solutia.
         3. Door panels must be glazed with DOW 995 structural silicone applied per manufacturer's instructions.
      3. Door Carriers:
         1. Roller Wheels: 2 steel roller wheels, 1-3/4 inch (44 mm) diameter, per active door leaf for operation over replaceable Delrin track. Single journal with sealed oil-impregnated bearings.
         2. 2 self-aligning anti-risers per leaf.
      4. Vertical Jambs: 1-3/4 inches (44 mm) by 4-1/2 inches (114 mm). No exposed screws will be acceptable.
      5. Header:
         1. Span: Maximum 14 feet (4267.2 mm).
         2. Size: 7-3/4 inches (187 mm) wide by 6-7/8 inches (175 mm) high.
         3. Hinge Point: Allows access for adjustments.
         4. Design: Closed header.

\*\* NOTE TO SPECIFIER \*\* Note that increased vertical stile widths affects clear door opening. Consult Drawings for dimensions. Delete stile widths not required.

* + - 1. Narrow Stiles - 2-1/8 inches (54 mm).
      2. Medium Stiles - 4 inches (102 mm)
      3. Wide Stiles - 5 inches (127 mm).
      4. Pivots: Top and bottom concealed pivots, extruded aluminum.
      5. Hardware: Breakaway.
      6. Exterior Glazing Stop Extrusion: Non-removable, security-type glazing bead to prevent unauthorized entry. No exposed screws in the snaps will be acceptable.

\*\* NOTE TO SPECIFIER \*\*. Delete if not required.

* + - 1. Structural Performance and Forced Entry Resistance:
         1. Locking shall be 2 pt- locking system with throw rod and solid steel bolts into carrier arm and threshold in each active leaf, and shall include exterior key cylinder with interior thumb turn and armored steel protection. Multiple locks per door leaf will not be acceptable. Locks on sidelites will not be acceptable.
         2. Threshold shall be aluminum, 1/2 inch by 4-1/2 inches (13 mm by 114 mm) running full width of package. Threshold shall be solid where lock rods meet floor. Hollow portions of lock rods are not acceptable.

\*\* NOTE TO SPECIFIER \*\*. Delete if not required.

* + - 1. Hardware: Provide panic hardware.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* 1. NON-IMPACT HURRICANE-RESISTANT AUTOMATIC SLIDING DOORS
     1. Automatic Sliding Door System: Provide Besam Resilience automatic sliding doors as specified herein. Door systems that do not employ a fail-safe self-monitoring system will not be acceptable.
        1. Overhead-concealed, electro-mechanical, microprocessor-controlled, sliding door operator.
     2. Door Operator:
        1. Automatic door equipment accommodates up to following weights for active leaf doors:
           1. Bi-Part Doors: 220 pounds (100 kg) per active leaf. For heavier doors, please consult the factory.
           2. Single Slide Doors: 220 pounds (100 kg) per active leaf. For heavier doors, please consult the factory.
        2. Operating Temperature Range: -35 degrees F to 131 degrees F (-30 degrees C to 55 degrees C).
     3. Emergency Breakaway:

\*\*NOTE TO SPECIFIER\*\* Delete one of the two following paragraphs to specify full breakout system or fixed sidelite system. Consult ASSA ABLOY Entrance Systems for additional information.

* + - 1. Full Breakout System: Interior sliding active leaves and sidelites swing out from any position in sliding mode.
      2. Fixed Sidelite System: Exterior sliding active leaves swing out from any position in sliding mode.
      3. Breakaway Pressure: Field adjustable to building code requirements and in accordance with ANSI/BHMA 156.10 maximum of 50 pounds (23 kg).
    1. Performance:
       1. Air Infiltration per TAS 202, ASTM E 283.
       2. Structural Performance (wind load) per ASTM E 330. Testing conducted at positive and negative loads.
          1. Fixed sidelite, non-impact: 60 psf (155 mph). No less than 60 PSF is acceptable for narrow stile doors. No more than .09 of permanent set will be acceptable.
          2. Full breakout, non-impact: 60 psf (155 mph). No less than 60 PSF is acceptable for narrow stile doors. No more than .09 of permanent set will be acceptable.
       3. Forced Entry Resistance per FBC TAS 202, ASTM F 842 and ASTM F588.
       4. State of Florida Approval Numbers:
          1. Full Breakout, Non Impact - 3230.3
          2. Fixed Sidelite, Non Impact - 3230.4
    2. Construction:
       1. Provide operator housing, floor rollers, and door carriers.

\*\*NOTE TO SPECIFIER\*\* Active leaf dampeners are available.

* + - 1. Aluminum Doors and Frames: With sidelite and active door leaves.
      2. Doors and Frames: Extruded aluminum, Alloy 6063-T5.

\*\* NOTE TO SPECIFIER \*\* Delete hydraulic dampers if not required.

* + - 1. Hydraulic dampers: Provide 90 degree stop and cushion door upon opening and closing during emergency breakout conditions.
      2. Glass: Glazing material - ANSI Z97.1.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two lines.

* + - * 1. Field-glazed.
        2. Factory-glazed with structural snaps. No exposed screws in the snaps will be acceptable.
        3. Active Leaves: 1/4 inch (6 mm) tempered dry glaze insulating units with one-way snap.
        4. Sidelites: 1/4 inch (6 mm) tempered dry glaze insulating units with one-way snap.
      1. Door Carriers:
         1. Roller Wheels: 2 steel roller wheels, 1-3/4 inch (44 mm) diameter, per active door leaf for operation over replaceable Delrin track. Single journal with sealed oil-impregnated bearings.
         2. 2 self-aligning anti-risers per leaf.
      2. Vertical Jambs: 1-3/4 inches (44 mm) by 4-1/2 inches (114 mm). No exposed screws will be acceptable.
      3. Header:
         1. Span: Maximum 14 feet (4267.2 mm)
         2. Size: 7-3/4 inches (187 mm) wide by 6-7/8 inches (175 mm) high.
         3. Hinge Point: Allows access for adjustments.
         4. Design: Closed header.

\*\* NOTE TO SPECIFIER \*\* Note that increased vertical stile widths affects clear door opening. Consult Drawings for dimensions. Delete stile widths not required.

* + - 1. Narrow Stiles - 2-1/8 inches (54 mm).
      2. Medium Stiles - 4 inches (102 mm)
      3. Wide Stiles - 5 inches (127 mm).
      4. Pivots: Top and bottom concealed pivots, extruded aluminum.
      5. Hardware: Breakaway.
      6. Exterior Glazing Stop Extrusion: Nonremovable, security-type glazing bead to prevent unauthorized entry. No exposed screws in the snaps will be acceptable.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* 1. CLEAN ROOM AUTOMATIC SLIDING DOORS
     1. Automatic Sliding Door System: Provide Besam SL500 Clean Room System automatic sliding doors as specified herein. Door systems that do not employ a fail-safe self-monitoring system will not be acceptable.
        1. Electro-mechanical, microprocessor-controlled, sliding door operator.
     2. Door Operator:
        1. Automatic door equipment accommodates up to following weights for active leaf doors:
           1. Bi-Part Doors: 220 pounds (100 kg) per active leaf.
           2. Single Slide Doors: 300 pounds (200 kg) per active leaf.
        2. Operating Temperature Range: -35 degrees F to 122 degrees F (-30 degrees C to 50 degrees).
     3. Performance:
        1. Particle Testing for Clean Room rating compatible up to Class 1.
     4. Construction:
        1. Provide operator housing, floor rollers, and door carriers.
        2. Weatherstripping: Provide non-shedding Santoprene weatherstripping.

\*\*NOTE TO SPECIFIER\*\* Active leaf dampeners are available.

* + - 1. Aluminum Doors and Frames: With fixed sidelite and active door leaves.
         1. Doors and Frames: Extruded aluminum, Alloy 6063-T5.
         2. Glass: Glazing material - ANSI Z97.1.
      2. Door Carriers:
         1. Roller Wheels: 2 steel roller wheels, 1-3/4-inch (44- mm) diameter, per active door leaf for operation over replaceable Delrin track. Single journal with sealed oil-impregnated bearings.
         2. 2 self-aligning anti-risers per leaf.
      3. Vertical Jambs: 1-3/4 inches (44 mm) by 4-1/2 inches (114 mm). No exposed screws will be acceptable.
      4. Header:
         1. Span: Maximum 14 feet (4267 mm) without intermediate supports when using 1/4-inch glass.
         2. Size: 7-3/4 inches (187 mm) wide by 6-7/8 inches (175 mm) high.
         3. Hinge Point: Allows access for adjustments.
         4. Design: Closed header.

\*\* NOTE TO SPECIFIER \*\* Note that increased vertical stile widths affects clear door opening. Consult Drawings for dimensions. Delete stile widths not required.

* + - 1. Narrow Stiles - 2-1/8 inches (54 mm).
      2. Medium Stiles - 4 inches (102 mm)
      3. Wide Stiles - 5 inches (127 mm).
      4. Pivots: Top and bottom concealed pivots, extruded aluminum.
      5. Hardware: Breakaway at active leaf only. Sidelights shall be fixed.
      6. Exterior Glazing Stop Extrusion: Nonremovable, security-type glazing bead to prevent unauthorized entry.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* 1. INTENSIVE CARE UNIT/ CORONARY CARE UNIT - ICU/CCU - SWING DOORS
     1. Manual ICU/CCU manual swing doors with header, door and track.
        1. Product: Besam VersaMax ICU/CCU manual swing doors as manufactured by ASSA ABLOY Entrance Systems.
     2. Performance:
        1. General: Provide doors that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
        2. Equipment shall accommodate up to 280 pounds (127 kg) weight of doors.

\*\*NOTE TO SPECIFIER\*\* Antimicrobial coating. Delete if not required.

* + - 1. Provide MicroShield antimicrobial silver-based ion finish on handles or all exposed surfaces including handles, door extrusions, rails and header to comply with the manufacturers specified requirements. Antimicrobial finish shall permanently suppress the growth of bacteria, algae, fungus, mold and mildew. Chlorinated or synthetic chemicals will not be accepted. Only baked on enamel silver ion technology shall be acceptable.
    1. Design:
       1. Door Configuration: Doors shall be manually operated, self-latching swing doors:
          1. Unequal Pair of Swing Doors: One active leaf (primary panel) and one inactive leaf (secondary panel).
          2. Pair of Swing Doors: Two active leaves (both primary panels).
          3. Single Swing Door: One active leaf (primary panel).

\*\*NOTE TO SPECIFIER\*\* Specify fixed sidelite for trackless system or full breakout for trackless or surface/recessed track system. Consult ASSA ABLOY Entrance Systems for additional information.

* + 1. Construction:
       1. Doors and Frames: Extruded aluminum, Alloy 6063-T5.
          1. Door and jambs: structural wall thickness to be no less than .125 inch (3.2mm)
       2. Door:
          1. Integrated corner block with 3/8 inch all-thread through bolt from each stile.
          2. Weatherstripping to be captured and integrated within extrusion. Stick on surfaced applied weatherstripping is not acceptable.
          3. Stiles: Narrow - 2-1/8 inches (54 mm).
          4. Stiles: Medium - 4 inches (102 mm).
          5. Bottom Rail: 4 inch (102 mm).
          6. Bottom Rail: 7 inch (178 mm).
          7. Bottom Rail: 10 inch (254 mm).
          8. Intermediate Muntin: 1-3/4 inches (45 mm).
          9. Intermediate Muntin: 4 inches (102 mm).
       3. Framing:
          1. Vertical Jambs: 1-3/4 inches (44 mm) by 4-1/2 inches (114 mm).
          2. Vertical Jambs: 1 inch (25 mm) by 4-1/2 inches (114 mm).
          3. Header Size: 4-1/2 inches (114 mm) wide by 4-3/4- inches (120.6 mm) high.
          4. Header Size: Low profile 4-1/2 inches (114 mm) wide by 1-3/4- inches (44.5 mm) high.
       4. Glazing Material: ANSI Z97.1.

\*\*NOTE TO SPECIFIER\*\* Specify required glass for active leaves and sidelites. Sidelites with 1-inch (25mm) glass only available with fixed sidelite units. Glass stops cannot be different on active leaf and sidelites. Delete options not required.

* + - * 1. Door Leaves: 1/4 inch (6 mm) glass.
        2. Door Leaves: 5/8 inch (16 mm) glass insulating units.
        3. Door Leaves: 1 inch (25 mm) glass insulating units.
        4. Door Leaves: 1-1/4 inch (31 mm) glass insulating units with integral blinds installed between glass panes.

\*\*NOTE TO SPECIFIER\*\* Delete option not required.

* + - * 1. Glazing: Field glazed.
        2. Glazing: Factory glazed.

\*\*NOTE TO SPECIFIER\*\* Optional: Delete if not required.

* + 1. Hardware:
       1. Swing doors shall be provided with C-shaped door pulls on both sides of active door leaves.
       2. Hinges: Full-mortise, gear type, continuous hinge.
       3. Latching hardware shall be provided as indicated on door schedule and specified herein:
          1. Latching Hardware (active door leaves): Roller latch mounted in the top door rail.
          2. Manual operated flush bolt to secure inactive door leaf.
       4. Self-closing device shall be provided as indicated.
          1. An adjustable speed, surface mounted, rack and pinion door closer, which will close door to a positive latched position.
          2. Door closer(s) are to have non-hold open type arm.
          3. Door closer(s) are to have hold open type arm.
    2. Finish:
       1. Microshield integral silver ion baked on enamel.
       2. Antimicrobial finish to operate at the surface of the product through the controlled release of silver ions that attack microbes and inhibit their growth on the treated surfaces.
       3. All treated surfaces to be safe, have no toxic effect and to be coated with an EPA registered material.
    3. Air and Smoke Infiltration:
       1. Sliding door shall be provided with seals on vertical meeting stiles and horizontal header to prevent the passage of air and smoke. The seals shall be tested to compliance with UL 1784.
          1. Maximum leakage rate at ambient temperature shall not exceed< 1 CFM/ft2 of opening at 0.3 in. of water.
       2. Smoke labeled doors shall be provided with positive latching so that door is latched when in closed position. Latching hardware on active door leaves to be concealed top vertical rods, with push paddle (push side) and curved lever handle (pull side) of door.
          1. Manual operated flush bolt to secure inactive door leaf.

\*\*NOTE TO SPECIFIER\*\* ASSA ABLOY Entrance Systems' ICU/CCU sliding door system features an appealing and functional closed header that prevents dust, germs and debris while attractively framing your doorway. Heavy-duty rollers, concealed pivots and associated hardware insure your package will operate flawlessly. Standard door packages are available in 2, 3, and 4-panel and can be specified with trackless configuration. Delete if not required.

* 1. INTENSIVE CARE UNIT/ CORONARY CARE UNIT - ICU/CCU - SLIDING DOORS
     1. Manual ICU/CCU manual sliding doors with header, door and track.
        1. Product: Besam VersaMax 2.0 ICU/CCU manual sliding doors as manufactured by ASSA ABLOY Entrance Systems.
     2. Performance:
        1. General: Provide doors that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
        2. Header spans up to 12 feet (3657 mm) without the need for intermediate support when utilizing 1/4 inch (6 mm) tempered glass. For units over 12 feet (3657 mm) consult factory or supply overhead structural support for the attachment of the header to the structure.
        3. Equipment shall accommodate up to 220 pounds (100 kg) weight of doors.

\*\*NOTE TO SPECIFIER\*\* Antimicrobial coating. Delete if not required.

* + - 1. Provide MicroShield antimicrobial silver-based ion finish on handles or all exposed surfaces including handles, door extrusions, rails and header to comply with the manufacturers specified requirements. Antimicrobial finish shall permanently suppress the growth of bacteria, algae, fungus, mold and mildew.
    1. Design:
       1. Doors shall be manually operated to full open or full close position.

\*\*NOTE TO SPECIFIER\*\* Specify fixed sidelite for trackless system or full breakout for trackless or surface/recessed track system. Consult ASSA ABLOY Entrance Systems for additional information.

* + - 1. Doors shall have a breakaway feature where the panel(s) can swing giving a greater opening:

\*\*NOTE TO SPECIFIER\*\* Specify fixed sidelite for trackless system or full breakout for trackless or surface/recessed track system. Consult ASSA ABLOY Entrance Systems for additional information. Delete entrance configuration(s) not required for the project

* + 1. Besam ASSA ABLOY VersaMax 2.0 ICU/CCU Sliding Door Package (Basis of Design):
       1. Single slide, full breakout, ICU/CCU door system.
          1. Operation: Manually operated.
          2. Configuration: Single slide, two equal panel unit with one operable leaf and one sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Sliding leaf and sidelite.
        4. Mounting: Overhead header installed between jambs.
      1. Single slide, full breakout, 3-panel ICU/CCU door system.
         1. Operation: Manually operated.
         2. Configuration: Single slide, three equal panel unit with one operable leaf and two sidelites.

Sliding panel in center of unit with sidelites on each side of sliding panel.

* + - * 1. Breakaway Capability: Sliding leaf and sidelite.
        2. Mounting: Overhead header installed between jambs.
      1. Single slide, fixed sidelite, ICU/CCU door system.
         1. Operation: Manually operated.
         2. Configuration: Single slide, two equal panel unit with one operable leaf and one fixed sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Sliding leaf only.
        4. Mounting: Overhead header installed between jambs.
      1. Single slide, surface mounted, ICU/CCU door system.
         1. Operation: Manually operated.
         2. Configuration: Single slide unit without sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Sliding leaf.
        4. Mounting: Surface mounted header installed on face of wall.
      1. Bi-parting, full breakout, ICU/CCU door system.
         1. Operation: Manually operated.
         2. Configuration: Bi-parting, four equal panel unit with two operable leaves and two sidelites.
         3. Breakaway Capability: Sliding leaves and sidelites.
         4. Mounting: Overhead header installed between jambs.
      2. Bi-parting, fixed sidelite, ICU/CCU door system.
         1. Operation: Manually operated.
         2. Configuration: Bi-parting, four equal panel unit with two operable leaves and two fixed sidelites.
         3. Breakaway Capability: Sliding leaves only.
         4. Mounting: Overhead header installed between jambs.
      3. Bi-parting, surface mounted, ICU/CCU door system.
         1. Operation: Manually operated.
         2. Configuration: Bi-parting, two equal panel unit with two operable leaves and no sidelites.
         3. Breakaway Capability: Sliding leaves only.
         4. Mounting: Surface mounted header installed on face of wall.
    1. Construction:
       1. Stile and Rail Sliding Panels and Sidelites:
          1. Material: Extruded Aluminum, Alloy 6063-T5 or 6063-T6.
          2. Door panels shall have a minimum .125 inch (3.2 mm) structural wall thickness including adjoining perimeter frames where applicable.

Aluminum extrusions shall allow for a factory installed, slide-in type gasket.

* + - * 1. Door construction shall be by means of an integrated corner clip with 3/8 inch (9.5 mm) diameter all-thread through bolt from each stile.

Face of door stiles shall be flush with adjacent rails and muntin.

* + - * 1. Glass stops shall be .062 inch (15.8 mm) wall thickness and shall provide security function as a standard by means of a fixed non-removable exterior section with glazing to be performed from the interior only.

\*\*NOTE TO SPECIFIER\*\* Beveled glass stops available only with 1/4 inch (6 mm) glazing. Delete if not required.

Beveled glass stops.

\*\*NOTE TO SPECIFIER\*\* Delete stile not required.

* + - * 1. Vertical Stiles shall be narrow stile 2-1/8 inch (54 mm).
        2. Vertical Stiles shall be medium stile 4 inch (102 mm).

\*\*NOTE TO SPECIFIER\*\* Delete rail not required.

* + - * 1. Bottom Rails shall be 4 inch (102 mm).
        2. Bottom Rails shall be 7 inch (178 mm).
        3. Bottom Rails shall be 10 inch (254 mm).

\*\*NOTE TO SPECIFIER\*\* Muntin is optional. Delete muntin not required.

* + - * 1. Intermediate Muntin shall be 1-3/4 inch (45 mm).
        2. Intermediate Muntin shall be 4 inch (102 mm).
        3. Gasketing: Slide-in type, replaceable pile mohair seals.

Bottom rails shall be provided with a concealed adjustable sweep gasket.

* + - * 1. Glass: Glazing shall comply with ANSI Z97.1, thickness as indicated.

\*\*NOTE TO SPECIFIER\*\* Select glazing types as required for the project. Add "Locations" to each of the following if multiple types and/or thickness glazing is required.

Glazing Sliding Panels and Sidelite Panels: 1/4 inch (6 mm) tempered glass, unless otherwise specified.

Glazing Sliding Panels and Sidelite Panels: 5/8 inch (16 mm) insulated glass.

Glazing Sliding Panels and Sidelite Panels: 1 inch (25 mm) insulated glass.

Glazing Sliding Panels and Sidelite Panels: 1-1/4 inches (31 mm) insulated glass.

Glazing Installation: Dry glazing; wet glazing not allowed.

See Division 8 Section "Glazing" for requirements and the manufacturer instructions.

\*\*NOTE TO SPECIFIER\*\* Consult SpecDesk for integral blind information - glazing by ASSA ABLOY  
Consider a lower panel with opaque glazing when specifying integral blinds - delete if not required.

Lower Lite Glazing: 1 inch (25 mm) overall thickness frosted insulating glass unit consisting of an interior and exterior glass lite; both lites to be 1/4 inch (6 mm) tempered glass.

Frosted Glazing: Opaque, acid etched on #2 or #3 surface.

Upper Lite Glazing with Integral Blinds: 1-1/4 inches (31 mm) overall thickness insulating glass unit consisting of an interior and exterior glass lite; both lites to be 1/4 inch (6 mm) tempered glass.

Integral Blinds: Glass to have blinds installed between glass lites.

Blinds to be mechanically gear-driven tilt micro-blind installed in the sealed insulating glass unit. Internally mounted control assembly that is coupled to the external operator controls the tilting of blind slats.

Tilt Operator: Thumb wheel, dual control.

Glazing Installation: Dry glazing; wet glazing not allowed.

See Division 8 Section "Glazing" for requirements and the manufacturer instructions.

* + - 1. Door Carriers: Manufacturer's standard carrier assembly that allows vertical adjustment.
         1. Sliding Panel Door Carriers:

Roller Wheels: Two heavy duty Delrin roller wheels per wheel assembly, for a total of four roller wheels, 1-7/16 inches (36.51 mm) diameter, per active door leaf for operation over a replaceable aluminum track. Single journal with sealed oil impregnated bearings.

Two heavy duty self-aligning anti-risers per leaf.

* + - 1. Framing Members: Provide ICU/CCU entrances as complete assemblies. Manufacturer's standard extruded aluminum framing reinforced as required to support loads.

\*\*NOTE TO SPECIFIER\*\* Delete jamb not required.

* + - * 1. Vertical Jambs: 1-3/4 inches (44.5 mm) by 4-1/2 inches (114.3 mm).
        2. Vertical Jambs: 1 inch (25.4 mm) by 4-1/2 inches (114.3 mm).
      1. Header: Extruded aluminum header with a replaceable aluminum track, mounted between the jambs and extending full width of entrance. Header to conceal door operators, carrier assemblies, and roller track; complete with hinged access panel for service and adjustment.
         1. Header Capacity: Capable of supporting active breakout leafs up to maximum of 220 lb (100 kg) per leaf.

\*\*NOTE TO SPECIFIER\*\* All VersaMax headers are to be anchored to overhead framing per manufacturer's recommendations.  
The framing surrounding the opening needs to be capable of supporting no less than 440lbs for single slide, 880lbs for bipart or single slide telescopic. This is a double the weight of the door panel safety factor.

* + - * 1. Header Size: 4-1/2 inches (114.3 mm) wide by 4-1/2 inches (114.3 mm) high.
        2. Gasketing: Slide-in type, replaceable pile mohair seals.
        3. Header Access: Continuous hinge at top of header allows cover to swing and allow complete access to operator and internal electronic and mechanical assemblies.

\*\*NOTE TO SPECIFIER\*\* Entrance needs to be connected to the building ground for the following option - work by others. Delete if not required.

* + - 1. Anti-Static Grounding: Fabricate ICU/CCU entrances to be internally grounded to reduce static shock. Connect to building ground.

\*\*NOTE TO SPECIFIER\*\* Electrified power transfer is required for the InteGlassTM privacy glass option. Delete if not required.

* + - 1. Electrified Power Transfer: Concealed power transfer from header to both sliding and sidelite panels. Power transfer to allow continuous power to sliding panels at all positions during the sliding and breakout operations.
         1. The power transfer system shall be rated at 5 amps (600 watts) at 120 VAC maximum.

Cable shall be 18 AWG stranded RoHS compliant UL listed 600V cable with a temperature range of -50 to 90 degrees C, with a dynamic bend radius of 6X cable diameter and have a pull tension of 51 lbs. maximum. Cable shall be able to withstand 8M cycles at rated dynamic bend radius.

* + 1. Breakaway Leaf:
       1. Active leaf and sidelite panels (full breakout and fixed sidelite packages) and sidelite panels (full breakout packages) shall swing out to 90 degrees with no greater force than 50 lbs (23 kg) and comply with NFPA 101 Life Safety Code and or AHJ "Authority Having Jurisdiction".
       2. Breakout tension to set the leaf in motion shall be adjustable.

\*\*NOTE TO SPECIFIER\*\* Optional: Delete if not required.

* + - 1. Active leaf dampeners will provide smooth and dampened action while door leafs are broken out. Self-closing torsion springs that close the door in an uncontrolled manor will not be acceptable.
      2. Active leaf torsion arm to be provided to support door leaf while broken out.
      3. During breakout, active leafs and sidelites are not to pass one another to protect hands and fingers near the finger pulls and optional positive latch handles.
      4. Trackless: active leaf bottom pivot to be strictly steel construction and not allow for disengagement at any point of breakout. Nylon or plastic in nature parts will not be acceptable.
      5. No special knowledge or training shall be required to operate door.
    1. Hardware:
       1. Provide manufacturer's standard hardware as required for operation indicated.
          1. Breakaway arms and bottom pivot assembly shall allow panels to breakout to 90 degrees. Force to breakout sliding panel adjustable to maximum 50 lbf (222 N).
          2. Nurse Assist magnetic catch(s) to retain breakout door and sidelite panels in the closed position.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - * 1. Gas regulated damper to control movement of breakout panels.

\*\*NOTE TO SPECIFIER\*\* Optional positive latching for sliding ICU/CCU door system. Delete if not required.

* + - * 1. Latching hardware shall be provided as indicated.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

Positive Latch: Mortise type self-latching hookbolt, BHMA A156.5, Grade 1, with lever handles on each side.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

Lever Style: End of lever to have a return towards door face.

\*\*NOTE TO SPECIFIER\*\* Automatic releasing/latching of active leaf and sidelite (Flush Bolt Free feature) is always required with the full breakout VersaMax trackless option   
\*\*NOTE TO SPECIFIER\*\* Delete automatic releasing/latching if only the fixed sidelite VersaMax is required   
Delete automatic releasing/latching if full breakout VersaMax with guide track is required

Automatic releasing/latching, concealed magnetic bolt shall allow breakout of sidelite panel(s) when sliding panel in full open position.

\*\*NOTE TO SPECIFIER\*\* Recessed pull/C-shaped pull are provided standard on sliding ICU/CCU doors, not available with positive latching door hardware. Delete if not required.

* + - * 1. Door pulls shall be provided as indicated.

Manufacturer's recessed pull installed on breakout side and surface-mounted, 10 inches (254 mm) C-shaped door pull installed on non-breakout side of active door leaves. Door pull mounting shall not decrease clear opening width.

\*\*NOTE TO SPECIFIER\*\* Optional C-shaped pull on both sides of sliding ICU/CCU door system

Manufacturer's surface-mounted, 10 inches (254 mm) C-shaped door pull installed on both sides of active door leaves. Door pull mounting shall not decrease clear opening width.

\*\*NOTE TO SPECIFIER\*\* Optional self-closing device for manually operated sliding ICU/CCU doors

* + - * 1. Self-closing device shall be provided where indicated.

A non-electrified, adjustable speed, rack and pinion mechanism, which will close door to a positive latched position.

\*\*NOTE TO SPECIFIER\*\* Optional magnetic hold-open device for ICU/CCU sliding entrances

Magnetic hold-open devices tied into the building fire alarm/sprinkler system, which will upon receiving a signal, release the self closing sliding door leaf.

Magnetic device to accept 12-24vdc with no more current draw than 120mA with a hold force not to exceed 30lbs for manual door release.

* + - * 1. Guide Track/Threshold: Manufacturer's threshold as indicated.

\*\*NOTE TO SPECIFIER\*\* Option "1" is the manufacturer's standard threshold/track for sliding ICU/CCU entrances and Option "2" is optional - full breakout entrance

Full Breakout Trackless Design: Floor mounted guide track and threshold not allowed.

Breakout from a full open position only.

Full Breakout Entrance Guide Track: Floor mounted aluminum guide track(s) adjacent to the sidelite portion of the sliding ICU/CCU entrance.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete track not required.

Surface mounted track.

Recessed mounted track.

Guide track shall allow breakout from any position except when door is latched.

\*\*NOTE TO SPECIFIER\*\* Option is the manufacturer's standard threshold/track for sliding ICU/CCU entrances - fixed sidelite entrance

Fixed Sidelite Entrance Guide Track: Aluminum guide track integrated in the bottom of the sidelite portion of the sliding ICU/CCU entrance.

Guide shall allow breakout from any position except when door is latched.

\*\*NOTE TO SPECIFIER\*\* Option is the manufacturer's standard - surface mounted entrance

Surface Mounted Entrance Guide Track: Aluminum fixed sidelite guide track mounted along the face of the wall. The track shall not extend past the jamb into the door opening.

Trim cover on top side of the guide track shall match the finish of the ICU/CCU entrance.

Guide track shall allow breakout from any position except when door is latched.

* + 1. Finish:

\*\*NOTE TO SPECIFIER\*\* Consult SpecDesk for custom finish options

* + - 1. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - 1. Anodized Finish:

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish not required.

* + - * 1. AAMA 611, Clear, AA- M12C22A41, Class I, 0.018 mm.
        2. AAMA 611, Dark Bronze, AA-M12C22A44, Class I, 0.018 mm.
        3. AAMA 611, Custom anodized to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - 1. Painted Finish:

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish not required.

* + - * 1. Powder coat painted to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish system not required.

* + - * 1. Kynar finish, 2 coat, to match architect's sample.
        2. Kynar finish, 3 coat, to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Delete following if MicroShield is not required. Consult SpecDesk for availability of MicroShield with anodized and painted aluminum finishes. Delete if not required.

* + - 1. MicroShieldTM antimicrobial silver-based ion, baked-on enamel finish on all exposed surfaces including door pulls, door extrusions, rails and header.
         1. Antimicrobial finish must permanently suppress the growth of bacteria, algae, fungus, mold and mildew by the controlled release of silver ions that attack microbes and inhibit the growth on the treated surfaces.
         2. Coating to be EPA registered resulting in a safe and non-toxic finish; chlorinated or synthetic chemical finishes will not be accepted.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* + 1. Air and Smoke Rated Infiltration:
       1. 2-panel or 4-panel manual sliding door shall be provided with seals on vertical and horizontal rails to prevent the passage of air and smoke.
       2. Smoke Gasketing:
          1. Slide-in type, replaceable, smoke type gasket that is capable of withstanding 400 degree F for a minimum of 30 minutes
          2. The seals shall be tested to compliance with UL 1784.
          3. Maximum leakage rate at ambient temperature shall not exceed 1 CFM/ft2 of opening at 0.3 in. of water.
       3. Smoke labeled doors shall be provided with positive latching so that door is latched when in closed position. Latching hardware to be mortise type self-latching hookbolt, BHMA A156.5, Grade 1, with lever handles on each side.
          1. Manual operated flush bolt to secure sidelite panels with trackless, full-breakout entrances.

\*\*NOTE TO SPECIFIER\*\* ASSA ABLOY Entrance Systems' ICU/CCU telescopic sliding door systems provide privacy, separation of space and convenient access while allowing 33% greater door opening. Available in 3 or 6-panel, the door package can be specified with trackless configuration. To facilitate moving equipment and for emergency egress requirements, the doors can be specified to breakaway to the interior of the room or the exterior to the hallway. Delete if not required.

* 1. INTENSIVE CARE UNIT/ CORONARY CARE UNIT - MANUAL TELESCOPIC SLIDING DOORS

\*\*NOTE TO SPECIFIER\*\* This specification is tailored to building codes within North America. Local building codes vary. If your project is outside North America, please contact Besam Export at export@besam.com.nu for discussion on proper equipment application.

* + 1. Manual ICU/CCU telescopic sliding doors with header, door and track.
       1. Product: Besam VersaMax 2.0 ICU/CCU telescopic manual sliding doors as manufactured by ASSA ABLOY Entrance Systems.

\*\*NOTE TO SPECIFIER\*\* Select entrance configuration(s) as required for the project.

* + 1. Besam ASSA ABLOY VersaMax 2.0 ICU/CCU Telescopic Sliding Door Package (Basis of Design):
       1. Telescopic single slide, full breakout, ICU/CCU door system.
          1. Operation: Manually operated.
          2. Configuration: Single slide, three equal panel unit with two operable leaves and one sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Sliding leaves and sidelite.
        4. Mounting: Overhead header installed between jambs.
      1. Telescopic single slide, fixed sidelite, ICU/CCU door system.
         1. Operation: Manually operated.
         2. Configuration: Single slide, three equal panel unit with two operable leaves and one sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Leading sliding leaf only.
        4. Mounting: Overhead header installed between jambs.
      1. Telescopic bi-parting, full breakout, ICU/CCU door system.
         1. Operation: Manually operated.
         2. Bi-parting, six equal panel unit with four operable leaves and two fixed sidelites.
         3. Breakaway Capability: Sliding leaves and sidelites.
         4. Mounting: Overhead header installed between jambs.
      2. Telescopic bi-parting, fixed sidelite, ICU/CCU door system.
         1. Operation: Manually operated.
         2. Configuration: Bi-parting, six equal panel unit with four operable leaves and two fixed sidelites.
         3. Breakaway Capability: Leading sliding leaves only.
         4. Mounting: Overhead header installed between jambs.
    1. Performance:
       1. General: Provide doors that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
       2. Equipment accommodates up to 220 pounds (100 kg) weight of doors.

\*\*NOTE TO SPECIFIER\*\* For antimicrobial coating. Delete if not required.

* + - 1. Provide MicroShield antimicrobial silver-based ion finish on handles or all exposed surfaces including handles, door extrusions, rails and header to comply with the manufacturers specified requirements.
         1. Antimicrobial finish shall permanently suppress the growth of bacteria, algae, fungus, mold and mildew.
         2. Chlorinated or synthetic chemicals will not be accepted
         3. Only baked on enamel silver ion technology will be accepted.
    1. Design:
       1. Doors are manually operated to full open or full close position.

\*\*NOTE TO SPECIFIER\*\* Timing transmission shall sequence the opening of the first and second leaves to provide a simultaneous opening of both leaves with a smooth operation; eliminating the "grabbing" that typically occurs with telescopic doors.

* + - 1. Active leaf 1 and active leaf 2 shall be internally synchronized by means of a fiberglass reinforced timing belt that insures smooth and consistent operation. Systems that do not tie active leaf 1 and 2 together will not be accepted.
      2. All models have a breakaway feature where the panel(s) can swing giving a greater opening:

\*\*NOTE TO SPECIFIER\*\* Specify fixed sidelite for trackless system or full breakout for trackless or surface/recessed track system. Consult ASSA ABLOY Entrance Systems for additional information.

* + - * 1. Fixed Sidelite System, trackless: Exterior sliding active leaves swing out from any position in sliding mode and sidelite remains fixed at all times.
        2. Full Breakout System, surface/recessed track: Interior sliding active leaves and sidelites swing out from any position in sliding mode.
        3. Full Breakout Trackless system: Swing breakaway to 90 degrees for both the sidelite and the active sliding door(s) shall only be performed when the active sliding door(s) are at the fully slid open position.
        4. Surface Mounted System, wall mounted track: Sliding active leaves swing out from any position in sliding mode, no sidelite panels.
        5. Breakaway Pressure: Field adjustable to building code requirements and in accordance with NFPA 101 Life Safety Code and or AHJ "Authority Having Jurisdiction".
    1. Construction:
       1. Stile and Rail Sliding Panels and Sidelites:
          1. Material: Extruded Aluminum, Alloy 6063-T5 or 6063-T6.
          2. Door panels shall have a minimum .125 inch (3.2 mm) structural wall thickness including adjoining perimeter frames where applicable.

Aluminum extrusions shall allow for a factory installed, slide-in type gasket.

* + - * 1. Door construction shall be by means of an integrated corner clip with 3/8 inch (9.5 mm) diameter all-thread through bolt from each stile.

Face of door stiles shall be flush with adjacent rails and muntin.

* + - * 1. Glass stops shall be .062 inch (15.8 mm) wall thickness and shall provide security function as a standard by means of a fixed non-removable exterior section with glazing to be performed from the interior only.

\*\*NOTE TO SPECIFIER\*\* Beveled glass stops available only with 1/4 inch (6 mm) glazing. Delete if not required.

Beveled glass stops.

\*\*NOTE TO SPECIFIER\*\* Delete stile not required.

* + - * 1. Vertical Stiles shall be narrow stile 2-1/8 inch (54 mm).
        2. Vertical Stiles shall be medium stile 4 inch (102 mm).

\*\*NOTE TO SPECIFIER\*\* Delete rail not required.

* + - * 1. Bottom Rails shall be 4 inch (102 mm).
        2. Bottom Rails shall be 7 inch (178 mm).
        3. Bottom Rails shall be 10 inch (254 mm).

\*\*NOTE TO SPECIFIER\*\* Muntin is optional. Delete muntin not required.

* + - * 1. Intermediate Muntin shall be 1-3/4 inch (45 mm).
        2. Intermediate Muntin shall be 4 inch (102 mm).
        3. Gasketing: Slide-in type, replaceable pile mohair seals.

Bottom rails shall be provided with a concealed adjustable sweep gasket.

* + - * 1. Glass: Glazing shall comply with ANSI Z97.1, thickness as indicated.

\*\*NOTE TO SPECIFIER\*\* Select glazing types as required for the project. Add "Locations" to each of the following if multiple types and/or thickness glazing is required.

Glazing Sliding Panels and Sidelite Panels: 1/4 inch (6 mm) tempered glass, unless otherwise specified.

Glazing Sliding Panels and Sidelite Panels: 5/8 inch (16 mm) insulated glass.

Glazing Sliding Panels and Sidelite Panels: 1 inch (25 mm) insulated glass.

Glazing Sliding Panels and Sidelite Panels: 1-1/4 inches (31 mm) insulated glass.

Glazing Installation: Dry glazing; wet glazing not allowed.

See Division 8 Section "Glazing" for requirements and the manufacturer instructions.

\*\*NOTE TO SPECIFIER\*\* Consult SpecDesk for integral blind information - glazing by ASSA ABLOY  
Consider a lower panel with opaque glazing when specifying integral blinds - delete if not required.

Lower Lite Glazing: 1 inch (25 mm) overall thickness frosted insulating glass unit consisting of an interior and exterior glass lite; both lites to be 1/4 inch (6 mm) tempered glass.

Frosted Glazing: Opaque, acid etched on #2 or #3 surface.

Upper Lite Glazing with Integral Blinds: 1-1/4 inches (31 mm) overall thickness insulating glass unit consisting of an interior and exterior glass lite; both lites to be 1/4 inch (6 mm) tempered glass.

Integral Blinds: Glass to have blinds installed between glass lites.

Blinds to be mechanically gear-driven tilt micro-blind installed in the sealed insulating glass unit. Internally mounted control assembly that is coupled to the external operator controls the tilting of blind slats.

Tilt Operator: Thumb wheel, dual control.

Glazing Installation: Dry glazing; wet glazing not allowed.

See Division 8 Section "Glazing" for requirements and the manufacturer instructions.

* + - 1. Door Carriers: Manufacturer's standard carrier assembly that allows vertical adjustment.
         1. Sliding Panel Door Carriers:

Roller Wheels: Two heavy duty Delrin roller wheels per wheel assembly, for a total of four roller wheels, 1-7/16 inches (36.51 mm) diameter, per active door leaf for operation over a replaceable aluminum track. Single journal with sealed oil impregnated bearings.

Two heavy duty self-aligning anti-risers per leaf.

* + - 1. Framing Members: Provide ICU/CCU entrances as complete assemblies. Manufacturer's standard extruded aluminum framing reinforced as required to support loads.

\*\*NOTE TO SPECIFIER\*\* Delete jamb not required.

* + - * 1. Vertical Jambs: 1-3/4 inches (44.5 mm) by 4-1/2 inches (114.3 mm).
        2. Vertical Jambs: 1 inch (25.4 mm) by 4-1/2 inches (114.3 mm).
      1. Header: Extruded aluminum header with a replaceable aluminum track, mounted between the jambs and extending full width of entrance. Header to conceal door operators, carrier assemblies, and roller track; complete with hinged access panel for service and adjustment.
         1. Header Capacity: Capable of supporting active breakout leafs up to maximum of 220 lb (100 kg) per leaf.

\*\*NOTE TO SPECIFIER\*\* All VersaMax headers are to be anchored to overhead framing per manufacturer's recommendations.  
The framing surrounding the opening needs to be capable of supporting no less than 440 lbs for single slide, 880lbs for bipart or single slide telescopic. This is a double the weight of the door panel safety factor.

* + - * 1. Header Size: 6 inches (152.4 mm) wide by 4-1/2 inches (114.3 mm) high.
        2. Gasketing: Slide-in type, replaceable pile mohair seals.
        3. Header Access: Continuous hinge at top of header allows cover to swing and allow complete access to operator and internal electronic and mechanical assemblies.

\*\*NOTE TO SPECIFIER\*\* Entrance needs to be connected to the building ground for the following option - work by others. Delete if not required.

* + - 1. Anti-Static Grounding: Fabricate ICU/CCU entrances to be internally grounded to reduce static shock. Connect to building ground.

\*\*NOTE TO SPECIFIER\*\* Electrified power transfer is required for the InteGlassTM privacy glass option. Delete if not required.

* + - 1. Electrified Power Transfer: Concealed power transfer from header to both sliding and sidelite panels. Power transfer to allow continuous power to sliding panels at all positions during the sliding and breakout operations.
         1. The power transfer system shall be rated at 5 amps (600 watts) at 120 VAC maximum.

Cable shall be 18 AWG stranded RoHS compliant UL listed 600V cable with a temperature range of -50 to 90 degrees C, with a dynamic bend radius of 6X cable diameter and have a pull tension of 51 lbs. maximum. Cable shall be able to withstand 8M cycles at rated dynamic bend radius.

* + 1. Breakaway Leaf:
       1. Active leaf and sidelite panels (full breakout and fixed sidelite packages) and sidelite panels (full breakout packages) shall swing out to 90 degrees with no greater force than 50 lbs (23 kg) and comply with NFPA 101 Life Safety Code and or AHJ "Authority Having Jurisdiction".
       2. Breakout tension to set the leaf in motion is to be adjustable

\*\*NOTE TO SPECIFIER\*\* Optional: Delete if not required.

* + - 1. Active leaf dampeners will provide smooth and dampened action while door leafs are broken out. Self-closing torsion springs that close the door in an uncontrolled manor will not be acceptable.
      2. Active leaf torsion arm to be provided to support door leaf while broken out.
      3. During breakout, active leafs and sidelites are not to pass one another to protect hands and fingers near the finger pulls and optional positive latch handles.
      4. Trackless: active leaf bottom pivot to be strictly steel construction and not allow for disengagement at any point of breakout. Nylon or plastic in nature parts will not be acceptable.
      5. No special knowledge or training shall be required to operate door.
    1. Hardware:
       1. Provide manufacturer's standard hardware as required for operation indicated.
          1. Breakaway arms and bottom pivot assembly shall allow panels to breakout to 90 degrees. Force to breakout sliding panel adjustable to maximum 50 lbf (222 N).
          2. Nurse Assist magnetic catch(s) to retain breakout door and sidelite panels in the closed position.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - * 1. Gas regulated damper to control movement of breakout panels.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - * 1. Centering wheel to plumb the sliding panel in areas subject to moderate static pressure.

\*\*NOTE TO SPECIFIER\*\* Optional positive latching for telescopic ICU/CCU door system. Delete if not required.

* + - * 1. Latching hardware shall be provided as indicated.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

Positive Latch: Mortise type self-latching hookbolt, BHMA A156.5, Grade 1, with lever handles on each side.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

Lever Style: End of lever to have a return towards door face.

\*\*NOTE TO SPECIFIER\*\* Automatic releasing/latching of active leaf and sidelite (Flush Bolt Free feature) is always required with the full breakout VersaMax trackless option   
\*\*NOTE TO SPECIFIER\*\* Delete automatic releasing/latching if only the fixed sidelite VersaMax is required   
Delete automatic releasing/latching if full breakout VersaMax with guide track is required

Automatic releasing/latching, concealed magnetic bolt shall allow breakout of sidelite panel(s) when sliding panel in full open position.

\*\*NOTE TO SPECIFIER\*\* Optional self-closing device for manually operated telescopic ICU/CCU doors. Delete if not required.

* + - * 1. Self-closing device shall be provided where indicated.

A non-electrified, adjustable speed, rack and pinion mechanism, which will close door to a positive latched position.

\*\*NOTE TO SPECIFIER\*\* Optional magnetic hold-open device for ICU/CCU telescopic entrances. Delete if not required.

Magnetic hold-open devices tied into the building fire alarm/sprinkler system, which will upon receiving a signal, release the self closing sliding door leaf.

Magnetic device to accept 12-24vdc with no more current draw than 120mA with a hold force not to exceed 30lbs for manual door release.

* + - * 1. Guide Track/Threshold: Manufacturer's threshold as indicated.

\*\*NOTE TO SPECIFIER\*\* Option "1" is the manufacturer's standard threshold/track for telescopic ICU/CCU entrances and Option "2" is optional - full breakout entrance. Delete design not required.

Full Breakout Trackless Design: Floor mounted guide track and threshold not allowed.

Breakout from a full open position only.

Full Breakout Entrance Guide Track Design: Floor mounted aluminum guide track(s) adjacent to the sidelite portion of the telescopic ICU/CCU entrance.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete track not required.

Surface mounted track.

Recessed mounted track.

Guide track shall allow breakout from any position except when door is latched.

\*\*NOTE TO SPECIFIER\*\* Option is the manufacturer's standard threshold/track for telescopic ICU/CCU entrances - fixed sidelite entrance. Delete if not required.

Fixed Sidelite Entrance Guide Track: Aluminum guide track integrated in the bottom of the sidelite portion of the telescopic ICU/CCU entrance.

Guide shall allow breakout from any position except when door is latched.

* + 1. Finish:

\*\*NOTE TO SPECIFIER\*\* Consult SpecDesk for custom finish options

* + - 1. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - 1. Anodized Finish:

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish not required.

* + - * 1. AAMA 611, Clear, AA- M12C22A41, Class I, 0.018 mm.
        2. AAMA 611, Dark Bronze, AA-M12C22A44, Class I, 0.018 mm.
        3. AAMA 611, Custom anodized to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - 1. Painted Finish:

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish not required.

* + - * 1. Powder coat painted to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish system not required.

* + - * 1. Kynar finish, 2 coat, to match architect's sample.
        2. Kynar finish, 3 coat, to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Delete following if MicroShield is not required. Consult SpecDesk for availability of MicroShield with anodized and painted aluminum finishes. Delete if not required.

* + - 1. MicroShieldTM antimicrobial silver-based ion, baked-on enamel finish on all exposed surfaces including door pulls, door extrusions, rails and header.
         1. Antimicrobial finish must permanently suppress the growth of bacteria, algae, fungus, mold and mildew by the controlled release of silver ions that attack microbes and inhibit the growth on the treated surfaces.
         2. Coating to be EPA registered resulting in a safe and non-toxic finish; chlorinated or synthetic chemical finishes will not be accepted.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* + 1. Air and Smoke Rated Infiltration:
       1. 2-panel or 4-panel manual sliding door shall be provided with seals on vertical and horizontal rails to prevent the passage of air and smoke. The seals shall be tested to compliance with UL 1784.
          1. Maximum leakage rate at ambient temperature shall not exceed 1 CFM/ft2 of opening at 0.3 in. of water.
       2. Smoke labeled doors shall be provided with positive latching so that door is latched when in closed position. Smoke Rated: Certified to UL 1784.
          1. Smoke Gasketing: Slide-in type, replaceable, smoke type gasket that is capable of withstanding 400 degree F for a minimum of 30 minutes.
          2. Latching hardware to be mortise type self-latching hookbolt, BHMA A156.5, Grade 1, with lever handles on each side.
          3. Manual operated flush bolt to secure sidelite panels with trackless, full-breakout entrances.
  1. INTENSIVE CARE UNIT/ CORONARY CARE UNIT - ICU/CCU - POWER OPERATED SLIDING AND TELESCOPIC DOORS
     1. Definitions:
        1. Activation Device: Device that, when actuated, sends an electrical signal to the door operator to activate the operation of the door.
           1. Knowing act:Consciously initiating the opening of a power operated door using acceptable methods including wall mounted switches such as push plates and controlled access devices such as keypads, card readers and key switches.
        2. Safety Device: A device that detects the presence of an object or person within a zone where contact could occur and provides a signal to stop the movement of the door.
     2. Power operated ICU/CCU sliding doors with header, door and track.
        1. Product: Besam VersaMax Touchless ICU/CCU power operated sliding doors as manufactured by ASSA ABLOY Entrance Systems.

\*\*NOTE TO SPECIFIER\*\* Select entrance configuration(s) as required for the project

* + 1. Besam ASSA ABLOY VersaMax 2.0 Touchless ICU/CCU Sliding Door Package (Basis of Design):
       1. Single slide, full breakout, ICU/CCU door system.
          1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
          2. Configuration: Single slide, two equal panel unit with one operable leaf and one sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Sliding leaf and sidelite.
        4. Mounting: Overhead header installed between jambs.
      1. Single slide, fixed sidelite, ICU/CCU door system.
         1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
         2. Configuration: Single slide, two equal panel unit with one operable leaf and one fixed sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Sliding leaf only.
        4. Mounting: Overhead header installed between jambs.
      1. Single slide, surface mounted, ICU/CCU door system.
         1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
         2. Configuration: Single slide unit without sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Sliding leaf.
        4. Mounting: Surface mounted header installed on face of wall.
      1. Bi-parting, full breakout, ICU/CCU door system.
         1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
         2. Configuration: Bi-parting, four equal panel unit with two operable leaves and two sidelites.
         3. Breakaway Capability: Sliding leaves and sidelites.
         4. Mounting: Overhead header installed between jambs.
      2. Bi-parting, fixed sidelite, ICU/CCU door system.
         1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
         2. Configuration: Bi-parting, four equal panel unit with two operable leaves and two fixed sidelites.
         3. Breakaway Capability: Sliding leaves only.
         4. Mounting: Overhead header installed between jambs.
      3. Bi-parting, surface mounted, ICU/CCU door system.
         1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
         2. Configuration: Bi-parting, two equal panel unit with two operable leaves and no sidelites.
         3. Breakaway Capability: Sliding leaves only.
         4. Mounting: Surface mounted header installed on face of wall.

\*\*NOTE TO SPECIFIER\*\* Select entrance configuration(s) as required for the project

* + 1. Besam ASSA ABLOY VersaMax 2.0 Touchless ICU/CCU Telescopic Sliding Door Package (Basis of Design):
       1. Telescopic single slide, full breakout, ICU/CCU door system.
          1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
          2. Configuration: Single slide, three equal panel unit with two operable leaves and one sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Sliding leaves and sidelite.
        4. Mounting: Overhead header installed between jambs.
      1. Telescopic single slide, fixed sidelite, ICU/CCU door system.
         1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
         2. Configuration: Single slide, three equal panel unit with two operable leaves and one sidelite.

\*\*NOTE TO SPECIFIER\*\* Delete door opening width not required.

* + - * 1. Minimum Clear Door Opening Width: 41-1/2 inches for 8 feet-0 inch (1054 mm for 2438 mm) unit width.
        2. Minimum Clear Door Opening Width: 44-1/2 inches for 8 feet 6 inches (1130 mm for 2591 mm) unit width.
        3. Breakaway Capability: Leading sliding leaf only.
        4. Mounting: Overhead header installed between jambs.
      1. Telescopic bi-parting, full breakout, ICU/CCU door system.
         1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
         2. Configuration: Bi-parting, six equal panel unit with four operable leaves and two fixed sidelites.
         3. Breakaway Capability: Sliding leaves and sidelites.
         4. Mounting: Overhead header installed between jambs.
      2. Telescopic bi-parting, fixed sidelite, ICU/CCU door system.
         1. Operation: Power operated open and close cycle; opening cycle activated by "knowing act activation".
         2. Configuration: Bi-parting, six equal panel unit with four operable leaves and two fixed sidelites.
         3. Breakaway Capability: Leading sliding leaves only.
         4. Mounting: Overhead header installed between jambs.
    1. Performance:
       1. General: Provide doors that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
          1. Design shall comply with ANSI/BHMA A156.38 American National Standard for Low Energy Power Operated Sliding and Folding Doors.
          2. Entrapment force requirements.
          3. Emergency Exit Door Requirements: Comply with requirements of authorities having jurisdiction for ICU/CCU entrances serving as a required means of egress.
       2. Entrapment Force Requirements:
          1. Power Operated Sliding Doors: Not more than 15 lbf (67 N) required to prevent a stopped door from opening or closing.
          2. Opening Time - Door(s) shall be adjusted to open at a speed of 12 inches per second maximum, from fully closed to fully open.
          3. Closing Speed - Door(s) shall be adjusted to close at a speed of 6 inches per second maximum per leaf, from fully open to latch check.
       3. Header spans up to 12 feet (3657 mm) without the need for intermediate support when utilizing 1/4 inch (6 mm) tempered glass. For units over 12 feet (3657 mm) consult factory or supply overhead structural support for the attachment of the header to the structure.

\*\*NOTE TO SPECIFIER\*\* Antimicrobial coating. Delete if not required.

* + - 1. Provide MicroShield antimicrobial silver-based ion finish on handles or all exposed surfaces including handles, door extrusions, rails and header to comply with the manufacturers specified requirements.
         1. Antimicrobial finish shall permanently suppress the growth of bacteria, algae, fungus, mold and mildew.
         2. Chlorinated or synthetic chemicals will not be accepted.
         3. Only baked on enamel silver ion technology shall be acceptable.
    1. Construction:
       1. Stile and Rail Sliding Panels and Sidelites:
          1. Material: Extruded Aluminum, Alloy 6063-T5 or 6063-T6.
          2. Door panels shall have a minimum .125 inch (3.2 mm) structural wall thickness including adjoining perimeter frames where applicable.

Aluminum extrusions shall allow for a factory installed, slide-in type gasket.

* + - * 1. Door construction shall be by means of an integrated corner clip with 3/8 inch (9.5 mm) diameter all-thread through bolt from each stile.

Face of door stiles shall be flush with adjacent rails and muntin.

* + - * 1. Glass stops shall be .062 inch (15.8 mm) wall thickness and shall provide security function as a standard by means of a fixed non-removable exterior section with glazing to be performed from the interior only.

\*\*NOTE TO SPECIFIER\*\* Beveled glass stops available only with 1/4 inch (6 mm) glazing. Delete if not required.

Beveled glass stops.

\*\*NOTE TO SPECIFIER\*\* Delete stile not required.

* + - * 1. Vertical Stiles shall be narrow stile 2-1/8 inch (54 mm).
        2. Vertical Stiles shall be medium stile 4 inch (102 mm).

\*\*NOTE TO SPECIFIER\*\* Delete rail not required.

* + - * 1. Bottom Rails shall be 4 inch (102 mm).
        2. Bottom Rails shall be 7 inch (178 mm).
        3. Bottom Rails shall be 10 inch (254 mm).

\*\*NOTE TO SPECIFIER\*\* Muntin is optional. Delete muntin not required.

* + - * 1. Intermediate Muntin shall be 1-3/4 inch (45 mm).
        2. Intermediate Muntin shall be 4 inch (102 mm).
        3. Gasketing: Slide-in type, replaceable pile mohair seals.

Bottom rails shall be provided with a concealed adjustable sweep gasket.

* + - * 1. Glass: Glazing shall comply with ANSI Z97.1, thickness as indicated.

\*\*NOTE TO SPECIFIER\*\* Select glazing types as required for the project. Add "Locations" to each of the following if multiple types and/or thickness glazing is required.

Glazing Sliding Panels and Sidelite Panels: 1/4 inch (6 mm) tempered glass, unless otherwise specified.

Glazing Sliding Panels and Sidelite Panels: 5/8 inch (16 mm) insulated glass.

Glazing Sliding Panels and Sidelite Panels: 1 inch (25 mm) insulated glass.

Glazing Sliding Panels and Sidelite Panels: 1-1/4 inches (31 mm) insulated glass.

Glazing Installation: Dry glazing; wet glazing not allowed.

See Division 8 Section "Glazing" for requirements and the manufacturer instructions.

\*\*NOTE TO SPECIFIER\*\* Consult SpecDesk for integral blind information - glazing by ASSA ABLOY  
Consider a lower panel with opaque glazing when specifying integral blinds - delete if not required.

Lower Lite Glazing: 1 inch (25 mm) overall thickness frosted insulating glass unit consisting of an interior and exterior glass lite; both lites to be 1/4 inch (6 mm) tempered glass.

Frosted Glazing: Opaque, acid etched on #2 or #3 surface.

Upper Lite Glazing with Integral Blinds: 1-1/4 inches (31 mm) overall thickness insulating glass unit consisting of an interior and exterior glass lite; both lites to be 1/4 inch (6 mm) tempered glass.

Integral Blinds: Glass to have blinds installed between glass lites.

Blinds to be mechanically gear-driven tilt micro-blind installed in the sealed insulating glass unit. Internally mounted control assembly that is coupled to the external operator controls the tilting of blind slats.

Tilt Operator: Thumb wheel, dual control.

Glazing Installation: Dry glazing; wet glazing not allowed.

See Division 8 Section "Glazing" for requirements and the manufacturer instructions.

* + - 1. Door Carriers: Manufacturer's standard carrier assembly that allows vertical adjustment.
         1. Sliding Panel Door Carriers:

Roller Wheels: Two heavy duty Delrin roller wheels per wheel assembly, for a total of four roller wheels, 1-7/16 inches (36.51 mm) diameter, per active door leaf for operation over a replaceable aluminum track. Single journal with sealed oil impregnated bearings.

Two heavy duty self-aligning anti-risers per leaf.

\*\*NOTE TO SPECIFIER\*\* Timing transmission applicable to telescoping design only. Delete if not required.

* + - 1. Timing Transmission: Manufacturer's standard assembly that provides for a smooth operation.
         1. Timing transmission shall sequence the opening of the first and second leaves to provide a simultaneous opening of both leaves with a smooth operation; eliminating the "grabbing" that typically occurs with telescopic doors.
      2. Framing Members: Provide ICU/CCU entrances as complete assemblies. Manufacturer's standard extruded aluminum framing reinforced as required to support loads.

\*\*NOTE TO SPECIFIER\*\* Sliding design only. Delete if not required.

* + - * 1. Vertical Jambs: 1-3/4 inches (44.5 mm) by 4-1/2 inches (114.3 mm).

\*\*NOTE TO SPECIFIER\*\* Telescoping design only. Delete if not required.

* + - * 1. Vertical Jambs: 1-3/4 inches (44.5 mm) by 6 inches (152.4 mm).
      1. Header: Extruded aluminum header with a replaceable aluminum track, mounted between the jambs and extending full width of entrance. Header to conceal door operators, carrier assemblies, and roller track; complete with hinged access panel for service and adjustment.
         1. Header Capacity: Capable of supporting active breakout leafs up to maximum of 220 lb (100 kg) per leaf.

\*\*NOTE TO SPECIFIER\*\* All VersaMax headers are to be anchored to overhead framing per manufacturer's recommendations.  
The framing surrounding the opening needs to be capable of supporting no less than 440lbs for single slide, 880lbs for bipart or single slide telescopic. This is a double the weight of the door panel safety factor.  
Header size for slider design only. Delete if not required.

* + - * 1. Header Size: 8-9/16 inches (218.0 mm) wide by 4-1/2 inches (114.3 mm) high.

\*\*NOTE TO SPECIFIER\*\* Header size for telescoping design only. Delete if not required.

* + - * 1. Header Size: 10-11/16 inches (270.8 mm) wide by 4-1/2 inches (114.3 mm) high.
        2. Gasketing: Slide-in type, replaceable pile mohair seals.
        3. Header Access: Continuous hinge at top of header allows cover to swing and allow complete access to operator and internal electronic and mechanical assemblies.

\*\*NOTE TO SPECIFIER\*\* Entrance needs to be connected to the building ground for the following option - work by others. Delete if not required.

* + - 1. Anti-Static Grounding: Fabricate ICU/CCU entrances to be internally grounded to reduce static shock. Connect to building ground.

\*\*NOTE TO SPECIFIER\*\* Electrified power transfer is required for the InteGlassTM privacy glass option. Delete if not required.

* + - 1. Electrified Power Transfer: Concealed power transfer from header to both sliding and sidelite panels. Power transfer to allow continuous power to sliding panels at all positions during the sliding and breakout operations.
         1. The power transfer system shall be rated at 5 amps (600 watts) at 120 VAC maximum.

Cable shall be 18 AWG stranded RoHS compliant UL listed 600V cable with a temperature range of -50 to 90 degrees C, with a dynamic bend radius of 6X cable diameter and have a pull tension of 51 lbs. maximum. Cable shall be able to withstand 8M cycles at rated dynamic bend radius.

* + 1. Breakaway Leaf:
       1. Active leaf and sidelite panels (full breakout and fixed sidelite packages) and sidelite panels (full breakout packages) shall swing out to 90 degrees with no greater force than 50 lbs (23 kg) and comply with NFPA 101 Life Safety Code and or AHJ "Authority Having Jurisdiction".
       2. Breakout tension to set the leaf in motion is to be adjustable

\*\*NOTE TO SPECIFIER\*\* Optional: Delete if not required.

* + - 1. Active leaf dampeners will provide smooth and dampened action while door leafs are broken out. Self-closing torsion springs that close the door in an uncontrolled manor will not be acceptable.
      2. Active leaf torsion arm to be provided to support door leaf while broken out.
      3. During breakout, active leafs and sidelites are not to pass one another to protect hands and fingers near the finger pulls and optional positive latch handles.
      4. Trackless: active leaf bottom pivot to be strictly steel construction and not allow for disengagement at any point of breakout. Nylon or plastic in nature parts will not be acceptable.
      5. No special knowledge or training shall be required to operate door.
    1. Sliding Door Operator:
       1. Sliding door operator shall be a Besam electro-mechanical controlled unit utilizing a high-efficiency, energy efficient, DC motor requiring a maximum of 3 amp current draw. System has capability to operate at full performance well beyond brown out and high voltage line conditions (85V - 265V) sensing changes and adjusting automatically. Operator shall allow an adjustable hold open time of 0 to 60 seconds.

\*\*NOTE TO SPECIFIER\*\* Optional: Delete if not required.

* + - 1. Convenience Battery: Shall be concealed in header and capable of full operation with blackout conditions, including sensor capabilities for minimum of 100 cycles.
      2. Controller shall be factory-adjusted configuration, with pre-set opening and closing speeds.
      3. Selector switch to be interior jamb mounted and shall allow the following functions to be engaged when switch is turned to the appropriate setting - Off, On, and Hold Open.
      4. Microprocessor Control Box:
         1. Factory-adjusted configuration, with pre-set opening and closing speeds.

\*\*NOTE TO SPECIFIER\*\* Optional: Delete control type not required.

* + - * 1. Mode Selector Control: Provide multi-position rotary knob.
        2. Mode Selector Control: Provide multi-position keyed cylinder.
        3. Multi-position mode selector control shall allow selection of the indicated functions to be engaged when switch is turned to the appropriate setting.

Mode Selector Control Mounting: Control shall be mounted as indicated:

Jamb mounted.

Mode selector control to allow the following functions:

"Off"

"On"

"Hold Open" doors activated and held in the full open position.

* + 1. Activation and Safety Control Devices:
       1. General: Provide the types of activation and safety devices specified, for the condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate activation and safety devices with door operation and door operator mechanisms.

\*\*NOTE TO SPECIFIER\*\* Optional: Knowing is the standard method of activation. Delete if not required.

* + - 1. Knowing Act Activation:

\*\*NOTE TO SPECIFIER\*\* Optional: Delete sensor plate not required.

* + - * 1. Sensor Plate: Touchless, jamb mounted activation senor plates, black polycarbonate with white letters. Microwave technology has an adjustable range of 2 inches to 24 inches.
        2. Sensor Plate: Touchless, 4-1/2 inch square wall mounted activation senor plates, black polycarbonate with white letters. Microwave technology has an adjustable range of 2 inches to 24 inches.

\*\*NOTE TO SPECIFIER\*\* The following hardware is required if the entrance is to be connected to an access control system   
The following latching hardware is required in addition to positive latching hardware if positive latching is specified - the positive latching hardware is not required for the access control system.  
Card reader/keypad activation is not available for bi-parting entrances. Delete if not required.

* + - 1. Card Reader / Keypad Activation:
         1. Access control systems including card readers and/or keypads, shall be provided by others. See Division 16.
         2. Latching Hardware: Provide latching hardware for connection to an access control system as indicated.

Positive Latch: Mortise type self-latching hookbolt, BHMA A156.5, Grade 1.

No lever handles are to be provided.

Electrified strike to automatically release the positive latch upon activation from access control system and allow the sliding function of the door panels.

\*\*NOTE TO SPECIFIER\*\* Fail safe operation is provided as a standard feature with card reader/keypad activation, fail secure operation is not available

Fail safe operation: Electrified strike shall unlock the sliding function of the door panels upon loss of power or upon receiving a signal from the smoke detection system and/or fire detection system.

Electrified strike to be provided with the required power supply and sequencing relays for a complete operable system.

\*\*NOTE TO SPECIFIER\*\* Consult the SpecDesk for information on the VersaMax Management System. Delete if not required.

* + - 1. Remote Activation:
         1. VersaMax Management System: Remote activation system allowing remote activation by patient, nurse, smoke/fire detection system, and/or security system.

\*\*NOTE TO SPECIFIER\*\* The following header mounted presence safety sensor is provided as a standard feature for full breakout and fixed sidelite entrances  
The header mounted presence safety sensor is available as an option with surface mounted entrances for a redundant safety option. Delete if not required.

* + - 1. Safety Presence Sensors:

\*\*NOTE TO SPECIFIER\*\* Optional: Delete if not required.

* + - * 1. Header Mounted Safety Sensor: Shall be the Besam OA Presence Safety Sensor utilizing active infrared reflection technology to detect presence from a single housing mounted on each side of the header.

\*\*NOTE TO SPECIFIER\*\* Optional: The following photoelectric safety beams are provided as a standard feature for the surface mounted entrance. The photoelectric safety beams are provided as an option to the header mounted presence safety sensor for full breakout and fixed sidelite entrances. Delete if not required.

* + - * 1. Photoelectric Safety Beams: Shall be two Besam transmitter/receiver assemblies with infrared photoelectric beams on each side of the frame, to stop the door movement when the beam is broken. Beams shall not be active when doors are fully closed.
        2. Breakout Beam: Shall be a transmitter/receiver assembly with an infrared photoelectric beam, to stop the sliding door movement when the door is in the breakout position and breaks the photoelectric beam.
    1. Hardware: Provide manufacturer's standard hardware as required for operation indicated.
       1. Breakaway arms and bottom pivot assembly shall allow panels to breakout to 90 degrees. Force to breakout sliding panel adjustable to maximum 50 lbf (222 N).
       2. Nurse Assist magnetic catch(s) to retain breakout door and sidelite panels in the closed position.

\*\*NOTE TO SPECIFIER\*\* Optional: Delete if not required.

* + - 1. Gas regulated damper to control movement of breakout panels.

\*\*NOTE TO SPECIFIER\*\* Optional positive latching for sliding ICU/CCU door system  
The hardware required for the access control system does not replace the positive latching hardware  
Optional positive latching hardware is not available for bi-parting entrances. Delete if not required.

* + - 1. Latching hardware shall be provided as indicated.
         1. Positive Latch: Mortise type self-latching hookbolt, BHMA A156.5, Grade 1, with lever handles on each side.

\*\*NOTE TO SPECIFIER\*\* Optional: Delete if not required.

Lever Style: End of lever to have a return towards door face.

Electrified strike to automatically release upon activation of sliding door operator.

\*\*NOTE TO SPECIFIER\*\* Automatic releasing/latching of active leaf and sidelite (Flush Bolt Free feature) is always required with the full breakout VersaMax trackless option   
Delete automatic releasing/latching if only the fixed sidelite VersaMax is required   
Delete automatic releasing/latching if full breakout VersaMax with guide track is required.

* + - * 1. Automatic releasing/latching, concealed magnetic bolt shall allow breakout of sidelite panel(s) when sliding panel in full open position.

\*\*NOTE TO SPECIFIER\*\* Recessed pull/C-shaped pull are provided standard on sliding ICU/CCU doors, not available with positive latching door hardware. Delete if not required.

* + - 1. Door pulls shall be provided as indicated.
         1. Manufacturer's recessed pull installed on breakout side and surface-mounted, 10 inches (254 mm) C-shaped door pull installed on non-breakout side of active door leaves. Door pull mounting shall not decrease clear opening width.

\*\*NOTE TO SPECIFIER\*\* Optional C-shaped pull on both sides of sliding ICU/CCU door system. Delete if not required.

* + - * 1. Manufacturer's surface-mounted, 10 inches (254 mm) C-shaped door pull installed on both sides of active door leaves. Door pull mounting shall not decrease clear opening width.
      1. Guide Track/Threshold: Manufacturer's threshold as indicated.

\*\*NOTE TO SPECIFIER\*\* Option "a" is the manufacturer's standard threshold/track for sliding ICU/CCU entrances and Option "b" is optional - full breakout entrance. Delete design not required.

* + - * 1. Full Breakout Trackless Design: Floor mounted guide track and threshold not allowed.

Breakout from a full open position only.

* + - * 1. Full Breakout Entrance Guide Track Design: Floor mounted aluminum guide track(s) adjacent to the sidelite portion of the sliding ICU/CCU entrance.

\*\*NOTE TO SPECIFIER\*\* Optional: Delete track not required.

Surface mounted track.

Recessed mounted track.

Guide track shall allow breakout from any position except when door is latched.

\*\*NOTE TO SPECIFIER\*\* Option "c" is the manufacturer's standard threshold/track for sliding ICU/CCU entrances - fixed sidelite entrance. Delete if not required.

* + - * 1. Fixed Sidelite Entrance Guide Track: Aluminum guide track integrated in the bottom of the sidelite portion of the sliding ICU/CCU entrance.

Guide shall allow breakout from any position except when door is latched.

\*\*NOTE TO SPECIFIER\*\* Option "d" is the manufacturer's standard - surface mounted entrance. Delete if not required.

* + - * 1. Surface Mounted Entrance Guide Track: Aluminum fixed sidelite guide track mounted along the face of the wall. The track shall not extend past the jamb into the door opening.

Trim cover on top side of the guide track shall match the finish of the ICU/CCU entrance.

Guide track shall allow breakout from any position except when door is latched.

* + 1. Finish:

\*\*NOTE TO SPECIFIER\*\* Consult SpecDesk for custom finish options

* + - 1. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - 1. Anodized Finish:

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish not required.

* + - * 1. AAMA 611, Clear, AA- M12C22A41, Class I, 0.018 mm.
        2. AAMA 611, Dark Bronze, AA-M12C22A44, Class I, 0.018 mm.
        3. AAMA 611, Custom anodized to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete if not required.

* + - 1. Painted Finish:

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish not required.

* + - * 1. Powder coat painted to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Optional. Delete finish system not required.

* + - * 1. Kynar finish, 2 coat, to match architect's sample.
        2. Kynar finish, 3 coat, to match architect's sample.

\*\*NOTE TO SPECIFIER\*\* Delete following if MicroShield is not required. Consult SpecDesk for availability of MicroShield with anodized and painted aluminum finishes. Delete if not required.

* + - 1. MicroShieldTM antimicrobial silver-based ion, baked-on enamel finish on all exposed surfaces including door pulls, door extrusions, rails and header.
         1. Antimicrobial finish must permanently suppress the growth of bacteria, algae, fungus, mold and mildew by the controlled release of silver ions that attack microbes and inhibit the growth on the treated surfaces.
         2. Coating to be EPA registered resulting in a safe and non-toxic finish; chlorinated or synthetic chemical finishes will not be accepted.
    1. Air and Smoke Rated Infiltration:
       1. 2-panel (4-panel bi-parting entrance not available) power operated sliding door shall be provided with seals on vertical and horizontal rails to prevent the passage of air and smoke. The seals shall be tested to compliance with UL 1784.
          1. Maximum leakage rate at ambient temperature shall not exceed 1 CFM/ft2 of opening at 0.3 in. of water.
       2. Smoke labeled doors shall be provided with positive latching so that door is latched when in closed position. Latching hardware to be mortise type self-latching hookbolt, BHMA A156.5, Grade 1, with lever handles on each side.
          1. Electrified strike to automatically release upon activation of sliding door operator.
          2. Manual operated flush bolt to secure sidelite panels with trackless, full-breakout entrances.

\*\*NOTE TO SPECIFIER\*\* ASSA ABLOY Entrance Systems' ICU/CCU telescopic sliding door systems provide privacy, separation of space and convenient access while allowing 33% greater door opening. Available in 3 or 6-panel, the door package can be specified with trackless configuration. To facilitate moving equipment and for emergency egress requirements, the doors can be specified to breakaway to the interior of the room or the exterior to the hallway. Delete if not required.  
The Besam SW100 low energy electro-mechanical operator is gentle enough for push forces to meet low energy codes yet suitable for hospital corridors, schools, government and office buildings. Automate your existing manual doors with an operator that has several innovative features. Delete if not required.

* 1. ADA RETROFIT SWING DOOR OPERATOR
     1. Low energy automatic swing door operator shall consist of aluminum operator housing, electro-mechanical motor, operator assembly, swing arm and electronic control.
        1. Product: Besam SW100 Low Energy Operator as manufactured by ASSA ABLOY Entrance Systems.
     2. Performance:
        1. Operator shall be used on interior or exterior doors and up to 200 pound (91 kg) weight of doors - maximum door width 48 inches (1219 mm).
        2. Operator shall be capable of operating within temperature ranges of -22 degree F (-30 degree C) and 122 degree F (50 degree C).
     3. Design:
        1. Operator: Electro-mechanical operator, powered by 24 volt, 1/8 hp motor. Operator is non-handed to insure maximum versatility in adapting to varying field conditions and shall include a replaceable internal door stop. Spring shall be adjustable to compensate for different manual push forces required on varying door widths.
           1. Nominal current draw 75 watts (.625 amps at 120 VAC). Low Power Consumption: Average electrical power required to open and close a 36 inches (914 mm), 200 lb (90 kg) door is 25 W. Control unit shall have a high efficient power supply and optimized door control with a maximum power consumption of 75 W.
        2. Operator Housing: Non-handed operator is completely contained in a 5-3/16 inches (132 mm) deep by 4 -5/16 inches (110 mm) high extruded aluminum housing. All aluminum sections are 6063-T5 alloy and all structural walls have a minimum thickness of .156 inch (4 mm).
        3. Electronic Controls: Microprocessor controlled unit shall control the operation and switching of the swing power operator. The electronic control provides low voltage power supply for all means of actuation. No external or auxiliary low voltage power source will be allowed. The controls include time delay (1.5 to 30 seconds) for normal cycle.
        4. Connecting Hardware: Surface mounted operator is connected to the door by means of a steel door arm. The door arm is secured to the top rail of the swing door using one piece threaded tubular inserts for aluminum doors, 1/4-20 binding head and post screws (sex bolts) for wood and hollow metal doors. The knurled door arm adaptor is broached for positive engagement with the shaft and requires no additional linkage, slide blocks or tracks. The appearance of the top rail of the swing door shall be modified in order to attach the door arm.
     4. Operation:
        1. Power Open: When an opening signal is received by the control unit, the door shall be opened at the operator-adjusted opening speed. Before the door is fully open at back check, it slows automatically to low speed. The motor stops when the selected door opening angle has been reached. The open position is held by the motor. If the door is obstructed while opening, it will either stop or reverse.
        2. Power Close: Closing shall be provided by means of clock spring and motor. When the hold open time has elapsed, the operator will close the door automatically, using spring force and motor. The door will slow to low speed at latch check before it reaches the fully closed position. The door is kept closed by spring power or extended closing force by the motor.
        3. Power Assist: Operator can be adjusted to lower the open forces when used manually. Power Assist will be active only while pushing or pulling the door and will allow the door to close when an opening force is no longer applied to the door.
        4. Electronic Dampening: Operator to include standard electric dampening system which automatically counteracts additional forces applied to the door during the opening or closing cycle by reducing door speed.
        5. Stack Pressure Consumption: Electronic control allows for increases of forces to overcome minor stack pressures. The control automatically compensates for lower manual push forces when the door is used in manual mode in order to comply with ANSI A156.19.
        6. Lock retry circuit: If locking is unsuccessful when the door reaches the closed position, the operator will automatically reverse open 10 degrees and reclose in an attempt to successfully lock the door.
        7. Test of Safety Sensors: If optional safety sensors are specified, Besam SW100 operator monitors the sensors before opening and closing the door. If sensors are not functioning properly, automation is deactivated and the door will function as a manual swing door with a door closer.

\*\*NOTE TO SPECIFIER\*\* Delete battery options not required.

* + - 1. Battery Back-up: During power failure, battery back-up system provides automatic cycling. Battery back-up is equipped with a battery conservation system to limit the amount of drain on the battery.
      2. Battery Convenience Mode: Operator can be activated by battery power for continuous operation. Battery is continuously monitored and control unit will output an electronic indication if the battery is not working properly.
    1. Push Plate Control Device:

\*\*NOTE TO SPECIFIER\*\* Activation device is either hard wired or wireless. Delete signal type not required.

* + - 1. Hard wired, square 4-1/2 inches (114 mm) stainless steel push plate switches engraved with "Push to Open" with a blue handicap logo.
      2. Radio controlled, 4-1/2 inches (114 mm) stainless steel push plate switches engraved with blue handicap logo.
         1. Control causes door to open instantly when press wall switch is pushed. Door can be used as a manual door with no damage to the operator.

\*\*NOTE TO SPECIFIER\*\* Option: Delete if not required.

* + - * 1. Push to Activate - Push or pull the door open from any position, and the door will gently power open, time out and slowly close.

\*\*NOTE TO SPECIFIER\*\* The versatile Besam PowerSwing operator is excellent for ADA compliance or full pedestrian use and is designed to be surface mounted to existing fixtures with little or no modifications. The Besam PowerSwing utilizes an electro-hydraulic unit which mounts directly onto your existing manual doors. Installed with push plates, the Besam PowerSwing transforms your doors into an ADA compliant entrance and is housed in an attractive aluminum cover, available in a variety of colors and finishes. Delete if not required.

* 1. ADA OR PEDESTRIAN SWING DOOR OPERATOR - ELECTROHYDRAULIC
     1. Automatic swing door operator suitable for use in handicap or pedestrian applications shall consist of aluminum operator housing, A.C. electro-hydraulic motor, operator assembly, swing arm and electronic control.
        1. Product: Besam PowerSwing for ADA as manufactured by ASSA ABLOY Entrance Systems.
     2. Performance:
        1. Operator to be used on interior or exterior doors and up to 215 pound (98 kg) weight of doors - maximum door width 48 inches (1219 mm).
        2. Operator shall be capable of operating within temperature ranges of - 22 degrees F (-3 degrees C) and 122 degrees F (50 degrees C).
     3. Design:
        1. Operator: Electro-hydraulic type, self-contained operator, powered by a 1/6 hp. Nominal current draw 222 watts (1.85 amps at 120 VAC). Power Transmission has only one moving part, ensuring superior reliability and low overall maintenance. Operator is non-handed to insure maximum versatility in adapting to varying field conditions. The operator housing provides a seal against dust, dirt and moisture.
        2. Electronic Control: A self-contained, solid state integrated circuit controls the operation and switching of the swing power operator. The electronic control provides low voltage power supply for all means of actuation. No external or auxiliary low voltage power source will be allowed. The controls include time delay (5 to 30 seconds) for normal cycle.
        3. Connecting Hardware: Surface mounted operator is connected to the door by means of a steel door arm. The door arm is secured to the top rail of the swing door using one piece threaded tubular inserts for aluminum doors, 1/4-20 binding head and post screws (sex bolts) for wood and hollow metal doors. The knurled door arm adaptor is broached for positive engagement with the shaft and requires no additional linkage, slide blocks or tracks. The appearance of the top rail of the swing door shall be modified in order to attach the door arm.
     4. Operation:
        1. Power Open: Automatic door operator powers the door open by forces transmitted hydraulically to the drive shaft and maintains a constant engagement throughout the opening cycle. Operator is designed to counteract most normal exterior wind conditions and/or interior stack pressure without the need of additional power assist mechanisms. Both opening and closing speed are field adjusted per current ANSI 156.19. The automatic door system is a self-contained, in line design requiring no remote pumps, exterior piping or compressors. The operator is equipped with a hydraulic bypass (relief valve), which diverts fluid back to its reservoir to prevent motor overload if the door is restricted by any means during its opening cycle. The automatic door system functions as a manual door closer in the event of a power failure. Manual opening force is unaffected by opening speed adjustment. Manual force to open the door will not exceed 15 pounds (6.8 kg), measured 1 inch (25.4 mm) in from latch edge of door.
        2. Spring Close: The automatic door operator is spring closed. The spring is non-handed and returns the door to full close.
     5. Control Device:
        1. Actuation and safety devices are as indicated on door schedule and specified herein. Controls cause door to open instantly when device(s) located on approach side of door is actuated; hold door in open position, and cause door to close - unless safety device or re-actuation of opening impulse overrides such operation.
           1. Motion sensor.
           2. Overhead presence sensor.
           3. Directional motion detector (approach and/or swing side).
           4. Matless presence sensor.
           5. Floor control mats -- size in accordance with current ANSI/BHMA 156.10 American National Standard for Power Operated Pedestrian Doors.
        2. Actuation device:
           1. Hard wired, round square 4-1/2 inches (114 mm) stainless steel push plate switches engraved with "Push to Open" with a blue handicap logo.
           2. Radio controlled, round square 4-1/2 inches (114 mm) stainless steel push plate switches engraved with blue handicap logo.
        3. Control causes door to open instantly when press wall switch is pushed. Door can be used as a manual door with no damage to the operator.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* + - 1. Push to Activate: A programmable push to activate feature. Push or pull the door open from the closed position, and the door will gently power open, time out and slowly close.

\*\*NOTE TO SPECIFIER\*\* The Besam SW200i Surface Mounted swing door operator is designed for use in high demand pedestrian applications and adjustable low energy applications. The operator is durable and strong with quiet operation and electro-mechanical design. The Besam SW200i also interfaces with panic devices and access control devices. Recommended for hospital corridors and other high usage applications. Delete if not required.

* 1. SURFACE MOUNTED FULL DUTY PLUG-N-PLAY SWING DOOR OPERATORS
     1. Automatic swing door operator consisting of operator housing, swing power operator, electronic control, wire harnesses and connecting hardware.
        1. Product: Besam SW200i Surface Mounted as manufactured by ASSA ABLOY Entrance Systems.
     2. Performance:
        1. Unit complies with UL fire door operator listed R-9469 and meets fire door egress and exit code requirements. The authority having jurisdiction (AHJ) has the final determination.
        2. Automatic door equipment accommodates medium to heavy pedestrian traffic and up to 700 pound (159 kg) weight of doors.
        3. Operator capable of operating within temperature ranges of -20 degree F (-29 degree C) and 160 degree F (71 degree C).
     3. Automatic Operator: Electro-mechanical, non-handed operator, powered by 24 volt, 1/4 hp motor. Operator shall be adjustable to compensate for different manual push forces as required.

\*\*NOTE TO SPECIFIER\*\* Select the type of operator mounting and operator housing option required for the project - Consult Besam SpecDesk for an operator mounted above the ceiling. Delete if not required.

* + - 1. Surface Mounted Operator:

\*\*NOTE TO SPECIFIER\*\* Select either side access operator housing or bottom load operator housing. If side access operator housing is required, select the size of operator housing.

* + - * 1. Side Access Operator Housing: Operator shall be contained in 5-1/8 inches (130.2 mm) deep x 4 5/16 inches (110 mm) high extruded aluminum housing with a removable cover.
        2. Side Access Operator Housing: Operator shall be contained in a 6 inches (152.4 mm) deep x 6 inches (152.4 mm) high extruded aluminum housing with a hinged cover.
        3. Bottom Load Operator Housing: Operator shall be contained in a 6 inches (152.4 mm) x 6 inches (152.4 mm) high, extruded aluminum housing with removable bottom cover.
        4. Surface Mounted Housing: Continuous for full width of door.
        5. Connecting Hardware: Surface mounted operators shall have a steel arm from the operator, mounted to the top face of the swing door.
        6. UL Listed R-9469 Fire Door Operator with Automatic Closer (surface mounted operator).

\*\*NOTE TO SPECIFIER\*\* Select the following Overhead Concealed Operator for doors that are hinged - Emergency breakaway is not available with hinged doors. Overhead Concealed Operator is not available for offset pivoted doors that comply with ANSI/BHMA A156.10. Delete if not required.

* + - 1. Overhead Concealed Mounted Operator:

\*\*NOTE TO SPECIFIER\*\* Delete operator housing not required.

* + - * 1. Side Access Operator Housing: Operator shall be contained in a 6 inches (152.4 mm) deep x 6 inches (152.4 mm) high extruded aluminum housing with a hinged cover.
        2. Overhead Concealed Mounted Housing: Mounted between door jambs, continuous for full width of door.
        3. Hinged Door Connecting Hardware: Overhead concealed mounted operators shall have a steel arm from the operator with a sliding track that is mounted to the top face on the approach (push) side of the swing door.

\*\*NOTE TO SPECIFIER\*\* Select the following Overhead Concealed Operator for doors that are center pivoted.

* + - 1. Overhead Concealed Mounted Operator:

\*\*NOTE TO SPECIFIER\*\* Select either side access operator housing or bottom load operator housing. Delete housing not required.

* + - * 1. Side Access Operator Housing: Operator shall be contained in a 6 inches (152.4 mm) x 6 inches (152.4 mm) high side access, extruded aluminum housing with a hinged cover.
        2. Bottom Load Operator Housing: Operator shall be contained in a 6 inches (152.4 mm) x 6 inches (152.4 mm) high, extruded aluminum housing with removable bottom cover.
        3. Overhead Concealed Mounted Housing: Mounted between door jambs, continuous for full width of door.
        4. Center Pivoted Door Connecting Hardware: Overhead concealed mounted operators to have a cast steel arm from the operator, concealed mounted to the top edge of the swing door.

\*\*NOTE TO SPECIFIER\*\* Select the following option if inswing center pivoted doors require breakaway for egress - verify compliance with the building code. Delete if not required.

* + - 1. Emergency Breakaway: Where inswing doors also serve as required exits, provide emergency breakaway feature to allow doors to swing in the direction of egress. Forces to comply with ANSI/BHMA A156.10. Discontinue power to automatic door operator when door is in emergency breakaway position, and to automatically reset when door is manually returned to the full closed position.
         1. Operator shall be field adjusted to comply with ANSI/BHMA A156.19 American National Standard for Power Assist and Low Energy Operated Doors. Activation devices may also need to be switched to knowing-act activation devices for compliance with ANSI/BHMA A156.19.
         2. Electrical Characteristics: Maximum power consumption is 300 watts (2.5 amps at 120 VAC), 50/60hz, built-in thermal overload protection.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* + - * 1. Battery Convenience Mode: Operator shall maintain continuous operation by battery power during power failure. Battery shall be continuously monitored and provides a warning signal if the battery is not working properly.

\*\*NOTE TO SPECIFIER\*\* Delete if not required.

* + - * 1. Digital Cycle Counter: Battery powered, 7 digit LCD cycle counter with a reset feature to track door usage cycles.
      1. Door Operation:
         1. Opening Cycle: The adjustable speed operator mechanically powers the drive shaft and the torque control maintains constant speed throughout the opening cycle regardless of stack pressures or wind speed. Operator shall allow manual door operation with operational forces as indicated to fully open the door applied at 1 inch (25 mm) from the latch edge of the door.

Manual push force shall be adjustable from 5 lbf to 30 lbf maximum.

* + - * 1. Hold Open: The operator shall stop and hold the door open at the selected door opening angle for an adjustable period of time (1.5 seconds to 30 seconds).
        2. Closing Cycle: Spring close with speed controlled power assist.

Upon loss of power, dynamic braking will control the door insuring controlled closing.

Selectable Torque Control: Automatically adjusts torque without changing the closing speed of the operator.

When the torque control is activated, the closing speed shall remain constant regardless of stack pressures or wind speed.

Torque Cancellation: The torque control is deactivated whenever there is a signal received from door mounted sensors.

The torque control is disabled during manual use of the door.

* + - * 1. Wind Force Dampening: The operator electromechanically counteracts wind forces, slowing down the door movement to safely open or close the door.
        2. Stack Pressure Compensation: Operator shall counteract positive stack pressures, negative stack pressures, and sudden changes of stack pressures. The operator never allows the door to open or close faster than the speed control settings, regardless of pressures.
        3. Obstruction Control: The operator will stop and reverse the door movement.
        4. Electric Lock Management:

Internal module for electrified locking integration.

Electric Lock Output: Selectable 12 VDC, maximum 1200 mA / 24 VDC, maximum 600 mA.

Lock monitoring prevents operator(s) from opening door(s) until release of electrified lock.

Operator pulls door closed before opening, automatically unjamming electric latch hardware.

Sequenced operation between operators for pairs of doors allowing lock release and astragal coordination.

* + - * 1. Lock Retry Circuit: If attempt to fully close the door is unsuccessful, the operator will automatically reverse open 10 degrees and reclose in an attempt to successfully close the door.
        2. Selectable Alarm Reset: The operator can be field set so that after receiving an alarm signal, the operator will not accept any activation impulses and will operate only as a manual door closer until manually reset.
        3. Electronic Controls: Solid state integrated circuit controls the operation and switching of the swing power operator. The electronic control provides low voltage power supply for all means of actuation. The controls include time delay (1 to 30 seconds) for normal cycle.
        4. Control Switch: Automatic door operators shall be equipped with the following type of multi-position function switch:

\*\*NOTE TO SPECIFIER\*\* The following control switch options are only available with surface mounted operators. Delete if not required.

3 position rocker switch mounted on end cap (On-Auto-Hold).

2 position rocker switch mounted on end cap (On-Off).

\*\*NOTE TO SPECIFIER\*\* The following control switch options are available with both surface mounted and overhead concealed mounted operators. Delete if not required.

3 position toggle switch remotely mounted (On-Auto-Hold).

4 position rotary switch remotely mounted (for special locking and one-way traffic).

* + - * 1. Operator Interface: Safety Sensor Integration for overhead presence safety device and door mounted reactivation safety sensors.

\*\*NOTE TO SPECIFIER\*\* Delete this entire option if not required. Review operation.

* 1. OPERATOR ACTIVATION BY SMOKE EVACUATION SYSTEM
     1. General: Provide activation by the smoke evacuation system and/or fire detection system. Coordinate other required activation devices and safety devices with door operation and door operator mechanisms.
     2. Activation: Smoke evacuation system and/or fire detection system shall provide activation of the operator by means of a normally open maintained contact to control the opening and closing of the door systems in the event of an alarm condition. Doors are to be held open until the smoke evacuation/fire detection system is reset.
     3. Actuation and Safety Devices: As indicated on door schedule and specified herein. Controls shall cause door to open instantly when device(s) located on approach side of door is actuated; hold door in open position, and cause door to close - unless safety device or re-actuation of opening impulse overrides such operation.

\*\*NOTE TO SPECIFIER\*\* Delete devices not required.

* + - 1. Motion sensor.
      2. Overhead presence sensor.
      3. Directional motion detector.
      4. Matless presence sensor.

\*\*NOTE TO SPECIFIER\*\* The Besam SW200i-OHC with Door Package is a complete package that comes equipped with a swing door, operator, motion sensor and presence sensor. Delete if not required.

* 1. SWING DOOR ENTRANCES WITH OPERATORS
     1. Automatic swinging door package consisting of overhead concealed operator unit, swing door presence sensor, motion detector, plug-n-play interface module, beam detection and center pivoted aluminum swing door.
        1. Product: Besam SW200i-OHC with Door Package as manufactured by ASSA ABLOY Entrance Systems.
     2. Performance:
        1. Automatic door equipment accommodates medium to heavy pedestrian traffic and up to 700 pound weight of doors.
        2. Motion and presence sensor capable of operating within temperature ranges of operating temperature range of - 30 degree F (-34 degree C) to 131 degree F (55 degree C).
     3. Design:
        1. Swing door as manufactured by ASSA ABLOY Entrance Systems and complete in all respects consisting of the following:

\*\*NOTE TO SPECIFIER\*\* Delete option for stile width not required.

* + - * 1. Manufacturer's narrow stile.
        2. Manufacturer's medium stile.
        3. Heavy-duty aluminum door fabricated of 6063-T5 alloy.
        4. Medium stile heavy-duty aluminum door fabricated of 6063-T5 alloy.
        5. Besam end load, bottom pivot.
        6. Top arm prep for swing door operator.
        7. Quick disconnect wiring harness.
        8. Mechanical 1 point lock. Provide 2 point lock for pairs of doors.
        9. Jamb tubes and finger guards as required by UL.
      1. Operator: Electro-mechanical operator, powered by 24 volt, 1/4 hp motor with field serviceable motor brushes. Completely assembled and sealed unit which includes helical gear drive transmission and interconnected rack and gear system for compression of exterior replaceable heavy duty spiral spring, all contained within a die cast aluminum housing and filled with special lubricant for extreme temperature conditions. Drive shaft is minimum 15/16 inch (24 mm) thick containing 14 tooth splines to maximize bearing surface contact with drive arm assembly to eliminate slippage. Interfaced with the transmission system is a DC shunt-wound permanent magnet motor with sealed ball bearings. System operates from 120 VAC-60 cycle-1 phase power supply. Operator is mounted in the header case housing using vibration isolators to maintain quiet operation. Operator is to be non-handed for left and right handed doors and be able to push or pull the door open to 90 degrees. Integrated microprocessor controlled utilizing the CUHub to coordinate all ANSI A156.10 required safety sensor systems.
      2. Operator Housing: Non-handed operator is completely contained in a 6 inches (152 mm) wide by 6 inches (152 mm) high extruded aluminum housing. All aluminum sections are 6063-T5 alloy and have a minimum thickness of .156 inch (4 mm). The operator housing provides a seal against dust, dirt and moisture.
      3. Electronic Controls: A self-contained, solid-state integrated circuit controls the operations and switching of the swing power operator. The electronic control provides low voltage power supply for all means of actuation. No external or auxiliary low voltage power source will be allowed. The control includes adjustable time delay (1 to 60 seconds) for normal cycle. Control unit shall also include wake up protection for power outages and panic breakaway. The Besam SW200i CU2 control also has the following built in features:
         1. Torque limiting for controlled forces on opening.
         2. Acceleration control for smooth starts and recycle.
         3. Special circuitry for reducing power to the motor when door is in HOLD-OPEN mode, extending longevity and assuring reliability.
         4. Ramp down control for backcheck.
         5. Plug-N-Play ready to reduce mis-wiring and labor.
         6. Ribbon Harness for plug-n-play interface with CUHub and sensors. No screw lug terminals or wire nut connections will be accepted.
      4. Connecting Hardware: Surface mounted operator is connected to the door by means of a cast steel door arm. The door arm is secured to the top rail of the swing door using one piece threaded tubular inserts for aluminum doors, 1/4x20 binding head and post screws (sex bolts) for wood and hollow metal doors. The toothed door arm adaptor is broached for positive engagement with the shaft and requires no additional linkage, slide blocks or tracks. The appearance of the top rail of the swing door shall be modified in order to attach the door arm.
      5. Guide Rails: Provide per current ANSI/BHMA A156.10 American National Standard for Power Operated Pedestrian Doors.
    1. Operation:
       1. Power Open: Automatic door operator powers the door open by forces transmitted mechanically to the drive shaft and maintains a constant engagement throughout the opening cycle. Operator is designed to counteract most normal exterior wind conditions and/or interior stack pressure without the need of additional power assist mechanisms. The automatic door system functions as a manual door closer in the event of a power failure. The automatic door system is electro-mechanical in design requiring no remote pumps or compressors.
       2. Spring Close: Automatic door operator is spring closed. Spring is designed to withstand most normal wind conditions and return the door to the full closed position. Closing forces regulated by utilizing the motor and gear assembly as a dynamic brake. The spring is compression type to ensure longevity.
       3. Emergency Breakaway: All inswing doors, which are required exits, are equipped with an emergency breakaway switch which internally cuts power to the operator. No external power switch will be allowed. The breakaway feature allows center-pivoted doors to swing in the direction of egress with forces that comply with current ANSI/BHMA A156.10 American National Standard for Power Operated Pedestrian Doors. Following emergency breakaway the doors return to the full closed position and electrically reset automatically. System shall include a wake up circuit of no less than 3 seconds to allow the safety system to survey the surroundings to prevent ghost openings or recycling.
    2. Control Device:
       1. Actuation and safety devices are as indicated on door schedule and specified herein. Controls cause door to open instantly when device(s) located on approach side of door is actuated; hold door in open position, and cause door to close - unless safety device or re-actuation of opening impulse overrides such operation.

\*\*NOTE TO SPECIFIER\*\* Delete actuation and safety devices not required.

* + - * 1. Motion sensor.
        2. Overhead presence sensor.
        3. Directional motion detector (approach and/or swing side).
        4. Mat less presence sensor.
        5. Floor control mats -- size in accordance with current ANSI/BHMA A156.10 American National Standard for Power Operated Pedestrian Doors.
      1. Motion detection device specified herein is based on K-band frequency technology, eliminating ghosting effect and band width jamming prevalent with X-bands, and providing motion detection twice as fast as X-band technology, with a higher quality detection pattern. Circuitry design eliminates Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI). Detection patterns remain very stable in extreme weather conditions.
         1. The motion detector is a unidirectional/bidirectional sensor which operates only on the FCC approved K-band frequency (24.125 GHz) It shall utilize a planar, (flat antenna) and for aesthetic purposes the unit shall be no larger than 4- 3/4 inches W by 3-1/8 inches H by 2 inches D.
         2. Relay hold time from 0.5 seconds to 9.0 seconds. Adjustable for unidirectional or bi directional sensing capabilities, wide or narrow patterns. All adjustments shall be made by a universal coded infrared remote control. Mounting height, 7 feet to 11 feet (2.1 m to 3.4 m) above finished floor.
      2. Finish: Black, ready for non-metallic field finish painting.
    1. Safety Device: Safety devices operate on active infrared technology.

\*\*NOTE TO SPECIFIER\*\* Delete safety device not required.

* + - 1. Product: Besam SW200i with doors as manufactured by ASSA ABLOY Entrance Systems.
         1. Active infrared presence device shall utilize a combination of focused and diffused technology. The SW200i with doors is powered by 24VAC/DC electronics supplied by the controller and shall recognize 2 different patterns: 1) when door is closed and 2) when door is open. When door is in open position it will provide 1 feet of threshold protection with an adjustable self-adaptation time of 30 seconds to 25 minutes. The PassPort protection pattern will go through the threshold and overlap the motion pattern. All adjustments shall be made by a universal coded infrared remote control. Mounting height 7 feet to 9 feet above finished floor.
         2. "Safety Beams" (PassPort Beam Kit) Active infrared safety beams, located 5 inches past the lead edge of the door in the full open position, will provide additional safety in the closing cycle. In the event someone breaks the beams, the door will not recycle open. Beams are connected to CUHub plug-n-play interface module. Note: guide rails are provided and installed by installing provider.
         3. Two sensors required for single doors. Four sensors required for pair of doors. Door mounted detectors shall use active infrared technology with distance measurement. 12V - 24V AC or DC power requirements.
  1. FINISHES

\*\* NOTE TO SPECIFIER \*\*. Delete finish options not required. Consult ASSA ABLOY Entrance Systems for availability of custom finishes such as stainless steel clad and powder coat painted to match Kynar colors.

* + 1. Aluminum Finishes: Anodized.

\*\* NOTE TO SPECIFIER \*\*. Delete finish system not required.

* + - 1. AAMA 611, Clear, AA- M12C22A41, Class I, 0.018 mm.
      2. AAMA 611, Dark Bronze, AA-M12C22A44, Class I, 0.018 mm.
      3. AAMA 611, Custom anodized to match architect's sample.
    1. Aluminum Finishes: Dark bronze anodized, AAMA AA-C23A44.
    2. Aluminum Finishes: Manufacturer's standard Kynar finish, color as selected from manufacturer's standard colors.

\*\* NOTE TO SPECIFIER \*\*. Delete finish system not required.

* + - 1. 2 coat to match Architect's sample.
      2. 3 coat to match Architect's sample.
    1. Aluminum Finishes: Manufacturer's standard powder coated finish to match Architect's sample.
    2. Finishes: Stainless steel cladding over aluminum, AISI No. 4 stainless steel finish.

1. EXECUTION
   1. EXAMINATION
      1. Examine and measure areas to receive automatic sliding doors. Notify Architect of conditions that would adversely affect installation or subsequent utilization of doors. Do not proceed with installation until unsatisfactory conditions are corrected.

\*\* NOTE TO SPECIFIER \*\*. ICU/CCU door requirement. Delete if not required.

* + 1. The framing surrounding the opening needs to be capable of supporting no less than 440lbs for single slide, 880lbs for bipart or single slide telescopic. This is a double the weight of the door panel safety factor.

\*\* NOTE TO SPECIFIER \*\*. Retain the following if magnetic hold-open devices are required

* + 1. Magnetic Hold-Open Devices: Connect magnetic hold-open devices to the building fire alarm/sprinkler system as specified in Division 16 Sections.
       1. Holding force not to exceed 30lbs for manual door release.
  1. PREPARATION
     1. Ensure openings to receive frames are plumb, level, square, and in tolerance. Ensure proper support has been provided at operator header. Ensure floor is level and smooth.
  2. INSTALLATION
     1. Install doors in accordance with manufacturer's instructions and ANSI/BHMA 156.10.
     2. Install doors and beam plumb, level, square, true to line, and without warp or rack.
     3. Anchor frames securely in place.
     4. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by Architect.
     5. Install exterior doors to be weathertight in closed position.
     6. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
     7. Remove and replace damaged components that cannot be successfully repaired as determined by Architect.
     8. Install in accordance with manufacturer's instructions.
  3. FIELD QUALITY CONTROL
     1. Manufacturer's Field Services:
        1. Manufacturer's representative shall provide technical assistance and guidance for installation of doors.
        2. Before placing doors in operation, AAADM certified technician shall inspect and approve doors for compliance with ANSI/BHMA 156.10. Certified technician shall be approved by manufacturer.
  4. ADJUSTING
     1. Adjust doors for proper operation in accordance with manufacturer's instructions and ANSI/BHMA 156.10.
  5. CLEANING
     1. Clean doors promptly after installation in accordance with manufacturer's instructions.
     2. Do not use harsh cleaning materials or methods that would damage glass or finish.
  6. PROTECTION
     1. Protect installed doors and finish to ensure that, except for normal weathering, doors and finish will be without damage or deterioration at time of substantial completion..
     2. After installation Contractor shall protect exposed aluminum surfaces from damage.
     3. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION