SECTION  – automatic door operator

1. General
   1. SUMMARY
      1. Supply and installation of automatic swing door operator, surface mounted onto suitable transom, and complete with accessories required for complete finish, installation, and operation.
   2. REFERENCE Standards
      1. American Association of Automatic Door Manufacturers (AAADM)
      2. American National Standards Institute (ANSI):
         1. ANSI A156.19 – Power Assist and Low Energy Power Operated Doors
         2. ANSI 117.1 – Accessible and Usable Buildings and Facilities
      3. Builders’ Hardware Manufacturers Association (BHMA)
      4. Underwriters Laboratory Canada (ULC)
      5. Canadian Standards Association (CSA)
      6. National Fire Protection Association (NFPA)
      7. International Code Council (ICC)
   3. SYSTEM DESCRIPTION
      1. Performance Requirements:
         1. Design system to operate, hold open and close doors under design wind and suction loads calculated in accordance with applicable code.
         2. Provide for thermal expansion and contraction of door and frame units, transmitted to operating equipment.
         3. Provide for dimensional distortion of components during operation.
         4. Operating Temperature Range: -33 deg. C to 72 deg. C ambient.
         5. Eliminate system performance interference by ambient light and radio frequencies.
         6. Provide for manual open and close operation of door leaves in the event of power failure.
   4. QUALITY ASSURANCE
      1. Manufacturer’s Qualifications: Manufacturer to have at least (5) five years experience in the fabrication of automatic and manual entrance systems.
      2. Subcontractor executing work of this Section shall have had a minimum five (5) years continuous experience in successful manufacture and installation of work of type and quality shown and specified. Submit proof of experience upon Consultant's request.
      3. The installation shall be in conformity with laws, by-laws and regulations which govern the design and installation of automatic entrance doors.
      4. Installer’s Qualifications: Products specified shall be represented by a factory authorized and trained distributor. Distributor shall be AAADM Certified and maintain parts inventory and trained service personnel capable of providing service.
      5. Pre‑installation Conference:
         1. Schedule a pre‑installation conference no later than one week prior to commencing work of this Section.
         2. Contact Contractor two weeks prior to proposed meeting to confirm schedule.
      6. All automatic equipment to comply with UL325 and CAN/CSA-C22.2 No 247-92.
      7. All automatic equipment to comply with ANSI A156.19.
   5. SUBMITTALS
      1. Submit submittals in accordance with Section 01 33 00 – Submittal Procedures.
      2. Action Submittals: Provide the following submittals before starting any work of this Section:
         1. Product Data: Submit product data indicating installation details, material descriptions, dimensions of individual components and profiles, and finishes.
         2. Shop Drawings: Submit shop drawings indicating details of electrified door hardware including, but not limited to, the following:
            1. Wiring Diagrams: Detail wiring for power, signal, and control systems and differentiate between manufacturer installed and site installed wiring.
            2. Submit complete elevations, details, and methods of anchorage to location; installation of hardware; size, shape, joints and connections; and details of joining with other construction.
         3. Templates and Diagrams: As needed shall be furnished to fabricators and installers of related work for coordination of swinging door system with concrete work, electrical work, and other related work.
         4. Samples: Submit to Consultant for approval, before fabrication of the work, samples of materials, components, and finishes to be used in the work.
         5. Maintenance Data and Operating Instructions: On completion of work of this Section, supply three (3) copies of maintenance instructions for insertion into Operating and Maintenance Manual.
   6. PROJECT CLOSEOUT SUBMISSION
      1. Operation and Maintenance Data: Provide operations and maintenance information in accordance with Section 01 33 00 – Submittal Procedures.
      2. Spare Parts and Tools: Submit unique parts and tools for maintaining hardware system in accordance with Section 01 33 00 – Submittal Procedures.
   7. DELIVERY, HANDLING AND PROTECTION
      1. Pack hardware in suitable wrappings and containers to protect from injury during shipping and storage. Enclose accessories, fastening devices and other loose items with each item. Mark packages for easy identification as indicated on approved delivery schedule. Hand over hardware to designated installer.
   8. SITE CONDITIONS
      1. Site Survey: Verify site conditions including, but not limited to the following: opening sizes, floor conditions, plumb and level mounting surfaces.
         1. Substrates shall be of proper dimension and material.
      2. Coordinate installation with glass, glazing hardware and electrical to avoid construction delays.
   9. WARRANTY
      1. Warrant work of this Section against defects in materials and workmanship in accordance with the General Conditions, but for a period of two (2) years and agree to promptly make good defects which become evident during warranty period without cost to the Owner.
      2. Warrant that any unit failing shall be removed and replaced without cost to the Owner.
2. Products
   1. AUTOMATIC SWING DOOR SYSTEM
      1. Coordinate the work of all trades, including glass and glazing, masonry, and electrical requirements covered in manufacturer's details and appropriate sections of the specifications.
      2. Coordinate with electrical contractor for provision of service to each operator from junction box for multiple operators.
      3. Coordinate with electrical contractor and provide electrical conduit and wiring from specified controls to operators as outlined on manufacturer's drawings.
      4. Finish Hardware Supplier: Provide and install the following automatic door operators and connecting hardware, and power on/off switch and safety sensor.
         1. Overhead Concealed Side Access (Type A): Provide and install overhead concealed swing door operator, for single or double doors, consisting of operator and electronic control, aluminum header.
            1. Basis of Design Material: Besam SW200i-OS by ASSA ABLOY.
         2. Surface Mount Single Push (Type B): High performance, heavy use application, surface mounted operator, complete with aluminum header case and arm link.
            1. Basis of Design Material: Besam SW200i by ASSA ABLOY.

SPEC NOTE: Type C is for Concealed Floor Mounted operators which are expensive and require extensive trenching of the existing floor to provide power. Please consult with the Specification Leader if this option is needed on the project.

* + - 1. Automatic entrance equipment: comply with ANSI A156.10 or A156.19.
      2. Aluminum header extrusions: minimum nominal 4 mm wall thickness with finish anodized AA‑M12‑C22‑A31 clear.
      3. Equipment must operate between ‑35 deg. C and +55 deg. C in all climate conditions.
      4. Operator: Electro‑mechanical system installed in a header to resist dust, dirt and corrosion; entire operator shall be removable from the header as a unit.
      5. Bearings: Fully lubricated and sealed to minimize wear and friction.
    1. Electrical Control:
       1. Solid-state microprocessor unit, allowing the opening speed, closing speed, back check, and latch check speed each to be adjusted separately and independently from each other to meet specific site conditions.
       2. Adjustable opening and closing speeds shall be set in accordance with ANSI A156.19.
       3. Control shall include time delay. All adjustments shall be specific and reproducible.
    2. The door forces and speeds generated during power opening, and manual opening in both directions of swing, and spring closing in both directions of swing shall conform to the requirements of ANSI A156.10 or A156.19.
    3. Verify that no defects or errors are present in completed phases of the work that would result in poor application or installation or cause latent defects of the automatic door equipment.
    4. Installation and warranty adjustments shall be performed by authorized distributors’ factory trained technician.
  1. ACTIVATING DEVICES

SPEC NOTE: Wall switches are most common. Another option is for Post (bollard) mounted button or plates. Sizes of the wall switches can also be modified. 150mm (6”) diameter is most common.

* + 1. Wall Switches: Round push plate switch, 150mm (6") diameter stainless steel surface, engraved, mounted to pushbutton box, mounted to wall or frame, as indicated on the drawings.

1. Execution
   1. INSTALLATION
      1. Automatic door equipment shall be installed by AAADM Certified, factory-trained installers in compliance with ANSI A156.19, manufacturer’s recommendations, and approved shop drawings.
   2. CLEANING AND PROTECTION
      1. After installation, clean framing members as recommended by the manufacturer.
      2. Protect aluminum surfaces in contact with masonry, concrete, or steel by use of neoprene gaskets, where indicated, or a coat of bituminous paint to prevent galvanic or corrosive action.
      3. Advise general contractor to protect unit from damage during subsequent construction activities.
   3. PERFORMANCE
      1. Provide services of certified technician without additional cost to Owner, to inspect and adjust installation of all hardware furnished under this Section to assure compliance with ANSI A156.10.

END OF SECTION