HORTON AUTOMATICS - ARCHITECTURAL SPECIFICATIONS, 9/2006

PROFILERSTORM™ HURRICANE RATED SLIDING DOOR SYSTEM

DIVISION 8 - DOORS AND WINDOWS
SECTION 08460 - AUTOMATIC ENTRANCE DOORS

Specifier Note: Coordinate and edit articles and paragraphs below to suit project requirements. Add section numbers and titles per CSI "MasterFormat" and specifier's practice. Consult with manufacturer regarding performance requirements for units applicable to project, as well as, related equipment and accessories required.

PART I - GENERAL

1.01 SUMMARY

A. WORK INCLUDED: Furnish complete automatic aluminum door system, as specified, that has been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

B. RELATED WORK:
   1. Masonry: Division 4, applicable sections.
   2. Electrical: Division 16, applicable sections.
   3. Storefront; Glass; Hardware: Division 8, applicable sections.
   4. Perimeter Sealants; Insulation: Division 7, applicable sections.

1.02 REFERENCES

A. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA) 101: Appendix Dissimilar Materials.

B. AMERICAN ASSOCIATION OF AUTOMATIC DOOR MANUFACTURERS (AAADM).

C. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI):
   1. ANSI Z97.1: Safety Glazing Materials Used in Buildings - Methods of Test.
   2. ANSI A156.10: For Power Operated Pedestrian Doors; Sliding Doors section.

D. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM):
   1. ASTM B221: Aluminum-Alloy Extruded Bars, Rods, Shapes and Tubes.
   2. ASTM E330: Static Load Test
   3. ASTM E283: Air Infiltration Test

E. THE ALUMINUM ASSOCIATION (AA) Aluminum Finishes Manual.

F. UNDERWRITERS LABORATORY, INC.(USA & CANADA) UL 325: Electrical Door, Drapery, Gate, Louver, and Window Operators and Systems.

G. MIAMI-DADE COUNTY BUILDING CODE COMPLIANCE OFFICE (BCCO) NOTICE OF ACCEPTANCE (NOA) Numbers:
   1. NOA No. 06-01241.07: Impact Unit – Large & Small Missile, Narrow Stile
      a. Type 110, Wind Load: +67 PSF, -67 PSF,
         Biparting:14’-0” Max.Unit Width x 8’-0” Max.Unit Height.
         Single Slide: 7’-0” Max.Unit Width x 8’-0” Max.Unit Height.
   2. NOA No. 03-0306.05: Non-Impact Unit, Narrow Stile
      a. Type 110, Wind Load: +66 PSF, -66.3 PSF
         Biparting: 16’-0” Max.Unit Width x 8’-0” Max.Unit Height.
         Single Slide: 8’-0” Max.Unit Width x 8’-0” Max.Unit Height.

3. NOA No. 04-0406.01: Impact Unit - Large & Small Missile, Medium Stile
   a. Type 110, Wind Load: 55 PSF
      Biparting:16'-0" Max.Unit Width x 8'-8" Max.Unit Height.
      Single Slide: 8'-0" Max.Unit Width x 8'-8" Max.Unit Height.
   b. Type 310, Wind Load: 55 PSF
      Biparting:16'-0" Max.Unit Width x 8'-8" Max.Unit Height.
      Single Slide: 8'-0" Max.Unit Width x 8'-8" Max.Unit Height.
   c. Type 310 with Exit Device, Wind Load: 45 PSF
      Biparting:14'-0" Max.Unit Width x 8'-0" Max.Unit Height.
      Single Slide: 7'-0" Max.Unit Width x 8'-0" Max.Unit Height.

4. NOA No. 04-0406.02: Impact Unit - Small Missile (Medium Stile)
   a. Type 110, Wind Load: 55 PSF
      Biparting:16'-0" Max.Unit Width x 8'-8" Max.Unit Height.
      Single Slide: 8'-0" Max.Unit Width x 8'-8" Max.Unit Height.
   b. Type 310, Wind Load: 55 PSF
      Biparting:16'-0" Max.Unit Width x 8'-8" Max.Unit Height.
      Single Slide: 8'-0" Max.Unit Width x 8'-8" Max.Unit Height.
   c. Type 310 with Exit Device, Wind Load: 45 PSF
      Biparting:14'-0" Max.Unit Width x 8'-0" Max.Unit Height.
      Single Slide: 7'-0" Max.Unit Width x 8'-0" Max.Unit Height.

5. NOA No. 04-0406.03: Non-Impact Unit (Medium Stile)
   a. Type 110, Wind Load: 55 PSF
      Biparting:16'-0" Max.Unit Width x 8'-8" Max.Unit Height.
      Single Slide: 8'-0" Max.Unit Width x 8'-8" Max.Unit Height.
   b. Type 310, Wind Load: 55 PSF
      Biparting:16'-0" Max.Unit Width x 8'-8" Max.Unit Height.
      Single Slide: 8'-0" Max.Unit Width x 8'-8" Max.Unit Height.
   c. Type 310 with Exit Device, Wind Load: 45 PSF
      Biparting:14'-0" Max.Unit Width x 8'-0" Max.Unit Height.
      Single Slide: 7'-0" Max.Unit Width x 8'-0" Max.Unit Height.

1.03 SUBMITTALS

A. PRODUCT DATA: Submit manufacturer's complete product and installation data.

B. NOA LETTER AND DRAWINGS: Submit Notice of Acceptance letter and drawings issued by BCCO showing layout, profiles, product components including anchorage, accessories and glazing details. Note: Any deviation from NOA letters and drawings voids compliance of Horton product with Miami-Dade County Building Code Compliance Office. Letters and drawings must be kept as complete set to meet compliance.

C. QUALITY ASSURANCE AND CLOSEOUT SUBMITTALS: Submit the following:
   1. Manufacturer's Operation and Maintenance Data.
   2. Warranty document as specified herein.
   3. AAADM inspection compliance form completed and signed by certified AAADM inspector prior to doors being placed in operation as proof of compliance with ANSI A156.10.

1.04 QUALITY ASSURANCE

A. INSTALLERS QUALIFICATIONS: Installer experienced (as determined by contractor) to perform work of this section who has specialized in the installation of work similar to that required for this project and who is acceptable to product manufacturer.

B. MANUFACTURER'S QUALIFICATIONS: Manufacturer to have minimum (5) five years successful experience in the fabrication of automatic doors of the type required for this project. Manufacturer capable of providing field service representation during installation, approving acceptable installer and approving application method.

1.05 WARRANTIES

A. MANUFACTURER'S WARRANTY: Units to be warranted against defect in material and workmanship for a period of one year from the Date of Substantial Completion. Manufacturer's warranty is in addition to, and not a limitation of, other rights owner may have under Contract Documents.

B. DISTRIBUTOR'S WARRANTY: One year warranty: Labor and transportation charges for defective parts replacement.

1.06 PROJECT CONDITIONS

FIELD MEASUREMENTS: Verify actual dimensions/openings by field measurements before fabrication and record on shop drawings. Coordinate with fabrication and construction schedule to avoid construction delays.

1.07 DELIVERY, STORAGE AND HANDLING

A. ORDERING AND DELIVERY: Comply with factory's ordering instructions and lead time requirements. Delivery shall be in factory's original, unopened, undamaged containers with identification labels intact.

B. STORAGE AND PROTECTION: Provide protection from exposure to harmful weather conditions and vandalism.

PART II - PRODUCTS

2.01 MANUFACTURER

HORTON AUTOMATICS, a division of Overhead Door Corporation, shall manufacture automatic sliding door(s) of type(s) and size(s) specified on plans and door schedule.

2.02 EQUIPMENT

A. MANUFACTURED DOOR UNITS: Shall include operator, header and track, jambs, sliding door panel(s), and sidelite(s). Units can be mounted within rough opening with sliding panel(s) sliding along sidelite. Units will be either single-slide or bipart and will be one of the following unit types:
   1. Type 110: Slide-swing panel(s) shall slide along exterior side.
   2. Type 310: Slide-swing panel(s) shall slide along interior side. Swing-out sidelite.

B. OPERATOR: The Electric Operating Mechanism shall be Profiler™ Series 2000 Linear Drive. Maximum current draw shall not exceed 3.15 amps. The operator shall be mounted and concealed within the header.
   1. Operation shall be accomplished through a 1/8 HP DC permanent magnet working with a threadless, induction hardened stainless steel 1/2" (13 mm) diameter linear drive shaft. A linear travel block describes a helical path along the rotating shaft utilizing six aircraft quality ball bearings acting as an integral clutch. Linear drive shaft shall be self lubricating by means of integral oiler located in the travel block.
   2. Microprocessor Master Control shall have Version 1 software and have dual on-board seven-segment diagnostic display. The control shall have minimum of 28 programmable parameters including those functions required by ANSI A156.10. Control shall include separate day and night modes of operation with security over-ride. Adjustable Reversing Circuit will reopen door unit if closing path is obstructed. Maximum force required to prevent sliding panel from closing = 28 lbf.

3. Finger Safety: When unit slides open, strike rail of sliding panel will stop short of adjacent sidelite; resulting opening is net slide.
4. On/Off Switch shall be supplied. When switched OFF, unit reverts to free manual operation (likewise during electrical power failure).

C. SECURITY AND SAFETY POWER FAIL OPTIONS:
1. Automatic lock: Automatically locks slide function of door when in closed position. Additional power supply for autolock not acceptable.
   a. Autolock Fail Secure: If power fails the lock engages.
   b. Autolock Fail Safe: If power fails the lock disengages.
2. Monitored Power Fail Options (battery back-up):
   a. Software Selectable Power Fail Open: If power fails the door slides open.
   b. Software Selectable Power Fail Close: If power fails the door slides closed.

D. PROFILER™ HEADER: Shall be slim 4" (102 mm) deep by 6" (152 mm) high aluminum construction with extruded z-profile reinforcement for dead load and lateral strength. Header shall have removable face plate.

E. HEADER TRACK: Shall be be aluminum, nylon covered, and replaceable. Rollers will be steel, high quality ball bearing wheels 1-1/4" (32 mm) diameter. Anti-Derailing shall be accomplished by means of a continuous aluminum extrusion full length of slide panel travel.

F. SLIDING PANEL(S) AND SIDELITE(S): Shall be aluminum, 1-3/4" (44 mm) deep with narrow stile construction. Weather-stripping to be along perimeter of sliding panel(s) and swing-out sidelite(s). Concealed guides to stabilize bottom of sliding panel. Standard glazing prep to be noted on appropriate NOA drawing.
1. Total weight limit per panel shall be:
   a. 200 lbs. (90.7 kg) for slide panel (non-breakout)
   b. 156 lbs. (70.7 kg) for UL listed slide-swing panel

G. EMERGENCY EGRESS: Slide-swing panels can swing out 90° from any position of slide movement and require no more than 50 lbf. (222 N) of force applied at the lock stile to open during normal operation.
1. Slide-swing panels and swing-out sidelites shall have torsion spring designed to re-close panel if pushed open in the direction of egress.
2. Breakout mechanism shall provide support across full width of the door, in normal operating mode. In breakout mode, torsion assembly shall support weight of the door to minimize drop during emergency egress.
3. Slide swing panels shall include intermediate horizontal rail only as shown in appropriate NOA drawing.

H. JAMBS/FRAME: Shall be aluminum. Dimensions to be 1 3/4" (44 mm) deep by 4" (102 mm) wide.

I. THRESHOLD: Shall be aluminum, 1/2" (25 mm) tall by 4” (102 mm) wide or 7” (178 mm) wide as per appropriate NOA drawing.

J. HARDWARE: Provided and installed in top and bottom portion of strike rail as per appropriate NOA shall be:
1. Maximum Security Lock with 31/32" (25 mm) backset.
2. Lock Indicator
3. Keyed Cylinder mounted on exterior side with 1 5/32" (29 mm) standard size cylinder.
4. Thumbturn mounted on interior side.
5. 3/8” Lockbolt extending 1/2” into breakout carrier frame and threshold.

K. HARDWARE OPTIONS:
1. Cylinder Guard.

2. Cylinder Escutheon.
3. Surface mounted Panic Exit Device: (door type 310 only as shown on appropriate NOA drawing).

2.03 RELATED EQUIPMENT

BASIC SENSOR SYSTEM: Shall be 24 VDC, class ll circuit and shall be adjusted and installed in compliance with ANSI A156.10. System shall include the following:

A. ACTIVATION SENSORS: Microwave or active infrared sensor shall be header-mounted each side of door unit for detection of traffic from each direction.

B. THRESHOLD PRESENCE SENSORS:
   1. Header mounted sensors shall provide active infrared presense detection on each side of the door unit and shall remain active throughout the entire door opening and closing cycle.
   2. Hold-open beams: Two pulsed infrared photoelectric beams to be mounted in vertical rails of sidelite or in jambs. Sender/receiver arrangement parallels door opening.

2.04 RELATED WORK REQUIREMENTS

A. ELECTRICAL: 120 VAC, 50/60 cycle, single phase, dedicated 20 amp circuit per operator. Non-North American voltages can be 240 VAC 50/60 cycle (operator must have 240 volt power supply).

B. GLASS AND GLAZING: Glass stops, glazing vinyl and setting blocks for field glazing as per Safety Glazing standard ANSI Z97.1.2. Contractor to coordinate acquisition of glass in thickness and type in accordance with BCCO Notice of Acceptance for prescribed design.

2.05 MATERIALS, FINISHES AND FABRICATION

A. EXTRUDED ALUMINUM: ASTM B221, 6063-T5 alloy and temper, anodized:
   1. Structural Header Sections: Minimum 3/16" (5 mm) thickness.
   2. Structural Frame Sections: Minimum 1/8" (3 mm) thickness.
   3. Structural Panel Sections: Commercial grade.

B. FINISHES (for all exposed aluminum surfaces): Shall be one of the following:
   1. 204-R1 Clear: Arch. Class ll Clear Anodized Coating, AA-MI2C22A31.
   2. 313-R1 Dark Bronze: Arch. Class ll Anodized Coating, AA-MI2C22A32.
   3. 312-R1 Light Bronze: Arch. Class ll Anodic Coating, AA-MI2C22A32.
   4. 315-R1 Black: Arch. Class ll Anodic Coating, AA-MI2C22A32.
   5. Special Paint Coating: Color as selected.

C. PANEL CONSTRUCTION:
   1. Corner block type with 3/16” steel backup plate construction, mechanically secured with minimum of four hardened steel screws and threaded rod reinforcement. Sash consists of snap-in glass stops, snap-in glazing beads and vinyl gaskets.
   2. Weatherstripping material captured in extruded aluminum door panel. Door nosing weatherstrip to be spring-loaded adjustable astragal type. Surface applied self-adhesive weatherstripping not acceptable.
   3. Slide-swing doors to be supplied with adjustable glass setting block to allow for adjusting of door to meet site conditions eliminating the need for additional shims.

D. FRAME CONSTRUCTION: Butt joints, mechanically secured by means of screws and formed aluminum corner brackets.

E. OPERATOR CONSTRUCTION: Electromechanical, modular type construction.

PART III - EXECUTION

3.01 EXAMINATION

SITE VERIFICATION OF CONDITIONS: Installer must verify that base conditions previously installed under other sections are acceptable for product installation according to with manufacturer's instructions. Notify the Contractor in writing of conditions detrimental to the proper and timely completion of work. Do not start work until all negative conditions are corrected in a manner acceptable to the installer and manufacturer.

3.02 INSTALLATION

A. GENERAL: Install door units plumb, level and true to line, without warp or rack of frames or sash with manufacturer's prescribed tolerances. Provide support and anchor in place.

B. DISSIMILAR MATERIALS: Comply with AAMA 101, Appendix Dissimilar Materials by separating aluminum materials and other corrodible surfaces from sources of corrosion or electrolytic action contact points.

C. WEATHER-TIGHT CONSTRUCTION: Install header and framing members in a bed of sealant or with joint filler or gaskets. Coordinate installation with wall flashings and other components of construction.

D. ELECTRICAL: General or electrical contractor to install all wiring to operator on a separate circuit breaker routed into header.

3.03 CLEANING, ADJUSTMENT AND PROTECTION

A. CLEANING: After installation, installer to take following steps:
   1. Remove temporary coverings and protection of adjacent work areas.
   2. Remove construction debris from construction site and legally dispose of debris.
   3. Repair or replace damaged installed products.
   4. Clean product surfaces and lubricate operating equipment for optimum condition and safety.

B. ADJUSTMENT: AAADM certified technician shall inspect and adjust installation to assure compliance with ANSI A156.10.

C. ADVISE CONTRACTOR: Of precautions required through the remainder of the construction period, to ensure that doors will be without damage or deterioration (other than normal weathering) at the time of acceptance.

END OF SECTION