

SECTION 08450 - ALUMINUM STOREFRONTS & AUTOMATIC ENTRANCES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Aluminum storefronts and automatic entrances include the following:
 - 1. Storefront framing systems.
 - 2. Automatic sliding entrance doors.
 - 3. Interior storefront systems.
- B. Electrical connections are specified in Division 16.
- C. Stores with revolving doors (section 08470): Furnish and install a swing door with a low energy electric operator and pushbutton switch located as shown on drawings.

1.02 SYSTEM PERFORMANCE

- A. General: Provide automatic entrance and storefront assemblies that have been designed and fabricated to comply with performance characteristics listed below.
 - 1. Wind loading: System shall withstand uniform pressure of 30 PSF (1440 Pa) with maximum deflection of 1/175 of span and allowable stress with a safety factor of 1.65.
 - 2. Entrance Operator: Provide operators which will open and close doors and maintain them in fully closed position when subjected to the 30 MPH wind velocity or equivalent inward differential pressures.
 - 3. Air infiltration: Tested in accordance with ASTM E-283-04 shall not exceed .06 CFM/SQ. FT. of fixed area.
 - 4. Water infiltration: Tested in accordance with ASTM E-331-00 shall allow no penetration at 8 PSF pressure.
 - 5. Thermal: All framing members shall incorporate a thermal barrier eliminating direct contact between exterior and interior aluminum sections.
- B. Hurricane Resistant Systems: Provide when required by local codes/ordinances and in the states of Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina and North Carolina for all store locations ten (10) miles or less from all salt water coastlines, bays, tributaries, etc. Such systems shall have reinforced frames, connectors, impact resistant glass and other features as required to comply with the local hurricane wind design requirements.

1.03 QUALITY ASSURANCE

- A. Each type of system is based on one manufacturers system respectively. Acceptable alternate manufacturers are listed but must conform in every way to the base system.
 - 1. Any deviation from Walgreens required finishes, colors, etc. must be approved by Walgreens and fully coordinated with all similar and related systems.
- B. Powered door operators shall comply with UL 325.
- C. Automatic entrances shall be UL listed as an exitway and comply with A.D.A. requirements.

- D. Automatic low energy swing door operators (when revolving doors are used) shall comply with the following standards:
ANSI/BHMA A159.19: American National Standard for Power Assist and Low Energy Power Operated Doors.
UL Standard 325
UL Standard 228
- E. All storefront installations, including glazing, shall be NFRC Certified as required by local codes/ordinances.

1.04 SUBMITTALS

- A. Submit shop drawings for each type of system.

PART II - PRODUCTS

2.01 ACCEPTABLE STOREFRONT MANUFACTURER

- A. Storefront Systems (base system): Kawneer Company #Trifab VG 451-T-CG, thermally broken, center glazed, flush glazed system 2" x 4-1/2" profile with shear block, to receive 1" insulating glass. Storefront in glass tower shall receive 1/4" thick glass.

Color: Clear Anodized, AA-M12C22 A41, Class I Anodic coating.

- B. Alternate Storefront Manufacturers:
 1. United States Aluminum Corp. #IT 451, thermally broken.
 2. Vistawall Architectural Products, Series 3000, Thermal Flush Glaze
 3. Arch Aluminum & Glass Co., Inc., #IGS 450, -thermal broken, center glazed
 4. Arch Aluminum & Glass Co., Inc. Series "3100/L-3100" Aluminum Window Wall System - L.M.I. Per Miami-Dade Notice of Acceptance (NOA) No. 05-0906.04 for Hurricane Impact Zones. Glazing to be 9/16" impact resistant glazing with 1/2" thermally broken frame with 1/4" interior tempered glass for a total of 1-5/16" glazing. Glass Type "A1". Vertical storefront mullions are also to meet NOA spacing requirements per Glass Load Capacity charts stated in the NOA. Refer to back of specification manual for storefront NOA document.

- C. Glass tower (only) shall receive 1/4" thick glass set in 1 3/4" x 4 1/2" profile, center glazed, flush glazed system, shear block construction.

1. Kawneer Trifab II 450.
2. United States Aluminum Corp Series 450.
3. Vistawall Architectural Products Series 2000.
4. Arch Aluminum & Glass Co., Inc., Series FG 450 EZ

Color: Clear anodized AA-M12C22 A41 Class 1 Anodic coating.

2.02 ACCEPTABLE AUTOMATIC ENTRANCE MANUFACTURER (National Accounts)

- A. Automatic Sliding Entrance System (base system): Horton Automatic #2-2110WD/T single slide doors or Stanley Access Technologies, model #313865. See Article 2.02.B regarding the

National Account Program. The slide-swing panel, installed to the exterior of the fixed sidelight, shall swing out 90 degrees from any position of slide movement and include a concealed spring closer to re-close door if pushed open. System components include:

1. Aluminum doors with fixed sidelights, fixed center light and transom. Provide 1/4" thick glass at sliding panels, 1" insulating glass at all other panels, safety glazed as required by code.
2. Structural aluminum section to be 6063-T alloy, minimum 0.125" thick.
3. Continuous header concealing ball bearing wheels, support track operator and closers.
4. Bi-directional scan motion/presence detectors for one-way or two-way traffic (as required) and safety devices in door openings to detect objects present during closing cycle and recycle doors. Adjust for two-way traffic at liquor store locations.
5. Concealed spring door closers, ON-OFF hold open switches, keyed entry switch (at entry door only), rim cylinder locks with exterior cylinder guards and thumb-turn on interior side.
6. Aluminum thresholds and weather-stripping at jambs, head and sill.
7. Break-away door stops, flush (integrally glazed) muntin bars flush cart bars in sidelights, doors and center light, glass stops and recessed pull handle at entry door muntin bar.
8. Stainless steel tubular guide rails (with one horizontal) and guide posts (quantity may vary per project).
9. Walgreens required decals including "Caution Automatic Door".
10. Finish: clear anodized, AA-M12 C22A41 Class I anodic coating.
11. Key Switch: Located on exterior frame for after hour's operation of door.

B. National Accounts: Walgreens has established National Accounts with Horton Automatics and Stanley Access Technologies. Each manufacturer has been assigned specific geographic areas (indicated below) to which each will supply automatic entrance doors.

1. For Arizona and all states East of the Mississippi River, except Mississippi, Alabama, Tennessee, Virginia, Michigan, Illinois, Indiana and Puerto Rico, provide Stanley Access Technologies.

Contact: Mr. Marc Voilette
Stanley Access Technologies
65 Swamp Scott Road
Farmington, CT 06032
Phone: 860-409-6522
Fax: 860-679-6436
E-mail: MViolette@stanleyworks.com

2. For all states West of the Mississippi River including Mississippi, Alabama, Tennessee, Virginia, Michigan, Illinois, Indiana, Minnesota and Louisiana, but excluding Arizona, provide Horton Automatics

Contact: Ms. Laura McBurnett
Sr. Project Manager
Overhead Door Corporation

Access Systems Division
Horton Automatics
2501 South State Highway 121, Suite 200
Lewisville, TX 75067
Phone: 800-972-1730
Direct: 469-549-7180
Fax: 972-528-1045
E-mail: laura_mcburnett@overheaddoor.com

3. For non-prototypical configurations, i.e.; vestibules, narrow openings, etc., confirm "Walgreens package" number with each manufacturer's National Accounts Representative.

- C. Motion/Presence Detector: Sensing system utilizing planar K-band microwave motion detection and focused active infrared presence detection. The presence detection shall overlap the motion detection at the threshold. The presence detection shall never shut off during the closing cycle. Provide units with remote control adjustability. Provide, on each side of ~~each~~ door: BEA "Apex" motion/presence detector, on Horton Doors, Stanley "SU-100" ~~motion~~ motion detection and Stanley "Stanguard" infrared threshold ~~sensors~~ sensors on Stanley doors. Color, all units: black. Provide a horizontal photoelectric holding beam for redundant safety.
- D. Operator: Electro-mechanical operator with 1/8 HP DC permanent magnet motor and regulated electronic controller. Operator functions to be microcomputer controlled to automatically provide operating forces and speeds as prescribed by ANSI A156 10-1985. An ON-OFF/hold open power switch shall be located on inside of header. Operator shall convert to free manual operation of door during power failure. Provide adjustable time delay from 1 to 28 seconds minimum. Operator shall reverse when 15-lbs. maximum is exerted to prevent door from closing. Include provisions to prevent damage to operator when locks/latches/bolts are engaged.
- E. Hardware: Closers: Spring closer
Rim Cylinder Lock: Adams Rite #MS 1850-S-050, anodized finish.
Cylinder Guard: Adams Rite # MS4043.
Thumb Turn: Adams Rite #4066.
Key switch: By automatic entrance manufacturer.
Threshold: By automatic entrance manufacturer, continuous across entire masonry opening.
- F. Weather-stripping: Adjustable nylon sweeps on bottom of sliding doors.
Double pile weather-stripping on lead edges of sliding doors including lock area.
Single pile weather-stripping between carrier and header, on lead stiles of sidelights and pivot stiles of sliding doors.

2.03 ACCEPTABLE LOW ENERGY SWING DOOR AND OPERATOR MANUFACTURERS

- A. Horton Automatics, a division of Overhead Door Corporation, Extra Heavy-duty Low Energy Operator, Series 4500 LE.

KM Systems, Inc., "Access Two™ Series 3200 Electromechanical Low Energy" operator.

Dorma Automatics, Inc., Series EDA-OHC.

LCN Closers, (a brand of Dor-O-Matic, a business of Ingersoll-Rand), 2910 Series, electromechanical.

- B. The door operator is to provide a dual purpose: Easy access for persons requiring assistance *and* normal entrance access for regular traffic. System components include:
 - 1. Operator: Electromechanical, completely self-contained, powered by 120 VAC, 15 Amp circuit.
 - 2. Motor: DC permanent magnet, variable speed, and reversible.
 - 3. Control: Actuating relay, solid state circuitry, time-delay and speed adjustments.
 - 4. Closing and opening: Adjustable opening and closing speed; opening and closing not to exceed 15 pounds measured 1" from lock stile. Closing shall be by spring force generated by a high quality compression spring(s). Time delay before closing shall be 2-30 seconds, variable. Operator is to have a safety feature that will allow unit to recycle at any closing point. Temporary power shut-off shall occur in the event that an obstruction is sensed during the open cycle. Manual operation (with speed adjustment) shall be with power on or off and without damaging the operator or components.
 - 5. Actuating device: Opening cycle shall be activated by press wall switches with the international symbol of accessibility and "PRESS TO OPERATE DOOR" engraved on the faceplate.
 - a. Provide Horton model number C521-2 or C1260-4, (or Walgreens approved equal).

PART III - EXECUTION

3.01 PREPARATION

- A. Field Measurement: Take field measurements prior to preparation of shop drawings and fabrication, to ensure proper fitting of work.
 - 1. Contractor shall provide rough opening to receive Walgreens standard size automatic entrance doors. See drawings for other sizes that apply to stores with liquor departments or vestibules. Walgreens Project Architect must approve non-standard sizes in writing.

3.02 INSTALLATION

- A. Comply with manufacturer's specifications and recommendations.
- B. Set units plumb, level and true to line, without warp or rack of frames or doors. Anchor securely in place. Separate aluminum and other corrodible metal surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
- C. Set sill members in a bed of sealant or with joint fillers or gaskets to provide weathertight construction.
- D. Install complete door operator system in accordance with manufacturer's instructions, including piping (if any), controls, control wiring, and remote power units (if any).
- E. Glass and Glazing: See Section 08800.
- F. Guide rails to be set in cored holes and grouted in place.

3.03 ADJUST AND CLEAN

- A. Adjust operating devices and hardware to function properly, without binding, and to provide tight fit at contact points and weather-stripping.
- B. Clean aluminum surfaces promptly after installation. Remove excess glazing and sealant compounds, dirt and other substances.

END OF SECTION