

SECTION 08462

AUTOMATIC SLIDING DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Aluminum sliding doors and frames.
- B. All-glass sliding doors and frames.
- C. Automatic door operators, actuators, and safeties.
- D. Sidelights and transoms.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-in-Place Concrete: Recess in concrete slab for track at sidelight areas.
- B. Section _____ - _____: Aluminum doors and frames.
- C. Section 08211 - Flush Wood Doors.
- D. Division 16 - Electrical: 115 VAC, single-phase wiring in conduit between operator enclosure and building power supply and low voltage wiring between enclosure and actuators and safeties.
- E. Division 16 - Electrical: 115 VAC, single-phase wiring in conduit between operator enclosure and remote switch station.

1.3 REFERENCES

- A. ANSI/BHMA A156.10 - American National Standard for Power-Operated Pedestrian Doors.
- B. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's catalog data, detail sheets, and specifications.
- C. Shop Drawings: Prepared specifically for this project; show dimensions of doors, operators, and interface with other products.

- D. Operating and Maintenance Data: Operating and maintenance instructions, parts lists, and wiring diagrams.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Factory-trained, with minimum 3 years experience.

1.6 WARRANTY

- A. Provide manufacturer's warranty for roller track for five years from date of completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable manufacturer: Provide products made by Dor-O-Matic, 7350 West Wilson Avenue, Harwood Heights, IL 60656-4786. ASD. Tel: (708) 867-7400 or (800) 543-4635. Fax: (708) 867-0291.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.
- C. Substitutions: Not permitted.
- D. Provide all door operators from a single manufacturer.

2.2 DOORS AND FRAMES

- A. Automatic Sliding Doors: Heavy duty anodized extruded aluminum header and jambs, with interlocked sections and thru-rod bolted connections; complete with doors, sidelights, transom, and all hardware and accessories; complying with ANSI/BHMA A156.10 and UL 325.
 - 1. Type: Bi-parting, two sliding leaves.
 - 2. Type: Single sliding, one sliding leaf.
 - 3. Type: Bi-parting and telescoping, six sliding leaves.
 - 4. Type: Single sliding and telescoping, three sliding leaves.
 - 5. Doors sliding on outside of fixed sidelights.
 - 6. Doors sliding on inside of breakaway sidelights.
 - 7. Non-breakaway doors sliding on inside of fixed sidelights.
 - 8. Actuators: Motion detector, both sides.

9. Actuators: Push plate, one side; motion detector, other side.
 10. Actuators: Mat-type, both sides.
 11. Actuators: _____.
 12. Safety: Overhead-mounted infrared presence detector and safety beams in door opening.
 13. Finish: Dark bronze anodized.
 14. Finish: Natural aluminum anodized.
 15. Finish: Black anodized.
 16. Finish: Kynar 500(tm) coating; color: _____.
 17. Finish: Clad, _____.
 18. No exposed fasteners.
- B. Header: Completely enclosing track, operator, and belt drive, with anti-riser stops.
1. Track: 1/2 inch (13 mm) wide stainless steel-capped roller track.
 2. Header Dimensions: 6-3/4 inches (171 mm) high by 4 inches (102 mm) wide; full width of rough opening.
 3. Header Dimensions: 9 inches (229 mm) high by 6 inches (152 mm) wide; full width of rough opening.
 4. Provide access door on bottom of enclosure for access to controls and removable components without removal of door or operator.
- C. Doors: Sliding panels with emergency swing out operation (breakaway) to 90 degrees at any position in opening cycle.
1. Door Panels: Glazed extruded anodized aluminum, with thru-bolted connections, matching header and jambs.
 - a. Glass: 1/4 inch (6 mm) clear tempered glass.
 - b. Glass: 1 inch (25 mm) thick sealed insulating units, clear, tempered.
 - c. Rail Height: 5 inches (127 mm); top rails 3-1/2 inches (89 mm).
 - d. Meeting stile weatherstripping: Dual nylon pile.
 - e. Overlapping stiles of doors and sidelights: Single nylon pile weatherstripping.
 2. Door Panels: 1/2 inch (13 mm) thick fully tempered glass.
 - a. Clear glass.
 - b. Gray tinted glass.
 - c. Bronze tinted glass.
 - d. Top and bottom rail: Extruded aluminum, matching header.
 - e. Meeting stile weatherstripping: None.

- f. Overlapping stiles of doors and sidelights:
Clear Lexan seals.
- 3. Door Suspension: 1-3/4 inch (44 mm) diameter nylon rollers, mounted over centerline of door, with steel corner support at hinge stile pivot to prevent sag.
- 4. Locking: Manual lock with interior thumbturn release.
- 5. Latching of Breakaway Panels: Magnetic latches.
- 6. Latching of Breakaway Panels: Ball detent catches.
- 7. Breakaway Closer: Provide mechanical spring closer to return swing out panel to normal sliding position.
- 8. Breakaway Closer: Provide hydraulic closer to return swing out panel to normal sliding position.
- 9. Limit Arm: Provide limit arm to prevent swinging to more than 90 degrees.
- 10. Weatherstripping:
 - a. Bottom: Adjustable nylon sweeps.
 - 11. Carrier and header contact surfaces: Single weatherstripping.
- D. Security Limited Access Hardware: Exit device mounted on breakaway panel, electric locking system, and controls.
 - 1. Exit Device: Concealed vertical rod type, mid-panel with muntin in door, or push pad; requiring not more than 8 pounds (35 N) pressure to open; 3/8 inch (9.5 mm) bar travel.
 - 2. Electric Lock: 5/8 inch (16 mm) steel bolt in header engaging sliding panel carrier; solenoid operated.
 - 3. Two Position Switch: Switch between day and night control options.
 - 4. Day Operation: Normal operation using actuators.
 - 5. Night Operation:
 - a. Outside: Actuators deactivated; electric lock prevents forcible entry by positively locking sliding panels.
 - b. Outside: In addition to the above, secure actuator _____ operates doors as in day operation; doors reclose and relock.
 - c. Inside - at door: Normal actuators deactivated; exit device operates breakaway, complying with NFPA 101 and local codes; swinging panels close and relock after exit.
 - d. Inside - remote operation: In addition to above, remote station open/close switch operates electric lock and door; doors reclose and relock.
 - 6. In case of power failure, doors remain locked.
 - 7. In case of power failure, doors are unlocked.

- E. Sidelights: Same construction as doors.
 - 1. Doors Sliding on Outside of Sidelight: Provide fixed sidelights; provide doors with side guides using roller bearing pivot assemblies, within sidelight area only.
 - 2. Doors Sliding on Inside of Sidelight: Make sidelights swing out to allow breakaway, with limit arm same as for door; provide floor guides for doors within sidelight area only; provide security latches to positively latch sliding door to sidelite when door is in closed position.
 - 3. Doors Not Requiring Breakaway: Provide doors with side guides using roller bearing pivot assemblies, within sidelight area only.
 - 4. Locking function: When doors are closed and locked, sidelights will not swing out.
 - 5. Glass: Same as for doors.
 - 6. Glass: 1/4 inch (6 mm) clear tempered glass.
 - 7. Glass: 5/8 inch (16 mm) thick sealed insulating units, clear, tempered.
 - 8. Glass: 1 inch (25 mm) thick sealed insulating units, clear, tempered.

- F. Door Operators: Completely electro-mechanical, DC motor powered, with positive pulley and cog belt drive in both opening and closing cycles; comply with ANSI A156.10.
 - 1. Provide microprocessor control; do not use rotary cam mechanisms or door position switches in header.
 - a. Adjustable opening and closing speed.
 - b. Hold-open time adjustable from 1 to 30 seconds.
 - c. Adjustable safety reverse: If object is encountered during closing cycle, re-open door; if object is encountered during opening cycle (in sidelight area), stop door and slowly reclose.
 - 2. Provide positive backcheck and latching by pre-set forces that drive the door fully open and closed.
 - 3. "On-Off-Hold Open" switch: Three-position toggle or rocker type.
 - 4. Energy Conservation Switch: Manual switch that reduces door opening width.
 - 5. Service conditions: Satisfactory operation between minus 30 degrees F (minus 34 degrees C) and 160 degrees F (71 degrees C).
 - 6. Power supply required: 115 VAC.

2.3 ACTUATORS

- A. Motion Detectors: Dor-O-Matic "Astro-Scan".
 - 1. Provide directional movement detection; allow door to close sooner when motion is away from door.
 - 2. Operation: Detect movement within adjustable zone near door and activate operator; deactivate operator upon no movement.
 - 3. Operation: Detect approaching movement within adjustable zone near door and activate operator; deactivate operator upon no movement or departing movement.
 - 4. Adjustable sensitivity and time delay.
 - 5. Housing: Black Lexan.
 - 6. Lens: Red Lexan, sealed to provide weather- and dust-proofing.
 - 7. Mounting: Flush against header/wall.
 - 8. Operating unit: Gimbal-mounted oscillator allowing pattern adjustment.
 - 9. Electronics: Removable printed circuit board with gold-plated contacts; unaffected by radio frequency interference, normal police, fire, and ambulance frequencies, and other two-way radio frequencies; designed to eliminate line noise and surge current.
 - 10. Service conditions: Satisfactory operation between minus 30 degrees F (minus 34 degrees C) and 160 degrees F (71 degrees C); unaffected by humidity or moisture.

- B. Push Plate Actuator: Formed metal plate with rounded corners, satin finish; approximately 5 inches (127 mm) square; with depressed marking.
 - 1. Material: Stainless steel.
 - 2. Material: Brass.
 - 3. Material: _____.
 - 4. Marking: "Push to operate door", filled red.
 - 5. Marking: Handicapped symbol, filled blue.

- C. Mat-Type Actuator/Safety: Manufacturer's standard rubber mat type.
 - 1. Frame for recessed mounting in floor slab.
 - 2. Frame for surface mounting, with transition strips.
 - 3. Color: As selected from manufacturer's standard selection.
 - 4. Color: _____.

- D. Overhead-Mounted Infrared Presence Detector and Safety Beams: Dor-O-Matic "Look-See" system with 2 safety beams, interconnected with actuators.

1. Housing: Mounted in door frame (header).
 2. Detection (safety) zone: Elliptical shaped, full width of door opening by 30 inches (760 mm) deep, centered on door opening.
 3. Controls: Microprocessor.
 - a. Detector or Safety Beam Inoperative: Prevent open door from closing.
 - b. Object detected in safety zone during door closing: Re-open door.
 - c. Object detected in safety zone, door open: Continue to hold door open.
- E. Signs: Provide signs complying with ANSI A156.10 and applicable codes; white letters on red background.
1. Outside: "AUTOMATIC SLIDING DOOR."
 2. Inside (push side for breakaway): "IN EMERGENCY PUSH TO OPEN."

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that door openings and doors are properly installed and ready for installation of automatic door equipment.
- B. Verify that electrical service is available, properly located, and of proper type.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions; comply with ANSI A156.10.
- B. Grout recess around track.
- C. Install mat-type actuators in recesses in floor, level, and grout securely.
- D. Verify that electrical connections are made correctly.

3.3 ADJUST AND CLEAN

- A. Adjust doors and operators for proper operation, without binding or scraping and without excessive noise.

END OF SECTION