

SECTION 08417

FOLDING ALUMINUM FRAMED WALL SYSTEM

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Folding aluminum framed door system.
 - 2. Door hardware.
 - 3. Glass.

1.2 SYSTEM DESCRIPTION

- A. Aluminum-framed folding door system includes aluminum framing, aluminum and glass door panels, shop fabricated, factory finished, glass and glazing, related flashings, anchorage and attachment devices and door hardware.

1.3 PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand positive and negative wind loads acting normal to plane of wall, including increased loads at building corners.
 - 1. Design Wind Load: As calculated in accordance with ~~UBC~~IBC code with 120 mph basic wind speed, ~~Exposure D~~Exposure C.
- B. Impact Resistance: Large missile, when tested in accordance with ASTM E1886.
- C. Deflection: Limit mullion deflection to 1/175 or flexure limit of glass with full recovery of glazing materials.
- D. System Assembly:
 - 1. Accommodate without damage to components or deterioration of seals, movement within system, movement between system and peripheral construction, dynamic loading and release of loads, deflection of structural support framing.
 - 2. Accommodate movement without damage or overstressing, connection failure, undue strain on fasteners and anchor or other detrimental effect when subject to expansion and contraction from temperature range of 120 degrees F over 12 hour period.
- E. Air and Vapor Seal: Maintain continuous air barrier and vapor retarder throughout assembly, primarily in line with inside pane of glass and heel bead of glazing compound.

1.4 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Signed and sealed by professional engineer registered where project is located.
 - 1. Indicate system dimensions, framed opening requirements and tolerances, affected related Work and details.
- C. Product Data: Submit component dimensions, describe components within assembly, anchorage and fasteners, glass, and door hardware.
- D. Design Data: Signed and sealed by professional engineer registered where project is located.
 - 1. Submit calculations to support design.
- E. Samples: Submit two corner samples 12 x 12 inches in size, illustrating finished aluminum door stile and rail, glass units, glazing materials.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with AAMA SFM-1 and AAMA - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.
- B. Accessibility Requirements: Conform to New Jersey Uniform Construction Code Barrier Free Subcode and CABO A117.1.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing aluminum folding door systems with minimum ten years documented experience.
- B. Installer: Company specializing in manufacturing aluminum folding wall systems with minimum three years documented experience and approved by manufacturer.

1.7 PRE-INSTALLATION MEETING

- A. Section 01300 - Administrative Requirements: Preinstallation meeting.
- B. Convene minimum one week prior to commencing Work of this section.
- C. Review work of this section with related work to ensure watertight completed installation.

1.8 DELIVERY, STORAGE, AND PROTECTION

- A. Section 01600 - Product Requirements: Product storage and handling requirements.
- B. Handle Products of this section in accordance with AAMA - Curtain Wall Manual #10.
- C. Protect finished aluminum surfaces with wrapping or strippable coating. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

PART 2 PRODUCTS

2.1 ALUMINUM FOLDING DOOR SYSTEMS

A. Manufacturers:

- ~~1. Rebco Inc.; Pacer Series.~~
- ~~2. Nana Wall; Series SL72.~~
- 3. Substitutions: Section 01600 - Product Requirements.

~~B. Folding Door System: 1-3/4 inch thick extruded tubular stile and rail members.~~

- ~~1. Glazing Stops and Gaskets: Snap-on extruded aluminum with preformed gaskets.~~
- ~~2. Stile and Top Rail Design: As selected.~~

C. Folding Wall System: Bifolding, swing opening as indicated on Drawings, 1-3/4 inch thick extruded tubular stile and rail members.

- 1. Glazing Stops and Gaskets: Snap-on extruded aluminum with preformed gaskets.
- 2. Stile and Top Rail Design: 2-1/2 inches wide.
- 3. Bottom Rail: 11 inches wide.

2.2 COMPONENTS

- A. Extruded Aluminum: ASTM B221; 6063 alloy, T5 temper typical, 6061 alloy, T6 temper for extruded structural members.
- B. Glass: ~~1 inch thick insulated~~ 7/16 inch thick, laminated glass; type as indicated on Drawings and as specified in Section 08800
- C. Glazing Materials: Manufacturer's standard types to suit application and to achieve weather, moisture, and air infiltration requirements.
- D. Hardware: Provide manufacturer's standard heavy duty door hardware for types of doors and applications indicated, and as specified below. Finish exposed hardware to match doors.
 - 1. Hinges: Provide hinges as recommended by manufacturer for application.
 - 2. Locking: Manufacturers standard maximum security deadlock with cylinder.

3. Sills: Aluminum flush type, thermally broken threshold with cutouts coordinated for operating hardware, ADA compliant.
 4. Weather Stripping: Manufacturers standard replaceable type.
 5. Provide system capable of adjustment without removing panels from tracks.
- E. Sealant and Backing Materials:
1. Sealant Used Within System (Not Used for Glazing): Manufacturer's standard materials to achieve weather, moisture, and air infiltration requirements.
 2. Perimeter Sealant: Specified in Section 07900.
- F. Fasteners: Stainless steel.

2.3 FABRICATION

- A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
- C. Prepare components to receive anchor devices. Fabricate anchors.
- D. Arrange fasteners and attachments to conceal from view.
- E. Prepare components with internal reinforcement for door hardware.
- F. Reinforce framing members for imposed loads.
- G. Factory assemble door panels including folding hardware, locking hardware, glass and glazing and weatherstripping.

2.4 SHOP FINISHING

- A. Aluminum Exposed to View: Painted, AA-M12C12R1x non-specular as fabricated mechanical finish, chemically cleaned, and prepared for applied coating; with organic coating.
 1. High Performance Organic Coating: Fluoropolymer coating system complying with AAMA 2605 minimum three-coat, with minimum 70 percent polyvinylidene fluoride resin; Kynar 500 or Hylar 5000.
 2. Color: To match curtainwall system.
- B. Apply bituminous paint to concealed aluminum and steel surfaces in contact with cementitious or dissimilar metals.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other Work.
- B. Verify wall openings and adjoining air and vapor seal materials are ready to receive Work of this Section.

3.2 INSTALLATION

- A. Install folding door system in accordance with manufacturer's instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent Work.
- E. Coordinate attachment and seal of perimeter air and vapor barrier materials.
- F. Install integral joint sealers.
- G. Set thresholds in bed of mastic and secure.
- H. Coordinate installation of glass with Section 08800; separate glass from metal surfaces. Apply heal bead of sealant full perimeter of glass.
- I. Coordinate installation of perimeter sealants with Section 07900.

3.3 ERECTION TOLERANCES

- A. Section 01400 - Quality Requirements: Tolerances.
- B. Maximum Variation from Plumb: 0.06 inches every 3 ft non-cumulative or 1/16 inches per 10 ft, whichever is less.
- C. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

3.4 ADJUSTING

- A. Adjust track, carriages, panels operating hardware for smooth operation and weather tight closure.

3.5 CLEANING

- A. Remove protective material from pre-finished surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- C. Remove excess sealant by method acceptable to sealant manufacturer.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01700 - Execution Requirements: Protecting installed construction.
- B. Protect finished Work from damage.

END OF SECTION