

## SECTION 08 41 13

### ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Section includes aluminum-framed storefronts including aluminum and glass doors, frames, hardware, glass, and infill panels.

##### 1.2 SYSTEM DESCRIPTION

- A. Aluminum-Framed Storefront System: Tubular aluminum sections with supplementary internal support framing, factory fabricated, factory finished, glass and insulated metal panel infill, related flashings, anchorage and attachment devices.
- B. System Assembly: Site assembled.
- C. System Design: Provide for expansion and contraction within system components caused by temperature cycling. Design and size members to withstand loads caused by pressure and suction of wind.
- D. Air Infiltration: Limit air leakage through assembly to 0.06 cfm/min/sq ft (0.003 cu m/s/sq m) of wall area, measured at reference differential pressure across assembly of 1.57 psf (75 Pa) as measured in accordance with ASTM E283.
- E. Water Leakage: None when measured in accordance with ASTM E331.
- F. System Internal Drainage: Drain water entering framing system to exterior.

##### 1.3 SUBMITTALS

- A. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work and expansion and contraction joint location and details.
- B. Product Data: Submit component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.

##### 1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with AAMA SFM-1 and AAMA MCWM-1 - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.
- B. Surface Burning Characteristics:
  - 1. Foam Insulation: Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
- C. Apply label from agency approved by authority having jurisdiction to identify each foam plastic insulation board.
- D. Maintain one copy of each document on site.

- E. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
- F. Installer: Company specializing in performing Work of this section with minimum three years documented experience approved by manufacturer.
- G. Design wind loading under direct supervision of Professional Engineer experienced in design of this Work and licensed at Project location.

#### 1.5 WARRANTY

- A. Furnish five year manufacturer warranty for insulated glass and factory finishes.

### PART 2 – PRODUCTS

#### 2.1 ALUMINUM-FRAMED STOREFRONTS

- A. Manufacturers:
  - 1. EFCO Corp.
  - 2. Kawneer Co., Inc.
  - 3. Traco.
  - 4. Tubelite.
  - 5. US Aluminum.
  - 6. Vistawall Architectural Products.
  - 7. Substitutions: Permitted subject to compliance with requirements.
- B. Product Description: Aluminum-framed storefronts, extruded aluminum, with aluminum and glass doors, glazing, hardware, and infill panels.

#### 2.2 COMPONENTS

- A. Frames: Thermally broken extruded aluminum; flush glazing stops. Frames for interior glazing need not to be thermally broken.
- B. Reinforced Mullion: Profile of extruded aluminum with internal reinforcement of shaped structural steel section.
- C. Doors: 1-3/4 inches thick, nominal 5 inch wide top rail and vertical stiles, 10 inch wide bottom rail; square glazing stops.
- D. Glass and Glazing: Specified in Section 08 80 00.
- E. Glass and Glazing Materials:
  - 1. Glass in Exterior Lights: Clear Low E insulating glass.
  - 2. Glass in Interior Lights: Clear float glass.
  - 3. Glass in Doors and Adjacent Lights: Clear Tempered Low E insulating glass.
  - 4. Glazing Materials: Storefront manufacturer's standard types to suit application and to achieve weather, moisture, and air infiltration requirements.
- F. Hardware: Manufacturer's standard hardware complying with following basic components.
  - 1. Weatherstripping: Wool pile, continuous and replaceable.
  - 2. Sill Sweep Strips: resilient seal type, of neoprene compound.

3. Threshold: Extruded aluminum, thermally broken, one piece for each door opening, ribbed non-slip surface, sloped to exterior; maximum 1/2 inch height.
  4. Pivots: Offset type.
  5. Push/Pull: Style as selected from manufacturer's full range of available push/pulls.
  6. Exit Device: Specified in Section 08 71 00, installed by door supplier.
  7. Closer: Specified in Section 08 71 00, installed by door supplier.
  8. Finish: Exposed hardware to match hardware finishes specified in Section 08 71 00.
  9. Lock Cylinders: Specified in Section 08 71 00, installed by door supplier.
  10. Electric Strikes: Specified in Section 08 71 00, installed by door supplier.
- G. Insulated Infill Panels: Mapes "Corelite" laminated insulated panels with UNA-CLAD aluminum faces, Kynar 500 finish; 1 inch (25 mm) thick, color as selected by Architect.
- H. Flashings: Minimum 0.040 inch (1.0 mm) thick aluminum, to match mullion sections where exposed.
- I. Steel Sections: ASTM A36/A36M, Structural shapes to suit mullion sections; galvanized.
- J. Fasteners: Stainless steel.
- K. Perimeter Sealant and Backing Materials: Specified in Section 07 90 00.

## 2.3 FABRICATION

- A. Fabricate doors and frames allowing for minimum clearances and shim spacing around perimeter of assembly.
- B. Accurately and rigidly fit and secure joints and corners, flush, hairline, and weatherproof.
- C. Arrange fasteners, attachments, and jointing to ensure concealment from view.
- D. Prepare components with internal reinforcement for door hardware [and door operator hinge hardware].

## 2.4 SHOP FINISHING

- A. Clear Anodized Aluminum Surfaces: AA-M12C22A41, Architectural Class I, 0.7 mils (0.018 mm) clear anodized coating conforming to AAMA 611.
- B. Concealed Steel Items: Galvanized to ASTM A123/A123M; minimum 2.0 oz/sq ft coating thickness; galvanize after fabrication.
- C. Apply bituminous paint to concealed aluminum and steel surfaces in contact with cementitious or dissimilar metals.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. Verify wall openings and adjoining air and vapor seal materials are ready to receive work of this section.

### 3.2 INSTALLATION

- A. Install doors, frames, glazing, hardware and flashings in accordance with AAMA MCWM-1 - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.
- B. Use anchorage devices to securely attach frame assembly to structure.
- C. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- D. Coordinate attachment and seal of air and vapor retarder materials. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- E. Install hardware in accordance with Section 08 71 00.
- F. Install infill panels using method required to achieve performance criteria.
- G. Install glass in accordance with Section 08 80 00; separate glass from metal surfaces.
- H. Install perimeter sealants in accordance with Section 07 90 00.
- I. Tolerances:
  - 1. Variation from Plane: 1/8 inch per foot (3 mm/m) maximum, or 1/4 inch per 30 feet (6 mm/m); whichever is less.

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