

SECTION 08 41 00 - ALUMINUM DOORS, WINDOWS AND FRAMES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 DESCRIPTION

- A. Furnish all material, labor, equipment and services necessary to install the aluminum windows and storefront, anchors, hardware, and related items indicated on the Drawings. In general, the work includes: Fixed aluminum storefront frames, doors and hardware, and windows.

1.03 WORK SPECIFIED ELSEWHERE

Section 07 92 00 - Joint Sealants
Section 08 11 13 - Hollow Metal Doors and Frames
Section 08 81 00 - Glazing

1.04 SUBMITTALS

- A. Prior to start of fabrication submit shop drawings to Architect for approval.
- B. Drawings shall indicate location of windows, opening dimensions and details of head, jamb and sill at each opening.

1.05 WARRANTY

- A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
- B. Manufacturer's Product Warranty: Submit, for Owner's acceptance, manufacturer's warranty for storefront system as follows:
 - 1. Warranty Period: Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from date of shipment.
 - 2. Manufacturer's Door Product Warranty: Submit, for Owner's acceptance, manufacturer's warranty for door/entrance system as follows:
Warranty Period: Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from date of shipment. In addition, welded door corner construction shall be supported with a **LIMITED LIFETIME WARRANTY** for the life of the door under normal use.
See items 2.01, item C below for door construction.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All door, window and framing systems shall be Architectural Class I anodized finish (AA-M10C21A44) unless noted otherwise. Color # 29, Black.
- B. Kawneer TRIFAB 451T, exterior framing system, or equal. Provide accessory parts, shapes and brake metal as required for a complete installation. Storefront System – 2" x 4-1/2" nominal dimension; Thermal, **Center** Set-Glazed, Shear Block Fabrication.
- C. Kawneer TRIFAB 450, interior framing system, or equal. Provide accessory parts, shapes and brake metal as required for a complete installation. Storefront System – 1-3/4" x 4-1/2" nominal dimension; Non-Thermal, **Center** Set-Glazed, Shear Block Fabrication.
- D. Doors to be Kawneer, 350 Medium Style door, or equal, of sizes shown on the Drawings with optional 10" Bottom Rail and with vertical and horizontal intermediate rails as shown on Drawings. Supply closers and thresholds where required. Bottoms and edges of doors shall be weather stripped with a full width metal bound, replaceable pile weather stripping.
 - 1. Door corner construction shall consist of mechanical clip fastening, SIGMA 1-1/8" long fillet welds along top and bottom of rail extrusion at stile and rail intersection, and deep penetration plug weld at all four corners of door. **MUST BE FULL PENETRATION PLUG WELD TO LEG OF CLIP. 1-1/8" LONG FILLET WELDS ALONG TOP AND BOTTOM OF RAILS AT STILES INTERSECTION. NO TIE-ROD CONSTRUCTION OF ANY TYPE OR PARTIAL DESIGN ALLOWED.** Meeting rail to still joint fillet weld "only" is NOT ACCEPTABLE. Glazing stops shall be hook-in type with EPDM glazing gaskets reinforced with non-stretchable chord
- E. Substitutions:
 - 1. General: Refer to Substitutions Section for procedures and submission requirements.
 - 1. Pre-Contract (Bidding Period) Substitutions: Submit written requests ten (10) days prior to bid date.
 - 2. Substitution Documentation
 - a. Product Literature and Drawings: Submit product literature and drawings modified to suit specific project requirements and job conditions.
 - b. Certificates: Submit certificate(s) certifying substitute manufacturer (1) attesting to adherence to specification requirements for storefront system performance criteria, and (2) has been engaged in the design, manufacturer and fabrication of aluminum storefront for a period of not less than ten (25) years.
 - 3. Samples: Provide samples of typical product sections and finish samples in manufacturer's standard sizes.
 - 4. Substitution Acceptance: Acceptance will be in written form, either as an

addendum or modification.

- F. All exposed screws to be tamper proof.
- G. Hardware: Furnish and install hardware as follows for each Kawneer Door: Cylinders shall be subject to change construction master, building master and grand master keys as specified in Section 08 71 00 – Door Hardware. See Hardware Schedule for remainder of hardware.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Comply with manufacturer's recommendations for the installation of aluminum doors, door frames and windows.
- B. Set units plumb, level and true to line without warp or rack of frames and doors. Anchor securely in place. Separate dissimilar metals with bituminous coatings or preformed separators.
- C. Set sill members and other members in a bed of compound to provide weather tight construction. Provide aluminum subsills where shown on Drawings.
- D. Obtain actual job site dimensions of each masonry opening and fabricate to fit with clearances indicated on the Drawings.
- E. Provide each continuous unit of framework, doors, sidelights, hardware and all accessory items as a packaged unit. Complete the fabrication, assembly and finishing before shipment to the project site to the greatest extent possible.
- F. Complete the cutting, fitting, forming, drilling and grinding of all metal work prior to cleaning, finishing, treatment and application of coatings.
- G. Weld by methods recommended by the manufacturer and AWS to avoid discoloration at welds. Grind exposed welds smooth and restore mechanical finish. Remove arises from cut edges and ease edges and corners to a radius of approximately 1/64".
- H. Conceal fasteners wherever possible. Joints shall be drawn up to an invisible or hair line crack. Exposed fasteners shall be flush with finished surface of the member.

- I. Reinforce the work, as necessary, for performance requirements and for support to the system. Provide separators which will prevent corrosion. Provide cutouts and concealed reinforcement shall be equal to 3/16" thick steel straps.

3.02 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.
- B. Protection: Protect installed product's finish surfaces from damage during construction. Protect aluminum entrances from damage from grinding and polishing compounds, plaster, lime, acid, cement, or other harmful contaminants. Remove and replace damaged aluminum entrances at no extra cost.

END OF SECTION