

ALUMINUM STOREFRONT

PART 1 - GENERAL

RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions Sections, apply to this Section.
- B. Furnish all necessary material, labor, and equipment for the complete installation of aluminum framing as shown on the drawings and specified herein.

SUMMARY

- A. This Section includes aluminum frames and doors for exterior and interior applications.
- B. Pre-qualified installers: Installer shall be a company specializing in installation of aluminum glazing systems with a minimum of three years experience.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
  1. "Glazing,"
  2. "Door Hardware"
  3. "Automatic Doors"

SUBMITTALS

- A. General: Submit Shop Drawings and Product Data for each type of door and frame specified, including details of construction, materials, dimensions, hardware preparation, core, label compliance, sound ratings, profiles, and finishes. Include details of each frame type, elevations of design types, conditions at openings, details of construction, location and installation requirements of hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.

DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage.
- B. Inspect doors and frames on delivery for damage. Minor damages may be repaired provided refinishing items match new work and are acceptable to Architect; otherwise, remove and replace damaged items as directed.
- C. Store doors and frames at building site under cover.

PROJECT CONDITIONS

- A. Field Measurements: Verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating systems without field measurements. Coordinate construction to ensure actual dimensions correspond to established dimensions.

WARRANTY

- A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Special Warranty: Submit a written warranty executed by the manufacturer agreeing to repair or replace components of entrance and storefront systems that fail in materials or workmanship within the specified warranty period. Failures include, but are not limited to, the following:
  1. Structural failures including, but not limited to, excessive deflection.
  2. Adhesive sealant failures.
  3. Cohesive sealant failures.
  4. Failure of system to meet performance requirements.
  5. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  6. Failure of operating components to function normally.
  7. Water leakage through fixed glazing and frame areas.
- C. Warranty Period: 2 years from date of Substantial Completion.

PART 2 - PRODUCTS

MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
  1. Aluminum Storefront door and frames:
    - a. Kawneer
    - b. Coral Industries, Inc.
  2. As a reference standard, Kawneer model numbers are used. Submitted products shall meet the specifications as the Kawneer system listed.

FRAMES

- A. Exterior frames for operable door units: Kawneer IR 500. See door schedule for size and configuration of door units.
- B. Exterior frames for fixed windows units: Kawneer IR 501. See schedule for size and configuration of window units.
- C. Interior frames: Kawneer TriTab 400. See enlarged plan and interior elevations for size and configuration.

DOORS

- A. Exterior doors: Kawneer medium stile series 350 IR. See door schedule for size and configuration of doors as shown in their frames. (Note: The door bottom rail on exterior doors shall be equipped with an EPDM blade gasket strip applied with concealed fasteners for added weather stripping.)
- B. Interior doors: Kawneer medium stile series 350, standard entrance. See door schedule for size and configuration of doors as shown in their frames.

HARDWARE

- A. Push - Pull: For exterior doors use Kawneer CO-9 (color: bronze) on exterior sides of the doors only.
- B. Door Closers: Single Acting: Kawneer SAM-II single acting manual concealed overhead closer ("Husky").
- C. Pivots / Butts: Single Acting: Kawneer top and bottom 4 1/2" x 4" ball bearing butt hinges.
- D. Aluminum sub-sill: Provide aluminum sub-sills on all exterior windows. See window sill detail.
- E. Intermediate Pivots / Butts: Single Acting: Kawneer 4 1/2" x 4" ball bearing butt hinge.
- F. Locks - Active Leaf: Lock cylinders shall be master-keyed with all of the other doors.
- G. Locks - Inactive Leaf: Not applicable.
- H. Thresholds: Aluminum mill finish threshold. Set in full bed of plastic and screw to slab. (Note: the width of the thresholds shall be wide enough to cover joint in slab between main building and porch. See door sill details for size requirements of threshold.)
- I. Weathering: Single Acting: SEALAIR weathering system in the door frame consisting of a dense, bulb polymeric material, which remains resilient and retains its weathering ability under temperature extremes. Also provide an EPDM blade gasket sweep strip applied to bottom door rail with concealed fasteners.
- J. Exit Devices: Paneltek CR-90 Concealed Rod Exit Device. Lock cylinders shall be master-keyed.

FABRICATION

- A. General: Fabricate components that, when assembled, will have accurately fitted joints with edges coped and beveled to produce joints free of burrs and distortion. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.
- B. Finishing: Finish shop drawings, straight and free of defects or deformations before installation.
  1. Provide components to receive concealed fasteners and anchor and connection devices.
  2. Fabricate components to drain water passing joints and condensation and moisture occurring or migrating within the system to the exterior.
  3. Glazing Stops: Provide minimum clearances for thickness and type of glass indicated according to FGMA's "Glazing Manual."

ALUMINUM STOREFRONT (CONT.)

- H. Metal Protection: Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- I. Storefront: Fabricate framing in profiles indicated for flush glazing (without projecting stops). Provide subframes and reinforcing of types indicated or, if not indicated, as required for a complete system. Factory assemble components to greatest extent possible. Disassemble components only as necessary for shipment and installation.
- J. Entrances: Fabricate door framing in profiles indicated. Reinforce as required to support imposed loads. Factory assemble door and frame units and factory install hardware to greatest extent possible. Reinforce door and frame units as required for installing hardware indicated. Cut, drill, and tap for factory-installed hardware before finishing components.
  1. Exterior Doors: Provide compression weather stripping at fixed stops. At other locations, provide sliding weather stripping retained in adjustable strip mortised into door edge.

FINISHES

- A. Aluminum profiles shall be given a caustic etch followed by an anodic oxide treatment to obtain the following finish:
  1. Black Anodizing Conforming to AA-M10C21A44, Architectural Class I. Black Anodic Coating (Black; #29)
  2. Hardware color shall match frame in which it is used.

PART 3 - EXECUTION

EXAMINATION

- A. Examine areas, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of entrance and storefront systems. Do not proceed with installation until unsatisfactory conditions have been corrected.

INSTALLATION

- A. General: Comply with manufacturer's written instructions for protecting, handling, and installing entrance and storefront systems. Do not install damaged components. Fit frame joints to produce hairline joints free of burrs and distortion. Rigidly secure nonmovable joints. Seal joints watertight.
- B. Metal Protection: Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- C. Install components to drain water passing joints and condensation and moisture occurring or migrating within the system to the exterior.
- D. Set continuous sill members and flashing in a full sealant bed to provide weathertight construction, unless otherwise indicated. Comply with requirements of Section "Joint Sealants."
- E. Install framing components plumb and true in alignment with established lines and grades without warp or rack of framing members.
- F. Install entrances plumb and true in alignment with established lines and grades without warp or rack. Lubricate operating hardware and other moving parts according to hardware manufacturers' written instructions.
  1. Install surface-mounted hardware according to manufacturer's written instructions using concealed fasteners to greatest extent possible.
- G. Install glazing to comply with requirements of Section "Glazing," unless otherwise indicated.
- H. Install perimeter sealant to comply with requirements of Section "Joint Sealants," unless otherwise indicated.

FIELD QUALITY CONTROL

- A. Water Spray Test: After completing the installation of test areas indicated, test storefront system for water penetration according to AAMA 501.2 requirements.
- B. Repair or remove and replace Work that does not meet requirements or that is damaged by testing; replace to conform to specified requirements.

ADJUSTING AND CLEANING

- A. Adjust doors and hardware to provide tight fit at contact points and weather stripping smooth operation, and weathertight closure.
- B. Remove excess sealant and glazing compounds, and dirt from surfaces.

PROTECTION

- A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, that ensure entrance and storefront systems are without damage or deterioration at the time of Substantial Completion.

END OF SECTION

GLAZING

PART 1 - GENERAL

REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, apply to this Section.
- B. Comply with written instructions of glass product manufacturers; FGMA's "Glazing Manual"; and publications of AAMA, LSGA, and SIGMA as applicable to products indicated, unless more stringent requirements are indicated.
- C. Provide certification from glazing manufacturer for ASTM E 1996. This requirement may be submitted after permitting but prior to issuing a C.O..

PART 2 - PRODUCTS

GLASS

- A. For exterior doors use 9/16" impact resistant glass meeting ASTM certification for large missile impact with LowE coating, gray color, .090 PVB clear inner layer.
- B. For fixed exterior windows use 1 3/8" insulated glass. Outboard shall be 1/2" gray tempered. 1/2" air space. Inboard shall be use 3/8" impact resistant glass meeting ASTM certification for large missile impact with LowE coating, gray color, .090 PVB clear inner layer. (Note: In the windows labeled F.G. on the exterior elevation the inboard layer shall be frosted glass.)
- C. 1/4" thick fully tempered frosted glass. Locations: See door schedule.
- D. 1/4" thick fully tempered clear glass. Locations: See door schedule.

PART 3 - EXECUTION

INSTALLATION

- A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are contained in FGMA's "Glazing Manual."
- B. Set glass lites in metal frames and metal doors as per guidelines contained in FGMA's "Glazing Manual."

END OF SECTION

HOLLOW METAL FRAMES

PART 1 - GENERAL

RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, apply to this Section.

SUMMARY

- A. This Section includes steel frames for solid core wood doors, for fixed interior windows, and for closed openings.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
  1. Section "Flush Wood Doors" for wood doors installed in steel frames.
  2. Section "Door Hardware" for door hardware and weatherstripping.
  3. Section "Glazing" for glass in steel doors and sidelights.
  4. Section "Painting" for field painting primed doors and frames.

SUBMITTALS

- A. General: Submit Shop Drawings and Product Data for each type of frame specified, including details of construction, materials, dimensions, hardware preparation, core, label compliance, sound ratings, profiles, and finishes. Include details of each frame type, elevations of design types, conditions at openings, details of construction, location and installation requirements of hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.

QUALITY ASSURANCE

- A. Provide frames complying with ANSI/SDI 100 Recommended Specifications for Standard Steel Doors and Frames and as specified.

DELIVERY, STORAGE, AND HANDLING

- A. Deliver frames cardboard-wrapped or crated to provide protection during transit and storage.
- B. Inspect frames on delivery for damage. Minor damages may be repaired provided refinishing items match new work and are acceptable to Architect; otherwise, remove and replace damaged items as directed.
- C. Store frames at building site under cover.

PART 2 - PRODUCTS

MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
  1. Hollow Metal Frames:
    - a. Ceco Door Products.
    - b. Curries.
    - c. Steelcraft.

FRAMES

- A. Provide metal frames for doors, transoms, sidelights, borrowed lights, and other openings, according to ANSI/SDI 100, and of types and styles as shown on Drawings and schedules. Conceal fasteners, unless otherwise indicated. Fabricate frames of minimum 16 gauge cold rolled sheets.
  1. Fabricate frames with mitered "T2" welded corners.
  2. Fabricate frames for interior openings over 48 inches (1220 mm) wide from 0.0598-inch- (1.5-mm-) thick steel sheet.
- B. Door Silencers: Except on weatherstripped frames, drill stops to receive 3 silencers on strike jambs of single-door frames and 2 silencers on heads of double-door frames.
- C. Provide lead lining for window in X-Ray.

FABRICATION

- A. Fabricate steel frame units to be rigid, neat in appearance, and free from defects, warp, or buckle. Where practical, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory assembled before shipment, to assure proper assembly at Project site. Comply with ANSI/SDI 100 requirements.
- B. Tolerances: Comply with SDI 117 "Manufacturing Tolerances Standard Steel Doors and Frames."
- C. Hardware Preparation: Prepare frames to receive hardware according to door hardware schedule.
- D. Glazing Stops: Minimum 0.0359-inch- (0.9-mm-) thick steel.
  1. Provide screw-applied, removable, glazing beads on inside of glass in fixed window frames.

FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual" for recommendations relative to applying and designating finishes.
- B. Factory Priming for Field-Painted Finish: Apply shop primer that complies with ANSI A224.1 acceptance criteria, is compatible with finish paint systems indicated, and has capability to provide a sound foundation for field-applied topcoats. Apply primer immediately after surface preparation and pretreatment.

PART 3 - EXECUTION

INSTALLATION

- A. General: Install frames and accessories according to Shop Drawings, manufacturer's data, and as specified.
- B. Placing Frames: Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
- C. Door Installation: Fit wood doors accurately in frames, within clearances specified in ANSI/SDI 100.

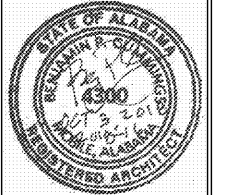
ADJUSTING AND CLEANING

- A. Prime Coat Touchup: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touchup of compatible air-drying primer.
- B. Protection Removal: Immediately before final inspection, remove protective wrappings from doors and frames.

END OF SECTION



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SHEET NAME  
ARCHITECTURAL SPECIFICATIONS

PROJECT NO. 2018-16  
DATE OCTOBER 3, 2018  
SHEET NO.

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Original Plans @