

SECTION 08121

INTERIOR ALUMINUM DOOR FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Section Includes:
1. Aluminum door frames and transoms for interior use.
 2. Aluminum door frames with sidelight frame components for interior use.

1.02 RELATED SECTIONS

1. Section 08211 - Flush Wood Doors.
2. Section 08710 - Door Hardware.
3. Section 08810 - interior Glazing.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Submit for door and sidelight frames.
1. Include information for factory finish, glazing gaskets, accessories and other required components.
 2. Include color charts for finish indicating manufacturer's standard colors available for selection.
- C. Shop Drawings: Submit schedule indicating opening identification number, frame types, dimensions, swing, label, and hardware requirements. Use same reference numbers for openings as Contract Drawings.
- D. Include elevations and details indicating frame types, profiles, conditions at openings, methods and locations of anchoring, glazing requirements, hardware locations, and reinforcements for hardware, details of connections to special construction and other custom features.
- E. Samples: Submit following:
1. Samples indicating quality of finish in selected colors on alloys used for Work.
 2. Where normal color and texture variations are expected, include additional samples to show range of such variation.
- F. Installation Instructions: Submit manufacturer's instructions.

1.04 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide aluminum frames, aluminum and glass doors, and accessories produced by a single manufacturer for each type of product indicated.
- B. Manufacturer's Qualifications: Manufacturer shall demonstrate previous experience in manufacturing of interior aluminum door framing for a period of not less than 10 years on comparable sized project.
- C. Fire and Smoke Rated Assemblies:
1. Where fire-rated openings are scheduled or required by authorities having jurisdiction, provide fire-rated aluminum frames that have been tested and certified to meet the requirements of UBC 7.2 Positive Pressure Test for specified exposure by an agency acceptable to governing authorities.
 2. Provide labels permanently fastened on each fire rated frame and door that are within size limits established by NFPA and the testing authority.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver frames and doors in cartons to provide protection during transit and storage at project site.
- B. Inspect frames and doors upon delivery for damage.
 - 1. Repair minor damage to pre-finished products by means as recommended by manufacturer
 - 2. Replace frames and doors that cannot be satisfactorily repaired.
- C. Store frames and doors at project site under cover and as near as possible to final installation location. Do not use covering material that will cause discoloration of aluminum finish.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Do not begin installation of frames or doors until area of work has been completely enclosed and interior is protected from the elements.
- B. Maintain temperature and humidity in areas of installation within reasonable limits, as close as possible to final occupancy. If necessary, provide temperature control and ventilation to maintain required environmental conditions.

1.07 WARRANTY

- A. Warrant against defects in manufacturing of materials for a period of 2 years from date of substantial completion.
- B. Warrant framing finish against defects, including cracking, flaking, blistering, peeling, and excessive fading, chalking and non-uniformity in color for a period of 5 years.
- C. Warrant aluminum and glass doors for life of door against corner construction failure, causing warping of door beyond acceptable tolerances.
- D. The Warranties submitted under this Section shall not deprive the Owner of other rights or remedies that the Owner may have under other provisions of the Contract Documents and the laws of governing jurisdictions and is in addition to and runs concurrently with other warranties made by the Contractor under requirements of the Contract Documents.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS AND PRODUCTS

- A. Drawings and specifications are based on manufacturer's literature from Raco Interior Products unless otherwise indicated. Other manufacturers to comply with the minimum levels of material and detailing indicated on the drawings and in conformance with provisions of Section 01600 – Product Requirements. www.racointeriors.com
- B. Acceptable Products:
 - 1. Interior Door Frames and Transoms: RACO Classic Freestanding fixed throat frames to accommodate wall thicknesses indicated on drawings; height of system as indicated on drawings.
 - a. Provide fire rated frames to 20 minute rating complying with UL 10B, ASTM E152, and NFPA 252.
 - 2. Interior Borrowed Light Framing: RACO Classic Free Standing, fixed throat frames to accommodate wall thicknesses indicated on Drawings
 - a. Provide non-fire rated with adjustable bottom rails for field adjustment.
 - b. Provide with 20 minute (without hose stream test) fire rated label, factory glazed with approved clear (wireless) or approved wire glass.

- c. Provide with custom horizontal and vertical mullion pattern if indicated on Drawings
Hardware for frames as indicated in Section 08710.

C. Substitutions: Permitted under provisions of Section 01600.

2.02 MATERIALS

- A. Aluminum: Meeting requirements of ASTM B221, 6063T5 alloy, and as otherwise required to assure compliance with dimensional tolerances and maintain color uniformity. Billets shall be composed of at least 33% recycled aluminum.
- B. Anchorage Devices, Clips and Fasteners: Manufacturer's standard type, compatible with materials being secured.
- C. Accessories: As necessary for complete system.
- D. Vinyl door numbers: Reference door schedule, color selected by Architect.

2.03 EXTRUDED ALUMINUM FRAME AND DOOR FABRICATION

- A. Assemble all sidelights and windows with the use of clips.
- B. Do not exceed maximum size of window or door to meet applicable code requirements.
- C. Factory pre-machine door frame jambs and prepare for hardware, with concealed reinforcement plates, drilled and tapped as required, and fastened within frame with concealed screws.

2.04 FINISHES

- A. Factory finish extruded frame and door components so that all parts exposed to view upon completion of installation are uniform in finish and color. Exposed surfaces shall be free of scratches and other serious blemishes.
- B. Factory Applied Paint Finish: Comply with AAMA(2603)603.8 and AA-DAF-45, factory applied backed enamel coating.
 - 1. Color: Custom color to match Architect's sample.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine project conditions and verify that project is ready for work of this section to proceed. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Verify wall thickness does not exceed manufacturer's recommended tolerances of specified throat size.

3.02 INSTALLATION

- A. Comply with frame and door manufacturer's printed installation instructions and approved shop drawings. Do not attempt installation in areas where wall thickness exceeds tolerances of specified throat size.
- B. Install frames plumb and square, free from warp or twist, securely anchored to substrates with fasteners recommended by frame manufacturer. Maintain dimensional tolerances and alignment with adjacent work. Ensure joints are hairline tight and surfaces flush with adjacent components.
- C. Set all doors in correct locations as shown on the drawings, level, square, plumb and in alignment with other work in accordance with the manufacturer's installation instructions and approved shop drawings.
- D. Install glass in accordance with Section 08810.

3.03 ADJUSTING AND CLEANING

- A. Protect exposed portions of aluminum surfaces from damage by plaster, lime, acid, cement, and other contaminants.
- B. Touch up marred areas so that touch-up is not visible from a distance of 4 feet. Remove and replace frames that cannot be satisfactorily adjusted.

3.04 PROTECTION

- A. Protect as required to assure that frames and doors will be without damage until Substantial Completion.

END OF SECTION

SECTION 01600

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Procedures for Owner-supplied products.
- F. Spare parts and maintenance materials.

1.02 RELATED SECTIONS

- A. Section 01400 - Quality Requirements: Product quality monitoring.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. Do not use products having any of the following characteristics: Non-conformance with performance standards.
- C. Where all other criteria are met, Contractor shall give preference to products that:
 - 1. Are extracted, harvested, and/or manufactured closer to the location of the project.
 - 2. Have longer documented life span under normal use.
 - 3. Result in less construction waste.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra products of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. General: Whenever a material, article, or piece of equipment is identified on the drawings or in the specifications by reference to manufacturer's or vendor's names, trade names or catalog numbers it is intended to establish a standard of quality for products. Other materials, articles, or equipment of other manufacturers which will adequately perform the duties imposed by the general design will be considered equally acceptable provided the material, article or equipment so proposed, is, in the opinion of the Owner, of equal substance and function. The Contractor is required to provide all documentation and research required for qualifying substitute materials as being equal or superior to the products specified. All equals shall be submitted to the Owner ten (10) working days prior to bidding and no equal shall be purchased or installed by the Contractor without the Owner's written approval.
- B. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- C. Architect will consider requests for substitutions only during the Bidding Phase. Substitutions will not be considered after the Bidding Phase.
- D. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- E. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- F. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
- G. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- H. Substitution Submittal Procedure:
 - 1. Use Architect provided Substitution Request Form.
 - 2. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 3. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 4. The Architect will notify Contractor in writing of decision to accept or reject request.

3.02 OWNER-SUPPLIED PRODUCTS

- A. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
 - 2. Arrange and pay for product delivery to site.

3. On delivery, inspect products jointly with Contractor.
 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
1. Review Owner reviewed shop drawings, product data, and samples.
 2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
 3. Handle, store, install and finish products.
 4. Repair or replace items damaged after receipt.

3.03 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.04 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- H. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
- L. Generate final listing of all attic stock, in accordance with specifications, and verify list accurately reflects actual storage material with Owner present.

END OF SECTION