SECTION 08121

ALUMINUM INTERIOR DOOR AND GLAZING FRAMES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum interior door frames.

B. Aluminum interior glazing frames.

1.2 RELATED SECTIONS

A. Section 08110 - Hollow Metal Doors and Frames.

B. Section 08210 - Wood Doors.

C. Section 08710 - Door Hardware.

D. Section 08800 - Glazing.

1.3 REFERENCES

A. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

B. ASTM B 209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric).

C. ASTM B 221 - Standard Specification for Extruded Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes.

D. ASTM B 221M - Standard Specification for Extruded Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes (Metric).

E. ASTM B 449 - Standard Practice for Chromate Treatments on Aluminum.

F. CAN4 S-104 - Fire Test of Door Assemblies; (Canada).

G. Certification Listings; Warnock-Hersey International (WHI).

H. CSFM 43.2 - Method of Test of Fire Door Assemblies; California State Fire Marshal (CSFM).

I. Metal Finishes Manual; National Association of Architectural Metal Manufacturers (NAAMM).

J. NFPA 252 - Standard Methods of Fire Test of Door Assemblies.

K. UBC 43-7 - Fire Test of Door Assemblies; International Conference of Building Officials (ICBO).

L. UL 10B - Fire Test of Door Assemblies.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's descriptive literature for each type frame; include the following information:
   1. Fabrication methods.
   2. Finishing.
   3. Hardware preparation.
   4. Accessories.

C. Shop Drawings: Indicate the following for frames:
   1. Typical elevations.
   2. Detail sections of typical members.
   3. Hardware, including mounting heights.
   4. Anchorages and reinforcements.
   5. Glazing details.
   6. Locations and types of accessories.

D. Selection Samples: Two sets of color chips representing manufacturer's full range of available colors and finishes.

E. Verification Samples:
   1. Submit samples of each type and color of aluminum finish, on 12-inch (304 mm) long sections of extrusions or formed shapes, and on 6-inch (152 mm) square sheets.
   2. Where color or texture variations are anticipated, such as anodized finishes, include 2 or more units in each set of samples indicating extreme limits of variations.

F. Quality Assurance Submittals:
   1. Test Reports: Provide certified test reports, prepared by an independent testing laboratory, documenting conformance to regulatory requirements specified in this section.

2. Manufacturer's instructions: Printed installation instructions for each product, including product storage requirements.

1.5 QUALITY ASSURANCE

A. Qualifications:
   1. Manufacturer: Company specializing in door frame systems manufacturing with minimum ten (10) continuous years documented experience.
   2. Installer: Company having minimum of five (5) years documented experience installing interior aluminum door frames, certified by manufacturer, and capable of submitting list which includes contact names and phone numbers of at least five (5) installations of frames similar to those specified in this section that have been in use for a minimum of three (3) years.

B. Regulatory Requirements: Fire-rated frames to have 20-minute fire rating in accordance with the following:
   1. NFPA 252.
   2. UL 10B.
   3. CSFM 43.2.
   4. CAN 4S-104.
   5. UBC 43-7.
   6. Warnock-Hersey.

1.6 DELIVERY, STORAGE AND HANDLING

A. Store products of this section in manufacturer's unopened packaging until installation.

B. Maintain storage area conditions for products of this section in accordance with manufacturer's instructions until installation; locate storage area as near as possible to installation location.

1.7 PROJECT CONDITIONS

A. Field Measurements: Take field measurements of areas to receive aluminum frames; note discrepancies on submitted shop drawings.

B. Do not begin installation of products of this section until building exterior provides complete protection from weather, and temperature and humidity conditions within

building are as close as possible to final occupancy standards.

1.8 SCHEDULING

A. Ensure that templates required for reinforcement, cutting, drilling, and tapping for door hardware specified in Section 08710 are available to manufacturer of products of this section in time for fabrication without affecting construction progress schedule.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Wilson Partitions, 3225 E. Washington Blvd., Vernon, CA 90023; ASD. Tel: (213) 261-9600 Fax: (213) 261-9927.
B. Requests for substitution will be considered in accordance with provisions of Section 01600.

C. Substitutions: Not permitted.

2.2 COMPONENTS

A. Door Frames:
1. Frame components: Extrusions of controlled-alloy aluminum billets of 69 percent prime recycled scrap aluminum, complying with ASTM B 221 or ASTM B 221M, Alloy 6063 or 6463, Temper T5, minimum metal thickness 0.062 inches (1.5 mm); consisting of head section and two (2) jamb sections, with two (2) corner aluminum reinforcing angles.
2. Profile: Projected; 0300 Series.
3. Profile: Projected; 0400 Series.
4. Profile: Projected; 0500 Series.
5. Profile: Projected; 2300 Series.
6. Profile: Projected; 2500 Series.
7. Profile: Flat; 1300 Series.
8. Profile: Flat; 1400 Series.
9. Profile: Flat; 1500 Series.
10. Profile: Radius; 3300 Series.
11. Profile: Radius; 3400 Series.
12. Profile: Radius; 3500 Series.
13. Profiles: Indicated on drawings.

14. Profiles: Specified in SCHEDULES Article of PART 3 of this section.
15. Finish: Specified in SCHEDULES Article of PART 3 of this section.
16. Finish: Clear anodic coating; NAAMM AA-M12C22A21 mechanical finish, non-specular as fabricated, with chemical medium-matte etch, minimum thickness 0.2 mil (0.005 mm).
17. Finish: Clear anodic coating; NAAMM AA-M12C22A31 Class II mechanical finish, non-specular as fabricated, with medium-matte chemical etch, minimum thickness 0.4 mil (0.010 mm).
18. Finish: Electrolytically-deposited colored anodic coating, bronze color; NAAMM AA-M12C22A34 Class II mechanical finish, non-specular as fabricated, with medium-matte chemical etch, minimum thickness 0.4 mil (0.010 mm).
19. Finish: Electrolytically-deposited colored anodic coating, black color; NAAMM AA-M12C22A34 Class II mechanical finish, non-specular as fabricated, with medium-matte chemical etch, minimum thickness 0.4 mil (0.010 mm).
20. Finish:
    a. Polyester powder coating; surface preparation consisting of multi-stage cleaning process and chromate conversion process conforming to ASTM B 449, with finish coating 2.5 mil (0.063 mm) minimum thickness.
    b. Color: Selected by Architect from manufacturer's full range of available colors.
    c. Color: Custom color matching Architect's sample.
    d. Color: _____.
21. Finish: Chrome anodized finish with clear anodic coating; NAAMM AA-M21C31A212 bright smooth specular mechanical finish, with chemical brightening, minimum thickness 0.2 mil (0.005 mm).
22. Finish: Brass anodized bright-dip gold finish, impregnated color with clear anodic coating; NAAMM AA-M21C31A233 bright smooth specular mechanical finish, with chemical brightening, minimum thickness 0.3 mil (0.007 mm).

B. Door Mutes:
    1. Non-rated frames: Mohair, pull-in type.
    2. Fire-rated frames: Vinyl, pull-in type.

C. Glazing Frames:

1. Frames: Same construction, profile, and finish as door frames, with recessed glazing channel for center glazing.
2. Stops: Formed aluminum sheet conforming to ASTM B 209 or B 209M, or aluminum extrusions of 69 percent prime recycled scrap aluminum conforming to ASTM B 221 or ASTM B 221M, , _____ inch (__ mm) minimum metal thickness, finish matching door frames; flush type, non-projecting above plane of frame.

D. Fasteners: Aluminum, stainless steel, or other non-corroding material; compatible with aluminum components, hardware, and anchors.

E. Glazing Gaskets: Vinyl; roll-in type.

F. Trim: Same material and finish as door frames, _____ inch (__ mm) minimum metal thickness; trim includes indicated types and profiles, both manufacturer's standard profiles and items fabricated for project conditions, and includes, but is not limited to the following:
1. Ceiling trim.
2. Wall trim.
3. Sills.
4. Covers.

G. Protective Backing for Metals: For prevention of electrolytic action between contacting dissimilar metals; one of the following:
1. Zinc molybdate primer.
2. Bituminous primer.
3. Gasket material.

2.3 FABRICATION

A. Fabricate and assemble components to greatest extent possible:
1. Miter-cut frame extrusions at true 45-degree angle for intersections at head and jambs.
2. Perform cutting, fitting, forming, drilling, and grinding of metal; do not damage sight-exposed finishes.
3. Provide concealed reinforcement for specified hardware; cut, mill, reinforce, drill, and tap frames for specified hardware:
a. Hinges: Three (3) hinge back-up plates of 0.125 inch (3 mm) thick aluminum plate.

b. All other template hardware: 0.125 inch (3 mm) thick aluminum plate.

4. Provide reinforcing required for frame performance and rigidity.
5. Assemble frames, maintaining accurate relationship of planes and angles, and hairline-joint fit of abutting members.
6. Integral color or texture variation between abutting frame member shall not be greater than half the range indicated in approved samples.
7. Exposed fasteners permitted on door frames only; where applied, use flat Phillips-head screws finished to match adjacent surface.

B. Fabricate non-standard trim items to quality level of standard trim items.

C. Permanently fasten fire-resistive rating label to each fire-rated frame which is within the size limitation established by NFPA and testing agency.

D. Package frames in materials which will not affect frame finishes; label packages with the following information:
1. Manufacturer's name.
2. Product number.
3. Frame number corresponding to Architect-accepted shop drawings.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that wall surfaces and openings are ready to receive frames and are within tolerances specified in manufacturer's instructions.

B. Installer's Examination:
1. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.
2. Transmit two copies of installer's report to Architect within 24 hours of receipt.
3. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.

4. Beginning construction activities of this section indicates installer's acceptance of conditions.

3.2 PREPARATION

A. Perform cutting, fitting, forming, drilling, and grinding of frames as required for project conditions; do not damage sight-exposed finishes.

B. Separate dissimilar metals to prevent electrolytic action between metals.

3.3 INSTALLATION

A. Install frames in accordance with manufacturer's instructions; set frames level, plumb, and in true alignment.

B. Install glazing in glazing frames; set glazing stops and glazing gaskets flush with frame.

C. Installation of hollow metal doors and frames is specified in Section 08110.

D. Installation of wood doors is specified in Section 08210.

E. Installation of door hardware is specified in Section 08710.

3.4 CLEANING

A. Wash soiled surfaces with mild soap solution, then rinse with clear water, and wipe dry; leave surfaces free of dirt, streaks, or labels other than fire-resistive rating labels.

B. Do not use cleaning agents other than those recommended by manufacturer, abrasives, or caustics for cleaning.

3.5 PROTECTION

A. Protect products of this section from damage caused by subsequent construction until substantial completion.

B. Repair damaged or defective products to original specified condition in accordance with manufacturer's recommendations.

C. Replace damaged or defective products which cannot be repaired to Architect's acceptance.

3.6 SCHEDULES

A. Location: Accounting.
   1. Frame profile: Projected; 0300 Series.
   2. Frame finish: Electrolytically-deposited colored anodic coating, black color; NAAMM AA-M12C22A34 Class II mechanical finish, non-specular as fabricated, with medium-matte chemical etch, minimum thickness 0.4 mil (0.010 mm).

B. Location: Conference.
   1. Frame profile: Custom profile indicated on drawings.
   2. Frame finish:
      a. Polyester powder coating; surface preparation consisting of multi-stage cleaning process and chromate conversion process conforming to ASTM B 449, with finish coating 2.5 mil (0.063 mm) minimum thickness.
      b. Color: Custom color matching Architect's sample.

END OF SECTION