

DIVISION 8 - DOORS AND WINDOWS
METAL WINDOWS

PART 1 - GENERAL

1-01 DESCRIPTION

- A. Lockheed procurement documents and Division 1 apply to work of this section.
- B. Related work specified elsewhere
 - 1. Caulking
Section 07920
 - 2. Window Screens
Section 08525
 - 3. Glazing
Section 08800

1-02 QUALITY ASSURANCE

- A. Fire rated assemblies
 - 1. Fire rated window frames shall comply with ASTM, NFPA 80, and UL 9/10B.
 - 2. Fire rated window frames shall be Factory Mutual approved and/or Underwriters' Laboratories or Warnock-Hersey International listed. Labels shall be permanently fastened on each frame.
- B. Acceptable manufacturers
 - 1. Kawneer
 - 2. Viking Industries
 - 3. Approved equivalent
- C. Regulatory requirements
Furnish products meeting the following
 - 1. UBC current edition

2. AAMA ANSI accredited certification program bearing AAMA certificate
3. State of California energy conservation standards
4. ANSI/ASTM E283 - Test Method of Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors
5. ASTM A36 - Structural Steel
6. ASTM A386 - Zinc Coating (Hot Dip) on Assembled Steel Products
7. ANSI/ASTM E330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference
8. ANSI/ASTM E331 - Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference
9. ANSI/ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
10. ANSI/ASTM B221 - Aluminum-Alloy Extruded Bar, Rod, Wire, Shape, and Tube

1-03 SUBMITTALS

Make submittals for approval in accordance with the provisions of Section 01300.

A. Shop drawings

Show plans, sections and elevations of windows, window construction and connections to adjacent construction.

B. Product data

Submit product data showing compliance with Part 2.

1-04 PRODUCT DELIVERY AND STORAGE

Provide adequate protection during fabrication and shipment. Deliver and store materials in protected areas. Cover materials to prevent dust accumulation or damage to finish. Manufacturer representative shall furnish written handling and installation instructions with windows.

PART 2 - PRODUCTS

2-01 ALUMINUM WINDOWS

A. Type

Commercial casement/projected extruded sections with tubular sash vent sections. Type selected as shown on drawings.

B. Materials

1. Aluminum extrusions

Alloy 6063-T5. Minimum depth of sections, 1-1/2 in. with a nominal thickness of 0.125 in. Dark bronze anodic finish conforming to AA-C-22-A42.

2. Hardware

Bronze and satin finish

3. Weatherstripping

Tubular vinyl conforming to NAAMM Standard SG-1-69.

4. Fasteners

Stainless steel or aluminum

5. Sealing compounds

As standard with manufacturer. Refer to Section 07920 for caulking compound for use in installation.

6. Corner posts

Aluminum tube, 2-1/2 in. by 1/8 in. thick. Provide where shown on drawings.

C. Fabrication

1. Fabricate and assemble to close tolerances to provide a tight fit between members and smooth operation of moving parts with corner joints of window and vent frames accurately formed, fitted, and made rigid and leakproof.

2. Weld in accordance with recommended practices of the AWS using electrodes and methods recommended by the manufacturer of the alloys being welded. Remove flux completely after welding and dress welded joints on all exposed and contact surfaces.

3. Maintain the overall height, width, and diagonal dimensions of frames within the following tolerances:
 - a. Six ft. - 0 in. or less $\pm 1/16$ in.
 - b. Greater than 6 ft. - 0 in. $\pm 1/8$ in.
4. Fabricate framing, mullions, and sash members with reinforced corners and joints, in a rigid jig. Supplement frame sections with internal reinforcement where required for structural rigidity.
5. Permit internal drainage weep holes and channels to migrate moisture to exterior. Provide internal drainage of glazing spaces to exterior through weep holes.
6. Form glass stops, exterior sills, closure trim, weatherstops, and flashings of same material as window for tight fit into window frame section.
7. Install weatherstripping to permit removal or replacement. Install around perimeter of each vent sash to ensure dust and weather tightness.
8. Glazing rabbet depths and clearances

Conform to FS DD-G-451D and Section 2 of the NAMMM Metal Curtain Wall Specifications Manual.
9. Assemble at the factory and ship as complete units with all hardware in place that does not interfere with handling and shipping.

D. Hardware

Include all items necessary to operate, tightly close and securely lock windows. Hardware shall be accessible from inside to permit adjustment or replacement without damage to windows.

1. Projecting ventilators
 - a. Provide two balance arms on each ventilator, with two adjacent sliding friction shoes or friction hinge arms of nonscoring material, capable of holding the ventilators in any open position.
 - b. Provide hardware designed for pole operation on lock rail of ventilators where lockrail is more than 6 ft. above floor.
 - c. Furnish one ives, or approved alternate, No. 118A92 sash pole and No. 058B260 pole hanger for installation in locations where directed, length as required to suit lockrail height. Omit where not required.

2. Casement ventilators
 - a. Provide two butt or extension hinges with friction sliding shoes, each ventilator, or two friction type hinges, each ventilator.
 - b. Provide concealed locking devices each pair of ventilators.
- E. Glazing

Furnish outside snap-in aluminum glazing beads to suit glazing materials specified under Section 08800 and as scheduled on drawings. Provide for thermal glazing where so shown on drawings.

PART 3 - EXECUTION

3-01 INSTALLATION

- A. Install windows in prepared openings in accordance with details, set plumb, square and true to line, and securely anchored in place in accordance with manufacturer's directions.
- B. Observe precautions to prevent galvanic corrosion where dissimilar metal are in contact and to prevent staining or other damage to aluminum from plaster, concrete, or other materials.
- C. Thoroughly caulk frame perimeters watertight using caulking material specified under Section 07920 in color compatible with aluminum.
- D. Upon completion, adjust as required for ease of operation and function. Provide protection for windows to prevent staining or damage of work under other sections.

END OF SECTION