



## SECTION 08520

### ALUMINUM WINDOWS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Psychiatric window interior panels.

##### 1.2 RELATED SECTIONS

- A. Section 07900: Joint Sealers.
- B. Section 08400: Entrances and Storefronts.
- C. Section 08480: Balanced Entrance Doors.
- D. Section 08580: Special Function Windows.
- E. Section 08587: Pressure Resistant Windows.
- F. Section 08590: Window Restoration and Replacement.
- G. Section 08700: Hardware.
- H. Section 08800: Glazing.

##### 1.3 REFERENCES

- A. AAMA/WDMA/CSA 101/I.S.2/A440 - Voluntary Specification for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.
- B. AAMA 701/702; 2000 - Combined Voluntary Specifications for Pile Weather strip and Replaceable Fenestration Weather Seals.
- C. AAMA 501.8-14 Standard Test Method for Determination of Resistance of Human Impact of Window Systems Intended for use in Psychiatric Applications.
- D. AAMA 907 - Voluntary Specification for Corrosion Resistant Coatings on Carbon Steel Components.
- E. AAMA 910 - Voluntary "Life Cycle" Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
- F. ANSI Z97.1 - American National Standard For Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test/Consumer Products Safety Commission CPSC 16 CFR 1201.
- G. ASTM F1233 - Standard Test Method for Security Glazing Materials and Systems.

- H. LEED: The Leadership in Energy & Environmental Design; U.S. Green Building Council (USGBC).

#### 1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Shop Drawings:
  - 1. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
  - 2. Manufacturer's head, jamb and sill details and section views for each window type specified.
- D. Schedules:
  - 1. Provide a window schedule indicating the type, size, color, and operation of each unit specified. Coordinate with window mark types found in the Contract Drawings.
- E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- F. Verification Samples: For each finish product specified, two samples representing actual product, color, and patterns. Samples may be subsequently installed on the project.
- G. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

#### 1.5 SYSTEM DESCRIPTION

- A. Test Units:
  - a) Manufactured units shall conform to AAMA 501.8-14 "Standard Test Method for Determination of Resistance of Human Impact of Window Systems Intended for use in Psychiatric Applications. The units shall sustain impacts of 2,000 lb-ft as described in the test and meet the minimum performance requirements.

#### 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All windows and window hardware specified in this section will be supplied by a single manufacturer with a minimum of ten (10) years experience.
- B. Provide engineering calculations to determine the number, type and spacing of fasteners required to withstand the human impact loading stipulated in the above testing requirements
- C. Code Compliance: Provide windows that comply with regulations of the code bodies having jurisdiction.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship if requested.
  - 1. Finish areas designated by Architect.
  - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
  - 3. Testing for Air and Water as specified
  - 4. Refinish mock-up area as required to produce acceptable work.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation in accordance with manufacturer's recommendations.
- B. Protect units against damage from the elements, construction activities and other hazards before, during, and after installation.

## 1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

## 1.9 WARRANTY

- A. At project closeout, provide to Owner or Owners Representative an executed copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Winco Window Co., 6200 Maple Ave., St. Louis, MO 63130-3305. . Toll Free: 800-525-8089. Tel: 314-725-8088. Fax: 314-725-1419. Web: [www.wincowindow.com](http://www.wincowindow.com).
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

### 2.2 MATERIALS

- A. Aluminum:
  - 1. Frame: Extruded aluminum, 6063-T6 alloy and temper, tensile strength of 25,000 psi.
  - 2. Access panel: Extruded tubular aluminum, 6063-T6 alloy and temper, tensile strength of 25,000 psi.
- B. Weather Stripping:
  - 1. Vent: Double Santoprene thermo plastic rubber weather stripping installed in extrusion pocket

### 2.3 FIXED WINDOWS – WINCO 8800 SERIES

- A. Acceptable Product:
  - 1. Winco 8800 Series: Heavy Commercial Human Impact Window.
- B. Frame:
  - 1. Wall Thickness: 0.094 inches (2 mm).
  - 2. Depth: 2-1/4 inches (57 mm).
  - 3. Corners: Closely fit and mechanically fastened with screws. Must be sealed using AAMA approved sealants in a multi-step process to provide sealant redundancy.
  - 4. Leg: Provide equal leg frame.
- C. Access Panel.
  - 1. Panel Frame:

2. Wall Thickness: 0.094 inches (2 mm).
3. Panel Depth: 2 inches (50 mm).
4. Corners: Mitered and mechanically fastened with screws and sealed.

## 2.4 BLINDS

- A. Head Rail: 1.085 inch wide by 0.875 inch high by 0.050 inch thick (27 mm by 22 mm by 1.3 mm).
- B. Bottom Rail: 1 inch wide by 0.355 inch high by 0.050 inch thick (25 mm by 9 mm by 1.3 mm).
- C. Rail Material: 6063-T5 extruded aluminum alloy and temper with a baked on polyester powder coat finish conforming to AAMA 603.8
- D. Ladder Cord Locations: Shall not exceed 6 inches (152 mm) from end of the slot or 24 inches (610 mm) apart.
- E. Tilt Control: Tilt control knob shall have slip feature to minimize damage due to over tilting of blind.
- F. Tilt Control: Provide angled tilt control knobs.
- G. Knobs: Provide removable key operated knobs.
- H. Knobs: Provide Low Profile knobs.
- I. Knobs: Provide Thumbturn knobs.

## 2.5 HARDWARE

- A. Locks:
  1. Security activated locks that require special key that cannot be removed when the access panel is in an open position
  2. Multi point locking rods to allow lock and release operation with the security key.
- B. Hinge:
  1. 4-bar casement hinge.

## 2.6 FINISH

- A. Anodic Finish: All exposed areas of aluminum windows and components shall receive a two-step finish: clear anodize components, then color coat with electrostatically deposited finish in accordance with Aluminum Association Designation AA-M12-C22-A, color as indicated.
  1. Color: To be selected by the Architect from the manufacturer's standard colors.
  2. Color: As noted in the Window Schedule.
  3. Color: A41, Class I clear anodized at 0.7 mils or greater in accordance with AAMA 611 (WINCO Finish 215).
  - 4.
  5. Color: A44, Class I color anodized at 0.7 mils or greater in accordance with AAMA 611 (WINCO Finish 111,112,113,115).
  6. Color: \_\_\_\_\_.
- B. Paint Finish: Finish all exposed areas of aluminum windows and components with the following:
  1. 70 percent Kynar in accordance with AA-M12-C42-R1X, AAMA 2605.
  2. 50 percent Kynar in accordance with AA-M12-C42-R1X, and AAMA 2604.
  3. Color: To be selected by the Architect from the manufacturer's standard colors.

4. Color: As noted in the Window Schedule.
5. Color: \_\_\_\_\_.

## 2.7 GLAZING

- A. Refer to Section 08800, Glazing: Glass and installation.
- B. Glass Type: Monolithic.
  1. Interior Lite: ½ inch mar resistant polycarbonate Makrolon AR2 clear or equivalent

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

### 3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Final operating adjustment shall be made after glazing work is complete. Operating sash and ventilator shall operate smoothly and shall be weathertight when in locked position
- C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION