

**1995 CSI SECTION 08520 Aluminum Windows**

**Part 1 – General**

1.01 Summary

- A. Section includes:
  - 1. Aluminum Windows
    - a. Arcadia Inc., N200T Series (thermal) Residential Fixed, Casement, Awning and Hopper Windows, 2-inch depth.
- B. Related Sections:

1.02 References

- A. American Architectural Manufacturers Association (AAMA)
- B. American Society for Testing and Materials (ASTM)
- C. Aluminum Association (AA)
- D. National Wood Window & Door Association (NWWDA)
- E. California Association of Window Manufacturers (CAWM)

1.03 System Description

- A. General: In addition to requirements shown or specified, comply with:
  - 1. Applicable provisions of AAMA Windows and Sliding Glass Doors Manual for design, materials, fabrication and installation of component parts.
- B. Design Requirements: Arcadia N200T Series (thermal) Residential Fixed, Casement, Awning and Hopper Windows 2-inch depth. Hinged compression sealed aluminum windows. Suitable for outside or inside glazing.
- C. Performance Requirements: Each assembly shall be tested by a recognized testing laboratory or agency in accordance with specified test methods.
  - 1. Conformance to FW-LC25, C-LC25, AP-LC25 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-5.
    - a. Air Infiltration: Accordance with ASTM E 283 at a static air pressure difference of 1.6 psf. Air infiltration shall not exceed .30 cfm per square foot.
    - b. Water Resistance: Accordance with ASTM E 331/ASTM E 547 at a static air pressure difference of 3.8 psf. No water leakage.
    - c. Uniform Load Structural: Aluminum window systems comply with AAMA/WDMA/CSA 101/I.S.2/A440-05, Voluntary specifications for aluminum windows. Guidelines for specified AW rated product.
    - d. Component testing: Accordance with procedures described in AAMA/NWWDA 101/I.S. 2/A440-05.
    - e. Forced Entry Resistance: All windows shall conform to CAWM 301-90.
    - f. Condensation Resistance Test: (CRF) when tested in accordance with AAMA 1503.1-88, the condensation resistance factor shall not be less than 51.
    - g. Thermal Transmittance Test: Accordance with AAMA 1503.1-88, (U-Value) not more than .59 BTU/hr/sf/°F.
    - h. Thermal Movements: Allow thermal movement resulting from the following maximum change (range) in ambient temperature.
      - (a) 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

1.04 Quality Assurance

- A. Single Source Responsibility:
  - 1. Obtain entrances, storefronts, ribbon walls, window walls, curtain walls, window systems, and finish through one source from a single manufacturer.
- B. Provide test reports from AAMA accredited laboratories certifying the performances as specified in 1.03.

1.05 Warranty

- A. Warranted against failure and/or deterioration of metals due to manufacturing process for a period of two (2) years.

**Part 2 – Products**

2.01 Manufacturers

- A. Acceptable Manufacturers:
  - 1. Arcadia, Inc., 2301 E Vernon, Vernon, CA. Telephone 323/269-7300, Fax 323/269-7390.
- B. Acceptable Products:
  - 1. Arcadia Inc., N200T Series (thermal)

2.02 Materials

- A. Extruded aluminum profiles 6063-T5 alloy and temper (ASTM B221 G.S. 10A-T6).
- B. All framing members .125 minimum wall thickness.
- C. At Casement, Awning, and Hopper windows provide heavy-duty four bar hinges shall be stainless steel only, with asymmetric end caps, and adjustable limit stops. Lock and latches cast white bronze, US-25D finish.
- D. Weatherstrip EPDM bulb type conforming to ASTM D2000 AA515 and shall be keyed into extruded grooves.
- E. Back glazing two-sided adhesive, 15 lbs./ft.<sup>3</sup> density, polyethylene tape. Glazing wedges shall be EPDM or Santoprene.
- F. At operable windows provide screens made of extruded aluminum frame and screened with either 18 x 14 aluminum or fiber mesh.
- G. Thermal barrier material poured-in-place two part polyurethane.

2.03 Finish

- 2. An Architectural Class II or I color anodic coating conforming with AA-M12C22A34/AA-M12C22A44.
  - a. Anodized finish color shall be Colornodic \_\_\_\_\_. (AB1 Light Champagne, AB2 Champagne, AB3 Light Bronze, AB4 Medium Bronze, AB5 Standard Medium Bronze, AB6 Dark Bronze, AB7 Standard Dark Bronze, AB8 Black.)
- (or) 1. An Architectural Class II or I anodic coating conforming with AA-M12C22A31/AA-M12C22A41.
  - a. Anodize finish color shall be Colornodic \_\_\_\_\_ (#11 Clear)
- (or) 1. Fluorocarbon Coating: AAMA 2605.2.
  - a. Resin: 70% PVDF Kynar 500/Hylar 5000.
  - b. Substrate: cleaned and pretreated with chromium phosphate.
  - c. Primer: Manufacturer's standard resin base compatible coating. Dry film thickness.
    - (a) Extrusion: Minimum 0.20 mil.
  - d. Color Coat: 70% PVDF, dry film thickness.
    - (a) Extrusion: 0.20 mil.
  - e. Color: As selected by Architect.
  - f. Acceptable Coatings Manufacturers:
    - (a) PPG Industries, Inc.
    - (b) Valspar Corporation
    - (c) BASF

2.04 Fabrication

- A. Frame components mitered, reinforced extruded corner key, hydraulically crimped, and "cold welded."
- B. All ventilator extensions tubular, each corner mitered, reinforced extruded corner key, hydraulically crimped, and "cold welded."
- C. All corners weather sealed with an elastomeric sealant.

**Part 3 – Execution**

3.01 Examinations

- A. Examine conditions and verify substrate conditions are acceptable for product installation.

3.02 Installation

- A. Install in accordance with approved shop drawings and manufacturers installation instructions.

3.03 Field Quality Control

- A. Contractor's responsibility to make all necessary final adjustments to attain normal operation of each window and its mechanical hardware.

**END OF SECTION**