

## SECTION 08 44 00 - CURTAIN WALL AND GLAZED ASSEMBLIES

### PART 1 - GENERAL

#### 1.1 SYSTEM REQUIREMENTS

- A. Design Requirements:
1. Provide conventionally glazed and/or structural-sealant-glazed aluminum curtain wall assemblies installed as stick or unitized assemblies. Unitized preferred; stick acceptable.
  2. All curtain wall members shall be thermally-broken.
  3. Narrow and medium stile doors are not permitted.
  4. Sliding entrance doors are not permitted.
- B. Performance Requirements:
1. Delegated Design: Contractor to design aluminum curtain wall systems.
  2. Structural Performance:
    - a. Wind Loads: Project specific.
  3. Deflection of Framing Members:
    - a. Deflection Normal to Wall Plane: Limited to  $L/175$ .
    - b. Deflection Parallel to Glazing Plane: Limited to  $L/360$  or  $1/8$  inch, whichever is smaller.
  4. Air Infiltration:  $0.06$  cfm/sq. ft. when tested according to ASTM E 283 at a minimum static-air-pressure difference of  $6.24$  lbf/sq. ft.
  5. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 331 at a minimum static-air-pressure difference of 20 percent of positive wind-load design pressure, but not less than  $6.24$  lbf/sq. ft.
  6. Water Penetration under Dynamic Pressure: No water penetration when tested according to AAMA 501.1 under dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than  $6.24$  lbf/sq. ft.
  7. Energy Performance: Glazed aluminum curtain walls shall have minimum energy performance ratings per NFRC as follows:
    - a. Thermal Transmittance (U-factor):  $0.45$  Btu/sq. ft. x h x deg F.
    - b. Solar Heat Gain Coefficient:  $0.40$ .
  8. Condensation Resistance: No condensation shall form on interior surfaces of aluminum glazing at exterior and interior winter design temperature and relative humidity.

### PART 2 - PRODUCTS

#### 2.1 FRAMING

- A. Framing Members: Extruded or formed aluminum.
1. Construction: Thermally broken.
  2. Glazing System: One or more of the following:
    - a. Retained mechanically with gaskets on four sides.
    - b. Two-sided structural-sealant-glazed and mechanically retained with gaskets on two sides.
    - c. Factory-glazed, four-sided structural-sealant-glazed.
  3. Glazing Plane: Front.

#### 2.2 ALUMINUM FINISHES

- A. Aluminum Finishes: High-performance organic (three coats).

#### 2.3 FABRICATION

- A. Provisions for field replacement of glazing.

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL

- A. Testing: By The University-engaged agency.
- B. Testing Services:
  - 1. Structural Sealant Adhesion: ASTM C 1401.
  - 2. Air Infiltration: ASTM E 783.
  - 3. Water Penetration: ASTM E 1105.
  - 4. Water Spray Test: AAMA 501.2.
  - 5. Frequency of Testing: To be determined by Design Professional.

**END OF SECTION 08 44 13**