

## SECTION 08500 – GLAZING SYSTEMS

### PART 1 - GENERAL

#### 1.1 SCOPE OF SECTION:

This section contains the requirements relating to thermal and moisture protection as specifically provided by window systems that include glazing systems, store front systems, and curtain wall systems. Systems typically have aluminum horizontal and vertical framing members that support glazing systems and transfer loads to the structural framing systems of the building.

#### 1.2 DESIGN

- A. Registered Architect or Engineer Required: All new, repair, and replacement window glazing projects shall have plans and specifications prepared by a registered architect or engineer licensed by the State of Florida. The professional consultant shall have a minimum of ten (10) years direct experience in window design.
- B. Design: The designer shall specify current Florida Building Code Product Approval or Miami-Dade Notice of Acceptance (NOA) indicating that the system has been satisfactorily tested for wind design pressures as determined by the project structural engineer. The wind design pressures shall be indicated on the plans according to the Florida Building Code. Window assemblies must have the impact resistance ratings required by code for the intended application.
- C. Design References and Guides: All installations shall comply with following industry standards and guidelines:
1. Florida Building Code, current edition
  2. American Society of Civil Engineers – Minimum Design Loads for Buildings and Other Structures (ASCE 7-02, or edition referenced by the current edition of the Florida Building Code).
  3. University of Florida Design and Construction Standards
  4. American Architectural Manufacturers Association (AAMA)
  5. GANA Glazing Manual, Glass Association of North America
  6. ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959, [www.astm.org](http://www.astm.org)
    - a. ASTM C1036 – Standard Specification for Flat Glass
    - b. ASTM C1048 - Standard Specification for Heat Treated Glass
    - c. ASTM E2112 – Standard Practice for Installation of Exterior Windows, Doors and Skylights
- D. Frames: Frames shall be factory finished, off-white aluminum. Depending on the application, framing systems may be thermally broken or thermally isolated to resist condensation.
- E. Glazing: All glazing shall be insulated. The preferred glazing is a low emissivity glass. Glazing options may need to be analyzed as a part of energy modeling requirements.
- F. Tinting: Tinting of glazing, if any, is typically gray on the UF campus. Other options must be presented to and approved by the Land Use & Facilities Planning Committee during design. Surface applied window film shall not be used.

- G. All connections and flashing conditions shall be shall detailed (including heads, jambs, sills, corners, terminations, and flashings). Where possible, window assemblies shall bear on integral sub-sill or independent sill pan flashing with end dams. The sill pan flashing shall be sealed to the wall opening substrate. Structural connections through the sill pans shall be avoided if possible. Glazing systems shall be designed and constructed with flashing and internal drainage and weep details to manage water infiltration.
- H. Crime Prevention Through Environmental Design: In keeping with the principals of CPTED, windows are encouraged to overlook exterior spaces near building entries, parking lots, bicycle parking, walkways and areas with high pedestrian use.
- I. Operable Window Openings: For most applications, the selection of fixed glazing is preferred over operable windows.

### 1.3 GLAZING SYSTEMS FOR RENOVATIONS

- A. Window refurbishment or replacement shall be considered for all significant building renovations, both for performance and esthetic reasons. The new or refurbished windows shall be in character with the building architecture, while still meeting or exceeding the requirements of this section as fully as possible. For historic buildings, the renovation or replacements details shall be reviewed and approved by the Preservation of Historic Buildings and Sites Committee (PHBSC).

### 1.4 VIEW WINDOWS AND SIDE LIGHTS:

- A. View windows in new corridor and stairwell fire/smoke doors shall be vertical style in a fire rated metal frame. The height of the glass shall be 25" clear. The width shall be 6" clear unless Life Safety and Fire Codes require 100 square inches maximum, in which case the width shall be 4" clear. Locate the window frame edge 10" from the door edge (latch side), with bottom edge of the window frame 48" from the floor.
- B. In new buildings, or areas of major renovation in existing buildings, view windows in doors shall be vertical style, 25" clear height and 6" clear width unless Life Safety and Fire Codes require 100 square inches maximum, in which case the width shall be 4" clear. Locate the window frame edge 10" from the door edge (latch side), with bottom edge of the window frame 48" from the floor.
- C. As a preferred method in all UF facilities, vertical side lites in hollow metal frames, which are integral with the doorframe, shall be utilized where there is a request or need for an entrance view window into an office suite, reception area, or similar public destination point. The height and width of the side lite and horizontal mullions (muntins) shall match that of the building standard.

### 1.5 QUALITY CONTROL

- A. Pre-Construction Conferences: The University shall coordinate a window or building envelope preconstruction conference for all window installation and replacement projects. Participants should include the University office responsible for administering the project, the University office responsible for maintaining the facility, the Architect/Engineer, Contractor, Window Installation Contractor, Window Manufacturer's representative, and other related trades representatives.

- B. Mock up panel assembly: Depending on the facility, a mock up panel assembly may be required to demonstrate the interfaces of building envelope systems. The project specifications shall indicate the nature of the mock up panel(s). Depending on the complexity of the building envelope systems, it may be necessary to provide schematic details of the mock up panel(s).
- C. Quality Control: The installer shall be certified by the manufacturer and the manufacturer shall certify the installation on completion.
- D. Moisture Intrusion Testing: Depending on the facility, performance testing of installed glazing systems shall be performed to verify that they are installed properly. The project specifications shall indicate the frequency and use of standard field test procedures developed by AAMA and ASTM.
  - 1. AAMA 501 – Voluntary Specification for Field Testing of Windows and Sliding Glass Doors
  - 2. AAMA 502 – Voluntary Specification for Field Testing of Metal Storefronts, Curtain Walls and Sloped Glazing Systems
  - 3. ASTM E1105 – Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors and Curtain Walls by Uniform or Cyclic Static Air Pressure Difference
- E. Building Commissioning: The University may include the Building Commissioning as part of the project requirements. For certain projects, the Building Commissioning will include the Building Envelope, which includes window glazing systems. The project specifications should provide information to outline the Building Envelope Commissioning requirements.

END OF SECTION