

SERIES 800 FIXED VINYL WINDOWS

**PART 1 GENERAL**

1.1 SECTION INCLUDES

- A. New Construction Windows.
  - 1. Fixed windows

1.2 RELATED SECTIONS

- A. Section 05450: Cold Formed Metal Framing.
- B. Section 06100: Rough Carpentry.
- C. Section 06200: Finish Carpentry.
- D. Section 07460: Siding.
- E. Section 07920: Joint Sealants.

1.3 REFERENCES

- A. AAMA/WDMA/CSA 101/I.S.2/A440-17 North American Fenestration Standard / Specification For Windows, Doors, And Skylights.
- B. ASTM E 283-04 (2012) - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.
- C. ASTM E 330-14 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
- D. ASTM E 2190-10 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units.
- E. NFRC 100-2020 / 200-2020 – Procedure for Determining Fenestration Product U-Factors and Solar Heat Gain.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Submit the following documents for each type of window.
  - 1. Manufacturer's technical data, product descriptions and installation guides.
  - 2. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
  - 3. Manufacturer's head, jamb and sill details for each window type specified.

- C. Verification Samples: Provide operating units of each style window specified.
  - 1. Verification samples may be operating scaled-down mock-ups of actual-size units.
  - 2. Operating hardware such as balances, sash locks and weather-stripping.
  - 3. Verification samples will be returned to manufacturer's representative at project closeout.
- D. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum ten (10) years producing vinyl (PVC) windows.
- B. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size.
- C. Provide window units independently tested and found to be in compliance with AAMA/WDMA/CSA 101/I.S.2/A440-17 performance standards listed above.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
  - 1. Finish areas designated by Architect.
  - 2. Do not proceed with remaining work until workmanship and color are approved by Architect.
  - 3. Refinish mock-up area as required to produce acceptable work.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver windows to project site in undamaged condition; handle windows to prevent damage to components and to finishes.
- B. Store products in manufacturer's unopened packaging, out of direct sunlight or high temperature locations, until ready for installation.

#### 1.7 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.

#### 1.8 WARRANTY

- A. Submit manufacturer's standard warranty against defects in workmanship and materials.
  - 1. Limited Lifetime Limited Transferable warranty on extruded solid vinyl member and component parts. Insulated glass is warranted against material obstruction of transparency resulting from film formation or dust collection on the interior glass surfaces for a period of twenty (20) years. Consult warranty for complete details.
  - 2. The warranty period for commercial project work such as apartments, housing authorities and other buildings not used by individual homeowners is 10 years, covering all vinyl, glass and component parts. Consult warranty for complete details.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Crystal Window & Door Systems located at: 31-10 Whitestone Expressway, Flushing, NY 11354; Tel: 718.961.7300; Fax: 718.460.4594; Email: [marketing@crystalwindows.com](mailto:marketing@crystalwindows.com) ; Web: [www.crystalwindows.com](http://www.crystalwindows.com)
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.
- D. Substitutions must be submitted to Architect two weeks prior to bid opening.

### 2.2 FIXED - CRYSTAL SERIES 310 (New Construction)

- A. Performance:
  - 1. Structural Rating: LC-PG50-FW - Test Size: 72 inches x 84 inches Twin in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-17
  - 2. Thermal Transmittance: The following values are in accordance with NFRC 100, 200 and 500:
    - a. With Low-E / Argon: U-Factor - 0.27 Btu/Hr-Ft<sup>2</sup>-F, SHGc – 0.31
- B. Operation: Glass unit shall be fixed in a frame. Window can be re-glazed by removing the snap-in glazing bead from inside.
- C. Materials: All vinyl extrusions shall be rigid 100% virgin PVC. Frame shall have a main wall thickness of 0.060" and tubular hollows for strength and thermal efficiency.
- D. Frame construction: Frame shall have an integral pre-punched nailing fin along the perimeter for new construction. All corners shall be mitered and fusion welded. Frame depth shall be 2-7/8".
- E. Glazing: Glazing unit shall be a 3/4" thick insulating glass consisting of two sheets of 1/8" thick argon filled Low-E glass in a desiccant-filled metal spacer system (intercept insulating unit). A butyl sealant shall be extruded around the entire perimeter of the spacer to achieve a seal. Glazing unit shall be back bedded with glazing tape on the frame and snap-in glazing bead.
- F. Finish: Shall be solid vinyl in off white. Optional Black or Bronze Two-tone Cap stock.
- G. Options: Grids – Colonial, Georgian, Applied, Prairie (Flat) and Diamond aluminum in-glass in white, black or two tone colors are available. Glazing – obscure, clear anneal and tempered glass can be used. Field mulled or factory mulled units are available.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Contractor must verify rough opening size is of sufficient size to receive window unit and complies with manufacturer's requirements for opening clearances.
- B. Confirm that sill plate is level.
- C. Architect must be notified of unacceptable conditions before proceeding with installation.

### **3.2 INSTALLATION**

#### **3.3 Contractor must install window unit in accordance with manufacturer's printed instructions.**

- A. Apply sealant around perimeter of window unit between nail fin and exterior sheathing of wall.
- B. Install window unit level and plumb. Center window unit in opening and secure window unit by nailing through nail fin.
- C. Flash window in accordance with AAMA's "Standard Practice for Installation of Windows with a Mounting Flange in Stud Frame Construction".
- D. Insulate between window frame and rough opening with suitable insulation.

### **3.4 ADJUSTING**

- A. Installer must adjust units for being square, levelled and plumb.

### **3.5 CLEANING**

- A. Clean soiled surfaces and glass prior to substantial completion.

### **3.6 PROTECTION**

- A. Protect window unit from damage until substantial completion. Repair or replace damaged units.

END OF SECTION