

SECTION 04820
GLASS UNIT MASONRY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. The provisions of the general Conditions, Supplementary Conditions, and the Sections included under Division 1, General Requirements, are included as a part of this Section.

1.2 SECTION INCLUDES:

- A. Exterior located glass masonry units
- B. Mortar bed and pointing mortar and sealant
- C. Perimeter treatment

1.3 REFERENCES

- A. ASTM A123 - Zinc (Hot-Galvanized) Coatings of Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strips.
- B. ASTM C270 - Mortar for Unit Masonry
- C. ASTM C780 - Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.
- D. Florida Building Code.
- E. ASCE 7-98 – Minimum Design Loads for Buildings and other Structures.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide data for glass units and accessories.
- C. Samples: Submit two glass units and two curved units illustrating size variation, color, design, and face pattern.
- D. Manufacturer's Installation Instructions: Indicate special procedures, positioning of reinforcement, perimeter conditions requiring special attention.
- E. Provide current Florida Building Code Product Approval System indicating compliance with both ASCE 7-98 and Large Missile Impact Testing (Small Missile Impact Testing if installed over 30' AFF).

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum three years documented experience and approved by manufacturer.

1.6 MOCKUP

- A. Provide mockup of glass units, reinforcement, and mortar under provisions of Section 01400.
- B. Construct mockup, 2' long x 3' high, which includes glass units with head, jamb, and sill conditions: perimeter chase and construction.

- C. Locate where directed.
- D. Mockup may remain as part of the work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of Section 01600.
- B. Accept glass units on site on pallets; inspect for damage.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Maintain materials and surrounding air temperature to minimum 40°F prior to, during, and 48 hours after completion of masonry work.
- B. Maintain materials and surrounding air temperature to minimum 90°F (32°C) prior to, during, and 48 hours after completion of masonry work.

1.9 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on shop drawings.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Glass block system shall be the product of Pittsburgh Corning Corporation or approved equal.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 GLASS BLOCKS

- A. Glass block system shall be "THICKSET" Series block, hollow, 3-7/8" inches thick, with a Polyvinyl butyral edge coating with the following design values:
 1. Thermal Conductance (U Value): 0.51 Btu/hr sq ft deg F (2.9 W/sq m K); winter night.
 2. Thermal Resistance (R Value): 1.96°F hr sq ft/Btu (0.35 (K sq m)/W).
 3. Visible Light Transmission: 75%.
 4. Shading Coefficient: 0.65.
 5. Pattern: As selected by the Architect.
 6. Face Size: 8" (203 mm) x 8" (203 mm), nominal; sound transmission: 48.
 7. Weight Installed With Mortar: 30-lb/sq ft (146 kg/sq m).
- B. Framing: Framed and anchored with the "KWIK'N EZ" Silicone System to meet Florida Building Code Product Approval System including wind loading to comply with ASCE 7-98 and Large Missile Impact Testing.

2.3 ACCESSORIES

- A. Sealant (caulk): Non-staining; waterproof mastic; silicone type.
- B. Integral Type Water-Repellant: Stearate; as recommended by block manufacturer.
- C. External Type Waterproof: Water based silane sealer; as recommended by block manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that openings are ready to receive work.

3.2 PREPARATION

- A. Clean glass units of substances that may impair bond with sealant.
- B. Establish and protect lines, levels and coursing.
- C. Protect elements surrounding the work of this section from damage or disfiguration.

3.3 INSTALLATION

- A. Erect glass units and accessories in accordance with manufacturer's instructions.
- B. Locate and secure perimeter metal chase.
- C. Coat sill under units with asphalt emulsion as a bond breaker, and allow to dry.
- D. Set panel anchors in sealant bed directly over coating.
- E. Provide full sealant joints. Furrowing not permitted. Remove excess sealant.
- F. Maintain uniform joint width of 1/4".
- G. Place panel reinforcement per the approved Florida Building Code Product Approval System.
- H. Place sealant in joints in accordance with Section 07900. Tool surface to a concave profile.
- I. Remove excess sealant.

3.4 TOLERANCES

- A. Variation From Joint Width: Plus 1/8" and minus 0".
- B. Maximum Variation from Plane of Unit to Adjacent Unit: 1/32".
- C. Maximum Variation of Panel from Plane: 1/8".

3.5 CLEANING

- A. Clean work under provisions of 01700.
- B. Do not scratch or deface units.

3.6 PROTECTION OF FINISHED WORK

- A. Protect finished work under provisions of Section 01500.
- B. Maintain protective boards at exposed external corners. Provide protection without damaging completed work.

END OF SECTION