



**SECTION 08 56 64
SECURITY AND DETENTION GLASS BLOCK WINDOWS / PANELS**

PART 1- GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, applicable provisions of the "CONDITIONS OF THE CONTRACT" and Division 01 Specification Sections, apply to this Section.

1.2 WORK INCLUDED

- A. This Section includes detention solid glass block set in detention glass-block grid systems.
- B. Related Sections include the following:
 - 1. Division 05 Section "Metal Fabrications" for loose steel lintels at glass unit masonry assemblies.
 - 2. Division 07 Section "Joint Sealers" for perimeter joints sealants at exterior detention glass block windows and surrounding masonry.

1.3 RELATED WORK

- A. Related work specified in other sections of the specifications:
 - 1. Section 04 20 00 - Unit Masonry

1.4 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide glass block grid systems capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Rubber Mallet Test: Prior to substantial completion and immediately following building enclosure, conduct rubber mallet test on detention glass block window assembly. From the inside of the building, strike interior face of each solid glass block perpendicular to the window assembly. Glass block or mortar must not show any evidence of cracking mortar joints or dislodged masonry units. Glass block units will be replaced at no cost to the Owner.

1.5 REFERENCES

- A. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure and Temperature Differences Across the Specimen.
- B. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- C. ASTM E547 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Difference.
- D. ASTM A1011 - Standard Specification for Steel, Sheet and Strip, Hot-rolled, Carbon, Structural, High-strength, Low-alloy, High-strength Low-alloy with Improved Formability, and Ultra-high Strength.
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
- F. ANSI Z97.1 - American National Standard for Safety Glazing Materials.
- G. 16 CFR Part 1202 - Consumer Product Safety Commission Architectural Glazing Materials.

1.6 QUALITY ASSURANCE

- A. Manufacturer
 - 1. Minimum of ten (10) years specialized experience in the manufacture of glass block units and systems.

- B. Direct Representation
 - 1. The manufacturer shall provide a direct representative, not a manufacturer's representative, with full knowledge and experience of the product and systems incorporated in this project, to supervise and oversee the installation of contractor's work. NOTE: If applicable to the job.
- C. Installer Qualifications
 - 1. Engage an experienced installer who has completed installations similar in design and extent to those required for this project and whose work has resulted in construction with a record of successful in-service performance.
- D. Single Source Responsibility
 - 1. Provide a prefabricated exterior detention glass block window system produced by a single manufacturer.

1.7 SUBMITTALS

- A. Product Data: Manufacturer's literature on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Verification Samples:
 - 1. Two glass block units of each type specified showing size, design, and pattern of faces.
 - 2. Representative samples of assembly as required for project.
- C. Color samples of finish as selected by owner.
- D. Shop drawings for each type and size of window. Include information not fully detailed in manufacturer's standard product data and the following:
 - 1. Layout and installation details, including anchors.
 - 2. Full size section details of typical composite members, including reinforcement.
 - 3. Accessories
 - 4. Required rough opening dimensions for each scheduled window type enumerated in the exterior detention window schedule.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Handle panels in a manner which will prevent undue stress on component parts, sealants and structural members. Do not rack, or torque, or cause load forces in an inappropriate manner.
- B. The General Contractor will be responsible for the protection and storage of the windows after delivery to the site.

1.9 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.
- B. Do not install glass block units when temperature is 40 degrees F (4 degrees C) and falling.
- C. Coordinate dimensions and fabrication schedule with construction progress to avoid delay of work.

1.10 WARRANTY

- A. Provide manufacturer's standard product warranty for Security & Detention glass block window assemblies of five **(5) years** from the date of Substantial Completion.

1.11 CERTIFICATION

- A. Manufacturer will provide a "Certificate of Compliance" upon completion of installation attesting that all components and installation conform to the requirements on drawings and in specifications. Submittal shall include test reports from independent laboratories indicating conformance to regulatory requirements.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Seves Glass Block Inc.
10576 Broadview Rd, Cleveland, Ohio 44147
440-627-6257 or 877-SEVES11 (877-738-3711)
www.sevesglassblockinc.com inquiry@sevesglassblock.com

2.2 GLASS BLOCK PREFABRICATED SYSTEM

- A. Basis of Design.
 - 1. SEVES LightWise® Architectural Security & Detention System or Approved Equal.

2.3 GLASS BLOCK

- A. Glass Block: General:
 - 1. Finish: Polyvinyl butyral edge coating or latex paint.
 - 2. Framing: Framed and anchored using steel framed grid system.

- B. Glass Block: VISTABRIK® or LAMINATED solid glass block.
 - 1. Physical Properties:
 - a. Weight Installed with Mortar: 40 lbs./sq. ft (195 kg/sq. m).
 - b. Thermal Conductance (U Value): 0.87 Btu/hr. sq. ft deg F (5 W/sq. mK); winter night.
 - c. Thermal Resistance (R Value): 1.15 deg F hr. sq. ft/Btu (0.2 (Ksqm)/W).
 - d. Visible Light Transmission: 80percent
 - e. Sound Transmission: No rating for VISTABRIK® Block unless otherwise indicated.
 - 2. Pattern: Clear or Stippled Finish.
 - a. Size: Face, 8 inches (203 mm) by 8 inches (203 mm), nominal; thickness, 3 inches (76 mm); sound transmission: 53.
 - 3. NOTE: Laminated VISTABRIK® size: 8 inches (203 mm) by 8 inches (203 mm), nominal; thickness 3-1/4 inches (85 mm).

2.4 STEEL FRAMED "T" GRIDS

- A. Grids shall be fabricated using A-36 laser quality carbon steel.
- B. Stainless Steel shall be sandblasted or etched prior to finishing if required.
- C. Finishing shall be **TIGER Drylac**® polyester/epoxy-based Powder Coating on all surfaces. Visit, tiger-coatings.com/us/downloads/color-cards, for RAL colors available.

2.5 ACCESSORIES

- A. Sealant (caulk): Non-staining; waterproof mastic; silicone type meeting the requirements of ASTM C920 shall be used for back-bedding of glass blocks prior to installation into grids.
- B. 1/2" diameter x three inches long, minimum, stainless steel expansion anchors for the purpose of anchoring frames to masonry substrates.
- C. Grout shall be SpectralLock Epoxy Grout as manufactured by Laticrete International.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify that structural members supporting glass blocks are designed for maximum deflection of L/600 under installed load.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install exterior detention glass block window assemblies in strict compliance with the manufacturer's directions, including all materials, reinforcing, accessories, workmanship and cleaning.

3.4 CLEANING

- A Remove excess sealant from glass surfaces immediately following application.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Maintain temperature of glass unit masonry above 40 degrees Fahrenheit (4 degrees Celsius) for first 48 hours after construction.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 08 56 64