PART 1 GENERAL

1.1 RELATED REQUIREMENTS

A. Coordinate glass block work with work before and after.

1.2 OVERALL STANDARDS

A. Perform glass block work following applicable requirements of:
   1. ACI 530 Building Code Requirements for Masonry.
   2. ACI 530.1 Specification for Masonry Structures except as more stringently specified herein.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM). Specifications for:
   1. C144-04 Aggregate for Masonry Mortar.
   3. C207.04 Hydrated Lime.

1.4 QUALITY ASSURANCE

A. Certification: Provide certification by a recognized testing laboratory stating that the glass block assembly has a 3/4 hour fire rating for installation in 1-hour rated walls.

1.5 SUBMITTALS

A. Submit product data, installation instructions, and certification of fire rating.

B. Submit to MDCPS Testing Lab 1 unit of any brand that is proposed as equal to specified unit, for testing in connection with request for substitution.

PART 2 PRODUCTS

Specifier: Normally, select only either hollow glass block, or the more expensive solid glass block. If there should be need for both types, give the locations of each use. It is recommended that only one size unit be selected, and that all horizontal joints carry through, jamb-to-jamb, in each opening. Undulations are cast into the inner faces, leaving the external faces plane. Due to difference in thickness, hollow and solid units cannot be laid up in the same panel or wall.
2.1 HOLLOW GLASS BLOCK  

A. Description: Hollow units made of colorless glass, PVB-coated at edges, for vertical installation as a wall, or an opening in a wall, not horizontally (in floor).
   1. Thickness: 3.875 in.
   2. Nominal face dimension: [6x6 in.] [8x8 in.] [12x12 in.] [6x8 in.] [4x8 in.].
   3. Degree of visual distortion where clear vision is not to be provided: Provide a slightly wavy undulation in each face shell that provides maximum light transmission. Do not use ribbed, fluted, gridded or diamond patterns cast into the inner surface of faces.
   4. Provide corner and radius units for corner and curved wall construction, also end units for exposed wall ends.

Specifier: Select either Clear or Obscure, or both. If both are selected, be sure to note on the Drawings precisely where each is to be used.

B. Product / Producer:
   2. Obscure glass block: Endura Regular Series, by Pittsburgh Corning.
   3. Equal in quality and performance as reviewed and approved by A/E and Board.

2.2 SOLID GLASS BLOCK

A. Description: Solid units made of colorless glass, PVB-coated at edges, for vertical use.
   1. Thickness: 3 in.
   2. Nominal face dimension: 8x8 in.
   3. Provide corner and end units at any corners and ends.

B. Product / Producer:
   1. Obscure solid glass block: Vistabrik, by Pittsburgh Corning.
   2. Equal in quality and performance as reviewed and approved by A/E and Board.

2.3 ACCESSORIES

A. Mortar. 1800 lb/in² compressive strength at 28 days.
   1. Mix: ASTM C270, Type S: 1.0 part white portland cement / 0.5 part hydrated lime / 4.0 parts white sand.
      a. Portland cement: ASTM C150, Type I or II.
      b. Mortar aggregate: ASTM C144.
      c. Hydrated lime: ASTM C207, Type S.

B. Horizontal Joint Reinforcement: 2 in wide x 0.188 in. (9 ga) continuous deformed ASTM A951 steel side wires and cross ties 2 in. oc, hot dip galvanized after welding. Provide preformed corner pieces.

C. Perimeter channels: 18 ga stainless steel, matte or brushed finish, with smooth edges.

Specifier: Adjust 1-1/4 in. channel depth if needed to permit partial recessing in finish materials such as gypsum board or wood paneling. However, depth of channel shall be no less than 3/4 in.

1. Size for hollow glass block: 4 x 1.250 in.
2. Size for solid glass block: 3.125 x 1.250 in.
D. Panel Anchors. 1.75 x 16 in. galvanized perforated steel.

E. Expansion Joints. 0.375 x 3 in. polyethylene foam.

F. Sealant:
   1. For setting glass block in channels: High modulus silicone or structural silicone.
   2. Other joints: Low modulus (softer) white silicone, unless clear is noted on Drawings.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install glass block following producer’s published instructions except as more stringently specified herein.

B. Anchor each panel of glass block in perimeter channels that are securely bolted to structure at sill, head and jambs of each opening, and where a glass block wall abuts any other construction. Do not erect any glass block except by setting in perimeter channels.

C. Lay glass masonry units plumb, true to line, with level and accurately spaced courses.
   1. Fasten glass masonry channels to perimeter structure with anchors 12 in. oc when panel width is over 6 ft, and 18 in. oc for narrower panel widths.
   2. Place glass block course reinforcing in every horizontal joint in panel widths over 6 ft., and every other horizontal joint for narrower panel widths.
   3. Insert vertical expansion material at jamb and head joints at perimeter.
   4. Tool joints smooth and concave, before mortar and sealants take their final set.

D. Remove surplus mortar from faces of glass blocks and wipe dry.
   1. Do not use abrasive cleaners (steel wool, wire brush, or acid) when removing mortar or dirt from the faces of glass block. Use plastic cleaning tools wherever possible.