

SECTION 08 81 00 – GLAZING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 DESCRIPTION

- A. Furnish all material, labor, equipment and services necessary for glazing of the building as indicated on the drawings and as described in this specification.

1.03 WORK SPECIFIED ELSEWHERE

Section 08 11 13 - Hollow Metal Doors and Frames
Section 08 14 16 - Flush Wood Doors
Section 08 41 00 - Aluminum Doors, Windows and Frames

1.04 SUBMITTALS

- A. Submit manufacturer's literature on each type of glass specified.

1.05 JOB CONDITIONS

- A. Obtain glass sizes from the work at the building or from the manufacturer of frames, sash, etc., in which the glass is to be set. Responsibility for correct glass sizes rests with Glass and Glazing Subcontractor.

1.06 STANDARDS

- A. Acceptable manufacturers for glass substrate: Vitro Architectural Glass, Guardian Industries Corp., Libby- Owens-Ford Co., PPG Industries, Inc., Glass Group and Saint-Gobain/Euroglass. Acceptable fabricators for laminated units are limited to: Viracon, Inc., Interpane Glass Co., Guardian Industries Corp., HGP/Tempglass Eastern, Inc. and Cardinal IG.
- B. Manufacturer of insulating glass shall warrant that insulating glass will not, for a period of ten years from date of manufacture, develop obstruction to vision due to film formation or dust collection due to failure of hermetic seal, and that all non-conforming glass will be replaced, but not installed, without cost to Owner.
- C. AFPC V2 2701.1 "Each light shall bear the manufacturer's label designating the type and thickness of glass." AFPC V2 2701.2 "Each unit of tempered glass shall be permanently identified by the manufacturer. The identification shall be etched or ceramic fired on the glass and be visible when the unit is glazed."

- D.** AFPC V2 2703.1 "Individual glazed areas in hazardous locations such as those indicated in 2703.2 shall pass the test requirements of 'Safety Standard for Architectural Glazing Materials Consumer Product Safety Commission (CPSC) 16 CFR 1201' or by comparative test shall be proven to produce at least equivalent performances." **EXCEPTIONS:**
1. Polished wire glass for use in fire doors, fire windows and view panels in 1-hr fire resistant walls and hazardous locations in 2703.2.1 (6) and 2703.2.1(7) shall comply with ANSI Z97.1.
 2. Approved plastic materials used as glazing in hazardous locations shall comply with ANSI Z97.1.
- E.** AFPC V2 2703.2.1. "The following shall be considered specific hazardous locations for the purposes of glazing:
1. Glazing in ingress and egress doors except wired glass in required fire doors and jalousies.
 2. Glazing in fixed and sliding panels of sliding (patio) door assemblies and panels in swinging doors.
 3. Glazing in storm doors.
 4. Glazing in all unframed swinging doors.
 5. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers.
 6. Glazing in any portion of a building wall enclosing these compartments where the bottom edge of the glazing is less than 60 inches above the drain inlet.
 7. Glazing in an individual fixed or operable panel adjacent a door where the nearest vertical edge is within a 24" arc of the door in a closed position and whose bottom edge is less than 60" above the floor or walking surface.
 8. Glazing in an individual fixed or operable panel, other than those locations described in Items 5 and 6 above, that meets all of the following conditions:
 - a. Exposed area of an individual pane greater than 9 sq. ft.
 - b. Bottom edge less than 18" above the floor;
 - c. Top edge greater than 36" above the floor;
 - d. One or more walking surfaces within 36" horizontal of plane glazing;
 - e. All glazing in railings regardless of area or height above a walking surface including structural baluster panels and nonstructural in-fill panels."

PART 2 - PRODUCTS

2.01 MATERIALS

- A.** Insulating-Glass Units: Pre-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, and complying with ASTM E 774 for class CBA units and requirements specified herein.
1. Provide Kind HS (heat strengthened) float glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of

individual glass lites and to comply with glass design requirements specified in "Performance Requirements" Article.

2. Provide Kind FT (fully tempered) where safety glass is indicated.
 3. Provide high performance low-emissivity coating on No. 2 surface. Min. performance requirements are implicit in products specified as the basis of design.
- B. 1" Insulated Unit: VITRO Architectural Glass. This glass is to be used at all exterior areas.
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| Exterior Lite: | 1/4" VITRO Solarban® 72 on Starphire (#2 |
| Surface) Low-E | |
| Interior Lite: | 1/4" VITRO Clear |
| 1/2" Cavity | Air (Standard) |
| Performance Characteristics | |
| Visible Light transmittance: | 32% |
| Exterior Reflectance: | 7% |
| Solar Heat Gain Coefficient: | 0.19 |
| Winter U-factor/U-Value (Btu/hr-ft ² -F°): | 0.28 |
- C. 1/4" Clear Glass: VITRO Architectural Glass 1/4" clear float glass, or equal.
- D. 1/4" & 3/8" Clear Tempered Glass: VITRO Architectural Glass, 1/4" & 3/8" clear float Herculite Tongless Tempered Safety Glass, or equal.
- E. 3/16" Fire-Rated Glass: FireLite, fire-rated glass ceramic by TGP (Technical Glass Products), or equal.
- F. Setting Blocks: Neoprene, 70-90 durometer hardness.
- G. Spacers: Neoprene, 40-50 durometer hardness.
- H. Glazing Tape: Tremco, pre-shimmed 440 tape, or equal, 1/8" minimum.
- I. Sealant: Dow Corning 781, GE Silicone 1200 or other approved black acid-type silicone rubber elastomeric sealant.
- J. Silicone Glazing Sealant: Tremco Proglaze Silicone Sealant, or equal, translucent.
- K. Plate Glass Mirrors: Clear plate glass (FS DD-G-451), Type I, Class 1, quality g2, 1/4" thick with silver coating, copper protective coating and 2 mil thick paint coating, complying with CS27.
- L. Mirror Mastic: An adhesive setting compound for installation by spot application method with support only at the bottom edge.

- M. Architectural Window Film: Hanita Tek Window Films, Matte 2 mil translucent, install on glass where indicated on Drawings.

PART 3 - EXECUTION

3.01 INSTALLATION GENERAL

- A. Refer to the sections of these specifications containing references to other work which must be executed in conjunction with glass and glazing.
- B. Each glazing installation shall remain airtight and watertight under normal temperature change, wind loads and impact loads without failure or deterioration of glazing or glass.
- C. Protect glass from edge damage at all times during handling and installation.
- D. Do not attempt to cut, nip or abrade glass which is heat strengthened, tempered or coated.
- E. Remove and reset glazing beads without marring or defacing any portion of doors, windows, or beads. Clean glazing channel or framing immediately before glazing.
- F. Install setting blocks of proper size at quarter points of sill rabbet. Provide spacers, inside and out, for all glass larger than 50 united inches except at gasket glazing.
- G. Force sealant into channel to eliminate air pockets and voids and to ensure complete wetting of glass and channel surfaces. Tool exposed surfaces of sealants to provide "wash" away from glass surface. Clean and trim excess glazing material.
- H. Do not remove labels until glass and mirrors are inspected and approved by the Architect. Replace all breakage caused in executing the work or by faulty installation without cost to the Owner. Improperly set glass or glazing which does not fully meet the requirements of its grade will not be accepted. Such glass must be replaced without cost to the Owner.
- I. Clean all glass prior to final inspection.

3.02 LOCATION OF GLASS

- A. Each window, sidelight, frame, transom, and door with opening for glass shall be glazed with glass of the type indicated on the Drawings.

END OF SECTION