

SECTION 08 8117

GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glazing units.

1.02 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; current edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015.
- C. ASTM C1036 - Standard Specification for Flat Glass; 2016.
- D. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2012.
- E. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- F. GANA (SM) - GANA Sealant Manual; 2008.
- G. INTERTEK (DIR) - SpecDirect; current edition.
- H. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2012.
- I. NFPA 257 - Standard on Fire Test for Window and Glass Block Assemblies; 2012.
- J. UL (DIR) - Online Certifications Directory; current listings at database.ul.com.
- K. UL 9 - Standard for Fire Tests of Window Assemblies; Current Edition, Including All Revisions.
- L. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Glass Fabricators:
 - 1. GGI - General Glass International; New Wire: www.generalglass.com/#sle.

2.02 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless noted otherwise.
 - 1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality-Q3.
 - 2. Heat-Strengthened and Fully Tempered Types: ASTM C1048, Kind HS and FT.
 - 3. Fully Tempered Safety Glass: Complies with ANSI Z97.1 and 16 CFR 1201 criteria.
 - 4. Impact Resistant Safety Glass: Complies with ANSI Z97.1 and 16 CFR 1201 criteria.
 - 5. Safety Wired Glass Type: ASTM C1036, Type II - Wired Flat Glass, Quality-Q5, ANSI Z97.1 and 16 CFR 1201 impact criteria for Class B/Category I, and color and performance characteristics as indicated.

2.03 GLAZING UNITS

- A. Type G-4 - Fire-Protection-Rated Glazing: Type, thickness, and configuration of glazing that contains flame, smoke, and does not block radiant heat, as required to achieve indicated fire-rating period of 90 minutes or less.
 - 1. Applications:
 - a. Glazing in fire-rated door assembly.
 - b. Glazing in fire-rated window assembly.
 - c. Other locations as indicated on drawings.
 - d. _____.
 - 2. Glass Type: Safety Wired Glass.

3. Provide products listed by ITS (DIR) or UL (DIR) and approved by authorities having jurisdiction.
4. UL Design Number: _____.
5. Safety Glazing Certification: 16 CFR 1201 Category II.
6. Glazing Method: As required for fire rating.
7. Fire-Rating Period: As scheduled.
8. Markings for Fire-Protection-Rated Glazing Assemblies: Provide permanent markings on fire-protection-rated glazing in compliance with ICC (IBC), local building code, and authorities having jurisdiction
 - a. "D" - meets fire door assembly criteria of NFPA 252, UL 10B, or UL 10C fire test standards.
 - b. "OH" - meets fire window assembly criteria including hose stream test of NFPA 257, or UL 9 fire test standards.
 - c. "H" - meets fire door assembly hose stream test of NFPA 252, UL 10B, or UL 10C fire tests standards.
 - d. "XXX" - placeholder that represents fire-rating period, in minutes.
9. Basis of Design Fabricator:
 - a. GGI - General Glass International; New Wire Glass: www.generalglass.com/#sle.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that the minimum required face and edge clearances are being provided.
- C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.
- D. Verify that sealing between joints of glass framing members has been completed effectively.
- E. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

- A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.
- B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.
- D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.
- E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.
- F. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, etc.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Monitor and report installation procedures and unacceptable conditions.

3.05 CLEANING

- A. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.
- B. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- C. Remove non-permanent labels immediately after glazing installation is complete.
- D. Clean glass and adjacent surfaces after sealants are fully cured.
- E. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.06 PROTECTION

- A. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION