PART 1 GENERAL

1.01 SECTION INCLUDES
A. Glazing units.

1.02 RELATED REQUIREMENTS
A. Section 08 4313 – Fire-Rated Storefronts: Glazing fire-tested as part of the wall assembly.

1.03 REFERENCE STANDARDS
I. INTERKTEK (DIR) - SpecDirect of Listed Products; current edition.

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

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. Basis of Design Glass Fabricator:
   1. GGI - General Glass International; Pyrobel: 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.

2.03 GLAZING UNITS
A. Type G-3 - Fire-Resistance-Rated Glazing: Type, thickness, and configuration of glazing that contains flame, smoke, and blocks radiant heat, as required to achieve indicated fire-rating period exceeding 45 minutes.
   1. See Section 08 4013 for glazing in fire-rated framing assemblies.
2. Applications:
   a. Glazing in fire-rated door assembly.
   b. Glazing in fire-rated window assembly.
   c. Glazing in sidelites, borrowed lites, and other glazed openings in fire-rated wall assemblies.
   d. Other locations as indicated on drawings.
   e. 
3. Glass Type: Multi-laminate annealed glass with intumescent fire retardant interlayers.
4. Provide products listed by INTERTEK (DIR) or UL (DIR) and approved by authorities having jurisdiction.
5. UL Design Number: 
7. Glazing Method: As required for fire rating.
8. Fire-Rating Period: 60, 90, 120 minutes.
   a. "W" - meets wall assembly criteria of ASTM E119 or UL 263 fire test standards.
   b. "D" - meets fire door assembly criteria of NFPA 252, UL 10B, or UL 10C fire test standards.
   c. "H" - meets fire door assembly hose stream test of NFPA 252, UL 10B, or UL 10C fire test standards.
   d. "T" - meets temperature rise of not more than 450 degrees F (232 degrees C) above ambient at end of 30 minutes fire exposure in accordance with NFPA 252, or UL 10C fire test standards.
   e. "XXX" - placeholder that represents fire-rating period, in minutes.
10. Manufacturers:
   a. GGI - General Glass International; Pyrobel: 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. 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. Glass and Glazing product manufacturers to provide field surveillance of the installation of their products.
C. 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