

SECTION 08800

GLASS AND GLAZING

PART 1 GENERAL

1.01 SUMMARY

A. Related Sections:

1. 08110 - Steel Doors and Frames.
2. 08210 - Wood Doors.
3. 08510 - Steel Windows.
4. 08520 - Aluminum Windows.

1.02 REFERENCES

- A. Flat Glass Marketing Association (FGMA): Glazing Manual, 1986 Edition.
- B. CPSC Standard 16CFR 1201 Category II.
- C. American Society for Testing and Materials (ASTM):
 1. C1036-91 Specification for Flat Glass.
 2. C1048-92 Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
 3. E119-95a Test Methods for Fire Tests of Building Construction and Materials.
 4. E152-81a Methods of Fire Tests of Door Assemblies.
 5. E163-84 Methods of Fire Tests of Window Assemblies.
- D. ANSI Z97.1 - Safety Performance and Methods of Test for Safety Glazing Materials Used in Buildings.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's specifications, recommendations for setting blocks, spacers and edge clearance, and installation instructions.
- B. Color Charts: For preformed glazing materials and glazing sealant.
- C. Certificate of Compliance: Certification of tempered and laminated glass complying with Consumer Product Safety Commission 16CFR 1201-CII.

1.04 QUALITY ASSURANCE

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- A. Labels:
 - 1. Label each unit of glass with manufacturer's sticker showing quality, grade, thickness, and type of glass.
 - 2. Labels shall remain in place until approval by the A/E.
- B. Trademarks: Each panel of tempered glass shall bear the manufacturer's trademark.
- C. All glass of each type shall be supplied by the same manufacturer.
- D. Missile impact resistant glazing shall comply with SBC/SSTD 12-99.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Glazing:
 - 1. Guardian.
 - 2. LOF, Libby-Owens-Ford.
 - 3. PPG.
 - 4. St.Gobain Architectural Glass Products.
 - 5. Viracon.
- B. Missile Impact Resistant Glazing:
 - 1. Saf-Glas by Security Impact Glass.
 - 2. Accepted Equivalent.
- C. One-way Glass:
 - 1. Mirrorpane E.P. by LOF Company
 - 2. Accepted equivalent.
- D. Fire Rated Safety Glazing:
 - 1. Superlite by O'Keefe, San Francisco, CA.
 - 2. Firelight Series, Pyrostop, and Pyro Swiss by Technical Glass Products, Kirkland, WA.
- E. Glazing Sealant: Dow Corning 999-A Silicone Building and Glazing Sealant or General Electric Contractors 1000 Sealant.
- F. Backer Rod: Dow Corning Ethafoam SB polyethelene cord or butyl rubber foam cord.

- G. Edge Protection Tape for Laminated Glass: "Scotch Brand Cellopane Tape", manufactured by 3M Company.
- H. Moisture-Resistant Paint for Frameless Mirror Glass: Palmer Products Corp., Mirro-Bac Paint.
- I. Bond Sealer Coat for Mirrors: Palmer Products Corp., Mirro-Mastic Bond.
- J. Mirror Adhesive: Palmer Products Corp., Mirro-Mastic.

NOTE TO SPECIFIER: The security film may be used (but is not required) at the interior face of low security glass to reduce tempered glass breakage hazard. It is not a mandatory requirement by The Board and it shall not be considered as an alternate for security or missile impact resistant glazing requirements.

- K. Security Film: Madico (Protekt), Profilon (P100, P200), or 3M (SH4 CLAR).

2.02 MATERIALS

- A. Tempered Glass: Comply with ASTM C1036 and further processed according to ASTM C1048, Kind FT, which has been fully tempered by the manufacturer's standard horizontal process. Minimum thickness of 1/4".
- B. Missile Impact Resistant Glazing:
 - 1. 0.070" polycarbonate between two 1/4" annealed glass sheets.
- C. Fire Rated Glazing:
 - 1. Wired Glass: ASTM C1036, Type II, Class 1, Form 1, Quality q8, Mesh M2, bearing UL label.
 - 2. Safety Glazing: ASTM E152, ASTM E163, ASTM E119, NFPA 80, NFPA 251, NFPA 252, NFPA 257, CPSC 16 CFR Part 1201, bearing UL label.
- D. Laminated Glass: Two sheets of equal thickness clear heat strengthened glass according to ASTM C1036, Type I, Class 1, Quality q3 permanently laminated with a 0.060 inch thick sheet of clear polyvinyl butyral.
- E. One-way Glass: ASTM C1036, 1/4" thick clear float glass.
- F. Wall Mirrors: 1/4" tempered or laminated glass with

electrolytic copper plated backing, guaranteed for 1 year.

G. Glazing Materials:

1. Glazing Sealant: Curing type gunable elastomeric sealant complying with TT-S-001543A, Type II Class A. Color as selected by A/E.
 - a. Glazing sealants for use with insulating glass units shall be approved by the fabricator of the insulating glass units.
2. Unshimmed Glazing Tape: Butyl-polyisobutylene with 20 to 30 "Shore A" hardness, self-sticking; _____ color.
3. Pre-Shimmed Glazing Tape: Butyl-polyisobutylene with built-in synthetic rubber spacer; 20 to 30 "Shore A" hardness, self-sticking; _____ color.
4. Setting Blocks: Solid neoprene, 80 to 90 Shore A durometer hardness; sizes as required.
5. Edge Blocks: Solid neoprene, 60-70 Shore A durometer hardness; sizes as required.
6. Shims: Solid neoprene, 40 to 60 Shore A durometer hardness; sizes as required.
7. Glazing Gaskets: Compression gaskets, closed cell, neoprene, EPDM or silicone rubber composition designed to provide a water-resistant seal between glass and frame.
8. Primers and Cleaning Agents: Type recommended by the sealant, glass, and glazing accessories manufacturer.

PART 3 EXECUTION

3.01 INSPECTION

- A. Verify glazing frames are acceptable for the correct installation of glass and glazing accessories.

3.02 INSTALLATION

- A. Glass Cutting: Make cuts clean, only moderately convoluted, with flare or bevel not exceeding 1/8 of glass thickness.

1. Unacceptable defects:

- a. Impact chips, spalls, or nipped edges.
- b. Flake chips or shark teeth deeper than 1/4 of glass thickness.
- c. Serration hackle deeper than 1/8 of glass thickness.

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- B. Comply with recommendations of FGMA Glazing Manual, glass manufacturer, manufacturer of sealant, and other glazing accessories.
- C. Do not attempt to cut, seam, nip, or abrade glass tempered or heat strengthened.
- D. Remove and replace glass broken, chipped, cracked, abraded, or damaged during construction.

NOTE TO SPECIFIER: In the following paragraph, use hangars or adhesive.

- E. Install wall mirrors and fasten with non-corrosive, theftproof, concealed hangers according to standard practices. [Fasten with mirror adhesive according to manufacturers instructions.]
- F. Manufacturer's label showing strength, grade, thickness, type, and quality of glass shall remain on each piece of glass until it has been set and inspected.
- G. Guarantee work to be waterproof.

3.03 CLEANING

- A. After glass has been inspected and approved, remove labels and wash and polish glass on both faces before the Board's approval of the project.
 - 1. Comply with glass manufacturer's recommendations for cleaning materials and methods.

END OF SECTION