

1 General

1.1 **SUMMARY**

.1 Section Includes

.1 Labour, Products, equipment and services necessary to complete the Work of this section, including but is not limited to the following:

.1 Glazing for interior and exterior applications including glazed partition, and glass door vision panel.

.2 This section shall be read in conjunction with Appendix A City of Toronto Corporate Building System Design Requirements. Appendix A shall take precedence where there is a conflict in this Section.

1.2 **REFERENCES**

.1 Conform to the latest edition of the following:

.1 ASTM C1503, Standard Specification for Silvered Flat Glass Mirror

.2 CAN/CGSB-12.1-~~M~~, Tempered or Laminated Safety Glass

.3 CAN/CGSB-12.3-~~M~~, Flat, Clear Float Glass

.4 CAN/CGSB-12.8-~~M~~, Insulating Glass Units

.5 CAN/CGSB-19.2-~~M~~, Glazing Compound, Non-Hardening, Modified Oil Type

.6 [IGMA TM-3000, North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use.](#)

~~.5.7~~ [Glass Association of North America, GANA Glazing Manual, latest edition.](#)

1.3 **SUBMITTALS**

.1 Shop Drawings:

.1 Submit Shop Drawings in accordance with Section 01 33 00 Submittals, for fabrication and erection of glazing elements indicating materials, thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details and accessories.

.2 Samples:

.1 Submit one 300 x 300 mm sample of each type of glass in accordance with Section 01 33 00. Samples shall show tints, surface treatments, thickness and details of edge finishing.

.3 Certificates: Submit manufacturer's certification that glass and glazing materials are compatible.

.1 Submit compatibility and adhesion test reports from sealant manufacturer indicating that glazing materials were tested for compatibility and adhesion with glazing sealants. Include sealant manufacturer's interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed for adhesion.

- .2 Compatibility test report from manufacturer of insulating glass edge sealant, indicating that glass edge sealants were tested for compatibility with other glazing materials including sealants, setting blocks, edge blocks and any other material that contacts or can affect the edge seal.

1.4 DELIVERY, HANDLING AND STORAGE

- .1 Deliver materials to the site in original crates and containers with the maker's name and brand distinctly marked thereon and with glass labeled as to types. Do not remove labels on glass until after Work is accepted by the Consultant.
- .2 Store materials within the building, in a clean, dry location. Fully protect materials from damage until ready for use.

2 Products

2.1 MATERIALS

- .1 Tempered Glass (GL-1 & GL-2): conforming to CAN/CGSB-12.1-M, Type 2, Class B, clear float glass. Free from roller and tong marks.

.1 Refer to Section 09 06 00 Product and Finishes Schedule for type, thickness, colour and location.

.2 Exterior Glass (ITGL)

.1 Insulating Glass: Factory sealed double glazed units conforming to CAN/CGSB 12.8. Both panes to be minimum 6 mm thick tempered safety glass for outboard and inboard lites.

.1 The insulating unit panes shall be joined with a edge spacer along all edges ensuring a dehydrated air space with argon gas, and hermetically sealed at the periphery with a factory applied continuous flexible sealer.

.2 Install units in exterior doors, sidelites and transom at main entry.

.3 Size insulating glass units to fit aluminum entrance framing system.

2.2 ACCESSORIES

- .1 Glazing compound (fire doors): Putty.
- .2 Spacer shims and setting blocks: Neoprene, Shore "A" Durometer hardness ~~70~~80-90, 100 mm long, wide enough to extend from fixed stop to opposite face of glass and of height suitable to provide adequate glazing "bite" for setting blocks. Neoprene, Shore "A" ~~40 to~~50 to 60 Durometer hardness, of adequate thickness to provide correct glass to face clearance of at least 3 mm for spacer shims. For glass in fire rated doors (screens) use ULC approved fire resistant setting blocks and spacer shims.
- .3 Glazing channel (for interior glazing): Black extruded neoprene or PVC channel gaskets, of size to suit glazing.
- .4 Glazing compound: One-part clear silicone. GE Canada "Silpruf SCS 2000", Dow Corning "795" or Tremco "Spectrum 2".
- .5 Window Films/Vision Barriers: Refer to Section 08 87 00 Glazing Surface Films.

3 Execution

3.1 INSPECTION OF JOB CONDITIONS

- .1 Inspect openings and frames prepared by other trades into which glass is to be installed. Notify the Consultant in writing, of any conditions which will preclude proper installation. Do not glaze unsatisfactory locations until such conditions have been made good. Commencement of Work implies acceptance of existing conditions.
- .2 Obtain glass dimensions on the job site. Glass shall be 4 mm less than the rebate size in either dimension, with allowance for edge spacers, shims and setting blocks.
- .3 Free rabbets, stops and glass edges of dirt, moisture, oil and other foreign matter detrimental to or obstructing glazing material.

3.2 **GLASS INSTALLATION**

- .1 Glass General Conform to the recommendation of the glazing manual, GANA Glazing Manual.
- .2 Refer to drawings and schedules for locations of each type of glass.
- ~~.3~~ Check that all openings and stops to be painted are primed before commencing Work.
- ~~.2.4~~ At completion of the Work, replace at own expense, glass provided under this section which is broken due to loose setting, binding in the frame, pinched by glazing clips, inadequate or improper use of setting blocks, improper workmanship or other causes.

3.3 **INTERIOR GLAZING**

- .1 Standard wood doors: Install glass with continuous glazing channels on glass edges. Set glass and secure in place with stops butted tight to glazing channels. Secure stops to door with screws provided, with heads slightly below glass stop surface.
- .2 Standard hollow metal frames for screens and borrowed lights: Place setting blocks and spacers as required to support glass. Use a minimum of two setting blocks, locate at one-quarter points. Locate spacers at jamb edges of glass, uniformly spaced at 600 mm o.c. maximum, and 300 mm maximum from top and bottom.
- .3 Fire rated hollow metal doors: Set glass on continuous setting block with 6 mm gap between glazing stops and embed in putty in accordance with NFPA 80 requirements. All exposed joints between the metal and glass shall be struck and pointed.

3.4 **EXTERIOR GLAZING**

- .1 Apply setting blocks at quarter points on all four sides of openings.
- .2 Cut glazing tape to proper length and set against permanent stops approximately 0.8 mm below sightline. Install horizontal strips first, extend over entire width of opening before applying vertical strips. Weld corners together by butting tape and dabbling with sealant.
- .3 Remove backing paper from tape prior to setting glass.
- .4 Apply continuous heel bead between glass and sash.
- .5 Place glass in opening, press tightly and evenly against glazing tape.
- .6 Apply continuous glazing tape on removable stop. Place and screw stop in place with fluorocarbon coated oval head screws. Apply elastomeric sealant cap bead over top between glass and removable stop.

3.5 **IDENTIFICATION OF GLAZING**

- .1 Provide on one side of all glass lites, temporary, easily removable, large safety decals, immediately after glass installation. Maintain safety markings until final clean-up. Remove all markings at time of final clean-up.

End of Section

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