Part 1 GENERAL

1.1 RELATED WORK

1. General Conditions as applicable.
2. Section 08 03 50 20: Conservation of Wood Windows
3. Section 08 03 50 30: Wood Epoxy Consolidation
4. Section 08 03 50 31: Wood Epoxy Patching
5. Section 08 81 00: Glass and Glazing
6. Section 09 03 01 01: Surface Preparation
7. Section 09 91 00: Painting and Finishing

1.2 INTENT

1. The intent of this work is to undertake the removal of existing broken or damaged single glazing panes of glass in existing exterior heritage wood windows and single glazing panes in built-in millwork, interior doors and windows.

1.3 Storage and Protection

1. All new materials and existing components are to be protected from damage throughout the duration of this contract.
2. Once work begins on exterior take necessary measures to protect from moisture until work is completed.

Part 2 MATERIALS

2.1 PUTTY

1. Oil based

2.2 LINSEED OIL

1. Double boiled type

2.3 TURPENTINE

1. Best quality.

2.4 WOOD TRIM AND GLAZING STOPS

1. For sull sash trims and new interior stops match existing species and grain orientation; white oak, maple, birch or ash, FAS clear, free of any knots or other natural imperfections and free of any machining imperfections.

2. Laminated or finger jointed material shall not be permitted.

2.5 ADHESIVE

1. G2 two-part epoxy by Industrial Formulators of Canada Ltd.

2.6 HARDWARE

1. Bronze wood screws (slot heads) and bronze grommets (#6 Window Stop Adjusters by "Ives" Fine Builders Hardware Inc. or approved equal. Oil-rubbed bronze finish.

2.7 GLASS

1. Same appearance, thickness, transparency, colour, texture as the existing glazing, as noted on drawings. Supplied by Section 08 81 00.

2. Note that any variations from existing weight will necessitate adjustments to sash weights of counter-balance system at double hung windows that are equipped with counter-balance system and are noted to remain operable.

2.8 NAILS

1. For holding wood glazing stop use galvanized finishing nails.

2.9 PLYWOOD

1. Plywood for temporary plugs where it is necessary to remove sash shall be Douglas Fir, good both sides, 8 mm (3/8"), exterior grade.

2.10 SASH CORDS

1. As required to match existing. Use sash cords with waxed braided cotton outer and polypropylene core. Where nylon rope has been used as an inappropriate temporary fix for the sash cord, provide replacement to match the standard.

2.11 SASH CHAINS

1. Sash chain specifically for double hung sash sized to suit existing rollers and specific weight. Provide data sheets from manufacturer.

2.12 GLAZING POINTS

1. Non-corrosive type sized appropriately.

Part 3 EXECUTION

3.1 Dismantling

1. All required dismantling, such as removal of sash, associated trim, and glass shall be done with extreme care, taking appropriate precautions not to damage adjacent material or window components themselves.

2. Take care with tools to avoid marring, crushing or splitting components. If necessary, nails which have to be removed should be snapped off on the back of the component rather than driven back through the face.

3. All components, including hardware, which are being dismantled shall be labeled and retained for the duration of the job. Hardware shall be bagged.

4. All disassembled components shall be labeled using the pre-assigned window inventory number, e.g., W1-02, and other information required.

5. Labels shall consist of gasket paper, marked with a waterproof marker, stapled to the component on a hidden surface in a secure manner. Label shall be applied immediately upon removal of the component.

6. Contractor shall store the components in such a way that they are protected from the weather and are accessible for easy reference throughout the job. Objects shall be stored together in logical groups to prevent any object from being misplaced or lost.

7. Sash and other components shall be appropriately stacked, padded and supported to prevent deterioration, warping, abrasion or other forms of damage.

3.2 REGLAZING

1. Remove existing glass as noted on drawings for new glass. Assume replacement of 10 window panes in addition to panes noted on drawings noted on drawings.

2. Install wired glass with wire parallel to sides of openings.

3. Carefully remove all deteriorated glazing compound from glass and rebate only if necessary; where deteriorated this can be done by chisel, otherwise soften with paint stripper or heat. Some experimentation will be required, replacement glass shall be at contractors' expense; anything more than accidental breakage will not be tolerated.

4. Clean all old putty, dirt and paint from the glass and rebates in stiles and rails. Apply one coat of boiled linseed oil, alkyd spar varnish and turpentine (mixed equally) to the rebates; allow drying for 24 hrs.

5. Apply back putty to rebate. Bed glass firmly into position in such a way that it is evenly seated.

6. Match existing glazing stop detail. This will be either by applying non-corroding glazing points at 8"+ -o.c. and near corners or by installing wood cant strips.

7. Apply exterior bevel of putty, straight and neat and in such a way that it lines up with inside face of stiles and rails. Remove excess putty and tool smooth.

8. Allow to cure for 3-4 weeks before shipping or painting. Note that cure time may vary with environmental conditions.

9. Do not field cut or abrade tempered glass.

10. Install glazing within temperature limits recommended by glazing manufacturer.

11. Check to ensure openings and stops to be painted have been primed before commencing installation.

3.3 PUTTY REPAIRS

1. Putty repairs are typically limited to bottom rails of lower sash and meeting rails of upper sash. As this repair technique is done with glass in place exercise caution.

2. Carefully cut out deteriorated putty from corner to corner. Carefully remove wood cant strip and, with a sharp narrow tool, carefully cut out back putty.

3. Clean all old putty, dirt and paint from the glass and rebates in stiles and rails. Apply one coat of boiled linseed oil, alkyd spar varnish and turpentine (mixed equally) to the rebate, including the area behind the glass; allow drying for 24 hrs.

4. Install wood cant strip to match size of existing. Treat all surfaces of cant strip with one coat of boiled linseed oil, alkyd spar varnish and turpentine (mixed equally) first and allow to dry for 24 hrs.

5. Neatly pack space behind glass with back putty. Remove excess and tool smooth.

6. Neatly apply putty bevel. Remove excess and tool smooth.

3.4 INSTALLATION OF STORM WINDOWS

1. Install wood storm windows complete with glass and gaskets to exterior side of single glazed window sashes where noted on the drawings.

2. Supply and install wood trim as noted on drawings.

~~*3.4.3 Drill two 1/8" diameter ventilation holes in the vertical rails of each existing wood sash receiving a sull sash. Space ventilation holes 4" from top rail and 4" from bottom rail along vertical rail either side of wood sash. Locate holes in such a manner to minimize visibility and as shown on drawings.*~~

3.5 RE-SET INTERIOR STOPS

1. Carefully remove vertical stops and pieces at sill, and to ensure that existing screws and grommets have sufficient purchase, glue wood fills into all existing screw holes in frame.

2. Reinstall stops and existing screws and grommets and assume the need to replace approximately 10% of missing screws and grommets.

3. Install new screws and grommets so that spacing is a maximum of 1'-6" on centre.

4. Ensure stops are set so that sash can easily be lifted for 2/3 of its height yet fits snugly in closed position.

3.6 TEMPORARY PLUGS

1. Where it is necessary to remove sash fit opening with plywood panel secured in the plane the interior stops with light framing around perimeter.

2. Plugs to be dust proof, weather proof and vandal proof.

3. Submit shop drawing of proposed installation for review before proceeding. Revise and resubmit as required.

3.7 SECURITY SCREENS

1. At windows where noted, remove security screens to facilitate cleaning, reglazing and painting of windows and frames.

2. Wash, remove any corrosion and repaint security screens.

3. Reinstall security screens.

3.8 REINSTALLATION

1. Reinstall sash to fit snugly and operate smoothly.

2. Thoroughly wax edges of sash immediately before reinstallation.

3. Plane or otherwise adjust as required.

4. Prime and repaint areas that are affected in final fitting.

5. Reinstall any hardware previously removed to facilitate this work.

3.9 FINISHING

1. Remove sealant and compound droppings from finished surface.

2. Periodically clean installed glass during construction to avoid permanent etching and staining.

3. Mark glass lights with temporary, easily removable large safety markings after glass installation. Maintain safety markings until final cleanup. Remove markings at time of final clean-up.

4. Avoid storing materials adjacent to glass.

5. Protect glass from other trades.

End of Section 08 03 50 10