

PART 1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Section 08 03 52.71 – Historic - Wood Window Rehabilitation.
- .2 Section 08 03 80 – Historic - Glazing.
- .3 Section 09 03 91 – Historic - Painting.

1.02 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-O141-05 (2009), Softwood Lumber.
- .2 National Lumber Grading Authority (NLGA)
 - .1 NLGA Standard Grading Rules for Canadian Lumber 2007.

1.03 DEFINITIONS

- .1 Parting bead: a small, linear moulding with rectangular section, guiding the movement of the sashes.
- .2 Run through: the tenon is allowed to run through the mortised member for wedging.
- .3 Wedged: a wood wedge used in a dovetail-shaped mortise to secure a tenon.
- .4 Draw-bore pin: a tapered wood peg used to fasten a mortise and tenon joint.
- .5 Blind mortise: a mortise joint in which the tenon is entirely surrounded by wood.
- .6 Dowelled sash: a wood sash with rails and stiles fastened with dowels rather than tenons.
- .7 Tongued: a projecting portion of a member, such as a tenon.
- .8 Half-lapped: a lap joint in which a rectangular notch in the end of one wood member overlaps a corresponding rectangular notch in the end of another wood member.
- .9 Stop chamfered: a corner chamfer that does not extend to the end of the timber or moulding; typically terminated with a small, triangular plane surface.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop drawings:
 - .1 Submit drawings.
 - .2 Indicate materials and details, including assemblies, in large-scale for each replicated sash type, full-size profiles of components, elevations of unit, description of related components and exposed finishes, weatherstripping, and fasteners.
 - .3 Prior to preparation of shop drawings, take field measurements as material is removed to confirm dimensions and details.
- .3 Samples:

- .1 Submit for review and acceptance of each unit.
- .2 Samples will be returned for inclusion into work.
- .3 Submit one complete full size sample of each replicated sash type.
- .4 Include glazing, weatherstripping, surface finish and hardware.

.4 Photographic Documentation:

- .1 Submit photographs for each stage of work and each mock-up in accordance with Section 08 03 52.71 – Historic - Wood Window Rehabilitation.

1.05 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for windows for incorporation into manual.
- .3 Record Documentation:
 - .1 Submit assembled documentation in the form of a Conservation Report to document every step of the restoration process from examination of exiting conditions to reinstallation.
 - .2 Submit Database to locate interventions by type for each window unit.

1.06 QUALITY ASSURANCE

- .1 Qualifications: in accordance with Section 08 03 52.71 – Historic - Wood Window Rehabilitation supplemented as follows.
 - .1 Carry out window fabrication work in this section using skilled tradesperson trained and experienced in fabrication and installation of wood windows.
 - .2 Window fabricators: experienced in use of specified materials.

1.07 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials off ground indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect windows from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .4 Packaging Waste Management: remove for reuse and return of pallets, crates, padding, and packaging materials in accordance with Section 01 00 10 – General Instruction, Waste Management.

1.08 EXTENDED WARRANTY

- .1 For the work of this Section, the 12 month warranty period is extended to 60 months for the new wood sashes and related accessories, and to 24 months for workmanship including warping, fit and operation.

PART 2 PRODUCTS

2.01 MATERIALS

- .1 Softwood lumber: to CAN/CSA-O141 and National Lumber Grades Authority (NLGA) requirements, with maximum moisture content of 12%.
- .2 Hardwood lumber: to National Hardwood Lumber Association (NHLA) requirements, moisture content of maximum 12%.
- .3 Glazing: in accordance with Section 08 03 80 – Historic - Glazing.
- .4 Hardware: in accordance with Section 08 03 52.71 – Historic - Wood Window Rehabilitation.
- .5 Weatherstripping: in accordance with Section 08 03 52.71 – Historic - Wood Window Rehabilitation.
- .6 Finishes: in accordance with Section 09 03 91 – Historic - Painting.

2.02 FABRICATION

- .1 Stiles and rails to be one piece solid stock.
- .2 Replicated sashes, to replace existing sashes as indicated in the Window Schedule:
 - .1 Grade: face to equal in appearance premium grade “C” select.
 - .2 Material: stiles and rails to be made from Douglas fir, quarter sawn. Moisture content of components not to exceed 10 percent at time of fabrication. Pegs and wedges to be oak 10 mm square or slightly diamond shaped.
- .3 Construction:
 - .1 Mortise and Tenon:
 - .1 Top rail and stile single mortise and tenon run through wedged draw-bore pegged.
 - .2 Meeting rail and stile single dovetailed mortise and tenon run through draw-bore pegged.
 - .3 Bottom rail and stile single mortise and tenon run through wedged draw-bore pegged.
- .4 Dry fit and assemble window components before completing fabrication.
- .5 Once stiles and rails are ready for assembly, prime end grain and inside mortice and tenons before assembly in accordance with Section 09 03 91 – Historic - Painting.
- .6 Fabricate units square and true with maximum tolerance of plus or minus 1.5 mm for units with a diagonal measurement of 1800 mm or less and plus or minus 3 mm for units with a diagonal measurement over 1800 mm.
- .7 Once stiles and rails are ready for assembly prime end grain and inside mortice and tenons before assembly in accordance with Section 09 03 91 – Historic - Painting.

PART 3 EXECUTION

3.01 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation.
 - .1 Visually inspect substrate.
 - .1 The outside faces of frames, top and sides, to be primed in accordance with Section 09 03 91 – Historic - Painting before sash installation.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied.

3.02 INSTALLATION

- .1 Install glazing in accordance with Section 08 03 80 – Historic - Glazing.
- .2 Paint in accordance with Section 09 03 91 – Historic - Painting.
- .3 Install weatherstripping, hardware, sashes and related wood window components in accordance with Section 08 03 52.71 – Historic - Wood Window Rehabilitation.

3.03 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 00 10 – General Instructions, Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 00 10 – General Instructions, Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 00 10 – General Instructions, Waste Management.

3.04 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by window installation.

END OF SECTION