

Modifications to Unit 4	Architectural Woodwork	Section 06 40 00
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Project No. R.061888.001		2016-06-24

PART 1 GENERAL

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| <u>1.1 REFERENCES</u> | <ul style="list-style-type: none"> .1 American National Standards Institute (ANSI) <ul style="list-style-type: none"> .1 NPA A208.1-2009, Particleboard. .2 American Society for Testing and Materials International (ASTM) <ul style="list-style-type: none"> .1 ASTM E1333-14, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber. .2 ASTM D2832-92(2011), Standard Guide for Determining Volatile and Non-volatile Content of Paint and Related Coatings. .3 ASTM D5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products. .3 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI) <ul style="list-style-type: none"> .1 Architectural Woodwork Quality Standards Illustrated, 8th edition, Version 1.0(2005). .4 Canadian Standards Association (CSA International) <ul style="list-style-type: none"> .1 CSA B111-74(R2003), Wire Nails, Spikes and Staples. .2 CSA O112.4 Series-M1977(R2006), Standards for Wood Adhesives. .3 CSA O112.5-Series-M-1977(R2006), Urea Resin Adhesives for Wood (Room- and High-Temperature Curing). .4 CSA O112.7-Series M-1977(R2006), Resorcinol and Phenol-Resorcinol Resin Adhesives for Wood (Room- and Intermediate-Temperature Curing). .5 CSA O115-M1982 (R2001), Hardwood and Decorative Plywood. .6 CSA O121-08(R2013), Douglas Fir Plywood. .7 CSA O141-05(R2014), Softwood Lumber. .8 CSA O151-09 (R2014), Canadian Softwood Plywood. .9 CSA O153-13, Poplar Plywood. .10 CSA Z760-94(R2001), Life Cycle Assessment. |
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- .5 Environmental Choice Program (EPC)
 - .1 ECP-44, Adhesives, current edition.
 - .2 ECP-45, Sealants and Caulking Compounds, current edition.
 - .3 ECP-76, Surface Coatings, current edition.
- .6 International Organization for Standardization (ISO)
 - .1 ISO 14040-2006, Environmental Management-Life Cycle Assessment - Principles and Framework.
 - .2 ISO 14041-1998, Environmental Management-Life Cycle Assessment - Goal and Scope Definition and Inventory Analysis.
- .7 National Electrical Manufacturers Association (NEMA)
 - .1 ANSI/NEMA LD-3-05, High-Pressure Decorative Laminates.
- .8 National Hardwood Lumber Association (NHLA)
 - .1 Rules for the Measurement and of Inspection Hardwood and Cypress 1998.
- .9 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2005.

1.2 SUBMITTALS

- .1 Provide Submittal submissions: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Indicate details of construction, profiles, jointing, fastening and other related details.
 - .1 Scales: profiles full size, details 1/2 full size.
 - .2 Indicate materials, thicknesses, finishes and hardware.
 - .3 Indicate locations of service outlets in casework, typical and special installation conditions, and connections, attachments, anchorage and location of exposed fastenings.
- .3 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.

- .1 Submit duplicate samples: sample size 300 x 300 mm samples of hardwood veneered plywood, plastic laminate, stainless steel and melamine and 300 mm long samples of hardwood edging, unless specified otherwise.
- .2 Provide duplicate colour samples of laminated plastic for colour selection.
- .3 Provide duplicate samples of laminated plastic joints, edging, cutouts and postformed profiles.
- .4 Quality assurance submittals:
 - .1 Manufacturer's Instructions: manufacturer's installation instructions.

1.3 QUALITY ASSURANCE

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.
- .3 Delivery, Storage, and Handling:
 - .1 Deliver, handle, store and protect materials of this section.
 - .1 Protect millwork against dampness and damage during and after delivery.
 - .2 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.
 - .2 Waste Management and Disposal:
 - .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 15 % or less in accordance with following standards:
 - .1 CSA 0141.
 - .2 NLGA Standard Grading Rules for Lumber. Canadian
 - .3 AWMAC custom grade, moisture content as

specified.

- .2 Machine stress-rated lumber is acceptable for all purposes.
- .3 Hardwood lumber: moisture content 15 % or less in accordance with following standards:
 - .1 National Hardwood Lumber Association (NHLA).
 - .2 AWMAC custom grade, moisture content as specified.
- .4 Douglas fir plywood (DFP): to CSA 0121, standard construction.
- .5 Canadian softwood plywood (CSP): to CSA 0151, standard construction.
- .6 Substrate for plastic laminate: Combination core plywood with a random waferboard inner core with Type II (interior) bond. Acceptable products:
 - .1 "Multi-Core".
 - .2 "Norcor".
 - .3 or preapproved product.
- .7 Laminated plastic for flatwork: to NEMA LD3, Grade VGL, Type S, 1.27 mm thick; satin finish, see drawings for finish schedule.
- .8 Hardwood edging - 19x38mm solid birch edging as detailed.
- .9 Nails and staples: to CSA B111.
- .10 Bolts, nuts, washers, lags, pins and screws: of size and type to suit application. Where fasteners are exposed, use stainless steel screws with stainless steel or chrome cup washers, and space neatly and evenly to the satisfaction of the Departmental Representative. Use tamper proof Torx type fasteners where indicated.
- .11 Sealant: refer to Section 07 92 00.
- .12 Adhesives and glues: nationally recognized brands suitable for intended application, water resistant, with acceptable low level emissions as follows:
 - .1 Total VOC concentration less than 0.5 mg/m3/hour.
 - .2 Formaldehyde: must be less than 1 part per

billion (1 PPB).

- .3 4 Phenycyclohexane (4-PCH): must be less than 1 part per billion (1-PPB).

2.2 FABRICATION

- .1 Set nails and countersink screws apply wood filler to indentations, sand smooth and leave ready to receive finish.
- .2 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings.
- .3 Veneer laminated plastic to core material in accordance with adhesive manufacturer's instructions. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface. Use continuous lengths up to 3000 mm.

2.3 FINISHING

- .1 Refer to Section 09 91 23 - Interior Painting. All hardwood to be shop finished including clear finishes and stained finishes, using materials and application methods specified in Section 09 91 23.

PART 3 EXECUTION

3.1 INSTALLATION

- .1 Do architectural woodwork to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.
- .2 Install prefinished millwork at locations shown on drawings. Position accurately, level, plumb straight.
- .3 Fasten and anchor millwork securely.
- .4 Install steel leg to table top as detailed, so that it is level and will support all superimposed loading. Fasten to table top using security bolts.
- .5 Site apply laminated plastic to units as

indicated. Adhere laminated plastic over entire surface. Make corners with hairline joints. Use full sized laminate sheets. Make joints only where approved. Slightly bevel arises.

- .6 For site application, offset joints in plastic laminate facing from joints in core.

3.2 CLEANING

- .1 Clean millwork and outside surfaces.
- .2 Remove excess glue from surfaces.

3.3 PROTECTION

- .1 Protect millwork from damage until final inspection.

END OF SECTION