

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 01 00 10 – General Instructions.

1.2 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI/HPVA HP-1-10, Standard for Hardwood and Decorative Plywood.
- .2 ASTM International
 - .1 ASTM E1333-10, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.
 - .2 ASTM D2832-92(R2011), Standard Guide for Determining Volatile and Nonvolatile 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)
 - .1 Architectural Woodwork Quality Standards Illustrated, 8th edition, Version 1.0 (2009).
- .4 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.
- .5 CSA International
 - .1 CSA B111-74(R2003), Wire Nails, Spikes and Staples.
 - .2 CSA O121-08, Douglas Fir Plywood.
- .6 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .7 Green Seal Environmental Standards (GS)
 - .1 GS-11-11, Paints and Coatings.
 - .2 GS-36-11, Commercial Adhesives.
- .8 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .9 International Organization for Standardization (ISO)
 - .1 ISO 14040-2006, Environmental Management-Life Cycle Assessment - Principles and Framework.
 - .2 ISO 14041-98, Environmental Management-Life Cycle Assessment - Goal and Scope Definition and Inventory Analysis.
- .10 National Hardwood Lumber Association (NHLA)
 - .1 Rules for the Measurement and Inspection of Hardwood and Cypress 2011.
- .11 National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber 2010.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 00 10 – General Instructions.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for architectural woodwork and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Shop Drawings:
 - .1 Indicate details of construction, profiles, jointing, fastening and other related details.
 - .1 Scales: profiles full size, details half 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.
- .4 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Submit duplicate samples of walnut veneer laminated onto plywood substrate and metal laminated plywood: sample size 300 x 600 mm.
 - .3 Submit duplicate samples of laminated showing joints, edging, cutouts and postformed profiles.
- .5 Certifications: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
 - .1 Low-Emitting Materials:
 - .1 Submit listing of adhesives and sealants and coatings used in building, comply with VOC and chemical component limits or restrictions requirements.
 - .2 Submit listing of composite wood products used in building, stating that they contain no added urea-formaldehyde resins, and laminate adhesives used in building, stating that they contain no urea-formaldehyde.

1.4 QUALITY ASSURANCE

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood panels to CSA and ANSI standards.
- .3 Mock-ups:
 - .1 Construct mock-ups in accordance with Section 01 00 10 – General Instructions.
 - .1 Shop prepare one elevator interior panel and shop applied finishes, and install where directed by Departmental Representative.
 - .2 Allow 24 hours for inspection of mock-up by Departmental Representative before proceeding with Work.
 - .3 When accepted, mock-up will demonstrate minimum standard for Work.
 - .4 Do not proceed with work prior to receipt of written acceptance of mock-up by Departmental Representative.
 - .5 Mock-up may not remain as part of finished work.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 00 10 – General Instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address. Protect millwork against dampness and damage during and after delivery.
 - .1 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.
- .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 architectural woodwork from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .4 Develop Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 00 10 – General Instructions.
- .5 Packaging Waste Management: remove for reuse as specified in 01 00 10 – General Instructions.

Part 2 Products

2.1 MATERIALS

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 15 % or less in accordance with following standards:
 - .1 AWMAC premium grade, moisture content as specified.
- .2 Machine stress-rated lumber is acceptable for all purposes.
- .3 Hardwood lumber: moisture content in accordance with following standards:
 - .1 AWMAC premium grade, moisture content as specified.
- .4 Douglas fir plywood (DFP): to CSA O121, standard construction, CAN/CSA-Z809 or FSC or SFI certified.
 - .1 Plywood resin to contain no added urea-formaldehyde.
- .5 Hardwood plywood: to ANSI/HPVA HP-1, CAN/CSA-Z809 or FSC or SFI certified.SPEC
 - .1 Plywood resin to contain no added urea-formaldehyde.
- .6 Birch plywood: to AWMAC Paint Grade CAN/CSA-Z809 or FSC or SFI certified.
 - .1 Plywood resin to contain no added urea-formaldehyde.
- .7 Laminated plastic backing sheet: Grade BK, Type HD S LD minimum of 0.5 mm thick or same thickness and colour as face laminate.
- .8 Nails and staples: to CSA B111.
- .9 Wood screws: plain, type and size to suit application.
- .10 Splines: wood.

- .11 Sealant: in accordance with Section 07 92 00 - Joint Sealants.

- .1 Sealants: VOC limit 250 g/L maximum.

- .12 Laminated plastic adhesive:

- .1 Adhesive: contact adhesive to CAN/CGSB-71.20.

- .2 Adhesives: VOC limit 120 g/L maximum.

- .3 Clear Wood Finishes: VOC limit 350 g/L maximum.

- .4 Paints: VOC limit 50 g/L maximum.

2.2 MANUFACTURED UNITS

- .1 Walnut Veneer Panels: Design intent is the wood pattern is viewed as a piece of art that has been installed in panels.

- .1 Fabricate panels to AWMAC premium grade supplemented as follows:

- .2 Hardwood plywood:

- .1 Thickness: 19 mm.

- .2 Number of plies: 7.

- .3 Face veneer: American Walnut species, AA grade, rotary cut, sequential matching requirement.

- .4 Back veneer: American Walnut species, C grade, rotary cut, matching requirement.

- .5 Core: veneer.

- .6 Bond: Type II.

- .7 Sanding: no sanding.

- .8 Grain direction: vertical.

- .3 Solid wood edging: American Walnut species, AA grade, 19 mm thick.

- .2 Stainless Steel Panels:

- .1 Fabricate panels to AWMAC premium grade supplemented as follows:

- .2 Douglas Fir plywood substrate:

- .1 Thickness: 19 mm.

- .2 Number of plies: 7.

- .3 Face veneer: Douglas Fir.

- .4 Back veneer: Douglas Fir. Core: veneer.

- .5 Bond: Type II.

- .6 Sanding: no sanding.

- .7 Grain direction: vertical.

- .3 Face laminate: Rigidized stainless steel with brushed finish wrapped around all edges of plywood. Min. gauge 0.018"/26. Max. gauge stainless 0.075"/14. Max gauge other metals 0.090". Sturdy, damage resistant, random pattern.

- .4 Backer laminate: flat metal faced plastic laminate.

2.3 FABRICATION

- .1 Set nails and countersink screws apply stained 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 Obtain governing dimensions before fabricating items which are to accommodate or abut equipment and other materials.
- .4 Ensure adjacent parts of continuous laminate work match in colour and pattern. Veneer 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 2400 mm. Keep joints 600 mm from sink cutouts.
- .5 Form shaped profiles and bends as indicated for metal laminate panels.
- .6 Use straight, matching solid hardwood edging for hardwood panel flatwork to cover exposed edge of core material. Chamfer exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.
- .7 Apply like laminate backing sheet to reverse side of core of laminate work.

2.4 FINISHING

- .1 Hardwood to receive natural, rubbed oil finish.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for architectural woodwork installation in accordance with manufacturer's instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative..
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.2 INSTALLATION

- .1 Do architectural woodwork to Quality Standards of AWMAC.
- .2 Install prefinished millwork at locations shown on drawings.
 - .1 Position accurately, level, plumb straight.
- .3 Fasten and anchor millwork securely.
 - .1 Supply and install heavy duty fixture attachments for panels.
- .4 Install walnut veneer panels, in two passenger elevators. Stainless steel laminated panels in 3 freight elevators.

3.3 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - 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 74 11 - Cleaning.
 - .1 Clean panels.

- .2 Remove excess glue from surfaces.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 00 10 General Instructions.
- .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.4 PROTECTION

- .1 Protect panels from damage until final inspection.
- .2 Protect installed products and components from damage during construction.
- .3 Repair damage to adjacent materials caused by architectural woodwork installation.

END OF SECTION