
Part 1 General

1.1 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM C36/C36M-03e1, Standard Specification for Gypsum Wallboard.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.
 - .2 CAN/CGSB-51.34-M86, Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
 - .3 CAN/CGSB-71.26-M88, Adhesive for Field-Gluing Plywood to Lumber Framing for Floor Systems.
- .3 Canadian Standards Association (CSA International)
 - .1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
 - .2 CAN/CSA-G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CSA O112 Series-M1977(R2006), CSA Standards for Wood Adhesives.
 - .4 CSA O141-05(R2009), Softwood Lumber.
 - .5 CSA O151-09, Canadian Softwood Plywood.
 - .6 CAN/CSA-O325.0-92(R2003), Construction Sheathing.
- .4 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2010.

1.2 SUBMITTALS

- .1 Submit Submittal submissions: in accordance with Section 01 33 00 - Submittal Procedures.

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.

1.4 DELIVERY, STORAGE, AND HANDLING

- .1 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 FRAMING AND STRUCTURAL MATERIALS

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
 - .1 CSA O141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Structural Composite Lumber (SCL) in accordance with ASTM D5456.
- .3 Framing and board lumber: in accordance with NBC.
- .4 Furring, blocking, nailing strips, grounds, rough bucks:
 - .1 Board sizes: "Standard" or better grade.
 - .2 Dimension sizes: "Standard" light framing or better grade.
 - .3 Post and timbers sizes: "Standard" or better grade.
- .5 Use pressure (preservative) treated lumber material for wood nailers at roof.

2.2 PANEL MATERIALS

- .1 Plywood, OSB and wood based composite panels: to CAN/CSA-O325.0.
- .2 Canadian softwood plywood (CSP): to CSA O151, standard construction.
- .3 Gypsum sheathing: to ASTM C36/C36M.

2.3 ACCESSORIES

- .1 Polyethylene film: to CAN/CGSB-51.34, Type 1, 0.15 mm thick.
- .2 Air seal: closed cell polyurethane or polyethylene.
- .3 Sealants: in accordance with Section 07 92 10 - Joint Sealing.
 - .1 Maximum allowable VOC limit 250 g/L.
- .4 Subflooring adhesive: to CGSB-71.26, cartridge loaded.
 - .1 Maximum allowable VOC limit 30 g/L.
- .5 General purpose adhesive: to CSA O112 Series.
 - .1 Maximum allowable VOC limit 140 g/L.
- .6 Nails, spikes and staples: to CSA B111.
- .7 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .8 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, recommended for purpose by manufacturer.

2.4 FASTENER FINISHES

- .1 Galvanizing: to CAN/CSA-G164, use galvanized fasteners for exterior work, interior highly humid areas, pressure-preservative, fire-retardant, and treated lumber.

Part 3 Execution

3.1 PREPARATION

- .1 Store wood products in a dry location, off the ground.

3.2 INSTALLATION

- .1 Comply with requirements of NBC 2005 Part 9 supplemented by following paragraphs.
- .2 Install members true to line, levels and elevations, square and plumb.
- .3 Construct continuous members from pieces of longest practical length.
- .4 Install spanning members with "crown-edge" up.
- .5 Select exposed framing for appearance. Install lumber and panel materials so that grade-marks and other defacing marks are concealed or are removed by sanding where materials are left exposed.
- .6 Install wall sheathing in accordance with manufacturer's printed instructions.
- .7 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, electrical equipment mounting boards, and other work as required.
- .8 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .9 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.

3.3 ERECTION

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.
- .3 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

3.4 SCHEDULES

- .1 Refer to drawings for various items requiring furring, blocking, nailing strips, grounds and rough bucks.
- .2 Provide backing in walls for all millwork, shelving and wall mounted items requiring solid blocking.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI/HPVA HP-1-2009, Standard for Hardwood and Decorative Plywood.
 - .2 ANSI/NPA A208.1-2009, Particleboard.
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
 - .1 Architectural Woodwork Quality Standards Illustrated, 1st edition, 2009.
- .3 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.
- .4 Canadian Standards Association (CSA International)
 - .1 CSA B111-74(R2003), Wire Nails, Spikes and Staples.
 - .2 CSA O112.4 Series-M1977(R2006), Standards for Wood Adhesives.
 - .3 CSA O121-08(R2013), Douglas Fir Plywood.
 - .4 CSA O141-05(R2009), Softwood Lumber.
- .5 National Electrical Manufacturers Association (NEMA)
 - .1 ANSI/NEMA LD-3-2005, High-Pressure Decorative Laminates (HPDL).
- .6 National Hardwood Lumber Association (NHLA)
 - .1 Rules for the Measurement and Inspection of Hardwood and Cypress 2011.
- .7 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2010.

1.2 PERFORMANCE REQUIREMENTS

- .1 Perform architectural casework work in accordance with the recommendations of the "Architectural Woodwork Quality Standards Illustrated" of the Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada (AWMAC), 2009 Edition, together with authorized additions and amendments, Custom Grade.
- .2 Where modifications to the AWMAC Quality Standards are included in this project specification, then such modifications shall govern in case of conflict.
- .3 Materials and installation shall be in metric measurement as specified.

1.3 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 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.
- .3 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Provide duplicate samples: sample size 300 x 300 mm or 600 mm long unless specified otherwise.
 - .2 Provide two (2) samples of each wood species for review.
 - .3 Provide duplicate colour samples of laminated plastic for colour selection.
 - .4 Provide duplicate samples of laminated plastic joints, edging, cutouts and postformed profiles.
- .4 Quality assurance submittals:
 - .1 Manufacturer's Instructions: manufacturer's installation instructions.

1.4 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 in accordance with Section 01 61 00 - Common Product Requirements.
 - .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 19% or less in accordance with following standards:
 - .1 CSA O141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
 - .3 AWMAC custom grade, moisture content as specified.

- .2 Hardwood lumber: moisture content 6% or less in accordance with following standards:
 - .1 National Hardwood Lumber Association (NHLA).
 - .2 AWMAC custom grade, moisture content as specified.
- .3 Douglas fir plywood (DFP): to CSA O121, standard construction.
 - .1 Urea-formaldehyde free.
- .4 Hardwood plywood: to ANSI/HPVA HP-1.
 - .1 Urea-formaldehyde free.
- .5 Birch plywood: to AWMAC Natural and Select White.
 - .1 Urea-formaldehyde free.
- .6 Engineered Combination core – 5 ply veneer: to ANSI A208-1
 - .1 Urea-formaldehyde free.
- .7 Laminated plastic for flatwork: to NEMA LD3, Grade VGL, Type HD, 1.6 mm thick; based on solid, woodgrain, printed pattern, and metallic, colour range with satin, matt, textured, and embossed finish.
- .8 Laminated plastic backing sheet: Grade BK, Type HD not less than 0.5 mm thick or same thickness and colour as face laminate.
- .9 Thermofused Melamine: to NEMA LD3 Grade VGL.
 - .1 High wear resistant thermofused melamine: equal or exceed 400 cycles (Minimum standard for HPL abrasion test).
- .10 Nails and staples: to CSA B111.
- .11 Wood screws: plain, type and size to suit application.
- .12 Splines: wood and metal.
- .13 Sealant: in accordance with Section 07 92 00 - Joint Sealants.
- .14 Laminated plastic adhesive:
 - .1 Adhesive: contact adhesive to CAN/CGSB-71.20.
 - .1 Maximum VOC limit 250 g/l.
 - .2 Adhesives urea-formaldehyde free.

2.2 MANUFACTURED UNITS

- .1 Casework:
 - .1 Fabricate caseworks to AWMAC custom quality grade.
 - .2 Furring, blocking, nailing strips, grounds and rough bucks
 - .1 S2S is acceptable for concealed products.
 - .2 Board sizes: "standard" or better grade.
 - .3 Dimension sizes: "standard" light framing or better grade.

- .4 Urea-formaldehyde free.
- .3 Case bodies (ends, divisions and bottoms).
 - .1 Particleboard, grade, square edge, 19mm thick. Laminated with high pressure laminate on exposed ends and thermofused melamine on concealed interiors.
- .4 Backs:
 - .1 Particleboard core, square edge, 12.7mm thick, laminated with thermofused melamine.
- .5 Shelving:
 - .1 Particleboard, laminated with thermofused melamine, 19 mm thick.
 - .2 Edge banding: provide matching colour PVC, 3 mm thickness.
- .2 Drawers:
 - .1 Fabricate drawers to AWMAC custom grade supplemented as follows:
 - .2 Sides and Backs.
 - .1 Thermofused melamine: 15 mm thick.
 - .3 Bottoms:
 - .1 Thermofused melamine: 15 mm thick.
 - .4 Fronts:
 - .1 Particleboard, 19 mm thick, laminated with high-pressure plastic laminate.
 - .1 Exposed finish: high-pressure plastic laminate
 - .2 Semi-exposed surface: plastic laminate.
 - .3 Edges: banded with 3 mm PVC edge, colour to match exposed faces.
- .3 Casework Doors:
 - .1 Fabricate doors to AWMAC custom grade supplemented as follows:
 - .2 Particleboard, 19 mm thick, laminated with high-pressure plastic laminate.
 - .1 Exposed finish: high-pressure plastic laminate
 - .2 Semi-exposed surface: plastic laminate.
 - .3 Edges: banded with 3 mm PVC edge, colour to match exposed faces.
- .4 Countertops
 - .1 High-pressure plastic laminate: edged with 3 mm PVC edge unless indicated otherwise on details. Backsplash to match countertop unless indicated otherwise on drawings.
 - .2 Plywood, combination core, 19 mm thick.

2.3 FABRICATION

- .1 Assemble cabinets in flush overlay style.
- .2 Set nails and countersink screws apply plain wood filler to indentations, sand smooth and leave ready to receive finish.

- .3 Shop install cabinet hardware for doors, shelves and drawers. Recess shelf standards unless noted otherwise.
- .4 Shelving to cabinetwork to be adjustable unless otherwise noted.
- .5 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.
- .6 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings.
- .7 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .8 Ensure adjacent parts of continuous laminate work match in colour and pattern.
- .9 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 2400 mm. Keep joints 600 mm from sink cutouts.
- .10 Use straight self-edging laminate strip for flatwork to cover exposed edge of core material. Chamfer exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.
- .11 Apply laminate backing sheet to reverse side of core of plastic laminate work.

2.4

HARDWARE

- .1 Hinges: European concealed hinges, 110 degree opening. Only screw fastened hardware will be accepted, no friction fit hardware will be accepted. Use plastic insertion dowels to receive screws of hinge baseplates.
 - .1 Acceptable manufacturers: Hettich, Blum, Hafele or Richelieu.
- .2 Drawer slides: full extension, bearing type, secured to sides of drawers and to gable, 45kg static load capacity, integral stop, self-closing
 - .1 Acceptable product: Accuride 3832, or Knape & Vogt 8400.
- .3 Shelf standards: Safety shelf support pin for 5mm diameter holes, steel pin with mounded on clear plastic.
- .4 Pulls: semi-circular style, satin nickel finish, 160mm centre to centre.
 - .1 Acceptable product: Richelieu 496160, or Amerock BP19004.
- .5 Cabinet locks: Cam type cylinder lock. Satin nickel finish. Install where shown on details. Key locks that are in the same room alike.
- .6 Clear plastic silencers to be installed on all cabinet doors.

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. Provide heavy duty fixture attachments for wall mounted cabinets.
- .4 Use draw bolts in countertop joints.
- .5 Scribe and cut as required to fit abutting walls and to fit properly into recesses and to accommodate piping, columns, fixtures, outlets or other projecting, intersecting or penetrating objects.
- .6 At junction of plastic laminate counter back splash and adjacent wall finish, apply small bead of sealant.
- .7 Apply water resistant building paper over wood framing members in contact with masonry or cementitious construction.
- .8 Fit hardware accurately and securely in accordance with manufacturer's written instructions.
- .9 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 indicated or approved. Slightly bevel arises.
- .10 For site application, offset joints in plastic laminate facing from joints in core.
- .11 Coordinate installation of continuous wood blocking behind adjustable shelving units. Attach standards to studs at a maximum spacing of 400mm on centre. Adjustable shelf shall extend a maximum of 100mm beyond the final standard, install standard as required.

3.2 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Clean millwork and cabinet work, inside cupboards and drawers and outside surfaces.
- .3 Remove excess glue from surfaces.

3.3 PROTECTION

- .1 Protect millwork and cabinet work from damage until final inspection.

END OF SECTION

