

Part 1 General**1.1 REFERENCES**

- .1 American Society for Testing and Materials International (ASTM).
 - .1 ASTM A653/A653M-11. Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .2 Canadian Standards Association International (CSA).
 - .1 CSA-B111-1974(R2003). Wire Nails, Spikes and Staples.
 - .2 CAN/CSA-G164-M92(R2003). Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CAN/CSA-O80 SERIES-08 (R2012) CONSOLIDATED. Wood Preservation.
 - .4 CSA-O112.9-10. Evaluation of adhesives for structural wood products (exterior exposure).
 - .5 CSA-O121-08 (R2013). Douglas Fir Plywood.
 - .6 CSA-O141-05 (R2009). Softwood Lumber.
- .3 Forest Stewardship Council (FSC).
 - .1 FSC Accredited Certified Bodies.
- .4 National Lumber Grades Authority (NLGA).
 - .1 Standard Grading Rules for Canadian Lumber. December 2010 Edition.
- .5 Western Red Cedar Lumber Association (WRCLA).
 - .1 Grading rules for Western Red Cedar Lumber 07-492 (2010).

1.2 QUALITY ASSURANCE

- .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood: by grade mark in accordance with applicable CSA standards.
- .3 Provide Forestry Stewardship Council (FSC) certified lumber and panel materials. Submit FSC certification and documentation to Departmental Representative.

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate wood waste in accordance with the Waste Management Plan and place in designated areas in the following categories for recycling: Solid wood, treated, painted, or contaminated wood.
- .2 Set aside damaged wood and dimensional lumber off-cuts for approved alternative uses (e.g. bracing, blocking, cripples, bridging). Store this separated reusable wood waste convenient to cutting station and area of work.

ROUGH CARPENTRY

- .3 Divert unused wood materials from landfill to recycling or reuse facility approved by Departmental Representative. Do not burn scrap at the project site.
- .4 Do not dispose of preservative treated wood through incineration. Do not dispose of preservative treated wood with materials destined for recycling or reuse. Dispose of treated wood, end pieces, wood scraps and sawdust at sanitary landfill approved by Departmental Representative. Dispose of unused wood preservative material at official hazardous material collections site approved by Departmental Representative.
- .5 Do not dispose of unused preservative material into sewer system, into streams, lakes, onto ground or in other locations where they will pose health or environmental hazard.

Part 2 Products**2.1 FRAMING AND STRUCTURAL MATERIAL**

- .1 Framing and board lumber: in accordance with NBC except as follows: Spruce species, minimum Construction No 1 grade. S4S, moisture content 19% (S-dry) or less in accordance with following standards:
 - .1 CSA-O141. NLGA Standard Grading Rules for Canadian Lumber.
 - .2 FSC Certified.
- .2 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers in exterior locations: unless specified otherwise, all lumber to be pressure treated materials to CAN/CSA-O80 series, Use Category 3.2. SPF softwood, moisture content 19% or less.
- .3 In-wall solid wood blocking for access devices, guard rails, hand rails, wall bumpers and millwork and casework to be select Douglas fir species, minimum Construction No 1 grade. S4S, moisture content 19% (S-dry) or less.
- .4 Fencing: western red cedar lumber. S4S.
 - .1 Frame components: Posts, frame, caps and trim. Grade: WRCLA Standard and better. Custom milled, sizes as indicated in the drawings. Provide WRCLA Clear grade.
 - .2 Fencing: Planking sizes as indicated on drawings. Grade: WRCLA clear grade..

2.2 PANEL MATERIALS

- .1 Douglas fir plywood (DFP): to CSA-O121, standard construction.
- .2 Pressure treated plywood: to CAN/CSA-O80 series, Use Category 4.1. Thickness as indicated in the drawings.

2.3 ACCESSORIES

- .1 Sealants: in accordance with Section 07 92 00 - Joint Sealants.
- .2 General purpose adhesive: to CSA-O112.9.

- .3 Nails, spikes and staples: to CSA-B111.
- .4 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .5 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 or ASTM A653. Use hot dip galvanized fasteners for all work except where Stainless Steel components are specified.

2.5 WOOD PRESERVATIVE

- .1 End cut surface applied wood preservative. Clear or coloured. As approved by supplier of treated lumber and plywood specifically intended for application to ends of treated materials exposed by cutting.

Part 3 Execution

3.1 PREPARATION

- .1 Treat cut surfaces of Pressure Treated materials with wood preservative, before installation. Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.

3.2 INSTALLATION

- .1 Comply with requirements of NBC, supplemented by the following paragraphs.
- .2 Install framing members true to line, levels and elevations, square and plumb. Construct continuous members from pieces of longest practical length.
- .3 Install spanning members with "crown-edge" up.
- .4 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, cladding, electrical equipment mounting boards and other work as required. Align and plumb faces of furring and blocking to tolerance of 1:600.
- .5 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .6 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using galvanized fasteners. Install sleepers as indicated.
- .7 Use caution when working with pressure treated materials. Use dust collectors and high quality respirator masks.

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.

3.4 SCHEDULES

- .1 Electrical equipment backboards: 19 mm thick DFP G1S plywood. 19 x 38 mm furring around spacing, perimeter and at maximum 300 mm intermediate. Apply two coats of fire retardant paint as per 09 91 23 – Painting.

END OF SECTION

Part 1 General**1.1 RELATED SECTIONS**

- .1 Section 06 47 00 - Plastic Laminate Finishing.
- .2 Section 08 71 73 - Special Function Hardware.

1.2 REFERENCES

- .1 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
 - .1 Architectural Woodwork Standards. First Edition 2009.
- .2 Canadian Standards Association (CSA).
 - .1 CSA-B111-1974(R2003). Wire Nails, Spikes and Staples.
 - .2 CSA-O121-08 (R2013). Douglas Fir Plywood.
 - .3 CAN/CSA-Z809-08 (R2013)- Sustainable forest management.
- .3 Forest Stewardship Council (FSC).
 - .1 FSC Accredited Certified Bodies.

1.3 SUBMITTALS

- .1 Provide Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide Forestry Stewardship Council (FSC) certified lumber and panel materials. Submit FSC certification and documentation.
- .3 Submit shop drawings. Indicate details of construction, profiles, jointing, fastening and other related details. Provide details as follows: profiles full size, details ½ full size. Indicate all materials, thicknesses, finishes and hardware. Indicate typical and special installation conditions, all connections, attachments, anchorage and location of exposed fastenings. Indicate shop applied and site applied finishes for each component.
- .4 Indicate locations of service outlets in casework, typical and special installation conditions, and connections, attachments, anchorage and location of exposed fastenings.
- .5 Submit duplicate samples. Sample size 600 x 600 mm or 600 mm long unless specified otherwise. Submit duplicate samples of laminated plastic joints, edging, cutouts and postformed profiles. Submit samples of solid hardwood in specified finishes. Submit duplicate colour samples of laminated plastic for colour selection.

1.4 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 - Common Product Requirements.

ARCHITECTURAL WOODWORK

- .2 Protect millwork against dampness and damage during and after delivery. Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction / Demolition Waste Management and Disposal.
- .2 Separate corrugated cardboard in accordance with Waste Management Plan and place in designated areas for recycling.
- .3 Fold up metal banding, flatten, and place in designated area for recycling.

Part 2 Products**2.1 MATERIALS**

- .1 Provide FSC certified products for all wood components.
- .2 Hardwood lumber: moisture content 7 % or less. AWMAC premium grade.
- .3 Douglas fir plywood (DFP): to CSA-O121. G1S or G2S as indicated in the drawings. Thicknesses as indicated in the drawings.
- .4 Laminated plastic: as specified in Section 06 47 00 - Plastic Laminate Finishing.
- .5 Laminated plastic adhesive: as specified in Section 06 47 00 - Plastic Laminate Finishing.
- .6 Nails and staples: to CSA-B111.
- .7 Wood screws: stainless steel, galvanized or plated steel, type and size to suit application.
- .8 Splines: compressed wood.
- .9 Sealant: as specified in Section 07 92 00 - Joint Sealants.
- .10 75mm brushed stainless steel cable grommets.
- .11 Sliding keyboard tray.
- .12 Robe hook: 50 x 50 mm overall size with 40 mm projection from wall. Flat face, vertical orientation of hook. Heavy duty, all welded construction. Satin stainless steel. 2 piece mounting bracket consisting of 1.2 mm thick stainless steel welded inside flange and 1.0 mm thick stainless steel wall plate. Stainless steel set screw.
- .13 Continuous hinge: continuous piano hinge, chrome finish.

2.2 MANUFACTURED UNITS

- .1 Casework: fabricate casework to AWMAC Custom Grade. Flush overlay.
 - .1 Furring, blocking, nailing strips, rough bucks and sleepers. Dimension sizes. Construction grade or better.
 - .2 Framing: kiln dried spruce or fir. S4S, minimum 19 mm thick. Concealed locations only.
 - .3 Case bodies: ends, dividers, tops and bottoms: DFP, G2S, square edges. Thickness: 19 mm or as indicated. Covered with plastic laminate both sides and all exposed edges.
 - .4 Backs: DFP 12.5 mm G1S. Covered with plam backing sheet on inside face.
 - .5 Shelving: 16 mm thick DFP G2S. Covered with plastic laminate both sides and all exposed edges.
- .2 Drawers: fabricate drawers to AWMAC Custom Grade and as follows:
 - .1 Sides, backs and false front: 12.5 mm DFP, G2S, covered with plastic laminate both sides and top.
 - .2 Bottoms: 12.5 mm DFP, G1S, covered with plastic laminate.
 - .3 Fronts: 19 mm thick DFP, G2S. Covered with plastic laminate both sides and all exposed edges.
- .3 Casework doors: fabricate doors to AWMAC Custom Grade. 19 mm thick DFP, G2S. Covered with plastic laminate both sides and all exposed edges.
- .4 Counter tops: fabricate post formed counter tops to AWMAC premium grade. Particleboard board core. Minimum 19 mm thick. Front edge bullnosed with integral coved backsplash. Provide in one piece length per location. Covered with plastic laminate top and all exposed edges. Bottom covered with Plam backing sheet. Provide separate matching side splashes for both sides with coved edge top.
- .5 Kick plate: 16 mm DFP, G1S, covered with plastic laminate. Fabricate in longest practical sections.
- .6 Custom maple bench: 2 piece solid edge grain maple on formed hot rolled stainless flat bar frame. Concealed fastening system. Refer to drawings.
- .7 Coat rack rail: Solid maple per drawing details.

2.3 FABRICATION

- .1 Set nails and countersink screws. Apply plain wood filler to indentations, sand smooth and leave ready to receive finish.
- .2 Shop install cabinet hardware for doors, shelves and drawers as specified in Section 08 71 73 - Special Function Hardware.
- .3 Shelving to cabinetwork to be adjustable unless otherwise noted. Provide drilled holes for shelf pins in all units with adjustable shelving.
- .4 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.

ARCHITECTURAL WOODWORK

- .5 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings.
- .6 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .7 Ensure adjacent parts of continuous laminate work match in colour and pattern.
- .8 Veneer laminated plastic to core material in accordance with adhesive manufacturer's instructions and as specified in Section 06 47 00 - Plastic Laminate Finishing. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface. Use continuous lengths up to 3000 mm. Keep joints 600 mm from sink cutouts. Apply laminated plastic backing sheet where indicated.

Part 3 Execution**3.1 INSTALLATION**

- .1 Do architectural woodwork to Architectural Woodwork Standards (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 Install Plam or solid surface counter tops at locations shown on drawings. Use heavy duty fixture attachments for counter tops. Use draw bolts in counter top 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 Install 75mm brushed stainless steel grommets at each workstation location and as indicated on drawings.
- .10 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. For site application, offset joints in plastic laminate facing from joints in core.

.11 Install custom maple bench mechanically fastened to floor with concealed fastening system.

.12 Install sliding keyboard tray where detailed.

3.2 CLEANING

.1 Clean millwork and cabinet work inside cupboards and drawers and outside surfaces.

.2 Remove excess glue from surfaces.

3.3 PROTECTION

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

END OF SECTION

Part 1 General**1.1 RELATED SECTIONS**

- .1 Section 06 40 00 - Architectural Woodwork.
- .2 Section 07 92 00 - Joint Sealants.

1.2 REFERENCES

- .1 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB-71.20-M88. Adhesive, Contact, Brushable.
- .2 National Electrical Manufacturers Association (NEMA).
 - .1 ANSI/NEMA LD 3-2005. High-Pressure Decorative Laminates.
 - .2 ANSI/NEMA LD 3-2005. High-Pressure Decorative Laminates - Annex A - Application, Fabrication and Installation.
 - .3 ANSI/NEMA LD 3-2005. High-Pressure Decorative Laminates - Annex B - Care and Cleaning of Laminates.

1.3 SUBMITTALS

- .1 Provide Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit manufacturer's printed product literature, specifications and data sheet.
- .3 Submit two copies of WHMIS MSDS - Material Safety Data Sheets. Indicate VOC's for adhesives, solvents and cleaners.
- .4 Submit samples. Submit duplicate samples of joints, edging, cutouts and postformed profiles. Submit 3 - 300 x 300 mm sized samples of colour and finish texture specified.
- .5 Submit manufacturer's installation instructions.
- .6 Provide maintenance data for laminate work for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.4 QUALITY ASSURANCE

- .1 Submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

PLASTIC LAMINATE FINISHING**1.5 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Maintain relative humidity between 25 and 60% at 22 degrees C during storage and installation. Protect millwork against dampness and damage during and after delivery. Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.

Part 2 Products**2.1 MATERIALS**

- .1 Laminated plastic for flatwork: to ANSI/NEMA LD 3.
 - .1 Type: General purpose.
 - .2 Grade: HGS.
 - .3 Size: 1.27 mm thick.
 - .4 Colour: multilayered.
 - .5 Pattern: printed pattern.
 - .6 Finish: satin, textured.
 - .7 Colours: a minimum of 2 different colours, patterns and textures will be selected from up to 2 different manufacturers after award by Departmental Representative. Selection to be from full, custom and extended range of products including premium classified products.
- .2 Laminated plastic backing sheet: Grade BK, Type HD not less than 0.5mm thick or same thickness and colour as face laminate.
- .3 Plywood core: DFP G1S or G2S as specified in Section 06 40 00 - Architectural Woodwork. Minimum thickness as specified in Section 06 40 00 - Architectural Woodwork.
- .4 Laminated plastic adhesive: contact adhesive to CAN/CGSB-71.20.
- .5 Sealants: mildew resistant sealant as specified in Section 07 92 00 - Joint Sealants.
- .6 Draw bolts and splines: as recommended by fabricator.

2.2 FABRICATION

- .1 Comply with ANSI/NEMA LD 3, Annex A.
- .2 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .3 Ensure adjacent parts of continuous laminate work match in colour and pattern.
- .4 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. Keep joints 600 mm from sink cutouts.

- .5 Form shaped profiles and bends as indicated, using postforming grade laminate to laminate manufacturer's instructions.
- .6 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.
- .7 Apply laminate backing sheet to reverse side of core of plastic laminate work.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 INSTALLATION

- .1 Install work plumb, true and square, neatly scribed to adjoining surfaces.
- .2 Make allowances around perimeter where fixed objects pass through or project into laminated plastic work to permit normal movement without restriction.
- .3 Use draw bolts and splines in countertop joints. Maximum spacing 450 mm on centre, 75 mm from edge. Make flush hairline joints.
- .4 Provide cutouts for plumbing fixtures, inserts, grilles, appliances, outlet boxes and other penetrations. Round internal corners, chamfer edges and seal exposed core.
- .5 At junction of laminated plastic counter back splash and adjacent wall finish, apply small bead of sealant.
- .6 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 and approved. Slightly bevel arises.
- .7 For site application, offset joints in plastic laminate facing from joints in core.
- .8 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.

3.3 PROTECTION

- .1 Cover finished laminated plastic, wood veneered surfaces with heavy kraft paper or put in cartons during shipment. Protect installed laminated surfaces by approved means. Do not remove until immediately before final inspection.

3.4 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Perform care and cleaning with ANSI/NEMA LD 3, Annex B.
- .3 Remove traces of primer, caulking, epoxy and filler materials. Clean doors and frames.

END OF SECTION