

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 01 33 00 – Submittal Procedures.
- .2 Section 01 61 00 – Common Product Requirements.
- .3 Section 08 71 00 - Door Hardware.
- .4 Section 09 21 16 - Gypsum Board Assemblies.
- .5 Section 09 91 00 – Interior Painting.

1.2 REFERENCES

- .1 ASTM International
 - .1 ASTM A 123/A 123M-09, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - .2 ASTM A 653/A 653M-11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealed) by the Hot-Dip Process.
 - .3 ASTM C 1396/C 1396M-11, Standard Specification for Gypsum Board.
 - .4 ASTM D 1761-06, Standard Test Methods for Mechanical Fasteners in Wood.
- .2 CSA International
 - .1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
 - .2 CSA O112.9-10, Evaluation of Adhesives for Structural Wood Products (Exterior Exposure).
 - .3 CSA O121-08, Douglas Fir Plywood.
 - .4 CSA O141-05(R2009), Softwood Lumber.
 - .5 CSA O151-09, Canadian Softwood Plywood.
 - .6 CSA O325-07, Construction Sheathing.
 - .7 CSA O437 Series-93(R2011), Standards on OSB and Waferboard.
- .3 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .4 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2010.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for wood products and accessories and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit location of plywood backing and blocking.

1.4 QUALITY ASSURANCE

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood and wood based composite panels in accordance with CSA, ANSI and standards Canadian Panel Association (CPA).

1.5 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 wood from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

PART 2 - PRODUCTS

2.1 LUMBER MATERIAL

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:
 - .1 CAN/CSA-O141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
 - .3 Forest Stewardship Council (FSC) certified.
- .2 Furring, blocking, etc:
 - .1 S2S is acceptable.
 - .2 Board sizes: "Standard" or better grade.
 - .3 Dimension sizes: "Standard" light framing or better grade.
 - .4 Post and timbers sizes: "Standard" or better grade.

2.2 PANEL MATERIAL

- .1 Douglas Fir Plywood (DFP): to CSA O121, standard construction, exterior grade, Canply / COFI certified.
- .2 Canadian Softwood Plywood (CSP): to CSA O151, standard construction exterior grade, Canply / COFI certified.
- .3 Plywood and wood based composite panels: to CAN/CSA-O325 exterior grade, Canply / COFI certified.

- .4 All panel materials to contain no added urea formaldehyde when tested in accordance with ASTM E1333.
- .5 All panel materials to be Forest Stewardship Council (FSC) certified.

2.3 FIRE RETARDANT TREATED PLYWOOD

- .1 Douglas fir plywood, fire retardant treated and produced in a licensed treatment plant.
- .2 Treatment to be free of halogens, sulfates and ammonium phosphate.
- .3 Product to have a flame spread rating of less than 25 when tested in an extended 30 minute tunnel test in accordance with ASTM E84, NFPA 255 or UL 723.

2.4 ACCESSORIES

- .1 Nails, spikes and staples: to CSA B111.
- .2 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .3 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.

2.5 FASTENER FINISHES

- .1 Galvanizing: to CAN/CSA-G164, use hot dipped galvanized fasteners for interior highly humid areas.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Comply with requirements of NBC, supplemented by the following paragraphs.
- .2 Install furring and blocking as required, whether or not detailed on drawings, to space-out and support casework, wall panels, wall panels, toilet partitions, washroom accessories, wall mounted door stops, miscellaneous specialties, wall and ceiling finishes, facings and other work as required and/or details.
- .3 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .4 Install to rough openings as required to provide backing for frames and other work.
- .5 Install wood, nailers, curbs and other wood supports as required and secure using galvanized steel fasteners.
- .6 Use caution when working with particle board and fire retardant treated plywood. Use dust collectors and high quality respirator masks.

3.2 ERECTION

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.

3.3 SCHEDULES

- .1 Provide equipment backboards for mounting electrical and telecom equipment as indicated. Use 19mm (3/4") thick fire retardant treated plywood on 19x64mm (1"x3") furring around perimeter and at maximum 300mm (12") intermediate.
- .2 Countersink bolts where necessary to provide clearance for other work.

3.4 PROTECTION

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

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Post-formed plastic laminate clad countertops.
- .2 Plastic laminate clad case bodies, and miscellaneous components and fixtures.
- .3 Cabinet hardware.

1.2 RELATED SECTIONS

- .1 Mechanical Sections.
- .2 Electrical Sections.

1.3 REFERENCES

- .1 American National Standards Institute (ANSI).
 - .1 ANSI A135.4-1995, Basic Hardboard.
 - .2 ANSI A208.1-1999, Particleboard.
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
 - .1 Architectural Woodwork Quality Standards Illustrated, Latest Edition.
- .3 Canadian Plywood Association (CANPLY).
- .4 Canadian Standards Association (CSA)
 - .1 CSA B111-1974, Wire Nails, Spikes and Staples.
 - .2 CSA O151-M1978, Canadian Softwood Plywood.
- .5 National Electrical Manufacturers Association (NEMA).
 - .1 NEMA LD3-2000, High-Pressure Decorative Laminates.
- .6 State Standards of the Russian Federation (GOST).
 - .1 GOST 1055-71 - Birch plywood. Technical Requirements for Export Products.

1.4 QUALITY ASSURANCE

- .1 The architectural casework manufacturer is to furnish, at the request of the Departmental Representative, a list of completed projects of equal or more value than this project completed in the last five years.
- .2 Where modifications to the AWMAC QSI are included in this specification, such modifications shall govern in case of conflict.
- .3 Any reference to Custom or Premium grade in this Section shall be as defined in the AWMAC QSI.
- .4 Any item not given a specific quality grade shall be Custom grade as defined by AWMAC QSI.

- .5 Casework manufacturer to maintain a copy of AWMAC QSI on site for reference purposes.
- .6 The casework manufacturer is responsible for all field dimensions on site that will affect the work.

1.5 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00.
- .2 Shop Drawings:
 - .1 Indicate construction details of all architectural woodwork and general arrangements; typical and special installation conditions; materials being supplied and all connections, attachments, anchorage and location of exposed fastenings, as applicable.
 - .2 Incorporate plans, elevations, sections, and details for all casework in scale.
 - .1 The details shall show all thicknesses, types and finishes and all cabinet hardware.
- .3 Samples:
 - .1 Submit duplicate colour samples of laminated plastic for colour selection.
 - .2 When requested by the Departmental Representative, submit duplicate sample of each hardware item requested.
- .4 No work shall be fabricated until the shop drawings have been reviewed and all related submittals and samples as required by the specification have been reviewed by the Departmental Representative.

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Do not deliver until painting and similar operations have been completed in installation areas.
- .2 Handle materials to prevent damage to finished surfaces. Provide protective coverings to prevent physical damage or staining following installation for duration of project.

1.7 PROJECT CONDITIONS

- .1 Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings.
- .2 Coordinate fabrication schedule with construction progress to avoid delaying the Work.

Part 2 Products

2.1 PANEL PRODUCTS

- .1 Particleboard: to ANSI A208.1, Grade M2, thicknesses as indicated.
 - .1 Urea-Formaldehyde free.
 - .2 Standard of acceptance: Flakeboard Vesta as manufactured in St. Stephen, New Brunswick.

- .2 Canadian softwood plywood (CSP): Urea-Formaldehyde free; Poplar plywood: to CSA O121, standard construction; thickness as indicated, grade stamped in accordance with CANPLY.

- .3 Melamine Panels (MCP): to NEMA LD3, consisting of a decorative paper impregnated and saturated with melamine resin, thermally fused under heat and pressure to Grade M3 particleboard core, thickness as indicated.
 - .1 Overlay bonded to both faces to prevent warping.
 - .2 Color to be white.

2.2 PLASTIC LAMINATE

- .1 High-Pressure Decorative Laminates (HPL) to NEMA LD3, types as follows:
 - .1 General purpose type, grade as follows:
 - .1 HGS, 1.2 mm thick for horizontal surfaces.
 - .2 VGS, 0.7 mm thick for light duty horizontal and vertical surfaces.
 - 3. Colour through Laminate for reception desk. Refer to sheet A11.
 - .2 Post-forming type: HGP, 1.0 mm thick.
 - .3 Cabinet liner type: Grade CLS, 0.5 mm thick.
 - .4 Backer type, grade as follows:
 - .1 BKH, 1.2 mm thick.
 - .2 BKV, 0.7 mm thick.

- .2 Provide backer sheet of same thickness as face sheet to reverse of all countertops, except post-formed units.

- .3 Standard of acceptance: Formica, Arborite, Nevamar.

- .4 Low VOC Adhesives: Contact adhesive to CAN/CGSB-71.20, semi-rigid (polyvinyl adhesive to CSA O112.4) or rigid adhesives (urea resin adhesive to CSA O112.5, resorcinol resin adhesive to CSA O112.7) may be used.
 - .1 Consult manufacturer for selection of adhesive for materials and application.
 - .2 Use waterproof adhesives for countertops.

- .5 Colour and pattern as selected by Departmental Representative from unrestricted range.

- .6 Colour-Through Laminate
 - .1 General purpose type, grade as follows:
 - .1 Laminate sheets to be 3050mm x 1300mm and 1.3 mm thick.
 - .2 Grade to be HPL/EN 438-9 BTS with a colour core to match finish colour.
 - .3 Colour through laminate for reception desk. Refer to sheet A11.
 - .4 Colours and surface finishes to be from manufacturers' full range.
 - .5 Install per manufacturer's instructions.
 - .6 Manufacturer's line to have a minimum of 10 colour options.
 - .7 Standard of Acceptance: - Formica ColorCore.
- .7 Five (5) Type of laminate and to be used as the following:

PLASTIC LAMINATES COLOUR SCHEDULE	
COLOUR	COLOUR NAME
P.LAM 1	Reception Desk (Colour Through)
P.LAM 2	Reception Desk (Colour Through)
P.LAM 3	Kitchen Lower, Shared Equipment Lower Base
P.LAM 4	Kitchen Uppers, Shared Equipment Uppers
P.LAM 5	Kitchen Counters, Shared Equipment Counters

2.3 COUNTERTOPS

- .1 Post-formed Countertops:
 - .1 Countertop core: particleboard, thickness as indicated.
 - .2 Finish: Post-formed HPL, HGP Grade.
 - .1 Colour and pattern as selected by Departmental Representative from unrestricted range.
 - .3 Provide backsplashes and apron profiles as indicated.
 - .4 Provide matching laminate to exposed edges of core not covered by post-forming laminate.
 - .5 Post form profile to be Italo Plus edge and cove backsplash.

2.4 HARDWARE AND COMPONENTS

- .1 Hinges:
 - 1. Provide hinges for flush overlay casework design for swing doors as indicated.
 - .1 110° opening angle, nickel plated steel with self-closing spring mechanism, fully concealed and adjustable, c/w mounting plates. Number per door per manufacturer's installation recommendation for size and weight of door.
 - .2 Standard of acceptance: Blum Clip

2. Provide hinges for flush overlay casework design for lift up doors as indicated.
 - .1 Symmetrical lift mechanism, nickel plated steel
With self-closing spring mechanism, fully concealed and adjustable, c/w mounting plates. Mount both sides of case.
 - .2 Standard of acceptance: Blum Aventos HK-XS

- .2 Drawer Slides:
 - .1 Drawer slides for light and medium duty drawers, 610 mm wide or less:
 - .1 Ball bearing, rail mount, full extension, 45 kg load rating.
Clear zinc finish.
 - .2 Standard of acceptance: Accuride 7432
 - .2 Drawer slides for heavy duty drawers, 1100 mm wide or less:
 - .1 Ball bearing, rail mount, full extension with 25 mm over travel, 90 kg load rating. Clear zinc finish.
 - .2 Standard of acceptance: Accuride 3640

- .3 Door and Drawer Pulls:
 - .1 D-shaped metal pull, brushed nickel finish. Size and orientation as indicated on drawings.
 2. Standard of acceptance: Richelieu 236mm x 39mm (2170224)
Richelieu 172mm x 39mm (21702160).

- .4 Shelf support pilaster standards and clips:
 - .1 Steel pilaster standards recessed in cabinet case, 15mm wide, length to suit, zinc finish. Four (4) per shelf.
 - .2 Metal shelf clips compatible with 15mm recessed standards, white finish.
 - .3 Standard of acceptance: Richelieu Pillaster 62251-2g; shelf supports 4245WS.

- .5 Pull out recycling units:
 - .1 Metal frame sets on slides mounted on cabinet side panels complete with extension glides for 50 kg load, including plastic waste containers with lids and handles, mechanism to securely attach cabinet door face, soft stop mechanisms and all hardware and components for a fully functional easily managed in cabinet slide out recycling unit. Contractor to supply and install door faces to match millwork.
 - .2 Standard of acceptance: Richelieu Wastebins and Recycling #4614100.

- .4 Silencers: clear, soft vinyl buttons.

3.1 FABRICATION - GENERAL

- .1 Shop assemble casework and other components for delivery to site in units easily handled and to permit passage through building openings.
- .2 Joinery to be in accordance with the AWMAC QSI.
- .3 When necessary to cut and fit on site, provide materials with ample allowance for cutting.
 - .1 Provide strip for scribing and site cutting.
- .4 Provide cut-outs for plumbing fixtures, inserts, appliances, outlet boxes, and other fixtures and fittings.
- .5 Natural and manufacturing defects in excess of those permitted in the grade specified are permitted if such defects are to be covered by adjoining members or otherwise concealed.
- .6 Carefully fit equipment to be installed.
- .7 Provide filler pieces when required.
- .8 Set nails and countersink screws, apply colour matched wood filler to indentations, sand smooth and leave ready to receive finish.
- .9 Shop install cabinet hardware for doors, shelves and drawers.
- .10 Recess shelf standards leaving 2 mm above surface of panel.
- .11 Shelving to cabinetwork to be adjustable and full depth of cabinet unless otherwise noted.

3.2 FABRICATION - CUSTOM CABINET UNITS

- .1 Fabricate in accordance with AWMAC QSI, Custom grade.
- .2 General Construction: Flush overlay, concealing cabinet case body.
- .3 Thickness: Thickness for panels identified on Drawings shall govern.
- .4 Case Body:
 - .1 Exposed Ends: Not less than 16 mm thick melamine.
 - .2 Unexposed Ends: Not less than 16 mm thick melamine.
 - .3 Tops and Bottoms: Not less than 16 mm thick melamine, fully supported and secured in rabbets in panels.
 - .4 Backs: Not less than 13 mm thick fastened to machined rear edge of ends, top and bottom case partitions.
 - .5 Exterior Exposed Finish: HPL, VGS grade, colour and pattern selection by Departmental Representative.

- .6 Interior Finish: White melamine finish.
- .7 Edgebanding: Laminate tape, colour match to exposed finish.
- .8 Toe kicks are to be a separate item and not made part of the base unit.

- .5 Doors and Applied Drawer Fronts: Both faces of solid slab panel doors and drawer fronts to be finished in plastic laminate of same thickness, to prevent warpage:
 - .1 Panel: Not less than 19 mm thick particleboard.
 - .2 Exposed Finish: HPL, VGS grade, colour and pattern selected by Departmental Representative.
 - .3 Concealed Finish: to match exposed finish.
 - .4 Edgebanding: Laminate tape, colour match to exposed finish.

- .6 Drawers: box-type construction with applied drawer fronts.
 - .1 Sides, Backs and Sub-fronts: Melamine, white colour, 13 mm thickness.
 - .1 Sub-front and back rabbeted into sides and secured with glue and mechanical fasteners.
 - .2 Fasten applied front to sub-front with mounting screws from interior of body.
 - .2 Bottoms: Hardboard, 6 mm thickness, set into rabbets in back, sides, and front.

- .7 Shelving: Melamine.
 - .1 Semi-exposed finish, shelves within cabinets: White melamine finish both faces of panel, laminate tape edgebanding all four sides, white colour.
 - .2 Exposed finish, exposed shelving without doors: HPL, VGS grade, colour and pattern selected by Departmental Representative.
 - .1 Colour-matching laminate tape edgebanding all four sides.
 - .3 Thickness: 19 mm thick for up to 915 mm unsupported length, 25 mm thick for unsupported lengths between 915 mm and 1066 mm, unless otherwise indicated.

- .8 Toe Kicks: Not less than 19 mm CSP plywood, full height of toe space, P-Lam finish.

- .9 Corner Blocks: Particleboard or CSP plywood; glued and fastened in each of four top corners to maintain cabinet squareness and rigidity.

3.3 PREPARATION

- .1 Verify adequacy of backing and support framing.

3.4 INSTALLATION

- .1 Do architectural woodwork to AWMAC QSI, except where specified otherwise.

- .2 Install prefinished casework and other components at locations shown on drawings.
 - .1 Position accurately, level, plumb straight.
- .3 Fasten and anchor casework securely.
 - .1 Provide heavy duty fixture attachments for wall mounted cabinets.
 - .2 Exposed screw to be installed with chrome cup washers.
 - .3 Recessed screws shall be covered with laminate matching adhesive backed dot.
- .4 Install countertops using draw bolts where applicable.
- .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 clear, paintable, mould resistant silicone 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 directions.
- .9 Install shelving.

3.5 ADJUSTING AND CLEANING

- .1 Adjust doors, drawers, hardware, fixtures and other moving or operating parts to function smoothly and correctly.
- .2 Clean casework, counters, shelves, hardware, fittings and fixtures.
- .3 Clean surfaces of plastic laminate with a damp cloth or ordinary bar soap and water.
 - .1 Harsh abrasive cleansers shall not be used.

END OF SECTION