

1 General

1.01 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM A153/A153M-09, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - .2 ASTM F1667-11ae1, Standard Specification for Driven Fasteners: Nails, Spikes, and Staples
 - .3 ASTM F2329-13, Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners
- .2 Canadian Standards Association (CSA International)
 - .1 CSA O112-M Series 1977 R2006, Standards for Wood Adhesives.
 - .2 CSA O121-08 (R2013), Douglas Fir Plywood.
 - .3 CSA O141-05 (R2014), Softwood Lumber.
 - .4 CSA O151-14, Canadian Softwood Plywood.
- .3 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2005.

1.02 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Action Submittals:
 - .1 Product Data: manufacturer's printed data sheet including technical data for performance requirements specified.

1.03 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.

1.04 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.

2 Products

2.01 FRAMING AND STRUCTURAL MATERIALS

- .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.
- .2 Furring, blocking, nailing strips, grounds, rough bucks, curbs:
 - .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.

2.02 PANEL MATERIALS

- .1 Douglas fir plywood (DFP): to CSA O121, standard construction.
 - .1 No added urea-formaldehyde
- .2 Canadian softwood plywood (CSP): to CSA O151, standard construction.
 - .1 No added urea-formaldehyde

2.03 ACCESSORIES

- .1 General purpose adhesive: Polyurethane based moisture curing adhesive compatible with materials being adhered.
- .2 Nails, spikes and staples: to ASTM F1667-11ae1.
- .3 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, recommended for purpose by manufacturer.

2.04 FASTENER FINISHES

- .1 Galvanizing: To ASTM A153, Class D, and ASTM F2329, use galvanized fasteners for fire retardant treated materials.

2.05 FIRE-RETARDANT-TREATED MATERIALS

- .1 General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

- .2 Fire-Retardant-Treated Lumber and Plywood by Pressure Process: UCF-1 classified to CSA O80, products with flame spread rating of 25 or less, and smoke development classification of 35 or less when tested according to CAN/ULC S102, and with no evidence of significant progressive combustion when test is extended additional 30 minutes.
- .1 Use treatment that does not promote corrosion of metal fasteners.

3 Execution

3.01 INSTALLATION

- .1 Comply with requirements of NBC 2015 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 materials so that grade-marks and other defacing marks are concealed or are removed by sanding where materials are left exposed.
- .6 Install furring and blocking as required to space-out and support casework, cabinets, electrical equipment mounting boards, and other work as required.
 - .1 Concealed Blocking: Provide 19 mm CSP panel material in accordance with requirements of other sections except provide dimensional lumber blocking where required by manufacturer of product being supported.
- .7 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .8 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .9 Install fire-retardant treated wood materials with galvanized fasteners and bolts to ASTM A153, Class D, and ASTM F2329.
- .10 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.
- .11 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .12 Countersink bolts where necessary to provide clearance for other work.

3.02 SCHEDULES

- .1 Wall Panels: fire-retardant treated plywood, DFP or CSP, SEL TF grade.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

1 General

1.01 RELATED REQUIREMENTS

- .1 Section 06 08 99 – Rough Carpentry for Minor Works: for furring and blocking to support cabinets.
- .2 Section 07 92 00 - Joint Sealants: Sealant materials and application

1.02 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI/BHMA A156.9-2010, Cabinet Hardware.
 - .2 ANSI A208.1-09, Particleboard.
 - .3 ANSI A208.2-09, Medium Density Fiberboard (MDF) for Interior Applications.
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC)
 - .1 Architectural Woodwork Standards (AWMAC AWS), 2014.
- .3 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-11.3-M87, Hardboard.
- .4 Canadian Standards Association (CSA International)
 - .1 CSA O112-M Series 1977 R2006, Standards for Wood Adhesives.
 - .2 CSA O121 08 (R2013), Douglas Fir Plywood.
 - .3 CSA O141 05 (R2014), Softwood Lumber.
 - .4 CSA O151 14, Canadian Softwood Plywood.
 - .5 CSA O153-M1980 (R2014), Poplar Plywood.
- .5 National Electrical Manufacturers Association (NEMA)
 - .1 ANSI/NEMA LD-3-05, High-Pressure Decorative Laminates (HPDL).

1.03 ADMINISTRATIVE REQUIREMENTS

- .1 Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.
- .2 Pre-Installation Meeting: Prior to enclosing framing, convene a meeting of contractor, casework fabricator, casework installer, framing subcontractor and Departmental Representative.
 - .1 Review locations of backing required for casework installation as shown on shop drawings and as necessary for installation.
 - .2 Review method of attachment for backing to wall system.
 - .3 Review coordination with other affected sections

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Action Submittals:
 - .1 Product Data:
 - .1 Prepare and submit material list in accordance with AWMAC AWS, cross-referenced to specifications.
 - .2 Include manufacturer's instructions, printed product literature, data sheets and catalogue pages for all materials and products to be incorporated into architectural wood casework and include product characteristics, performance criteria, dimensions and profiles, finish and limitations on use.
 - .2 Hardware List:
 - .1 Submit hardware list cross-referenced to specifications.
 - .2 Include manufacturer's specification sheets indicating name, model, material, function, finish, BHMA designations and other pertinent information.
 - .3 Shop Drawings: Prepare and submit shop drawings in accordance with AWMAC AWS and as follows.
 - .1 Indicate details of construction, jointing, fastening and other related details.
 - .1 Scales: 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 Show location on casework elevations of backing required in supporting structure for attachment of casework.
 - .5 Indicate seaming of high pressure laminate countertops where required.
 - .6 Indicate AWMAC AWS quality grade where different from predominant grade specified.
 - .7 Include color schedule of all casework items, including all countertop, exposed, and semi-exposed cabinet finishes, finish material manufacturer, pattern, and color.
 - .4 Samples: Prepare and submit samples in accordance with AWMAC AWS and as follows.
 - .1 Apply sample finishes to specified substrate or core material minimum 300 x 300 mm.
 - .2 Submit duplicate samples of HPDL and LPDL for each specified colour selection.
 - .3 Submit duplicate samples of laminated plastic joints, edging, cutouts and post-formed profiles.
 - .4 Edge banding:
 - .1 Sample deck for full range.
 - .2 Representative samples of each edge band thickness applied to core material with HPDL finish.

- .3 Informational Submittals:
 - .1 Submit WHMIS MSDS - Material Safety Data Sheets. Indicate VOC's for adhesives, solvents and cleaners.

1.05 CLOSEOUT SUBMITTALS

- .1 Submit information in accordance with Section 01 78 00 - Closeout Submittals.
 - .1 Cleaning and maintenance instructions for high pressure laminate surfaces and thermally fused melamine surfaces.
 - .2 Written Warranty.

1.06 QUALITY ASSURANCE

- .1 Fabricator Qualifications: Fabricator shall be either of the following:
 - .1 Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of minimum five years' successful in-service performance with value within 20% of cost of work of this Section, or
 - .2 Member in good standing of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), the American Woodwork Institute (AWI), or the Woodwork Institute (WI).
- .2 Installer Qualifications: Fabricator of products.
- .3 Fabrication Shop Requirements: Indoor relative humidity (RH) within 5-10% of indoor RH of the building where the installation is intended.
- .4 Quality Standard: Unless otherwise indicated, comply with AWMAC AWS "Architectural Woodwork Quality Standards" custom grade quality of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

1.07 WARRANTY

- .1 Provide two year manufacturer's warranty from date of Substantial Performance of 'work covering architectural woodwork materials and workmanship, except:
 - .1 Hinge warranty: Lifetime.
 - .2 Laminated Plastic warranty: Warrant against warpage and delamination from substrate for period of three years from date of Substantial Performance of Work.

1.08 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section with manufacturer's written instructions, and 01 61 00 - Common Product Requirements.
- .2 Deliver wood casework only when area of work is enclosed, plaster and concrete work is dry, and area is broom clean and site environmental conditions are acceptable for installation.
- .3 Protect millwork against dampness and damage during and after delivery.

- .4 Store millwork in ventilated areas, protected from extreme changes of temperature and humidity, and within range recommended by AWMAC AWS for location of project.
 - .1 If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Site Conditions" Article.
- .5 Store materials indoors in clean, dry area.
- .6 Protect architectural woodwork and hardware from nicks, scratches, and blemishes.
- .7 Replace defective or damaged materials with new.
- .8 Waste Management: for packaging and materials, in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .9 Do not install woodwork until painting and similar operations that could damage woodwork have been completed in installation areas.

1.09 SITE CONDITIONS

- .1 Environmental Limitations: Do not deliver or install woodwork until HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- .2 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. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.10 MAINTENANCE MATERIALS

- .1 Turn over surplus materials of edge banding material.

2 Products

2.01 QUALITY GRADE

- .1 Provide materials and perform fabrication in accordance with AWMAC AWS Custom Grade, except where specified otherwise.
- .2 In case of conflict between Contract Documents and AWMAC AWS grade requirements, highest quality requirements govern.

2.02 LUMBER

- .1 Wood Materials: containing no added urea-formaldehyde.
 - .1 Softwood and Hardwood Lumber: Sound lumber to specified AWMAC AWS quality grade requirements, kiln-dried to moisture content recommended by AWMAC AWS for location of the Work.
 - .2 Machine stress-rated lumber is acceptable for all purposes.

2.03 PANEL MATERIALS

- .1 Douglas fir plywood (DFP): to CSA O121, 7-ply veneer core, S4S, moisture content 4 to 9% or less.
- .2 Canadian softwood plywood (CSP): to CSA O151, 7-ply veneer core, S4S, moisture content 4 to 9% or less, solid two sides.
- .3 Poplar plywood (PP): to CSA O153, 7-ply veneer core, S4S, moisture content 4 to 9% or less.
- .4 Interior mat-formed wood particleboard: to ANSI A208.1, industrial grade M-2 or M-3, medium density (640-800 kg/m³), thickness in accordance with AWMAC AWS grade requirements.
 - .1 Use moisture resistant grade 2-M-2 or 2-M-3 for countertops and splash-backs to receive plumbing fixtures.
- .5 Medium density fibreboard (MDF): to ANSI A208.2, Grade MD, density 640 to 800 kg/m³, thickness in accordance with AWMAC AWS grade requirements.
 - .1 Use moisture resistant MR grade for countertops and splash-backs to receive plumbing fixtures.
- .6 Hardwood lumber: moisture content 4 to 9% or less, and in accordance with following standards:
 - .1 National Hardwood Lumber Association (NHLA).
- .7 Hardboard: To CAN/CGSB-11.3.

2.04 DECORATIVE OVERLAID COMPOSITE PANELS

- .1 Thermofused Melamine Panels (LPDL): particleboard or MDF core, finished on both faces with high wear-resistant thermally fused, melamine-impregnated decorative paper complying with NEMA LD 3.
 - .1 Abrasion Resistance: Equal or exceed 400 cycles (Minimum standard for HPL abrasion test).
 - .2 Colour: exposed and semi-exposed, to match HPDL selected by Departmental Representative.
 - .3 No added urea-formaldehyde, or urea-formaldehyde containing resins.

2.05 LAMINATED PLASTIC MATERIALS

- .1 High-Pressure Decorative Laminate (HPDL): NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard. Colours, patterns, finish, and textures, selected from manufacturers' entire range, by Departmental Representative. No added urea-formaldehyde.
 - .1 Horizontal applications: High Wear or Superior Wear, high abrasion resistance, Horizontal Grade Post forming, HGP, complying with NEMA LD3.
 - .2 Vertical surfaces, all remaining exposed or semi-exposed surfaces: VGS.
 - .3 Colours, patterns and finishes: Minimum 5 colours.

- .4 Backing sheet: Grade BK, Type HD not less than 1.2 mm thick or same thickness as face laminate., except for concealed surfaces.
 - .1 Colour: acceptable to Departmental Representative.

2.06 EDGING

- .1 Edge Banding: ABS Colour and pattern-through; with colour, pattern, and finish matched to each selected HPDL and LPDL colour and pattern; allow for full rolls and/or minimum order quantity of each specified pattern, colour, and thickness.
 - .1 Thickness as follows:
 - .1 3 mm thickness: Countertop edges, drawer and door panels, and exposed edges of boxes, gables, and shelves.
 - .2 1 mm thickness for semi-exposed shelves, and drawer boxes.

2.07 CABINET HARDWARE

- .1 Hinges: institutional hinge for full overlay with 3 mm width reveal, semi-concealed, Grade 1 to ANSI/BHMA A156.9-2003 Standard, 270 degree opening, self-closing, c/w cover cap, all-metal with two-way hinge arm adjustment, and mounting plate. Provide doors up to 810 mm high with two hinges, doors between 810 and 1200 mm with three hinges, and doors over 1200 mm high with four hinges.
- .2 Angle reduction clip – to set/adjust max degree of door opening to 90° to prevent contact with perpendicular surfaces.
- .3 Regular Drawer Slides: for drawers up to 150 mm high and 400 mm wide, 40 kg dynamic load rating, undermount, full extension, soft-close, synchronized with rack & pinion, fully adjustable, 4 way adjustments, 500 or 550 mm length or to suit maximum cabinet depth.
- .4 Heavy Duty Drawer Slides: Minimum 60 kg dynamic load rating, undermount, full extension, soft-close, synchronized with rack & pinion, fully adjustable, 4 way adjustments, length or to suit maximum cabinet depth.
- .5 Door and Drawer Pulls: surface mounted contemporary style metal pull; 170 stainless steel, 12 mm diameter straight rod, 128 mm centres, 160 mm overall length, 35 mm projection; Centre on drawers 180 mm height or less. Position horizontally on door and drawer fronts, 50 mm from top edges, centered on drawer widths, and 50 mm from side edge of doors, typical.
- .6 Shelf Supports: typical for cabinets unless otherwise noted; pre-drilled type, shelf support and socket, nickel-finish steel.
- .7 Support Brackets: typical for countertop or work surfaces: epoxy coated metal, size to suit countertop depth indicated; load capacity 500 kg/pair; with openings to allow cables to bypass. Allow one pair per 900 mm span of worktop or countertop knee space typically.
- .8 Magnetic catches: fabricator's option.
- .9 Door bumpers: 9 mm dia. clear, nylon, peel and stick, fabricator's option.

2.08 MISCELLANEOUS MATERIALS

- .1 Furring, Blocking, Shims, and Hanging Strips: 19 mm thick veneer core plywood.
- .2 Blind framing: 19 by 64 mm lumber.
- .3 Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide non-ferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- .4 Adhesives, General: Adhesives shall not contain urea formaldehyde.
 - .1 Construction Adhesive: waterproof, high solids content, polyurethane for bonding metal to metal, and metal to wood.
 - .1 Maximum VOC Content: 30 g/L, less water
 - .2 Laminate Adhesive: water-resistant, as recommended by manufacturer for high-pressure bonding.
 - .1 Maximum VOC Content: 250 g/L, less water
- .5 Draw Bolts and Splines: as recommended by fabricator.
- .6 Sealer: Latex based primer from approved products list for MPI #39.
 - .1 Maximum VOC Content: 200 g/L, less water

2.09 FABRICATION, GENERAL

- .1 Interior Woodwork Grade: Unless otherwise indicated, provide AWMAC AWS Custom-grade interior woodwork.
- .2 Drawing utilize the AWMAC AWS - Architectural Woodwork Standards Casework Design Series (CDS) numbering system to identify units required.
- .3 Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- .4 Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
- .5 Use continuous lengths up to 3 660 mm to minimize joints.
- .6 Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
 - .1 Seal edges of openings in countertops with a coat of varnish.
- .7 Shelving: Adjustable, on shelf supports, unless otherwise indicated.

2.10 CASEWORK FABRICATION - GENERAL

- .1 Fabricate casework of specified core and surface finish materials to specified AWMAC AWS quality grade.
 - .1 Construction type: A - frameless.
 - .2 Door-cabinet interface: flush overlay.
- .2 Shop install cabinet hardware for doors, shelves and drawers.
- .3 Shelving to cabinetwork to be adjustable unless otherwise noted.
- .4 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.
- .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.

2.11 LAMINATED PLASTIC CASEWORK FABRICATION

- .1 Do laminated plastic fabrication in compliance with NEMA LD3, Annex A and specified AWMAC AWS quality grade.
- .2 Ensure adjacent parts of continuous laminate work match in colour and pattern.
- .3 Veneer laminated plastic to MDF or particleboard core material as indicated and 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 3 000 mm. Keep joints 600 mm from sink cutouts.
- .4 Form shaped profiles and bends as indicated, using post-forming grade laminate to laminate manufacturer's instructions.
- .5 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.
- .6 Apply laminate backing sheet to reverse side of core of plastic laminate work.
- .7 Drawer Construction:
 - .1 Sides: LPDL on MDF.
 - .2 Bottoms: LPDL on MDF.
 - .3 Joinery: Meeting requirements of AWMAC for Grade specified.
- .8 Exposed Surfaces:
 - .1 Cabinet Boxes: 19 mm thick particleboard or MDF core, LPDL finish.
 - .2 Counter Gables: 19 mm thick particleboard with HPDL finish.
 - .3 Door and Applied Drawer Fronts: 19 mm thick particleboard with HPDL finish.

- .9 Semi-Exposed Surfaces:
 - .1 Surfaces: 19 mm thick particleboard or MDF core, LPDL finish.
 - .2 Cabinet Backs: 13 mm thick particleboard or MDF core, LPDL finish.
 - .3 Drawer Boxes: LPDL, 1 mm thick edge banding on top edge.
- .10 Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure laminate, Grade BKL, for balanced construction.
- .11 Provide dust panels of 6 mm plywood or tempered hardboard above compartments and drawers, unless located directly under tops.
- .12 Edge Banding: 3 mm edge-banding.
- .13 Valance: height indicated, continuous front and side returns; 19 mm thick particleboard with HPDL finish and 3 mm thickness edge-banding.
- .14 Filler panels: 19 mm thick particleboard with HPDL finish.
 - .1 Vertical at ends of cabinet runs: nominal 50 mm wide typically, equal at both ends.
 - .2 Provide horizontal filler panels at top and bottom of cabinets at ends and at corners.
- .15 Toe Kick: 19 mm thick particleboard, prepared to receive base material as indicated for walls in room finish schedule.
 - .1 Refer to Division 9 flooring specifications for applicable base materials.

2.12 COUNTERTOPS

- .1 High Pressure Laminate Countertops: Particleboard core, high pressure laminate clad, except plywood for 1 220 mm centred on any plumbing fixtures.
 - .1 Configuration: Post formed edge with splash, except no splash where ceramic tile splash indicated.
 - .2 Side and Backsplash: typical except at ceramic tile.
 - .1 Coordinate work with Section 09 30 13 - Ceramic Tiling.
 - .3 Front Edge: Square Wrap
 - .4 Joint adhesive: manufacturer's standard two-part adhesive kit to create inconspicuous, non-porous joints.
 - .1 Maximum VOC Content: 250 g/L, less water

2.13 SHOP FINISHING

- .1 Grade: Provide finishes of same grades as items to be finished.
- .2 General: Finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touch-up, cleaning, and polishing until after installation.
- .3 Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.

- .4 Sealer: Shop prime all faces and edges of furring, blocking, shims, hanging strips, and blind framing.

3 Execution

3.01 PREPARATION

- .1 Before installation, condition woodwork to average prevailing humidity conditions in installation areas.

3.02 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections are acceptable for architectural woodwork installation in accordance with manufacturer's instructions.
- .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.

3.03 INSTALLATION

- .1 Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- .2 Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- .3 Install prefinished millwork at locations shown on drawings.
 - .1 Position accurately, level, plumb straight.
 - .2 Install level and plumb (including tops) to a tolerance of 3 mm in 2 440 mm
- .4 Fasten and anchor millwork securely.
 - .1 Supply and install heavy duty fixture attachments for wall mounted cabinets.
- .5 Install woodwork level, plumb, true, and straight. Shim as required with concealed shims.
- .6 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.
- .7 Make cutouts for inset equipment and fixtures using templates provided.
- .8 Apply water-resistant building paper, or other moisture barrier acceptable to Departmental Representative, over wood framing members in contact with masonry or cementitious construction.

- .9 Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
 - .1 Seal site cuts with specified shop applied sealer except transparent finish where required to match specified final finish.
- .10 Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to centre doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
 - .1 Install cabinets with no more than 3 mm in 2 440 mm sag, bow, or other variation from a straight line.
- .11 Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
 - .1 Use draw bolts in countertop joints.
 - .2 Install countertops with no more than 3 mm in 2 440 mm sag, bow, or other variation from a straight line.
 - .3 Caulk space between countertop and tile backsplash with mildew resistant silicone sealant to Section 07 92 00 - Joint Sealants.
 - .4 Provide HPDL countertops except as indicated.
- .12 Fit hardware accurately and securely in accordance with manufacturer's written instructions.
- .13 Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.

3.04 ADJUSTING AND CLEANING

- .1 Adjust joinery for uniform appearance.
- .2 Clean, lubricate, and adjust hardware.
- .3 Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.
- .4 Progress Cleaning: clean in accordance with Section 01 74 00 – Cleaning.
 - .1 Leave Work area clean at end of each day.
- .5 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 00 - Cleaning.
 - .1 Clean inside and outside surfaces of woodwork.
 - .2 Remove excess glue, pencil and ink marks from surfaces.
- .6 Waste Management: separate waste materials for recycling, reuse in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.05 PROTECTION

- .1 Protect woodwork from damage until final inspection.
- .2 Repair damage to adjacent materials caused by architectural woodwork installation.
- .3 Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork.

END OF SECTION