

PART 1 - GENERAL

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| 1.1 RELATED SECTIONS | .1 | Section 06 40 00 - Architectural Woodwork. |
| | .2 | Section 07 21 16 - Blanket Insulation. |
| | .3 | Section 07 31 30 - Wood Shingles. |

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| 1.2 REFERENCES | .1 | American Society for Testing and Materials (ASTM) |
| | .1 | ASTM A 653/A653M-10, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealed) by the Hot-Dip Process. |
| | .2 | ASTM E 84-13a, Standard Test Method for Surface Burning Characteristics of Building Materials. |
| | .3 | ASTM E 1333-10, Test Method for Determining Formaldehyde Concentrations in Air and Emissions Rates from Wood Products Using a Large Chamber. |
| | .4 | ASTM D 1761-06, Standard Test Methods for Mechanical Fasteners in Wood. |
| | .2 | Canadian Standards Association (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 | CSA O112 Series-M1977(R2006), CSA Standards for Wood Adhesives. |
| | .4 | CSA O121-08(R2013), Douglas Fir Plywood. |
| | .5 | CAN/CSA-O141-05(R2009), Softwood Lumber. |
| | .6 | CSA O151-09, Canadian Softwood Plywood. |
| | .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 2000. |
| | .5 | National Fire Protection Association (NFPA): |
| | .1 | NFPA 255 Standard Test Method for Surface Burning Characteristics of Building Materials. |

1.3 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 standards and Canadian Panel Association (CPA).
- .3 Plywood identification: by grade mark in accordance with applicable CSA standards, Council of Forest Industries (COFI) certified.
- .4 Fire retarder treated plywood: certified test report showing compliances with specified performance characteristics and physical properties. Include in test report certification that fire retardant solution does not contain ammonium phosphate.

1.4 WASTE
MANAGEMENT AND
DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management System.
- .2 Separate metal, plastic, wood and corrugated cardboard-packaging in accordance with the Waste Management Plan and place in designated areas for recycling.
- .3 Do not burn scrap at the project site.
- .4 Fold up metal banding, flatten, and place in designated area for recycling.

PART 2 - PRODUCTS

2.1 FRAMING
MATERIALS

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
 - .1 CAN/CSA-0141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
 - .3 Forest Stewardship Council (FSC) certified.

2.1 FRAMING
MATERIALS
(Cont'd)

- .2 Furring, blocking, nailing strips, grounds, rough bucks, curbs, and sleepers:
 - .1 S2S is acceptable.
 - .2 Board sizes: "Standard" or better grade.
 - .3 Dimension sizes: "Standard" light framing or better grade.
 - .4 Forest Stewardship Council (FSC) certified.

2.2 PANEL MATERIALS

- .1 Plywood, OSB and wood based composite panels:
 - .1 CAN/CSA-0325.0, exterior grade, Canply/COFI certified.
 - .2 Forest Stewardship Council (FSC) certified.
- .2 Douglas fir plywood (DFP):
 - .1 CSA 0121, standard construction, exterior grade, Canply/COFI certified.
 - .2 Forest Stewardship Council (FSC) certified.
- .3 Canadian softwood plywood (CSP):
 - .1 CSA 0151, standard construction, exterior grade, Canply/COFI certified.
 - .2 Forest Stewardship Council (FSC) certified
- .4 All panel materials to contain no added urea formaldehyde when tested in accordance with ASTM E1333.

2.3 ACCESSORIES

- .1 Exterior wall sheathing paper: to CAN/CGSB-51.31 spunbonded olefin type; Tyvek Homewrap, or approved equal.
- .2 Polyethylene film to CAN/CGSB-51.34, Type 1, 0.15mm thick. For interior side vapour barrier.
- .3 Air seal: closed cell polyurethane or polyethylene.
- .4 General purpose adhesive: to CSA 0112 Series.
- .5 Nails, spikes and staples: to CSA B111.
- .6 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.

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| <u>2.3 ACCESSORIES
(Cont'd)</u> | .7 | 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. |
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| <u>2.4 FASTENER
FINISHES</u> | .1 | Galvanizing: to CAN/CSA-G164, use hot dipped galvanized fasteners for exterior work and pressure-preservative treated materials. |
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| <u>2.5 WOOD
PRESERVATIVE</u> | .1 | Pressure impregnated wood preservative: preservative to be vacuum/pressure impregnated in accordance with CSA 080.1 to an average net retention of 4.0 kg/m3 of C.A. (Copper Azole) preservative or ACQ preservative, arsenic free. |
| | .2 | End cut treatment: preservative as recommended by treated wood manufacturer. |
| | .3 | All fasteners used in the installation of pressure treated wood to be either hot dipped galvanized or stainless steel. |

PART 3 - EXECUTION

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| <u>3.1 PREPARATION</u> | .1 | Store wood products off the ground and protected from weather. |
| | .2 | Pressure treated surfaces exposed by cutting, trimming or boring to be re-treated with liberal brush application of preservative as recommended by manufacture before installation. |
| | .3 | Pressure treated material to be used:
.1 Wood cants, fascia backing, curbs, nailers, sleepers on roof deck.
.2 Wood furring and blocking on outside surface of exterior masonry and concrete walls.
.3 Wood furring and blocking to exterior side of air/vapour barrier. |

3.2 INSTALLATION

- .1 Comply with requirements of NBC 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 furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding electrical equipment mounting boards, and other work as required.
- .5 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .6 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using galvanized fasteners.
- .7 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .8 Use caution when working with particle board and preservative treated wood. Use dust collectors and high quality respirator masks when cutting or sanding wood panels.
- .9 Install membrane air barrier using wood strapping at stud locations, or with 25mm cap nails at 150mm o.c. at studs. All laps shall occur under strapping.
- .10 For attachment to masonry and concrete use screws and plastic plugs, bolts and lead shields or other similar fastenings for any load bearing member or finish material. Power actuated fasteners on masonry to be approved by Departmental Representative.

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 Provide equipment backboards for mounting electrical and communication equipment as indicated. Use 19 mm thick fire retardant treated plywood on 19 x 38 mm furring around perimeter and at maximum 300 mm intermediate. Pre-paint by Section 09 91 23 before installation.
- .2 Pressure preservative treated material to be used, including but not limited to the following:
 - .1 Wood window bucks exposed to cavity.
 - .2 Wood cants, fascia backing, curbs, nailers, sleepers on roof deck.
 - .3 Wood furring and blocking to exterior side of air/vapour barrier.
 - .4 Wood studs, lintels, floor joists.
- .3 Exterior wall sheathing.

PART 1 - GENERAL

1.1 RELATED WORK .1 Rough Carpentry: Section 06 10 00.

1.2 REFERENCES .1 CAN/CSA-080 Series-08(R2012), Consolidated - Wood Preservation.

.2 CSA 086-09, Consolidation Engineering Design in Wood.

.3 CAN/CSA-0141-05(R2009), Softwood Lumber.

.4 CSA S307-M1980(R2001), Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings.

.5 CSA S347-99(R2009), Method of Test for Evaluation of Truss Plates Used in Lumber Joints.

.6 NLGA-2010, Standard Grading Rules for Canadian Lumber.

.7 National Building Code of Canada, 2010.

1.3 DESIGN CRITERIA .1 Design trusses, bracing and bridging in accordance with CSA 086, for building locality as ascertained by NBC Supplement No. 1, Climatic Information for Building Design in Canada, and minimum uniform and minimum concentrated loadings stipulated in NBC commentary, and/or as noted on the Drawings. Use more stringent vales.

.2 Limit live load deflection to 1/360th of span where gypsum board ceilings are hung directly from members.

.3 Limit live load deflections to 1/300th of span unless otherwise specified or indicated.

.4 Limit total load deflection to 1/180th of span unless otherwise specified or indicated.

.5 Design and supply all truss uplift anchors including girder truss tie downs in accordance

- 1.3 DESIGN CRITERIA .5 (Cont'd)
(Cont'd) with CAN/CSA- 086.1, to withstand the wind uplift loads shown on drawings.
- 1.4 SOURCE QUALITY .1 Identify lumber by grade stamp of an agency
CONTROL certified by Canadian Lumber Standards Administration Board.
- 1.5 SHOP DRAWINGS .1 Submit shop drawings and erection drawings in accordance with Division 01.
- .2 Each shop drawing submission showing connection details shall bear signature and stamp of professional engineer registered or licensed in Nova Scotia.
- .3 Indicate species, sizes, and stress grades of all lumber used as structural members. Show pitch, span, camber, configuration and spacing of members. Indicate connector types, thicknesses, sizes, locations and design value. Show bearing details. Indicate design load for each member.
- .4 Submit stress diagram or print-out of computer design indicating design load for each member. Indicate allowable load and stress increase.
- .5 Indicate arrangement of webs or other members to accommodate ducts and other specialties.
- .6 Show lifting points for storage, handling and erection.
- .7 Show location of lateral bracing for compression members.
- .8 Indicate all locations of uplift connections and type on erection drawings and supply all uplift connections for review by Departmental Representative. Each connection shall state capacity that connection can withstand.

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| <u>1.6 DELIVERY AND STORAGE</u> | .1 | Store members on job site in accordance with manufacturer's instructions. Provide bearing supports and bracings. Prevent bending, warping and overturning of members. |
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PART 2 - PRODUCTS

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| <u>2.1 MATERIALS</u> | .1 | Lumber: SPF species, No. 1 grade, softwood, S4S, with maximum moisture content of 19% at time of fabrication and to following standards: <ul style="list-style-type: none">.1 CAN/CSA-O141..2 NLGA (National Lumber Grading Association), Standard Grading Rules for Canadian Lumber. |
| | .2 | Fastenings: to CSA-O86. |
| | .3 | Tie-down anchors: provide galvanized truss tie-down anchors at each truss bearing point. Design truss tie-down anchors as per uplift requirements in latest edition of NBC. |

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| <u>2.2 FABRICATION</u> | .1 | Fabricate wood trusses in accordance with reviewed shop drawings. |
| | .2 | Provide for design camber and roof slopes when positioning truss members. |
| | .3 | Connect members using metal connector plates. |

PART 3 - EXECUTION

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| <u>3.1 ERECTION</u> | .1 | Erect wood trusses in accordance with reviewed erection drawings. |
| | .2 | Indicated lifting points to be used to hoist trusses into position. |
| | .3 | Make adequate provisions for handling and erection stresses. |
| | .4 | Exercise care to prevent out-of- plane bending of trusses. |
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| 3.1 ERECTION
(Cont'd) | .5 | Install temporary horizontal and cross bracing to hold trusses plumb and in safe condition until permanent bracing and decking are installed. |
| | .6 | Install permanent bracing in accordance with reviewed shop drawings, prior to application of loads to trusses. |
| | .7 | Do not cut or remove any truss material without approval of Departmental Representative. |

PART 1 - GENERAL

<u>1.1 RELATED REQUIREMENTS</u>	.1	Section 01 33 00 - Submittal Procedures.
	.2	Section 06 40 00 - Architectural Woodwork.
	.3	Section 08 71 00 - Door Hardware.
	.4	Section 09 91 23 - Interior Painting.
<u>1.2 REFERENCES</u>	.1	Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI) .1 Architectural Woodwork Quality Standards, 1st edition, 2009.
	.2	Canadian General Standards Board (CGSB) .1 CAN/CGSB-11.3-M87, Hardboard.
	.3	CSA International .1 CSA B111-74(R2003), Wire Nails, Spikes and Staples. .2 CSA O121-08(R2013), Douglas Fir Plywood. .3 CSA O141-05(R2009), Softwood Lumber. .4 CSA O151-09, Canadian Softwood Plywood. .5 CSA O153-M1980(R2008), Poplar Plywood. .6 CAN/CSA-Z809-08, Sustainable Forest Management.
	.4	Forest Stewardship Council (FSC) .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
	.5	National Lumber Grades Authority (NLGA) .1 Standard Grading Rules for Canadian Lumber 2010.
	.6	South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards .1 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.
	.7	Sustainable Forestry Initiative (SFI) .1 SFI-2010-2014 Standard.
	.8	Underwriters Laboratories of Canada (ULC) .1 CAN/ULC-S104-10, Standard Method for Fire Tests of Door Assemblies.

1.2 REFERENCES (Cont'd)	.8	(Cont'd) .2 CAN/ULC-S105-09, Standard Specification for Fire Door Frames.
1.3 ACTION AND INFORMATIONAL SUBMITTALS	.1	Submit in accordance with Section 01 33 00 - Submittal Procedures.
	.2	Shop Drawings: .1 Indicate details of construction, profiles, jointing, fastening and other related details. .2 Indicate materials, thicknesses, finishes and hardware.
1.4 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 products from nicks, scratches, and blemishes. .3 Replace defective or damaged materials with new.
	.4	Develop Construction Waste Management Plan Waste Reduction Workplan related to Work of this Section.
	.5	Packaging Waste Management: remove for reuse of pallets, crates, padding, and packaging materials as specified in Construction Waste Management Plan Waste Reduction Workplan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Softwood lumber: S4S, moisture content 19% or less in accordance with following standards:
 - .1 CSA 0141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
 - .3 Machine stress-rated lumber is acceptable.
 - .4 Hardwood lumber: moisture content 8% or less. Select or better grade; white wood only. (SAP hard maple).

2.2 PANEL MATERIAL

- .1 Douglas fir plywood (DFP): to CSA 0121, standard construction, exterior grade, CanPly/COFI certified.
- .2 Canadian softwood plywood (CSP): to CSA 0151, Standard construction, exterior grade, CanPly/COFI certified.
- .3 All panel material to contain no added urea formaldehyde when tested in accordance with ASTM E1333.

2.3 ACCESSORIES

- .1 Nails and staples: to CSA B111; galvanized to CAN/CSA-G164 for exterior work, interior humid areas and for treated lumber; plain finish elsewhere.
- .2 Wood screws: plain steel, type and size to suit application.
- .3 Splines: wood.
- .4 Adhesive and Sealants: as recommended by manufacturer.
- .5 Metal trim: for use with window sills, aluminum clear anodized finish, including:
 - .1 Channel trim to receive sills at windows: "Extrude-A-Trim" Type.

- 2.4 FINISHES .1 Clear finish on hardwood wood surfaces where noted.
- .1 Base coat of catalyzed sealing lacquer.
 - .2 Two finish coats of catalyzed top coat lacquer.
 - .1 Approved products.
 - .1 ML Campbell.
 - .2 Sadolin.
 - .3 Sand between all coats.

PART 3 - EXECUTION

- 3.1 INSTALLATION .1 Do finish carpentry to Quality Standards of (AWMAC).
- .2 Scribe and cut as required, fit to abutting walls, and surfaces, fit properly into recesses and to accommodate piping, columns, fixtures, outlets, or other projecting, intersecting or penetrating objects.
 - .3 Form joints to conceal shrinkage.

- 3.2 CONSTRUCTION .1 Fastening:
- .1 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.
 - .2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.
 - .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round smooth cut hole and plug with wood plug to match material being secured.
 - .4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.
- .2 Standing and running trim:
- .1 Butt and cope internal joints to make snug, tight, joint. Cut right angle joints of casing and base with mitred joints.
 - .2 Fit backs of carpentry snugly to wall surfaces to eliminate cracks at junction of base and casing with walls.

- 3.2 CONSTRUCTION (Cont'd)
- .2 Standing and running trim:(Cont'd)
 - .3 Make joints where necessary using a 45 degrees scarf type joint.
 - .3 Oak cap at Stair 13R.
 - .1 Install cap at locations indicated.
 - .2 Make joints hair line.
- 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.
 - .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.
- 3.4 PROTECTION
- .1 Protect installed products and components from damage during construction.
 - .2 Repair damage to adjacent materials caused by finish carpentry installation.

PART 1 - GENERAL

1.1 RELATED
SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 06 10 00 - Rough Carpentry - blocking and plywood blocking.
- .3 Section 07 92 00 - Joint Sealing.
- .4 Section 09 30 13 - Ceramic Tiling.
- .5 Section 09 91 23 - Interior Painting.
- .6 Division 26 - Electrical Power Signal, data wiring.

1.2 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI A208.1-09, Particleboard.
 - .2 ANSI A208.2-09, Medium Density Fiberboard (MDF) for Interior Applications.
 - .3 ANSI/HPVA HP-1-10, Standard for Hardwood and Decorative Plywood.
- .2 American Society for Testing and Materials (ASTM):
 - .1 ASTM E 1333-10, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.
 - .2 ASTM D 2832-92(R2011), Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
 - .3 ASTM D 5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
- .3 Architectural Woodwork Manufacturers Association of Canada (AWMAC)
 - .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 Canadian Standards Association (CSA):
 - .1 CSA B111-74(R2003), Wire Nails, Spikes and Staples.

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| 1.2 REFERENCES
(Cont'd) | .5 (Cont'd) |
| | .2 CSA 0112.10-08, Evaluation of Adhesives for Structural Wood Products (Limited Moisture Exposure). |
| | .3 CSA 0121-08(R2013), Douglas Fir Plywood. |
| | .4 CSA 0141-05(R2009), Softwood Lumber. |
| | .5 CSA 0151-09, Canadian Softwood Plywood. |
| | .6 CSA 0153-M1980(R2008), Poplar Plywood. |
| | .7 CSA 0115-M82(R2001) - Hardware and Decorative Plywood. |
| | .6 Health Canada/Workplace Hazardous Materials Information System (WHMIS) |
| | .1 Material Safety Data Sheets (MSDS). |
| | .7 National Electrical Manufacturers Association (NEMA) |
| | .1 ANSI/NEMA LD-3-05, High-Pressure Decorative Laminates (HPDL). |
| | .8 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 Shop Drawings: |
| | .1 Indicate details of construction, profiles, jointing, fastening, working surface seams 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 Samples: |
| | .1 Submit duplicate samples approximately 150mm x 150mm (6"x6"), shop finished illustrating cabinet finishes. |
| | .2 Submit duplicate samples of laminated plastic for colour selection. |
| | .3 Submit one sample of each hardware item. Requested hardware will be returned for incorporation in the work. |

1.3 ACTION AND
INFORMATIONAL
SUBMITTALS
(Cont'd)

- .4 Low-Emitting Materials:
.1 A listing of adhesives and sealants and paints and coatings used in building, shall be available upon request and comply with Green Seal VOC and chemical component limits or restrictions requirements.
.2 A listing of composite wood products used in building, shall be available on request with documentation from the manufacturer stating that they contain no added urea-formaldehyde resins.

1.4 QUALITY
ASSURANCE

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
.2 Plywood, particleboard, wood based composite panels to CSA and ANSI standards.
.3 Any reference to custom grade in this section shall be as defined in the AWMAC Quality Standards.
.4 Any item given a specific quality grade shall be premium grade as defined by AWMAC Quality Standards.
.5 The subcontractor for this section is responsible for all field dimensions on site that will affect the work.
.6 Mock-ups:
.1 Construct mock-ups in accordance with Section 01 45 00 - Quality Control.
.1 Shop prepare one base cabinet unit wall cabinet counter top shelving unit, complete with hardware and shop applied finishes, and install where directed by Consultant
.2 Allow 48 hours for inspection of mock-up by Consultant and AWMAC 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 Consultant.
.5 Mock-up may remain as part of finished work.

- 1.5 QUALITY CONTROL .1 Work of this Section shall be manufactured and installed to the specified AWMAC Quality Standards.
- .2 Work that does not meet the AWMAC Architectural Woodwork Standards, as specified, shall be replaced, reworked and/or refinished by the architectural woodwork contractor to the approval of the Consultant at no additional cost to the Owner.
- 1.6 DELIVERY, STORAGE AND HANDLING .1 Deliver, store and handle materials in accordance 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.
- .1 Protect millwork against dampness and damage during and after delivery as specified in AWMAC/AWS QSI, Section 01700.
- .2 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 Refer to AWMAC AWS Section 2 - Care and Storage.
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PART 2 - PRODUCTS

- 2.1 FINISHED LUMBER .1 Softwood lumber: unless specified otherwise, S4S, moisture content 11% or less in accordance with following standards:
.1 AWMAC custom grade, moisture content as specified.
- .2 Machine stress-rated lumber is acceptable for all purposes.
- .3 Hardwood lumber: moisture content 11% or less in accordance with following standards:
.1 AWMAC custom grade, moisture content as specified.
- 2.2 PANEL PRODUCTS .1 Poplar plywood (PP): to CSA 0153, standard construction.
.1 Plywood resin to contain no added urea-formaldehyde.
- .2 Interior mat-formed wood particleboard: to ANSI/NPA A208.1.
.1 Particleboard resin to contain no added urea-formaldehyde.
- .3 Medium Density Fibreboard (MDF) core: to ANSI A208.2, Grade thickness as indicated on drawings, density 769 kg/m².
.1 Medium density fibreboard performance requirements to: ANSI A208.2.
.2 MDF resin to contain no added urea-formaldehyde.
- 2.3 PLASTIC LAMINATE .1 Laminated plastic for postforming work:
.1 To NEMA LD3, Grade VGL, based on solid colour range with furniture finish.
.2 Post form profile Italo Plus edge and cove backsplash.
- .2 Laminated plastic backing sheet: Grade BK, same thickness and colour as face laminate.
- .3 Thermofused Melamine: to NEMA LD3 Grade VGL,
.1 High wear resistant thermofused melamine: equal or exceed 400 cycles (Minimum standard for HPL abrasion test).

2.3 PLASTIC LAMINATE (Cont'd)	.3	Thermofused Melamine:(Cont'd) .2 All cabinets to be 19mm material unless otherwise noted.
2.4 EDGE BANDING MATERIALS	.1	For thermally fused laminate (MCP): .1 All exposed edges: 3mm PVC, colour and through pattern to match face panel, unless noted otherwise. .2 All semi-concealed edges only (ie: front edges of boxes and shelves behind doors): 1mm PVC, colour to match face panel, unless noted otherwise. .3 Edgebanding to be applied using an edgebanding machine with heat and pressure.
2.5 SEALANTS ADHESIVE COATINGS	.1	Sealant: in accordance with Section 07 92 00 - Joint Sealing. Refer to 2.6 SOLID SURFACE MATERIAL, 2.6.6 FOR ADHESIVE
	.2	Laminated plastic adhesive: .1 Refer to laminate manufacturer's technical manuals for correct adhesive.
	.3	Wood Finishes: VOC limit to comply with Green Seal certification.
2.6 SOLID SURFACE MATERIAL	.1	For window sills in shower in Room 340.
	.2	Cast, nonporous, solid surface sheet product manufactured with acrylic resins, polymers, fire-retardant fillers and proprietary colouring agents, with homogeneous, uniform colour throughout, having minimum physical and performance properties specified and capable of being thermoformed to shapes indicated.
	.3	Superficial damage to a depth of 0.25 mm (0.010 inch) shall be repairable by sanding and/or polishing.
	.4	Thickness: 13mm.
	.5	Seaming is not applicable. Window sills to be in one piece.

- 2.6 SOLID SURFACE MATERIAL (Cont'd)
- .6 Accessories:
- .1 Joint adhesive: translucent white (TW) Dupont Joint Adhesive for inconspicuous, nonporous joints with a chemical bond.
 - .2 Sealant: Manufacturer's standard mildew-resistant, FDA-compliant, UL-listed silicone sealant in colours matching components.
 - .3 Adhesive: as recommended by manufacturer for securement to panel material substrate.
- .7 Colours:
- .1 White: to match Corian Glacier White.
- .8 Acceptable Material:
- .1 Corian.
- 2.7 MANUFACTURED UNITS
- .1 Casework:
- .1 Fabricate caseworks to AWMAC custom quality grade.
 - .2 Case bodies (ends, divisions and bottoms).
 - .1 Particle board laminated with thermofused melamine 19mm thick unless otherwise noted on drawings.
 - .3 Backs:
 - .1 Particle board laminated with thermofused melamine 19mm thick unless otherwise noted on drawings.
 - .4 Shelving:
 - .1 Particleboard, laminated with thermofused melamine 19mm thick.
 - .2 All shelves to have continuous 1mm PVC edging to match melamine.
 - .5 All case interior surfaces for white.
 - .6 All exposed edges for 3mm matching edge band to match face laminate unless otherwise noted.
- .2 Drawers:
- .1 Fabricate drawers to AWMAC custom grade supplemented as follows:
 - .2 Sides and Backs: melamine panel, 12.7mm thick, white.
 - .3 Bottoms: melamine panel, 12.7 mm thick, white.
 - .4 Fronts: particleboard laminated in plastic laminate for front face with backing sheet for back face, 19mm thick, colour to be selected by Consultant.

- 2.7 MANUFACTURED UNITS (Cont'd)
- .2 Drawers:(Cont'd)
- .5 All drawer interiors for white unless otherwise noted on drawings.
- .6 All exposed edges for 3mm matching edge banding, matching fame laminate.
- .3 Casework Doors:
- .1 Fronts: particleboard laminated in plastic laminate for front face with backing sheet for back face, 19mm thick, colour to be selected by Consultant.
- .2 All exposed edges for 3mm matching edge banding, matching face laminate
- 2.8 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. Recess shelf standards unless noted otherwise.
- .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.
- .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. 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.

- 2.8 FABRICATION (Cont'd)
- .9 Form shaped profiles and bends as indicated, using postforming grade laminate to laminate manufacturer's instructions.
 - .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.

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 Inform General Contractor of unacceptable conditions immediately upon discovery.
 - .2 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.
- 3.2 INSTALLATION
- .1 Install 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 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.

3.2 INSTALLATION
(Cont'd)

- .6 At junction of plastic laminate counter and adjacent back splash wall finish, apply small bead of sealant in accordance with Section 07 92 00 - Joint Sealing.
- .7 Fit hardware accurately and securely in accordance with manufacturer's written instructions.

3.3 HARDWARE AND
COMPONENTS

- .1 Hinges:
 - .1 Concealed door hinges:
 - .1 Concealed hinges for overlay doors, 110 degree opening with integral horizontal and vertical adjustment; self-closing; for full-overlay doors.
 - .2 Finish: manufacturer's standard bright nickel.
 - .3 Standard of acceptance:
 - .1 Dumatic Hinges by Häfele America Co.
 - .2 Pivot door hinges:
 - .1 Concealed pivot hinges, smooth drawn 180 degree opening; length to suit door size.
 - .2 Quantity: two (2) per door.
 - .3 Standard of acceptance: pivot hinges by Hafele America Co.
 - .3 Invisible door hinges:
 - .1 Concealed hinges, 180 degree opening.
 - .2 Finish: polished chrome.
 - .3 Quantity: provide in sizes and quantities as recommended by manufacturer to suit door thicknesses and sizes.
 - .4 Standard of acceptance: Soss Invisible Hinges by Universal Industrial Products Company.
- .2 Drawer slides:
 - .1 Description: ball bearing slides, side mounted.
 - .2 Load capacity: 50 pounds per pair.
 - .3 Extension: full extension.
 - .1 Bins and file drawers: three section, full extension.
 - .4 Finish: manufacturer's standard electro-plated zinc.
 - .5 Standard of acceptance:
 - .1 Accuride.

3.3 HARDWARE AND
COMPONENTS
(Cont'd)

- .3 Pulls:
 - .1 Doors and drawers unless otherwise specified:
 - .1 Contemporary Stainless Steel Handle Pull; centre to centre- 7 9/16"; handle diameter 25/64".
 - .2 Standard of acceptance: Richelieu 2102 Product # BP2102192170.
 - .4 Shelf support pins:
 - .1 Description: nickel-plated spoon shaped pins for support for adjustable shelves, inserted into 1/4 inch diameter holes drilled a 6 inches on center in sides of cabinet.
 - .2 Standard of acceptance: 282.04.739 by Häfele.
 - .5 Silencers: clear, soft vinyl buttons.
 - .6 Miscellaneous hardware: provide other required hardware as indicated for complete and proper operation and installation of units.

3.4 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 millwork and cabinet work inside cupboards and drawers and outside surfaces.
 - .2 Remove excess glue from surfaces.
 - .3 Remove recycling containers and bins from site and dispose of materials at appropriate facility.
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- 3.5 PROTECTION
- .1 Protect millwork and cabinet work 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.