All guidelines apply to both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.

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1.0 GENERAL

1.1 Related UBC Guidelines

.1 Section 06 10 00 Rough Carpentry

1.2 Coordination Requirements

.1 Section 27 05 05 Communication Rooms Design Guidelines, 1.5.2. The General Contractor must install plywood for the back-boards of all Communications Rooms not only in a professional manner, but also according to UBC’s IT Guidelines sub-section 1.5.2.

.2 All trades.

1.3 Wood Construction – Structural Requirements

.1 Design building structures and their components for a 100 year service life.

.2 Drawings to include a summary of the structural systems and to provide supplementary information as required.

.3 Increase live loads for specific occupancies as per Table UBC 4.1.6.3.

.4 Design light roofs for a minimum net factored uplift of 1.0 kPa.

.5 Ensure that the design and field review of non-structural components is covered in the contract documents (drawings and/or specifications).

1.4 Materials

.1 Do not use Part 9 of the BCBC for structural design of wood frame structures. Wood frame structures must be designed to Part 4 of the BC Building Code.

.2 Where wall sill plates are located above concrete, use preservative treated wood plates installed on foam sill gaskets.

.3 Do not use finger-jointed studs for members in tension.

.4 Ensure that the maximum permitted moisture content of wood members do not exceed the limits specified in the Building Envelope section of these guidelines or 19%, whichever is more restrictive.

.5 Protect susceptible wood products from moisture penetration.

.6 Sub floors shall be constructed with exterior grade tongue and groove plywood, glued and screwed in place.

1.5 Lateral Load-Resisting Systems

.1 Use only plywood shear walls (or other acceptable engineered systems complying with Part 4 of the BC Building Code) to provide the lateral load resistance of wood frame structures.

.2 Do not use gypsum wallboard in contributing to the lateral load resistance of wood frame structures.
.3 Do not use oriented strand board for sheathing of wood frame shear walls.

.4 Continuity of the plywood floor diaphragm must be maintained on all floors. Do not cut or stop the plywood at party-wall locations.

***END OF SECTION***
1.0 GENERAL

1.1 Related UBC Guidelines

.1 Section 06 00 10 Wood Structures - General Requirements

1.2 Coordination Requirements

.1 All trades.

1.3 Quality Control and Assurance

.1 Quality Assurance

.1 Wood structures, including those falling under Part 9 of the BC Building Code, are to be engineered in accordance with Part 4 of the BC Building Code.

.2 Costs to be included in contract unless the engineering design has been carried out by the Project Consultant Team.

.2 Quality Control

.1 Manufactured wood products to be protected from weather at all times, including during transportation and installation.

.2 Do not use finger-jointed studs.

2.0 MATERIALS

2.1 Prescriptive Requirements

.1 Components

.1 For all interior work, provide kiln-dried lumber with a maximum moisture content of 10% or less after Kiln-drying and no greater than 12% moisture content at time of installation, unless otherwise indicated or approved.

.2 Machine stress lumber is an acceptable alternate to the visual graded method.

2.2 Pressure Preservative Wood Treatment

.1 Provide lumber and plywood which is pressure preservative treated to CAN/CSA O80 Series with ACQ for:

.1 All members in contact with ground.

.2 Wood grounds at high humidity areas

.2 After treatment, kiln-dry lumber and plywood to a maximum moisture content of 15%.

.3 Note that hot-dipped galvanized or stainless steel fasteners are to be used with ACQ treated wood.

.4 Examples of wood to be pressure preservative treated:

.1 Wood cants, plywood sheathing, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, air barrier, and waterproofing.
.2 Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

.3 Wood framing members less than 18 inches (460 mm) above grade.

.4 Wood floor plates installed foundation walls.

.5 All wood members beyond the face of building paper at exterior walls (i.e. strapping within cavity walls).

.6 All wood members in contact with concrete and masonry.

.7 Wood exposed to weather.

***END OF SECTION***
1.0 GENERAL

1.1 Related UBC Guidelines

.1 Laboratory Casework
.2 Wood Doors
.3 Laboratory Safety Equipment
.4 Special Construction

1.2 Coordination Requirements

.1 Coordinate with UBC Building Operations – Carpentry Shop.
.2 Coordinate with Hardware Consultant.
.3 Coordinate design with UBC Locksmith.

1.3 Description

.1 Architectural Woodwork, defined as all clear, kiln dried, dressed or re-sawn material exposed to view in a finished building interior or exterior, including casework, frames, paneling, trim and other wood-related products and including cabinet hardware. Architectural Woodwork does not include Economy Grade.

1.4 Performance Standards

.1 Architectural Woodwork Manufacturers Association of Canada (AWMAC)

.1 AWMAC Quality Standards current edition at time of tender.
http://awmac.com

1.5 Quality Control and Assurance

.1 Submittals

.1 Before Start of Work
.1 List of all proposed materials for review and color samples for selection plus for final approval.
.2 Shop drawings conforming to AWMAC Quality Standards requirements that include details of construction, profiles, jointing, fastening and other related details.
.3 Sample mock-up.

.2 Work in accordance with Grade or Grades specified in the AWMAC Quality Standards (AQS) current edition at time of tender.

.3 Guarantee and Inspection Service:

.1 Architectural woodwork shall be manufactured [and/or] installed to the AWMAC Quality Standards current edition at time of tender and shall be subject to an inspection at the factory and/or site by an appointed AWMAC Certified Inspector. Inspection costs shall be included in the tender price for this project. (Contact your local AWMAC Chapter for details of inspection costs). Shop drawings submitted to the AWMAC Chapter office for review before work commences. Work that does not meet the AWMAC Quality Standards, as specified, shall be replaced, reworked and/or refinished by the architectural woodwork contractor, to the approval of AWMAC, at no additional cost to the Owner.
2. If the woodwork contractor is an AWMAC manufacturer member in good standing, a two (2) year AWMAC Guarantee Certificate will be issued. The AWMAC Guarantee shall cover replacing, reworking and/or refinishing deficient architectural woodwork due to faulty workmanship or defective materials supplied [and/or] installed by the woodwork contractor, which may appear during two (2) year period following the date of issuance.

3. If the woodwork contractor is not an AWMAC Manufacturer member they shall provide the owner with a two (2) year maintenance bond, in lieu of the AWMAC Guarantee Certificate, to the full value of architectural woodwork contract.

4. Woodwork Manufacturer Qualifications:
   .1 Member in Good Standing of AWMAC.
   .2 Minimum 5 years of production experience similar to this project, whose qualifications indicate ability to comply with requirements of this Section.
   .3 Minimum one project in past 5 years where value of woodwork within 20 percent of cost of woodwork for this Project.
   .4 At Completion
      .1 Maintenance data shall itemize list C/W each finish type, color formulation.

2.0 MATERIALS

2.1 Performance Requirements
   .1 All Architectural Woodwork shall conform to Architectural Woodwork Standards.
   .2 Laboratories
      .1 Wood is allowed within laboratories, including casework, trim, wood doors and frames, etc., but only on approval of UBC Health Safety and Environment.
   .3 Seismic Anchorage is required on all cabinets and shelving over 1200 mm high or where units are likely to be a hazard from overturning. Refer also to Structural Section for engineering requirements.

2.2 General
   .1 AWMAC Quality Standards (AQS) current edition at time of tender.
   .2 Typical
      .1 Casework Grade - Custom.
      .2 Casework Style: Flush Overlay
   .3 Typical Veneer when using Wood Veneer Ply
      .1 White Birch.
   .4 Security Problem Areas (to assist in preventing doors and drawers from being pried open)
      .1 Casework Style: Flush Overlay
2.3 Environmental

.1 Source

.1 Endangered wood species in millwork, casework and furniture products must not be used.

.2 Use of local manufacturers shall be preferred.

.2 Manufacture

.1 Adhesives, preservatives, hardeners, synthesizing agents and finish coatings shall be 1.2.9. South Coast Air Quality Management District (SCAQMD) Rule 1168-[A2005] compliant.

.2 MDF to be CARB2 compliant, no added formaldehyde and recycle certified.

.3 Plywood shall be Exterior Grade (i.e. manufactured with no added formaldehyde).

.3 Performance

.1 Life Cycle Costing

.1 15-year.

.2 Provide modular components to facilitate reuse whenever possible.

.3 Disposal

.1 Minimize use of packing materials such as cardboard for shipping case goods, millwork and furniture and if used, recycle. Use blanket wraps for shipping whenever feasible.

2.4 Prescriptive Requirements

.1 Materials

.1 Components

.1 MDF shall be typical core material.

.2 Plywood Cores at the following locations:

.1 Core for countertops with plumbing cut-outs.

.2 High humidity areas.

.3 All food service areas.

.3 When plastic laminate or melamine surfacing is used, provide same finish (backer sheet when concealed) on all surfaces of the core.

.4 Drawer sides, backs and bottoms to be constructed of min. 12 mm (1/2") Baltic Birch plywood or Apple plywood.

.5 Typical edge banding for Wood Cabinet shall be solid 3 mm (1/8") birch or same species as veneer when hardwood veneer is used.

.6 On all shelving designed for use as chemical storage, a 50 mm clear acrylic plastic lip must be installed on the shelf edge.
.7 Cabinets
.1 Non-Formaldehyde Medite is a preferred product.
.2 Maximized recycled content.
.3 Avoid use of adhesives, use re-usable mechanical fasteners where possible.
.4 Do not specify fir ply, specify birch ply.
.5 Standard cabinet construction to be 3/4".

.8 Cabinet Hardware Requirements
.1 Ensure commercial availability for maintenance.
.2 UBC standard Hardware for Cabinets (see .9 Cabinet Hardware Preferences, below).
.3 Locks to be per UBC Grand Master System - contact UBC Locksmith.

.9 Cabinet Hardware Preferences
.1 Hinges shall be HOC/Blum 110, 170 when required or equal.
.2 Pulls shall be Gallery Style 302B stainless steel or equal.
.3 Drawer slides shall be Accuride (or equal) min. 100 lbs (45.5 kg.) duty; full extension (avoid residential slides).
.4 Cabinet locks shall be supplied by Owner for installation by this Section.
.5 Stainless Steel hardware in laboratories.

.2 Finishes
.1 Factory finishing is to be AWMAC custom grade unless directed otherwise.
.1 Clear finish is to be AWMAC conversion varnish System 5.
.2 Opaque finish is to be AWMAC conversion varnish System 5.

.2 Execution
.1 Conform to Architectural Woodwork Standards Manual including the recommendations additional to the work as described.

***END OF SECTION***