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

INDEX

1.0 GENERAL

1.1 Related *Scope of Work and* UBC Guidelines

.1 *Section 05 50 00 Metal Fabrications*
.2 Section 06 10 00 Rough Carpentry
.3 *Section 07 40 00 Cladding*
.4 *Section 07 62 00 Sheet Metal Flashing and Trim*
.5 *UBC LEED Implementation Guide*

1.2 *Related External Documents*

.1 *Latest edition of the British Columbia Building Code (BCBC).*

1.3 *Description*

.1 *General requirements for wood structures on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.*

1.4 *Coordination*

.1 *In instances where conflicts are found between the UBC Technical Guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect or UBCO Facilities Management.*
.2 *These guidelines are intended to be read by design consultants and their content integrated into construction drawings and specifications. Construction documents are not to reference the technical guidelines directly.*
.3 *The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.*

2.0 *DESIGN AND PERFORMANCE REQUIREMENTS*

2.1 *Design Requirements*

.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 Building Code.*
.2 Design building structures and their structural components for a 100-year service life. *Coordinate with the UBC Technical Guidelines Performance Objectives located here.*
.3 *Oriented strand board shall not be used for sheathing of wood frame shear walls.*

2.2 *Performance Requirements*

.1 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.
.2 Protect susceptible wood products from moisture penetration

3.0 *MATERIAL REQUIREMENTS*

3.1 *Product Selection*

.1 Where wall sill plates are located above concrete, use preservative treated wood plates installed on foam sill gaskets.
.2 Do not use finger-jointed studs for members in tension.
.3 Sub floors shall be constructed with exterior grade tongue and groove plywood, glued and screwed in place.

*****END OF SECTION*****

1.0 GENERAL

1.1 Related *Scope of Work and* UBC Guidelines

.1 Section 06 00 10 Wood Structures - General Requirements
.2 *Section 06 40 00 Architectural Woodwork*
.3 *Section 07 40 00 Cladding*
.4 *Section 07 62 00 Sheet Metal Flashing and Trim*
.5 *Section 08 11 00 Metal Doors and Frames*
.6 *Section 08 14 00 Wood Doors*
.7 *Section 08 41 13 Aluminum-Framed Entrances and Doors*
.8 *Section 08 44 13 Glazed Aluminum Curtain Walls*
.9 *Section 08 50 00 Windows*

1.2 *Related External Documents*

.1 *Latest edition of the British Columbia Building Code (BCBC), Parts 3 & 4.*
.2 *CSA O80 series, Wood Preservation.*
.3 *Wood Preservation Canada.*

1.3 *Description*

.1 *Miscellaneous rough carpentry, including shims, furring and backing for millwork and wall - mounted accessories.*

1.4 *Coordination*

1. *In instances where conflicts are found between the UBC Technical Guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect or UBCO Facilities Management.*
2. *These guidelines are intended to be read by design consultants and their content integrated into construction drawings and specifications. Construction documents are not to reference the technical guidelines directly.*
3. *The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.*

1.5 Quality Control and Assurance

.1 Quality Assurance
  .1 *If the project is being carried out by the UBC Construction Office,* cost *of structural design* to be included in the contract.
.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 *DESIGN AND PERFORMANCE REQUIREMENTS - NOT USED*

3.0 MATERIALS

3.1 *Product Selection*

.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.

3.2 ***Treated Wood***

.1 Examples of wood *members* to be treated:
- *.1 All wood exposed to the weather or in contact with the ground including wood grounds.*
- .2 All wood members in contact with concrete and masonry.
- .3 Wood cants, plywood sheathing, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, air barrier, and waterproofing.
- .4 Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
- .5 Wood framing members less than 18 inches (460 mm) above grade.
- .6 Wood floor plates installed on foundation walls.
- .7 All wood members beyond the face of building paper at exterior walls (i.e. strapping within cavity walls).
- *.8 In applications where fire-retardant wood is required.*

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

.3 Fasteners:
- *.1 Fasteners for use in treated wood that will be exposed to the weather should be selected to withstand weathering as long as the treated wood itself.*
- *.2 Fasteners used in combination with metal connectors must be the same type of metal to avoid galvanic corrosion caused by dissimilar metals.*
- *.3 Hot-dipped galvanized or stainless steel fasteners are to be used with ACQ treated wood. Hot-dipped galvanized nails should not be fastened using a high pressure nail gun due to the risk of damage to the coating during firing.*
- *.4 For borate treated wood used inside buildings, the same fasteners can be used as for untreated wood.*
- *.5 Aluminum fasteners should not be used with treated wood, except if specifically tested, approved and labelled as suitable for use with new generation wood preservatives.*

.4 Flashing type for treated wood to be as per Section 07 62 00.

*****END OF SECTION*****

1.0 GENERAL

1.1 Related *Work and* UBC Guidelines

1. *Section 08 14 00 Wood Doors*
2. *Section 09 00 Finishes – General Requirements*
3. *Section 12 30 00 Fabricated Casework*
4. *Section 12 35 53 Laboratory Casework*
5. *UBC LEED Implementation Guidelines*
6. *UBC Protection of Contents Guideline – for seismic restraint of casework.*

1.2 *Related External Documents*

.1 *Latest edition of the North American Architectural Woodwork Standards (NAAWS).*

1.3 Description

.1 *Section includes custom millwork.*

1.4 Coordination

.1 *In instances where conflicts are found between the UBC Technical Guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect or UBCO Facilities Management.*
.2 *These guidelines are intended to be read by design consultants and their content integrated into construction drawings and specifications. Construction documents are not to reference the technical guidelines directly.*
.3 *The Coordinating Registered Professional is required to coordinate these requirements with other disciplines.*
.4 *Confirm with the UBCV Technical Review Team Architect on a project by project basis if hardware related to this section will be reviewed by the UBC Locksmith Shop.*

1.5 Submittals

1. *Design phase:*
   .1 *Submit required documents to consultants in accordance with Section 013300 Submittal Procedures*
   .2 *For Construction Office projects only, provide a* list of all proposed materials for review and color samples for selection plus final approval.
2. *Handover – O&M submittals:*
   .1 *Final reviewed shop drawings.*
   .2 *Confirmation of AWMAC warranty.*
   .3 *Maintenance data complete with each finish type, colour and related hardware.*

1.6 Quality Control and Assurance

1. Work to be in accordance with grades specified in the *North American Architectural Woodwork Standards (NAAWS)*, current edition at time of tender.
2. Guarantee and Inspection Service:
   .1 Architectural woodwork shall be manufactured [and/or] installed to *NAAWS* 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 the project.
   .2 Shop drawings submitted to the AWMAC Chapter office for review before work commences. Work that does not meet the *NAAWS* as specified, shall be replaced,

reworked and/or refinished by the architectural woodwork contractor, to the approval of AWMAC, at no additional cost to *UBC*.

.3 If the woodwork contractor is an AWMAC manufacturer member in good standing, a two (2) year AWMAC Guarantee Certificate will be issued. *Issuance date should match the date of Substantial Performance of the project.* 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.

.4 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.

3. Woodwork Manufacturer Qualifications:
   .1 Member in Good Standing of AWMAC.
   .2 Minimum 5 years of production experience similar to this project, and qualifications that indicate ability to comply with requirements of this Section.
   .3 Minimum one project in the past 5 years where the value of woodwork is within 20% of cost of woodwork for a project.

2.0 *DESIGN AND PERFORMANCE REQUIREMENTS*

2.1 *Design Requirements*

.1 Casework Grade – Custom. *Economy Grade is not be used. Casework Style - Flush Overlay. This casework style prevents doors and drawers form being pried open.*

.2 Typical veneer when using wood veneer ply
   .1 *Rotary* White Birch.

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

.4 Local manufacturers are preferred.

.5 Adhesives, preservatives, hardeners, synthesizing agents and finish coatings shall be *low-VOC compliant. Coordinate with the UBC LEED Implementation Guidelines.*

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

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

.8 *Tables and custom millwork in Learning Spaces shall not have sharp edges and corners.*

2.2 Performance Requirements

.1 Laboratories
   .1 Wood is allowed within laboratories, including casework, trim, wood doors and frames, etc., but only *upon review and approval by UBC Safety and Risk Services*.

.2 Seismic *restraint* is required on all cabinets and shelving over 1200 mm high or where units are likely to be a hazard from overturning. *Coordinate with the requirements of the UBC Protection of Contents Guideline.*

3.0 MATERIALS

3.1 *Product Selection*

.1 Components
   .1 MDF shall be typical core material *for door and drawer fronts*.
   .2 *Veneer core* plywood *to be used* 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 *both* surfaces of the core.

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

.5 Typical edge banding for wood cabinets shall be *a minimum* solid 3 mm (1/8") birch or same species as veneer when hardwood veneer is used. *Other options for edge banding are minimum 3mm PVC or ABS edge banding. Each of the options listed here should be carefully reviewed for use depending on the work environment in which it will be installed.*

.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 *Preferred product is* No- *added*-Formaldehyde *(NAF)*Medite.
- .2 Maximize recycled content *use*.
- .3 Standard cabinet construction to be 3/4" *thick*

.8 Cabinet Hardware Requirements

- .1 Ensure *local suppliers are used for* availability *of products* for maintenance *and replacement*.
- .2 Locks to be per UBC Grand Master System - *hardware to be reviewed by UBC Access Services* Locksmith *Shop during the design phase*.

.9 Cabinet Hardware Preferences

- .1 Hinges shall be *European Style concealed type* Blum*, GRASS, Salice, Hettich or approved equal,* 110 *degree opening*, 170 *degree opening* when *noted.*
- .2 Pulls shall be Gallery Style 302B stainless steel or equal.
- *.3* Drawer slides shall be Accuride *3832* (or equal) min. 100 lbs (45.5 kg.) duty; full extension.
- .4 *File drawer slides to be Accuride 4034 or equal, min. 150 lbs (68kg); full extension.*
- .5 Cabinet locks -supplied by Owner for installation by this Section.
- .6 Stainless steel hardware *is required* 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.

*****END OF SECTION*****