

1.0 **GENERAL**

1.1 **Related Work and UBC Guidelines**

- .1 Section 06 40 00 Architectural Woodwork
- .2 Section 12 20 00 Window [Treatments](#)
- .3 Section 12 30 00 Fabricated Casework
- .4 Section 12 35 53 Laboratory Casework
- .5 Section 27 05 28 Pathways for Communications Systems
- .6
- .7 Learning Space Design Guidelines
- .8 UBC LEED Implementation Guide
- .9 UBC Guidelines for Seismic Protection of Building Contents

1.2 **Related External Documents**

- 1. Latest edition of the British Columbia Building Code (BCBC)
- 2. Latest edition of the British Columbia Fire Code
- 3. Relevant CSA Standards for various furnishing types

1.3 **Description**

- .1 [Furnishings for various UBC space types.](#)

1.4 **Coordination**

- 1. The Guidelines apply to all work completed within buildings on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.
- 2. In instances where conflicts are found between these guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect and UBCO Facilities Management.
- 3. 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.
- 4. The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.
- 5. The UBCV Facilities Technical Review Team or UBCO Facilities Management is to be contacted for assistance with coordination of furnishings review by UBC Facilities staff when the furnishings package is available. UBC Facilities staff involved in the review would include at a minimum; UBC Facilities Planning, UBC Building Operations Electrical, Accessible Buildings Planner and UBC IT.

1.5 **Submittals and Handover**

- .1 Submittals
 - .1 Shop Drawings
 - .1 Provide final reviewed shop drawings in O&M manual at project completion. Shop drawings to include product and colour specifications and maintenance requirements.
- .2 Warranty
 - .1 Furniture (hard goods) shall have a standard minimum 10-year written manufacturer's warranty on all components.

- .2 Electrical components shall have a standard minimum 5-year written manufacturer's warranty on all components.
 - .3 Upholstered furniture (soft seating) shall have a standard minimum 5-year written manufacturer's warranty, fabric included.
 - .4 Learning Spaces furniture shall have a minimum standard 10-year written manufacturer's warranty
- .3 Handover/Turn-Over
- .1 Provide a walkthrough for UBC Facilities prior to handover.

2.0 **DESIGN AND PERFORMANCE REQUIREMENTS**

2.1 **Design Requirements**

- .1 Contact Facilities Planning for furnishings guidelines.
- .2 Ensure all products comply with CSA Standards, latest edition of the BC Building Code, and BC Fire Code.
- .3 Ergonomics: Furniture should meet current ANSI/BIFMA and CSA standards.
- .4 Specify durable materials for long-term, institutional use. . Residential quality furniture is not permitted due to concerns over fire safety and durability standards.
- .5 Specify products with reduced environmental impact. Consider items with certifications such as Greenguard, [BIFMA Level](#), Cradle-to-Cradle (C2C), Green Seal, and FSC Chain of Custody. Specify locally manufactured products whenever possible (within 500km radius).
- .6 Coordinate furniture [layout](#) with electrical and communications outlets.
- .7 [At a minimum](#), design for the seismic restraint of shelves, cabinets, fixtures and vending machines, according to BC Building Code Part 4 and CSA S832-06 'Seismic Risk Reduction of Operational and Functional Components (OFCs) of Buildings'.
 - .1 Lobby areas to include seismic restraint for vending machines.
 - .2 Seismic restraint of artwork (where provided) is required.

2.2 **Office Spaces:**

- .1 Office furniture: Design desks and workstations to support the work tasks of the user(s). Configurations may include a [height-adjustable desk](#), a lockable box/file pedestal and/or a lockable 2-drawer file pedestal (keyed alike); a task light; a tack board; overhead storage or shelving; an adjustable keyboard tray with provision for computer mouse; an adjustable task chair; and one or two guest chairs as required.
- .2 Office shelving: Typical enclosed offices shall have wall-mounted or freestanding shelving to meet user requirements. Install wall-mounted shelves utilizing slotted vertical standards securely fastened to reinforced walls, laid out in +/-800 mm bays, complete with +/-300 mm deep adjustable shelves. Alternately, provide freestanding bookcases securely fastened to the wall.
- .3 Filing: File cabinets shall meet current ANSI/BIFMA and CSA standards. Securely fasten filing cabinets that are 3-drawers high or taller to walls and adjacent cabinets (where present).

- .4 Seismic [Restraint](#): Securely fasten all taller loose furniture such as shelving and cabinets to floors or walls to meet seismic requirements as per 2.1.7.
- .5 Where feasible, re-use or re-furbish existing furniture. Alternately, specify new furniture that is durable and provides an extended service cycle that will also provide future opportunities to be re-purposed or recycled.

2.3 Conference Rooms

- .1 Seating in [meeting](#) and [conference](#) rooms should be upholstered and height-adjustable with fixed arms. Specify to meet user requirements.
- .2 Tables shall be easily movable.
- .3 Table edges should be durable and scratch resistant.

2.4 Learning Spaces:

- .1 Coordinate design of learning spaces with the Learning Space Design Guidelines.
- .2 Provide designs suitable for appropriate quantities of left-handed people.
- .3 If specifying upholstery, ensure it is durable and easy to clean.
- .4 Specify frame finishes for durability.

2.5 Drapery

- .1 Where drapery is required to be fire retardant [such as at stage openings](#), use only inherently permanent fire-retardant fabrics. (Fabrics manufactured utilizing Trevira and/or Avora polyester fibers are considered inherently fire-retardant).
- .2 [Window drapery is not permitted. Where required under special circumstances, a variance request will be required for approval. Refer to section 12 20 00.](#)

2.6 Laboratories

- .1 Refer to Section 12 35 53, Laboratory Casework for additional information.
- .2 Laboratory chairs and stools shall be durable, easy-to-clean seats in a non-absorptive material. Where appropriate and applicable, consider ergonomic task seating.

2.7 Libraries

- .1 Contact
- .2 Provide seismic restraint [as per BCBC requirements and coordinate with the UBC Guidelines for Seismic Protection of Building Contents](#).
- .3 Tables shall be easily movable.
- .4 Edges of tables and other furniture shall be durable and scratch resistant.
- .5 Coordinate [furniture](#) layouts with electrical and communications outlets.

2.8 Performance Requirements (Not Used)

3.0 MATERIALS (Not Used)

END OF SECTION

1.0 GENERAL

1.1 Related Work and UBC Guidelines

- .1 Section 06 10 00 Rough Carpentry
- .2 Section 09 21 16 Gypsum Board Assemblies
- .3 Section 09 51 00 Acoustical Ceilings
- .4 Section 09 90 00 Painting and Coating
- .5 Section 27 05 28 Pathways for Communications Systems
- .6 Learning Space Design Guidelines
- .7 UBC LEED Implementation Guide
- .8 UBC Guidelines for Seismic Protection of Building Contents

1.2 Related External Documents

- 1. Latest edition of the British Columbia Fire Code
- 2. Latest edition of the British Columbia Electrical Code

1.3 Description

- .1 Window treatments (blinds and shades).

1.4 Coordination

- 1. The Guidelines apply to all work completed within buildings on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.
- 2. In instances where conflicts are found between these guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect and UBCO Facilities Management.
- 3. 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.
- 4. The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.
- 5. The UBCV Facilities Technical Review Team or UBCO Facilities Management is to be contacted for assistance with coordination of furnishings review by UBC Facilities staff when the furnishings package is available. UBC Facilities staff involved in the review would include at a minimum; UBC Facilities Planning, UBC Building Operations Electrical, Accessible Buildings Planner and UBC IT.

1.5 Submittals and Handover

- .1 Submittals
 - .1 Shop Drawings
 - .1 Provide final reviewed shop drawings in O&M manual at project completion. Shop drawings to include product and colour specifications and maintenance requirements.
 - .2 Submit a window treatment schedule with same room designations indicated on the Drawings; including but not limited to opening sizes and key to typical mounting details.

- .3 Maintenance Data: Submit instructions and precautions for cleaning and maintenance, operating hardware and controls as applicable.
- .2 Warranty
 - .1 Lifetime warranty for components which make up the window covering (brackets, wands, caps, etc.).
 - .2 Five-year warranty for motors and motorized products from the date of purchase.
- .3 Handover/Turn-Over
 - .1 Demonstrate blind operation to UBC Facilities Building Operations. Blinds to be kept in a fully raised position during construction.

2.0 **DESIGN AND PERFORMANCE REQUIREMENTS**

2.1 **Window Blinds**

- .1 Provide heavy duty, commercial quality blinds for offices and labs. Blinds are not to be used for classrooms.
- .2 For renovation work, match blinds of remainder of room where appropriate. Blinds to be prefinished aluminum or clear anodized..
- .3 Curtains, drapes or interior shutters are not to be used except in special circumstances. A variance request will be required for approval if any of these window treatment types are desired.

2.2 **Window Shades – including Black-Out Shades**

- .1 Provide manual or motorized shades on all windows.
- .2 Use heavy duty commercial quality for offices or labs.
- .3 Curtains, drapes or interior shutters are not to be used except in special circumstances.
- .4 Side tracks to secure from lateral loads and light-seal blinds, and prevent rattle.
- .5 Roller type blinds to be specified with chain operator (no cranks).
- .6 Provide side tracks to secure blinds from lateral loads and shall not rattle in tracks.
- .7 For renovation work, match shades of remainder of room where appropriate.

2.3 **Motorized Shades and Blinds**

- .1 Motorized shades and blinds shall be provided in AV-enabled spaces at the following locations to improve the user experience in academic or administrative spaces:
 - .1 Window size is 60" wide by 60" high or larger, or
 - .2 Manual operation is inhibited due to location.

- .2 UBC IT Audio Visual or Facilities Planning may determine that motorized coverings or blinds shall be provided despite the minimum requirements such as for security reasons.
- .3 Coordinate requirements for power supply conduit and wiring, and integration conduit required for motorized coverings and blinds with Division 26.
- .4 Battery powered motorized coverings or blinds are not permitted.
- .5 Wall switch shall be provided to control the motorized coverings and blinds separately from the AV system. Switches shall be grouped together where multiple [switches](#) are required.
- .6 Integration with a third-party AV control system shall be provided via RS-232 or LAN connection.
- .7 Motorized blinds are required to have a local disconnecting means for power. This is required to allow maintenance personnel to work on blinds without involving an electrician to operate a panelboard or hardwired connection. An acceptable disconnection means for 120VAC systems is a cord connected end into a receptacle. For blinds operating at voltages below 120VAC, a cable connector that can be unplugged/plugged without any special tools is acceptable.

END OF SECTION

1.0 **GENERAL**

1.1 **Related Work and UBC Guidelines**

- .1 Section 06 40 00 Architectural Woodwork
- .2 Section 12 00 00 Furnishings
- .3 Coordinate with requirements of Divisions 26 and 27
- .4 Learning Space Design Guidelines
- .5 UBC LEED Implementation Guide
- .6 UBC Guidelines for Seismic Protection of Building Contents_for requirements above and beyond the BCBC

1.2 **Related External Documents**

- 1. Latest edition of the British Columbia Building Code (BCBC)
- 2. Latest edition of the British Columbia Fire Code
- 3. Latest edition of the North American Architectural Woodwork Standards (NAAWS).

1.3 **Description**

- .1 Pre-assembled or modular furniture such as cabinets, bookshelves, and storage units, manufactured off-site and delivered to construction sites for assembly.

1.4 **Coordination**

- 1. The Guidelines apply to all work completed within buildings on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.
- 2. In instances where conflicts are found between these guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect and UBCO Facilities Management.
- 3. 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.
- 4. The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.
- 5. The UBCV Facilities Technical Review Team or UBCO Facilities Management is to be contacted for assistance with coordination of casework review by UBC Facilities staff when the casework package is available. UBC Facilities staff involved in the review would include at a minimum; UBC Facilities Planning, UBC Building Operations Electrical, Accessible Buildings Planner and UBC IT.

1.5 **Submittals and Handover**

- .1 Submittals
 - .1 Shop Drawings
 - .1 Provide final reviewed shop drawings in O&M manual at project completion.
 - .2 Shop drawings to include product and colour specifications and maintenance requirements.
 - .2 Warranty
 - .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, UBC Technical Guidelines Section 06 40 00 UBC Vancouver and UBC Okanagan Architectural Woodwork November 2023 Revision Page 2 of 3 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 On shelving designed for use as chemical storage, a 50 mm clear acrylic plastic lip must be installed on the shelf edge.
- 2.2 Provide seismic restraint for all cabinets and shelving.
- 2.3 Provide low VOC products, and use products that comply with LEED requirements such as high recycled content, GreenGuard/FSC certified.

3.0 MATERIALS (Not Used)

END OF SECTION

1.0 **GENERAL**

1.1 **Related Work and UBC Guidelines**

- .1 Section 06 40 00 Architectural Woodwork
- .2 Section 11 53 13 Fume Hoods
- .3 [Section 11 53 33 Emergency Safety Appliances](#)
- .4 [Section 23 38 16 Fume Hood Exhaust Systems](#)
- .5 UBC Guidelines for Seismic Protection of Building Contents

1.2 **Related External Documents**

- 1. Latest edition of the British Columbia Building Code (BCBC)
- 2. Latest edition of the British Columbia Fire Code

1.3 **Description**

- 1. Cabinets, countertops, and storage solutions specifically designed for use in laboratories.
- 2. Casework for laboratories designated for biohazard containment levels:
 - .1 Containment Level 1.
 - .2 Containment Level 2.
 - .3 Containment Level 3.
- 3. Whenever project permits, conform to the requirements of Containment Level 2, to allow flexibility of use.

1.4 **Coordination**

- 1. The Guidelines apply to all work completed within buildings on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.
- 2. In instances where conflicts are found between these guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect and UBCO Facilities Management.
- 3. 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.
- 4. The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.
- 5. The UBCV Facilities Technical Review Team or UBCO Facilities Management is to be contacted for assistance with coordination of casework review by UBC Facilities staff when the casework package is available. UBC Facilities staff involved in the review would include at a minimum; UBC Facilities Planning, UBC Building Operations Electrical, Accessible Buildings Planner and UBC IT.
- 6. An overall coordination with Section 11 53 33 Emergency Safety Appliances, Section 11 53 13 Fume Hoods, Section 12 35 53 Laboratory Casework, and Section 23 38 16 Fume Hood Exhaust Systems will be required by project teams.
- 7. At design development, coordinate with UBCV Safety and Risk Services (SRS) or UBCO Health, Safety and Environment for review of design intent and additional requirements.

1.5 **Quality Assurance and Submittals**

- .1 Submittals
 - .1 Shop Drawings

- .1 Provide final reviewed shop drawings in O&M manual at project completion. Shop drawings to include product and colour specifications and maintenance requirements.
- .2 Warranty
 - .1 Provide manufacturer's written warranty.
- .3 Quality Assurance
 - .1 Professional Engineer registered in BC, engaged by manufacturer, to seal shop dwgs and carry out site reviews, confirmed by Letters of Assurance, for seismic restraints including anchorage.

2.0 DESIGN AND PERFORMANCE REQUIREMENTS

2.1 Design Requirements

- .1 General
 - .1 Select recognized manufacturer specializing in the manufacture and installation of laboratory casework and fittings of the type required for project.
 - .2 Tops to be continuous with no open seams, integral with backsplash, sealed joints to walls etc.
 - .3 Rounded edges to be provided. This requirement is mandatory when positive pressure suits are worn.
 - .4 Minimize joints generally, and seal well.
 - .5 Maximize spacing of legs to maximize free under counter space and flexibility.
 - .6 Provide under-slung relocatable modular units (e.g. drawer / shelf units), generally 12" free of floor.
 - .7 Design casework for vibration control.
- .2 Environmental
 - .8 Avoid adhesives, preservatives, hardeners, and synthesizing agents and finish coatings that contain formaldehyde and high V.O.C. content.
 - .9 Minimize use of packing materials such as cardboard for shipping and if used, recycle. Use blanket wraps for shipping whenever feasible.

2.2 Performance Requirements

- .1 Conform to function-specific requirements, including as applicable:
 - .1 Canadian Biosafety Standard, 3rd Edition, Public Health Agency of Canada.
 - .2 Containment Standards for Veterinary Facilities, Agriculture & Agri-Food Canada, Publication 1921/E.
 - .3 Canadian Nuclear Safety Commission Standard R-52, Design Guidelines for basic and intermediate level radioisotope laboratories.
- .2 Seismic Restraint
 - .1 Restraints and anchorage engineered to BC Building Code. Coordinate with UBC Guidelines for Seismic Protection of Building Contents.
 - .2 Provide edges to shelving and similar features to minimize spillage including during seismic activity.
 - .3 Provide marine edging or similar at countertops to contain spillage.
- .3 Finishes

- .1 Select finishes to suit required resistance to:
 - .1 Chemicals including corrosives and solvents.
 - .2 Heat
 - .3 Moisture and humidity
 - .4 Abrasion
 - .5 Impact
 - .6 Radioisotope chemistry
- .2 Surfaces and coatings, including case work, to be:
 - .1 Cleanable
 - .2 Nonabsorbent
 - .3 Resistant to scratches and damage.
- .3 Life Cycle Costing
 - .1 15-year
 - .2 Provide adjustable modular components to facilitate changes in lab procedures.

3.0 **MATERIALS**

3.1 **Product Selection**

- .1 Materials
 - .1 "No-Wood" policy within laboratories, including casework, trim, wood doors and frames., ~~etc. unless approved by UBC SRS .~~
- .2 **Finishes**
 - .1 Worktop Material
 - .1 Solid cast epoxy resin.
 - .2 Stainless steel preferred
 - .3 Resin-impregnated natural stone.
 - .4 Laboratory grade plastic laminate.
 - .5 Other **proposed materials need to be reviewed with UBCV Facilities Technical Review Team Architector UBCO Facilities Management, and UBCV SRS or UBCO Health, Safety and Environment. A variance request will need to be submitted for approval.**
- .3 Execution
 - .1 Installation shall be by manufacturer-trained and certified installer.

END OF SECTION