



.1 Design Considerations

- .1 The University encourages the use of glass panels in interior doors, to provide natural light in corridors. Frameless glass doors shall be avoided.
- .2 Typical interior and exterior door sizes
 - .1 Typical thickness: 44 mm.
 - .2 Minimum stiles and top rail width: 125mm aluminum; 150mm wood doors. Bottom rail: min 250mm
 - .3 Minimum width: 900 mm single and 1800 mm double doors.
 - .4 Mechanical rooms: minimum width 1200 mm, single or double doors. Double doors shall have the active leaf 900 (or 915) mm wide.
- .3 Interior door locations shall provide adequate clearance behind the door opened at 90° and the adjacent wall. The clearance between the edge of hinge side frame and adjacent wall:
 - .1 100 mm – typical at offices, classrooms, labs, etc.
 - .2 650 mm – typical at filing rooms, lunchrooms, office supply storage, etc.

.2 Steel doors

- .1 Use steel doors at exterior locations with low public traffic (exit, utility rooms doors). Building entrances shall typically be aluminum, or wood when required to match an existing condition.
- .2 Use steel doors at interior locations where required for Fire Protection Rating over 20 min, high use, or security considerations.
- .3 Construction: Hollow Core, welded assemblies (pressed seams NOT ACCEPTABLE)
- .4 Thickness of materials (minimum / mm):
 - .1 Face sheet – interior doors typical 1.2 (18 gauge)
 - .2 Face sheet - exterior doors 1.6 (16 gauge)
 - .3 Top and Bottom Channels 1.2 (18 gauge)

.3 Wood Doors

- .1 Use wood doors at interior locations – typical, except where otherwise required for Fire Protection Rating, high use, security, or matching existing.
- .2 Faces (rated and non-rated assemblies):
 - .1 Type 1 – TYPICAL, except residences: hardwood veneer; rotary cut sound birch or maple. Finish: clear factory coating, satin sheen.
 - .2 Type 2 – TYPICAL at residences, and where required to match existing elsewhere on campus: hardboard, painted.
- .3 Cores: Solid core.

.4 Metal Frames for Doors and Interior Windows

- .1 Steel Frames – Typical application
 - .1 All frames to be welded pressed steel. Knock-down steel frames are not acceptable.
 - .2 Throat size to suit GWB wall construction for wrap around assembly.
- .2 Interior aluminum glazed modular wall partitions and doors/windows frames are desired in office and meeting room locations to minimize impacts of churn.

.5 Tamper-Resistant Fasteners

- .1 All doors and windows fasteners within secured areas shall be Tamper-Resistant Torx (or pin-in-Torx, or Torx TR).



.1 Definitions

.1 The term “window”, as used in this section, is defined as curtain walls, storefronts, vents and entrance systems.

.2 Finish

.1 TYPICAL: clear anodized aluminum, unless approved otherwise to suit the application

.3 Performance Requirements

.1 Thermal Performance – at a minimum, meet the most stringent requirement, below:

.1 System (including vision areas):

.1 U-Factor: maximum 1.75 W/m²•K

.2 Solar Heat Gain Coefficient (SHGC): maximum 0.45.

.1 Decrease SHGC at windows on South and West elevations as required to provide adequate indoor thermal comfort.

.3 Energy Rating:

.1 Exceed by 10% the values specified by the **ENERGY RATING PATH** of Natural Resources Canada - ENERGY STAR Qualifying Criteria for windows, effective 01 June 2010.

.2 LEED Certification and Sustainability:

.1 LEED projects: augment and coordinate the thermal performance of window assemblies with the performance of other assemblies, systems and equipment, as required to achieve the necessary LEED credit objectives.

.2 Testing: windows shall be tested for air leakage on projects with a significant quantity. Confirm with Project Officer.

.4 Window Hardware

.1 Hardware: stainless steel or white bronze sash locks and handles.

.2 Latching/locking devices shall be cam handle type (rotor operators not acceptable).

.3 Opening restrictors shall be installed to limit window *opening* as follows:

.1 Residential units in dorms: 100mm.

.2 Typical: 150mm

.4 Opening operation

.1 Residential units in dorms: awning opening, unless approved otherwise..

.5 Screens shall not be provided, except some ground floor rooms, reviewed on a case by case basis.

.5 Warranty – 24 months

.1 Windows shall stay in place and remain leak proof including coverage for complete system failure in accordance with GC 24, but for Twenty-four (24) months.

.6 Acceptable Products

.1 Kawneer 1600 or 1602 System c/w 526 Isoport or AA900 Isoweb vents, or other equivalent Kawneer products to suit the application.

.2 Other pre-approved equal.



.1 General

- .1 Use one manufacturer's products for similar items.
- .2 Aluminum store front doors must use the hardware indicated below, including FBB/NRP leaf hinges (continuous or pivots not acceptable).
- .3 Products: to simplify maintenance and minimize parts stock, the following are University standards for all new and existing buildings, including Student Residences suites. ALL PRODUCTS LISTED BELOW SHALL BE AS SPECIFIED (NO SUBSTITUTIONS).

.2 Locksets, Locks and Latches

- .1 Finish
 - .1 TYPICAL: satin chromium (# 626).
 - .2 Where necessary to match existing: oil rubbed bronze (#613).
- .2 Electric hardware is preferred over electric latches
- .3 Locksets - Keyed:
 - Schlage 'ND' series - 6-pin cylinder - Rhodes lever handle (handle types other than lever are acceptable only when matching existing style takes priority, on a case by case basis).
 - Key schedule and Keyway to be supplied by UVIC.
- .4 Locksets – Key Pad: Schlage AD200CY70-PRK-RHO-626-PD with key override.
 - This item shall be installed at User's request with cost to the department (not the project).
- .5 Deadbolts: Schlage B600 series (installed 150 mm o/c above locksets)
- .6 Special function locksets may be used only with the FMGT Executive Director approval.

.3 Exit Devices

- .1 Panic Hardware:
 - Von Duprin "33/35" or "98/99" series.
 - Cylinder dogging is required unless using for EL hardware.
 - Interior doors (lecture halls and corridor doors): where vertical rod is required use surface mounted less bottom rod application.
 - Exterior doors (store front aluminum doors): where vertical rod is required internal rods are acceptable, top and bottom rods are required.

.4 Door Closers and Accessories:

- .1 Door closers: shall be surface mounted (not recessed), heavy-duty, made by a manufacturer having service facilities in British Columbia, time adjusted for wheelchair entry at regular speed.
 - .1 Acceptable product: LCN 4041 series, adjusted to level 3 for interior doors and level 5 for exterior doors with "back check selector valve" set on for all parallel arm applications.
- .2 Astragal: MUST be installed (on keyed side of door) at all double doors with one leaf fixed, as required to provide security and maintain the alignment of the door leaves and door hardware.
- .3 Co-ordinator: None

.5 Automatic Door Operators:

- .1 Automatic Openers shall be established in consultation with FMCA Locksmith and as follows:
 - Product: Horton 7100 series, or pre-approved equal.
 - Interior and exterior activation pads shall be hardwired.
- .2 Electric power transfers: Von Duprin EPT 2 or EPT 10 as required



.1 Hardware Schedule

Note: Vandlgard locksets are being used on all new buildings. Lockset type at additions and renovations must be confirmed with the FMCA Locksmith, on a case by case basis.

- .1 Exterior Doors
 - Lockset: "Night Entry" - except for exit only doors (i.e. if a key is used to open a door, the door must automatically relock when the user removes the key)
 - Panic hardware in public areas
 - Door closers: LCN 4041
 - Hinges: FBB/NRP (Butt hinges only)
- .2 Service rooms (Janitor, Mechanical, Electrical, Communications, Elevator Machine Rooms, etc.)
 - Lockset: Schlage ND80PD/RHO or ND96PD/RHO (Vandlgard).
Use PLY on exterior applications.
 - Door closers: LCN 4041
- .3 Washrooms (single user – without door opener)
 - Lockset: Schlage ND73PD/RHO or ND97PD/RHO (Vandlgard)
 - Door closer: LCN 4041
 - H/C washrooms require a delayed action closer
- .4 Washrooms (single user – with door opener)
 - Auto door opener: Horton 7100 Series
 - Lockset: Schlage ND10S/RHO
 - Deadbolt: Schlage B660P – installed 150mm o/c above lockset
 - Electric Hardware: provide as required
- .5 Washrooms (multiple users)
 - Deadbolt: Schlage B663
 - Door closer: LCN 4041 delayed action
 - Push-Pull door hardware
- .6 Offices
 - Lockset: Schlage ND53PD/RHO or ND92PD/RHO (Vandlgard)
 - Door closer: LCN 4041, only where required by Code
- .7 Classrooms
 - Lockset: Schlage ND70PD/RHO or ND94PD/RHO (Vandlgard)
 - Door closer: LCN 4041, only where required by Code
- .8 Classrooms (with card access)
 - Lockset: Schlage ND80PD/RHO or ND96PD/RHO (Vandlgard)
 - Door closer: LCN 4041
- .9 Labs
 - Lockset: Schlage ND60PD/RHO or ND93PD/RHO (Vandlgard) OR ND80PD/RHO or ND96PD/RHO (Vandlgard)
 - Door closer: LCN 4041, only where required by Code.
- .10 Student Residence Rooms
 - Locksets: Schlage ND73PD/RHO or ND97PD/RHO (Vandlgard)
 - Door closer: LCN 4041 - mounted on hallway side of door.
- .11 Stairwell - Coordinate with BCBC exiting requirements:
 - Doors with regular hardware: "Classroom" setup (can be left locked or unlocked using a key).
 - Doors with card access: fail-secure "Storeroom" setup.



.1 General Requirements

- .1 Doors, padlocks and cabinet locks shall be keyed as directed. Keying shall be to the University of Victoria grandmaster and master key system, using a Schlage quad/numerical keyway. All cylinders must be construction keyed.
- .2 Construction Master Keying Systems may be required on new and large projects, as designated by the FMGT Executive Director. Such systems shall be established in consultation with the FMCA Locksmith.
- .3 For projects with **under 50 locksets**: cylinders and keys are Not In Contract (installed by FMCA). Provide sufficient notice to FMCA Locksmith for acquisition of materials.
- .4 For projects with **over 50 locksets**: Hardware supplier to supply all cylinders and keys as per UVic's Keying Schedule. Allow for:
 - 15 copies of Grandmaster key
 - 10 copies of each Master key
 - 10 copies of Construction master key
 - 4 extractor keys
 - 8 keys per cylinder
 - 200 key blanks
 - 20 additional cylinders (10 standard cyls, 5 mortise cyls, 5 rim cyls.)
 - All keys and key blanks stamped "**DO NOT DUPLICATE**"
- .5 Hardware, cylinders and the 10 construction keys to be shipped to the site contractor for installation.
- .6 All keys (grandmasters, masters, change keys, extractors and key blanks) shall be shipped by registered mail or courier directly from the manufacturer to the UVic Carpenters Shop.
- .7 Construction plugs are removed by FMCA after Substantial Performance has been granted.

.2 Door Hardware and Keying Schedules Review Process

- .1 Door Hardware Schedule
 - .1 Door Hardware Schedule must be submitted to FMCA Locksmith for review prior to tender. Corrections and changes will be noted and returned for updating.
 - .2 The final Hardware Schedule must be resubmitted and approved by FMCA Locksmith before ordering any materials.
- .2 Keying Schedule: UVic FMCA shall provide a Keying Schedule after the final Hardware Schedule approval.



.1 General

- .1 The use of a single pane of glass over 1.8m in any dimension should not be considered, for safety, shipment delay and difficulty in replacement.
- .2 The minimum thickness of glass in interior and exterior applications, single pane and insulated units, shall be 6 mm, for sound attenuation.