

PART III – CSU FACILITIES PLANNING, DESIGN AND CONSTRUCTION STANDARDS

DIVISION 08 – OPENINGS

Housing and Dining Facilities (HDS) has adopted amendments for all HDS facilities. Confirm applicable standards with Project Representative on a per Project basis. Refer to HDS amendments here – <https://housing.colostate.edu/about/construction/>.

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08 00 00 – GENERAL INFORMATION

A. General Requirements:

1. All window types shall be approved by the Project Representative.
2. Exterior window frames shall be aluminum.
 - a. Steel-framed windows shall be prohibited for exterior use.

08 10 00 – DOORS AND FRAMES

A. Door Requirements:

1. Interior doors shall be wood or hollow metal (HM).
2. Exterior doors shall be insulated hollow metal or aluminum and glass.
 - a. Wood shall be prohibited for exterior doors.
3. Typical door size shall be 3'-0" x 7'-0".
 - a. Wider doors shall be used if required by function.
4. All door hardware shall be installed according to industry standards.
 - a. Door frames shall conform to profiles shown in the Colorado State University (CSU) Facilities Planning, Design and Construction Standards – Additional Documents unless the door is a special purpose door.
5. All doors leading to food establishments shall be provided with a door sweep.

B. Fire Door Requirements:

1. All doors and frames shall conform to International Building Code requirements for fire-rating.
2. All fire-rated doors and frames shall have an approved Fire Door label.
3. Fire doors may only be modified by a certified fire door milling facility.
4. No fire door shall be modified or removed without the expressed knowledge and permission of the Project Representative.
5. All fire doors must have gaskets for smoke and draft control.
6. Standard wire glass shall be prohibited in fire-rated doors and sidelites.

C. Types of Doors and Frames:

1. Use only wide stile design for high traffic aluminum doors.
2. Hollow metal doors shall be 16-gauge metal.

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3. Exterior hollow metal doors shall be insulated.
4. Door frames shall be metal, 16–gauge for interior application and 14–gauge for exterior application.
5. Doors larger than 3’–0” x 7’–0” require four hinges instead of three.

08 14 00 – WOOD DOORS

A. Acceptable Manufacturers:

1. Marshfield
2. Lynden
3. Eggers
4. Algoma

B. Minimum Grade:

1. ANSI/WDMA I.S.1A Custom Grade, Extra Heavy Duty
2. Low usage doors may be specified Heavy Duty with review and approval of Facilities Management (FM) Planning, Design, Construction and Engineering.

C. Types of Doors and Frames:

1. Interior wood doors shall be 1–3/4” thick solid core rotary cut birch veneer.
2. All doors shall have aluminum or hollow metal frames.
 - a. Wood frames shall not be used without approval of FM Planning, Design, Construction and Engineering.
3. Top, bottom and edges of wood doors shall be sealed immediately after fitting.

08 41 13 – ALUMINUM–FRAMED ENTRANCES AND STOREFRONTS

A. Sole Source Products:

1. Pivot Hinges:
 - a. Contact Project Representative

B. Materials, Systems and Hardware:

1. Entrances and Storefront Systems shall be aluminum, equal to Kawneer Trifab Versaglaze 451T System and approved by the Project Representative.
2. Doors shall be wide stile.
 - a. Stile shall be wide enough to accommodate rim metal exit hardware.
 - b. Narrow stile shall not be allowed.
 - c. Verify dimensions with FM Locksmith prior to specification.
3. All closers shall be surface mounted.

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4. Use pivot hinges on new installations.
 - a. Existing installations shall have pivot hinges replaced with specified Manufacturer.

08 51 13 – ALUMINUM WINDOWS

A. Construction:

1. Whenever possible, provide ventilating windows operated with a pivoting cam handle to facilitate cleaning and allow means for emergency ventilation.
 - a. Window cam handle or crank location shall not interfere with window coverings including, but not limited to blinds and screens.
2. Screens shall accompany all windows as an integrated unit.
 - a. Frame and screen shall be aluminum.
 - i. Fiberglass, vinyl and plastic shall not be acceptable.
 - b. Wickets required for cam handle operation shall be integral to the screen frame.

08 71 00 – DOOR HARDWARE

A. Always verify products with FM Locksmith through the Project Representative.

B. Required Products, no substitutions:

1. Locksets:
 - a. Sargent 11 Line
2. Exit Devices:
 - a. Von Duprin 98/99 EO (interior), 990 NL/DT (exterior)
3. Closers:
 - a. LCN 4041 Reg/PA
4. Hinges:
 - a. Hagar #BB1279 or Stanley #FBB179
5. Lock Cylinders:
 - a. Medeco
6. Combination Locksets:
 - a. Trilogy T2 with key override DL2700
7. Removable Mullions, Keyed (No Card Access):
 - a. Von Duprin KR 4954 with MT54/KR 9954 with MT 54
8. Removable Mullions, Keyed (With Card Access):
 - a. Von Duprin KR 9854 with MT54
9. Automatic Door Operators:
 - a. Refer to 08 71 13 – Automatic Door Operators

B. General Information:

1. For remodels and additions, Architect shall consult with FM Locksmith through Project Representative to determine which hardware program(s) shall be applied:

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- a. Match new hardware to existing hardware.
 - b. Match new hardware to meet the current CSU Facilities Planning, Design and Construction Standards.
 - c. Update existing hardware to meet the current Standards.
2. Specify heavy duty, US26D finish for stops, door holders and other accessories for new Work.
 - a. Match existing finishes for small projects within existing buildings.
 3. Extension flush bolts shall be manual only.
 - a. Automatic flush bolts are prohibited.
 4. In general, use floor-mounted stops. Where safety or other considerations make floor stops undesirable, gypsum board partitions shall have blocking installed for wall-mounted stops.
 5. All exterior doors require high quality weather stripping.
 6. Sweeps shall be brush, felt or rubber.
 - a. Automatic door bottoms are prohibited.
 7. When required for accessibility, existing knob locksets shall be replaced with lever locksets.
 - a. Retrofit lever handles may be used for remodel only with approval of the FM Locksmith.
 8. Where Corbin Russwin locksets are required, use CL3300Nzd series.

C. Locksets:

1. Locksets for new buildings shall be heavy duty lever set with heavy duty key-in-lever.
 - a. Knobs shall be used in certain locations such as mechanical, electrical, custodial closets and electrical rooms where levers are not required as determined by the FM Locksmith.
2. On large projects of duration greater than 6 months, locksets shall be ordered with cylinders keyed to CSU Master System as directed by FM Locksmith through the Project Representative.
 - a. Architect shall consult with FM Locksmith through the Project Representative to determine which lockset functions shall be applied.
3. Combination locks may be installed where there are 50 or more individual users upon request, subject to needs assessment and approval by the FM Locksmith through the Project Representative.
4. Finish shall be US26D, US10 or US10B.
 - a. Other finishes shall be submitted to the Project Representative for approval by FM Planning, Design, Construction and Engineering.
5. Lever handles shall be used for all doors except doors with exit devices, mechanical/electrical/utility rooms.

D. Exit Devices:

1. Use only where required by code or safety considerations.
2. Required:
 - a. Rim type
 - b. Key dogging

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- c. Exterior Door:
 - i. Pull Trim (NL night latch or DT dummy trim)
- d. Interior Classroom Door:
 - i. Lever Trim 996L

3. Prohibited:

- a. Vertical rod type
- b. Concealed type
- c. Thumb latch

4. Allowable only where unavoidable:

- a. Mortise type

E. Closers:

- 1. Aluminum painted finish with arm and shoe as appropriate for the application.

F. Hinges:

- 1. All hinges on the same door must be of the same brand.
- 2. Full mortise, 4–1/2 x 4–1/2 standard weight, 5 knuckle, US26D.

08 71 13 – AUTOMATIC DOOR OPERATORS

A. Automatic Door Operators:

- 1. Refer to Chapter 06 – Requirements by Space Type and Use for required locations.
- 2. Operators:
 - a. Norton 6061–689 6000
 - b. Stanley Access Technologies Magic Access
 - c. Or approved equal
- 3. Activation Plates:
 - a. All Activation plates shall be vertical in style with a minimum height of 36”.
 - b. Activations plates used in exterior applications shall be weather resistant rated.
 - i. Vertical Activation Plates:
 - a) Mounted 5” above finished floor (AFF)
 - b) New Construction shall use hard-wired activation plates.
 - i. Camden CM–7536SS
 - ii. BEA 10LPR36HW
 - iii. Or approved equal
 - c) Remodels which cannot accommodate hard-wired activation plates may use remote control technology if necessary.
 - i. Camden CM–7536
 - ii. BEA 10LPR36
 - iii. Or approved equal
- 4. Automatic Door Operators shall be compatible with keyless access hardware and control sequences.
- 5. Automatic Door Operators shall be capable of interfacing with electronic strike hardware for applications where doors must remain closed and latched (e.g. fire door application).

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08 80 00 – GLAZING

- A. All glazing in non-rated doors, sidelites and other non-rated assemblies subject to human impact loads shall be 1/4" tempered glass, laminated safety glass or polycarbonate.
 - 1. Standard wire glass shall not be used in these locations.
- B. All glazing in fire-rated doors, sidelites or other fire-rated assemblies subject to human impact loads shall be tempered ceramic glass or safety wire glass manufactured with a fire-rated safety film and bearing a label indicating compliance with impact safety standard CPSC 16CFR 1201 Cat. II.
- C. Standard wire glass shall be allowed for fire-rated assemblies only in locations where the glazing is not subject to human impact loads, such as transoms and windows.
 - 1. Wire glass shall not be acceptable for security.
 - a. Laminated glass or polycarbonate shall be used.

END OF DIVISION