

SECTION 08 10 00 – DOORS, FRAMES, AND HARDWARE

1. MATERIAL

- A. All entrance exterior doors shall be heavy-duty, thermally-broken, aluminum doors with thermally-broken aluminum storefront frames. Aluminum systems taller than 12'-0" shall be specified as a glazed aluminum curtainwall system for improved structural and thermal performance.
- B. Provide "Heavy duty (min)" galvanized hollow metal frames and "heavy duty (min)" insulated hollow metal doors at service entries.
- C. Loading dock overhead doors shall be coiling overhead, insulated steel type to allow for mechanical air curtains and shall be motorized. Do not use sectional overhead doors for occupied, conditioned spaces.
- D. Exterior doors shall be numbered per requirements by the fire department and Ivy Tech.

2. MULLIONS

- A. Removable with core-type locks.
- B. Hardware: All hardware must be reviewed with Facility Manager prior to bidding.
 - 1. Continuous hinges are required for exterior doors but are not needed on service doors used infrequently.
 - 2. Door panic devices (non-electric type) shall "dog" down using a lock/core type device.
 - 3. Interior-mounted door sweeps are required on exterior doors.
 - 4. Where possible at exterior double doors, utilize a removable mullion in lieu of vertical rods. At applications where large open door openings are necessary for room access, use of vertical rods with prior Owner's approval.
 - 5. Electronic access shall be provided at all exterior entry doors and other select interior doors. As a minimum, provide these doors with rough-ins for card access, electrified control, and door position monitoring. Reference Technology System Standards for other interior doors to receive electronic access control.
 - 6. All hardware shall be provided by Division 8 Section "Door Hardware", including the electrified hardware. Electrical Contractor shall connect all electrified hardware.
 - 7. Removable cores shall be provided at all doors.
- C. Size

1. All door leafs shall be standard 3'-0" wide except at loading dock areas where doors shall be 4'-0" wide or other areas as required by program or indicated in the Space Standards.

3. INTERIOR FRAMES, DOORS, AND HARDWARE

- A. Interior doors and frames shall be selected in accordance with the building program requirements. Doors and frames in service areas, high abuses, and high traffic areas shall be hollow metal. Entrances into offices, classroom, light abuse, and special areas shall have hollow metal frames and flush doors.
- B. 6 x 30" wood vision lites shall be included within classroom doors.
- C. 3 x 30" vision lites shall be included within office doors.
- D. Aluminum storefront systems should be utilized for office areas that serve student needs such as financial aid, dean's office, and other student services.
- E. Standards:
 1. Interior hollow metal (HM) frames shall be 16 ga. minimum.
 2. Exterior hollow metal (HM) frames shall be 14 ga. minimum. Thermally broken HM frames are acceptable at locations where appropriate to the design.
 3. Exterior hollow metal doors shall be 16 ga. minimum. Exterior HM doors are to be fully insulated with a minimum R-value of 2.5.
 4. For new construction, all hollow metal frames shall have mitered and welded corners.
 5. For renovations, knock-down frames shall be provided.

4. INTERIOR HARDWARE

- A. Hardware selections shall be based on the campus hardware standard in order to maintain uniformity. This decision must be reviewed with the Owner. Door and hardware schedules must also be reviewed by the Service Area Director of Facilities. This review meeting is the responsibility of the Architect to schedule and conduct.
- B. Where possible, provide a removable mullion at double doors. At cross corridor door pairs or doors which will stand open during daily operation, concealed vertical rods are acceptable.
- C. All hardware shall be provided by General Contractor, including the electrified hardware. Electrical contractor shall connect all electrified hardware.
- D. Electrical gear room shall have panic hardware for emergency exit.
- E. Door Hardware Types:
 1. Classroom – Mortise Lock

2. Lab – Mortise Lock
 3. Assembly Spaces – Mortise Lock
 4. Other Spaces (high use) – Mortise Lock
 5. Office – Cylindrical
 6. Storage – Cylindrical
 7. Other Spaces (low use) – Cylindrical
- F. Typical Mortise – Classroom function with thumbturn and locked indicator.
- G. Typical Office Function – Push Button locking.
- H. Coordinate door hardware with access control requirements.

5. FLUSH WOOD DOORS

- A. Flush Wood Doors: provide “A” Grade doors. All doors shall be “Stain Grade.”
1. 5-ply veneer
 2. WDMA I.S. 1-A requires only running matched grade A veneers with center balance matching.
- B. Minimum width or special sizes should be discussed with the campus.
1. i.e. Health Occupations (beds moving in and out of the doors), Specialty Equipment, etc. may require special width doors. Providing door systems similar to the types in use for that occupation is preferable.

6. ACCESS DOORS – WALLS

- A. Full-height (steel) access door should be provided in cases of gang restroom.
- B. A minimum 24” x 24” access door should be provided at all other chases.

7. OVERHEAD COILING DOORS – RATED

- A. Electronically operated doors shall be coordinated with power requirements for the door and are to be interconnected with the Fire/Smoke Alarm systems in the building

8. OVERHEAD COILING GRILLS

- A. Provide slide bolts at each side rail with locks. Coordinate lock. If powered, provide key locked operator. Slide bolts are not required at powered grille locations.

9. RESTROOM DOORS

- A. It is preferred that public gang restrooms are designed without doors.

1. If doors are required for the design, they should be out swinging.
2. If doors are included on all gang restrooms on the floor, at least one per floor should have ADA electronic “touchless” operator.

SECTION 08 80 00 – GLAZING

1. EXTERIOR GLAZING

- A. One-inch, insulated glass consisting of two ¼” thick panes with ½” air space, hermetically sealed. Glass should be Heat Treated, Kind HS at a minimum (ASTM C 1048). If Fully Tempered, shall conform to ANSI Z97.1 and CPSC 16 /CFR 1201 standards.
 - 1. Specify Low-E sputter coating on second surface.
 - 2. Specify argon gas in air space.
 - 3. Specify a warm edge spacer system for insulated glass panels.
 - 4. Acceptable tint colors:
 - a. Colors/tints: manufacturer’s standard gray, bronze, green, and Low-E coated glass. All other colors or tints must be approved by the Owner and must comply with all requirements.
 - b. Fritted & Spandrel glass panels: Manufacturer’s standard colors/patterns. All other colors/patterns must be approved by the Owner.
 - c. Reflective (mirror) glass is not acceptable.

2. ALUMINUM ARCHITECTURAL WINDOWS

- A. Generally, operable windows are not needed. If operable windows are determined to be needed, confirm with Owner and confirm operable type.
- B. Windows shall meet the following requirements:
 - 1. Material: Aluminum frame with anodized or fluorocarbon paint finish.
 - 2. Construction: Thermally broken with subframe.
 - 3. Glazing: As noted above for 1” insulated glass.
 - 4. Type: Fixed.
 - 5. Size: To the greatest extent possible, standardize window sizes within each building, and within classrooms, to minimize the number of variations.
- C. Maximum perimeter sealant joint 3/8”.
- D. Window units shall have dry glazing system.

3. INTERIOR GLAZING

- A. Labs or Classrooms with large glazing to the hallway: as a minimum; ¼” clear, fully tempered glass.

SECTION 08 90 00 – LOUVERS AND VENTS

1. LOUVERS – WALL

- A. Fixed blade, weather/sight proof louvers with drainable blades are the standard unless an operable blade louver is required by the application. All ductwork to the back of louvers should have a drainage channel with a connection to the sewer line. All louvers are to have insect screens or blank-off panels as necessary.
- B. Color: Selected by Architect from manufacturer's standard colors.
- C. Coordinate louver type (S.F. of open area), material, and finish with Mechanical Engineer.