DIVISION 8 - DOORS AND WINDOWS

GENERAL DOOR GUIDELINES

1. All exterior doors shall be insulated metal doors with adequate weather stripping and threshold utilized to conserve energy. If glass is used, the glass shall be thermal/safety glass, and non-reflective.
2. All interior solid core wood doors to be left natural shall be finished with a natural material, which is insoluble and resistant to marring, abrasion and staining.
3. Doorframes shall be properly anchored to prevent movement of frame during the opening and closing of the door. Galvanized frames shall be used in exterior applications and interior frames subject to moisture. Frames in masonry shall be fully grouted.
4. To prevent the flexing and breaking of the wall along the door frames, a nest of studs shall be provided around each door installation to accommodate the weight of the door and the shock caused by the closing of the door. The number and gauge of studs in the nest must be specified. The finished wall shall extend into the doorframe throat opening a minimum of 1-1/2 inches for wrap-around frames.
5. All operable items on exterior doors shall have an integral finish. Not applied, painted, baked-on, etc.
6. At least one main entry door shall be accessible from adjacent sidewalks by wheelchair and shall display the proper handicapped signage. Preferably all other entry doors shall have proper signage to direct wheelchair handicapped persons. The current ANSI standards shall apply to raised letter signage for the blind. Provide automatic door opening devices for the handicapped at entrance doors on the accessible path and at main (multi-toilet) restrooms designed for accessibility. If the building perimeter is secured by card access, at least one of the card accessed doors shall be located at an accessible entry. Automatic door opening devices and card reader access shall be coordinated.
7. All doors shall be 7-foot high doors as a standard.
8. Exterior doors shall be of "monumental" quality, minimum width of each leaf 3'-0" and minimum height of 7'-0". In renovation projects, a different height may be used, if appropriate, upon approval by the Project Manager.
9. Interior doors shall be 3'-0" wide minimum x 7'-0" high each leaf, except that in renovation projects the door height shall match existing. Do not mix door heights in adjacent areas. All doors shall be solid core wood stave. The AE shall submit labeled plans for room numbering with the Design Development submittal. The Project Manager will coordinate to ensure that FSU Planning and Space Management provides room numbering for use in door numbering in the 50% Construction Document. All doorways shall be numbered. Do not place number on door, but to the open side with raised numbering at a height consistent w/accessibility code requirements.
10. View panels in any fire door shall conform to Florida Fire Prevention Code specifications. All classroom doors shall have wired glass or wireless fire rated view panels set in steel framing or stops according to code.
11. Install doorstops on all doors. Where floorstops may cause tripping hazards, install wallstops to prevent damage by door handset to adjacent wall.
12. Hollow Metal Door Frames. All interior frames shall be a minimum of 16 gauge metal. Exterior frames shall be a minimum of 14 gauge metal. Provide reinforcing of frames for hardware. A light angle is desirable. Where two doors swing from the same mullion the

metal should be of heavier material and reinforced. All frames shall be pre-primed

13. If fume hoods or other large equipment occur in a room, provide doors of adequate width to provide clearance for moving the items in or out. If size is questionable, use larger size opening.
14. All corridor doors and doors to closets shall be 1-3/4" solid core to meet requirements of NFPA 80 and 101, and shall use mortise locksets meeting all code requirements. Where cutouts for closers are required, the head rail should be not less than 6 inches. If hardwood edges are desired, they should be completely specified with the thickness given. Wood doors shall meet the Standards of The National Woodwork Manufacturers Association.
15. Wood door quality shall be clearly specified as well as manufacturer's name noted. For example, the term "equal to Mengel" is not sufficient.
16. Plastic Faced Wood Doors, Facing and Adhesives. Plastic laminate shall conform to NEMA LD-3Adhesives for both exterior and interior shall conform to ANSI/NWMA-I.S.1.

GENERAL HARDWARE GUIDELINES

General

1. Include a completely itemized hardware schedule in the specification. A cash allowance for finish hardware shall not be used unless otherwise authorized.
2. The hardware schedule shall include a complete list of items proposed as standard, together with manufacturers' names and with the names of manufacturers whose products are proposed as equals. This schedule must be approved by the University Project Manager at 50% Construction Documents.
3. All hardware shall be furnished under this section.
4. Specify one manufacturer as standard and, whenever possible, at least two other manufacturers whose products are proven equal EXCEPT comply with specific manufacturers as required herein.
5. The hardware supplier shall furnish to the door manufacturer templates or the actual hardware.
6. Hardware added to existing buildings may utilize the same manufacturer as the existing hardware, at the discretion of the Project Manager and the Key Shop. New hardware added to an existing building shall be compliant with accessibility codes.
7. Use non-handed door closers whenever possible: Russwin 2800 series, Sargent 1230 series, or LCN equivalent. (Steve to confirm series are current/acceptable.)
8. When required, the University prefers the use of horizontal exit bolts for single doors and horizontal exit bolts with removable mullions for double doors. Vertical rod fire exit bolts are not desired unless their use is dictated by specific functional requirements.
9. When vertical rods must be used, they should be concealed. **Surface mounted vertical rods for exit devices are not acceptable**. Where exterior doors are required to have a removable center mullion, rim type devices may be provided.
10. All operable items on exterior doors shall have an integral finish -- not applied, painted, baked on, etc.
11. Provide only five-knuckle, stainless steel ball-bearing hinges, with non-removable pins, on exterior doors. Provide heavy-duty ball-bearing butts, with 4 ball bearing for exterior doors and interior doors over 3 feet wide and standard weight butts with 2 ball bearing for interior doors up to 3 feet wide.

12. Provide extra-heavy adjustable pivots at exterior doors that have a high frequency of use.
13. Provide Von Duprin type 99 (exit device) in a finish compatible with the door.
14. Provide Kawneer Panic Guard, or comparable, at exterior double door aluminum entrances. (check)
15. Provide aluminum or steel removable mullion at all lockable pairs of doors, interior and exterior.
16. Provide surface applied Russwin 2820 series, LCN 4040 series, or comparable closers. Provide Corbin 110 series at dormitories. Locate on room side of doors so not visible from corridors, lobbies, and other public spaces.
17. Use stainless steel at all locations where severe usage is anticipated.
18. Provide weather-stripping at heads and jams and surface applied automatic door bottoms, on machine room doors and other doors where excessive noise is anticipated.
19. Avoid thresholds raised above floor levels at doors to trash and receiving rooms and at all doors intended for use by handicapped persons.

Keying

1. All door locks shall be on the new proprietary University Keying System (***BEST*** Removable Core) as specified by Facilities Operations and Maintenance Key Shop. **All** keyed locks shall be subject to the Zone Master as assigned to the facility at Florida State University.
2. The contractor shall provide extra copies of the approved hardware submittal and current floor plans, showing door numbers, to the University's project manager. The project manager will then provide this submittal to the Facilities Operations and Maintenance Key Shop, together with room numbers. In order to allow adequate time for proper "pinning", the project's approved hardware submittal must be provided to Facilities Operations and Maintenance Key Shop ***120*** (one hundred and twenty) days prior to substantial completion for projects containing more than 250 doors, and ***90*** (ninety) days for projects containing less than 250 doors. The Lock Shop keeps material on hand for small projects having less than 12 doors. Cores can be provided and installed on these jobs with a minimum of two weeks notice. All hardware must be purchased with Best removable core cylinders. **The University will accept no substitutes.** Cost of all hardware will be borne by the contractor and must coordinated with the Project Manager and the Key Shop to determine exact number and type of keyways prior to ordering. The contractor's order should specify delivery of key cores and keys directly to the FSU Key Shop. The contractor shall install the cylinders. The Key Shop shall install the keyways and distribute keys to building users.
3. All keying schemes shall be planned in coordination with the Project Manager and the Key Shop. The process shall begin early enough to insure that systems (key plans, keyways, cores) are compatible with Florida State University's total Master Keying System, that time phasing is proper, and that the FSU Key Shop retains control of ***all*** keys and cores.
4. The Contractor will supply and install temporary construction cores and provide construction personnel and the owner with keys during construction.
5. The final keying schedule is prepared by, and directly submitted to Best by the FSU Key Shop.
6. All doors with card access shall have cores with Best key override.

Guidelines for Campus Card Access and Security

All new construction and major renovation projects shall be designed for the inclusion of FSU Card Access systems (a/k/a cCure Card Access). The plans for placement of card access must be reviewed and approved by the FSU Police Department (FSUPD). The FSU Construction Project Manager will facilitate the inclusion of the FSUPD in the early design stages to ensure compliance with security standards. Installation of security devices is managed by Information Technology Services network deployment technicians.

Perimeter Doors of new buildings must be fully secured through the use of cCure Card Access as follows:

1. A minimum of two card readers for building access after regular hours. At least one card reader should be located at an accessible door.
2. Door contact and request to exit at all building perimeter doors. Exceptions: Service rooms (such as Electrical or Mechanical Rooms) which do not provide access to other internal areas of the building and are scheduled to be key locked at all times.
3. Exit only doors should NOT include a keyed cylinder.
4. A Best "Z key" cylinder should be provided at all card accessed doors.

Interior Doors of new buildings may include cCure Card Access, but unless specifically exempted by University policy (OP-H-4B-1), interior areas will not have monitoring devices installed (i.e. door contacts and requests to exit). The FSUPD will work with future building occupants to ascertain proposed area usage and will make the determination as to whether an interior area qualifies as a "mandatory" alarm area pursuant to policy. Previously utilized "Locknetics" devices are no longer accepted.

Information Technology Services publishes standards for conduit and electrical infrastructure required for a variety of types of doors (see Door Conduit Standards). These standards must be followed for all perimeter doors (doors that will have door contacts and requests to exit). Interior doors that will be monitored require the same infrastructure as perimeter doors. Interior doors that will not be monitored but which will have card access also require the same infrastructure as perimeter doors except the conduit to the top of the door that would ordinarily be used for the door contact cable.

Other types of security such as closed circuit television (CCTV) camera surveillance equipment and intrusion alarm/burglar alarm systems must also be reviewed and approved by the FSUPD.

INTERIOR DOOR HARDWARE

1. Use Best mortise lock 35H7J, Russwin ML2255, or Sargent 8237, for classrooms and laboratories.
2. Use Best mortise lock 35H7E, Russwin ML 2251, or Sargent 8205 for corridor and office doors.

3. Use Best mortise lock 34H7R, Russwin ML 2212, or Sargent 8203, for restroom doors. Provide kick plates, push plates, or pull plates of lexan or stainless steel.
4. Use Best mortise lock 35H7EW, Russwin ML 2257, or Sargent 8250, for custodial closets.
5. Hardware trim shall be Satin Chrome, US26D, 626 finish. Trim design: Best 15J, Russwin NSN, or Sargent WTL, cold forged escutcheon plate.
6. Use astragals on interior double doors for security.
7. All interior fire doors shall have magnetic door holders actuated by the building fire alarm system, where appropriate and allowed by code.

EXTERIOR DOOR HARDWARE

1. Von Duprin exit devices shall be specified**. (No substitutions).**
2. Single doors - Use a Von Duprin 99 series (panic device). Do not use mortise lock.
3. Double Doors - Use Von Duprin 99 series with removable mullions. Use Russwin 298 foot and head bolts with dust proof strikes, or Sargent equivalent. Do not use mortise locks.
4. All exit bolts installed on exterior doors should have cylinder dogging devices.
5. All hinges on exterior doors or doors in security areas should have non-removable pins to prevent the unauthorized removal of the door from the outside.
6. Exit bolts for narrow stile exterior doors shall be Von Duprin 55 series.
7. Doors that are of the narrow stile type shall have the same hardware functional requirements as specified for other exit bolts. All double doors shall have a removable rabbeted mullion and each door leaf shall not be less than 36 inches wide.
8. All mullions are to be key locked into the door frame; contractor to provide Best cylinder.

GENERAL DOOR AND HARDWARE GUIDELINES FOR SPECIFIC SPACES

Restrooms

1. All interior restroom and vestibule doors are to have 10" wide kick and push plates of stainless steel or lexan and are to be non-lockable.

Custodial Closets

1. Entrance doors shall swing outward where possible.
2. Each closet lock shall be individually keyed and keyed to the grandmaster system.

Classrooms

1. Classroom doors shall have wired glass or wireless fire glass view panels set in steel framing or stops according to code.
2. Classroom doors shall have closers and electric strike hardware for coordination w/the card access system. Conduit and power for door contacts and request to exits should be included.

WINDOW GUIDELINES

1. Don't locate glass in areas that are inaccessible.
2. Exterior windows shall be accessible for washing either by manually operable sash, the use of a swinging scaffold or the use of safety gear that snaps onto the window frame. Each window shall be properly equipped with anchors to support safety gear. The architect shall design and supervise the installation of the windows into the building frame, insuring that the windows are adequate and safe.
3. All windows shall be capable of being opened manually for cleaning and in the event of a shutdown of the HVAC equipment, unless fixed windows are required for control/security reasons. Operable windows shall be provided with positive locking devices. **Pivot windows shall not be specified**.
4. Consideration shall be given to the use of double panes (thermopane) with outer shield of solar glass, especially if windows area exceeds 3% of wall area.
5. Provide guardrails at all full height glass panels in accordance with applicable codes.
6. Confirm that any hurricane shelter requirements have been considered in the design of windows and selection of window materials.
7. Types of glass and location shall be indicated on the drawings or in the specifications as follows: A "type number" to each type of glass being used on the job. Location of each by the simple note, "glass type 1", "glass type 2," etc. (Avoid lengthy descriptions of the glass on the drawings.) Each glass type precisely defined in the specifications.
8. Use obscure glass in toilet and bathroom windows.
9. All window glass shall be replaceable from inside the building wherever feasible.
10. Windows shall be glazed in the closed position and left closed for several weeks, particularly awning or projected types.
11. Specify safety glass in all hazardous locations to comply with Life Safety Code, ADA Requirements, etc.
12. Selection of window materials shall be assessed for long range, life-cycle cost.
13. Specify aluminum profiles for new construction and renovation, unless specifically authorized to match existing wood windows.

END OF SECTION