

L. Division 8 - Doors and Windows1. Windows

- a. Glazing shall be energy efficient (ie; Low-E) and have an insulated glass certification council markup of class "CBA" of the ASTM E2188 and E2190 specification.
- b. Use thermally broken sections if metal window frames are used. Do not use steel windows.
- c. Operable windows must be tied into the HVAC system.

2. Doors

- a. Provide vestibules for all entrances except as noted in 2 (c).
- b. The exterior glazed portions shall be of sealed insulated double glass units. Consider Low-E glass. Minimum 3'-0" wide door.
- c. Exterior doors need not be protected with a vestibule where:
  - 1) The door is used primarily to facilitate vehicular movement or material handling
  - 2) The door is not intended to be used as a general entrance door
  - 3) The door opens directly from an enclosed space of less than 1,650 square feet in area

3. Hollow Metal Doors and Frames

- a. Construct fire-rated doors and frames of ratings indicated, in accordance with IAO 80 "fire doors and windows", as adopted by Insurers Advisory Organization, and as otherwise required by Jurisdictional Authorities.
- b. Insulate exterior doors and frames.
- c. Fabricate exterior doors not less than 16 gauge and exterior frames not less than 14 gauge. Fabricate interior doors not

less than 18 gauge and interior frames not less than 16 gauge.

- d. Prepare frames and doors for specified finishing and security hardware with mortises and reinforcement. Provide 10 gauge steel plate reinforcement for hinges, electric strikes and electric contactors, and 12 gauge for pushes, pulls, lock and latch sets, and panic devices. Drill and tap to template information. Reinforce for surface-mounted hardware and for door closer brackets. Provide for concealed door closers where specified. Install 22 gauge metal mortar guards at cutouts and reinforcing plates in frame. For cylindrical locks, install reinforcing units to lock manufacturer's specification. For mortise locks provide a suitable internal bracket to hold the lock rigidly in the center of the door.

4. Wood Core Doors

- a. Cores may be 28 lb. high density particle board (Formaldehyde free).
- b. Fabricate doors of solid core construction minimum 1-3/4" thick
- c. For plastic facing use 0.045" to 0.050" thick General Purpose Regular

5. Store Front Systems

- a. Store Front Systems shall be equal to Kawneer Trifab VG450, 451, &451T (Thermal) Framing Systems.
- b. The City must specifically approve store front systems and/or store front doors, including hardware and finish during the design phase.
- c. The general contractor will coordinate the store front hardware with access control and keying requirements as per Appendix F.

6. Glass and Glazing

- a. Conform to all applicable requirements of "Glazing Manual" published by The Flat Glass Marketing Association, Topeka, Kansas.

- b. Glass shall conform to the following:
  - 1) Safety Plate Glass - to ANSI, minimum 1/4" - use either fully tempered or laminated, minimum thickness of vinyl 0.015"
- c. Use double or triple glazing when necessary to provide consistent "R" ratings for energy efficiency and to prevent undesirable condensation.
- d. Low-E glazing shall be used.
- e. Use FireLite fire-rated glass as appropriate.

7. Door Hardware

a. Hinges

1) Types

Provide the proper types to suit door and door frame requirements. For doors with closers, provide ball-bearing butts. For all other doors, provide plain bearing butts.

b. Locks and Latches

1) Types

All lock/latch sets, including cylinders, shall be Schlage primus series. Latch sets to have lever handles.

2) Keying (Temporary)

a) The contractor will supply and install temporary project lock cylinders during the construction period and furnish 5 temporary construction lock keys to the City Project Representative.

b) The contractor will supply two (2) keys to the City project representative to any temporary site gates that confine the project for the duration of the construction period.

3) Keying (Permanent)

- a) The contractor will supply and install a Primus keying system for the entire project and will coordinate this process with the City's sole source provider: Colorado Doorways, Inc., 3333 E. 52<sup>nd</sup> Avenue, Denver, Colorado 80216. (800)321-6448 or (303)291-0900. Website: [www.codoor.com](http://www.codoor.com). Refer to Appendix F. "Keying and Card Access".
  - b) Contractor will provide a Knox box and mount as directed by Poudre Fire Authority.
  - c) The contractor will provide a key cabinet when needed by the project requiring building occupants and/or custodial personnel access to keys.
- c. Closers
- 1) Shall meet ADA criteria.
  - 2) Public exterior entries identified as handicap accessible routes shall have automatic door openers.
- d. Door Stops
- 1) Types
- Provide the proper type of stop to all doors to prevent damage to hardware, doors, and walls. In general:
- a) Where doors open against a wall, provide a wall-mounted stop.
  - b) Where doors are unprotected, vulnerable to high-frequency use or wind conditions, on all exterior doors, provide overhead stops. Do not use door closer arms as door stops, unless it is specifically manufactured as a door stop arm type.
  - c) Where other stops will not suit the condition, floor-mounted stops may be accepted.

2) Finishes

To match door hardware

3) Weather stripping

Provide replaceable weather stripping at exterior and vestibule door openings.

4) Smoke seals, etc. as required by current adopted code.

8. Electronic Access Controls

Card reader system and door hardware shall be H.I.D. proximity access readers with Continental Controls access controller field terminal units. See Appendix F for complete access control standards.