ADDENDUM TO CONTRACT DOCUMENTS

SOLANO COMMUNITY COLLEGE	ADDENDUM: #02
	SCCD BID: #12-001
	Project: Building 202 NEW CHILD CARE CENTER **DSA File No. 48-C1** **DSA 02-112397**
	Date : 5/28/2013 All Addendums can be found at the District Purchasing website below: www.solano.edu/purchasing

To All Prospective Bidders:

This ***ADDENDUM,*** dated May 28, 2013 supersedes sections of the original PROJECT MANUAL and DRAWINGS, wherein it contradicts them. All other conditions remain the same.

Acknowledgement of receipt of this ***ADDENDUM*** is required on the Bid Form.

Item Descriptions
No.

1. **Specification and Drawing Changes:**

1.1 **22 40 00 Plumbing Fixtures:** Addendum one adds a mop sink shown on sheet A-1, floor plan note 21. Mop sink shall be Fiat Model TSB-100 with Chicago Model 897 faucet. This will be installed in room 109 in lieu of laundry sink. Addendum 2 will confirm this change. There will be no sink, and associated plumbing in room 110. Delete from scope these items

1.2 **22 40 00 Plumbing Fixtures:** Plumbing fixture SK2 listed on P0.1 should be changed to the following. “Whittington 340591, single compartment, 16 gauge type 304 stainless steel, wall mounted, 35-1/2" x15" x 6" deep. Complete with American Standard "Serin" 1-Handle In-Wall faucet,…”

1.3 **A8 Window Schedule:** Window “X” – (48”x 40”) on the window schedule and on A-11/4 Elevation B needs to be raised to a height of 76” and resize the **window X to 24”x36”**

1.4 **Per sht note 4/G2.** Wall finish scheduled for skip trowel. Wall finishes on all walls will be Level 4 on all interior rooms and Level 5 for classrooms 101 and 104.

1.5 **Sht A8 and A10** conflict for cabinet and countertop finishes. Countertops and Cabinets are to be plastic laminate for both items.

1.6 **Sht 2/A1 and 2/A6** Water play table will be OFOI item. There will be no sink and associated plumbing except for a floor drain. Contractor to provide 2" floor drains with 2"W, 2"V and 1/2"trap primer lines in same locations as shown on plans.

1.7 **Sht A8 Door Schedule.** Doors 101 and 117 will have metal grids pattern similar to windows on exterior of glazing.

1.8 **08 71 00 Door Hardware Schedule:** Changes made to for closers and exit devices with no substitutions permitted. Keying will be done by District. Blanks to be provided to District. Coordination with District will be required prior to procurement of cores.

SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes Door hardware for wood doors, steel doors. aluminum framed entrance doors, and miscellaneous hardware items.

B. Provide hardware not described herein but otherwise required for proper completion of the project, conforming to size, function, quality, and finish of other specified hardware.

1.02 REFERENCED STANDARDS

A. Builders Hardware Manufacturers Association (BHMA):

1. BHMAA 156.1 “Butts and Hinges”.
2. BHMAA 156.3 “Exit Devices”.
3. BHMAA 156.4 “Door Controls – Closers”.
4. BHMAA 156.5 “Auxiliary locks and Associated Products”.
5. BHMAA 156.6 “Architectural Door Trim”.
6. BHMA A 156.7 “Template Hinge Dimensions”.
7. BHMA A 156.8 “Door Controls - Overhead Stops and Holders”.
8. BHMA A 156.13 “Mortise locks and latches”.
9. BHMAA156.16 “Auxiliary Hardware”.
10. BHMAA156.18 “Materials & Finishes”.
11. BHMA A156.19 “Power Assist & low Energy Power Operated Doors”.
12. BHMA A 156.21 “Thresholds”.
13. BHMA A 156.22 “Door Gasketing Systems”.
14. BHMA A 156.25 “Electrified Locking Devices”.
15. BHMAA156.26 “Continuous Hinges”.
16. BHMAA156.28 “Master Keying Systems”.
17. BHMA A156.31 “Electrified Strikes and Frame Mounted Activators”.

B. California Building Code (CBC):

1. California Code of Regulations, Title 24.

C. Door and Hardware Institute (DHI):

1. DHI A 115 “Steel Door Preparation Standards”.

2. DHI A 115W “Wood Door Preparation Standards”.

3. DHI A 115.JG “Installation Guide for Doors and Hardware”.

4. DHI “Keying Systems and Nomenclature”.

5. DHI “Sequence and Format for the Hardware Schedule”.

D. National Fire Protection Association (NFPA):

1. NFPA 80 “Fire Doors and Fire Windows”.

E. Underwriters laboratories Inc. (UL):

1. UL10C “Positive Pressure Fire Tests Of Door Assemblies”.

2. UL 305 “Panic Hardware”.

3. UL1034 “Burglary-Resistant Electric locking Mechanisms”.

F. Uniform Building Code (UBC):

1. UBC 7-2 “Fire Tests Of Door Assemblies”.

2. UBC 10-4 “Panic Hardware”.

1.03 SUBMITTALS

A. Products other than those designated herein must be approved as substitutions prior to submittal of Door Hardware.

B. Submit for Approval: Door Hardware Schedule in vertical format conforming to DHI "Sequence and Format for the Hardware Schedule: Horizontal format schedules will be rejected without review. Format shall be single-sided, 8-1/2 by 11 inch page size. Organize Schedule into headings, grouping doors to receive same hardware items, indicating quantity and complete designations of every item required for each door opening. The schedule shall include:

1. Cover sheet indicating name and location of Project; name of Architect; name of Contractor; name, address and phone of hardware supplier, name of hardware consultant preparing the schedule; date of submittal or revised submittal.

2. List of abbreviations used in schedule.

3. An index of door openings, listed in numerical order, with hardware heading identification cross-referenced to Architect's set identification.

4. Hardware headings shall be listed in numerical order corresponding, as closely as possible, with numerical order of Architect's set numbers.

5. Each hardware heading shall have each door listed in numerical order according to door numbers in the Architect's door schedule, and denoting: location, configuration (single, pair, etc.), type (elevation, etc.), door and frame size(s), door and frame material(s), handing, fire rating, and key set identification.

6. Type, complete model number, style, function, size, hand, and finish of each door hardware item.

7. Manufacturer of each item.

8. Fastenings and other pertinent information.

C. Submit for Information: Manufacturer's technical product data ***/*** catalog cut sheets, clearly marked for each hardware item, including installation details, material descriptions, dimensions of individual components and profiles, and finishes. Format shall be single- sided, 8-1/2 inch x 11-inch page size.

D. No Keying Schedule is required for this project. Contractor to provide blank hardware cores and keys and issue to District representative at procurement/closeout.

E. Operation and Maintenance Data: Provide complete operating and maintenance instructions listing routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guides.

F. Qualification Data: For firms and persons specified in "Quality Assurance" Article.

G. Warranties: Special warranties specified in this Section.

1.04 QUALITY ASSURANCE

A. Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.

B. Manufacturers, Hardware Supplier, and Installer shall have no less than five years experience in the provision of Door Hardware for projects similar in size, complexity and type to this Project.

C. Hardware Schedule submittals shall be prepared and signed by a Hardware Consultant holding the credentials of Architectural Hardware Consultant (AHC) issued by the Door and Hardware Institute. Hardware Consultant shall have no less than five years experience in the scheduling of Door Hardware for projects similar in size, complexity and type to this Project; and shall be available, at no additional cost, during the course of the Work to consult with Contractor, Architect, and Owner regarding door hardware and keying.

1.05 REGULATORY REQUIREMENTS

A. All hardware shall meet the requirements of CBC Sections 1133B.2.1, 1133B.2.5.1, and 1003.3.1.8.

B. Panic Exit Devices and Fire Exit Devices shall comply with UBC Standard 10-4, CBC Section 1003.3.1.9.

C. Thresholds shall comply with CBC Section 1133B.2.4.1.

D. Fire-Rated Door Assemblies: Not Used.

E. Comply with all applicable accessibility guidelines as set forth in Americans with Disabilities Act (ADA) - Accessibility Guidelines for Buildings and Facilities (ADMG); and California Building Code (CBC) Chapters 11A, 11B and 11C.

F. Latching and locking doors that are hand-activated and that are in a path of travel shall be operable with a single effort by lever-type hardware, panic bars, push-pull activating bars, or other hardware designed to provide passage without requiring the ability to grasp the opening hardware.

1. All hand-activated hardware shall be mounted between 30 inches and 44 inches above finished floor, except Panic Exit Devices and Fire Exit Devices shall be mounted between 36 inches and 44 inches above finished floor.

G. Latches, locks, and exit devices shall require no more than 15 lbs to release latch; from egress side shall not require the use of a key, tool, or special knowledge for operation.

H. At sliding doors, when fully open, operating hardware shall be exposed and usable from both sides.

I. Door Opening Force: Comply with the following maximum opening-force requirements:

1. Interior Hinged Doors: 5 lbs applied perpendicular to door at latch.

2. Exterior Hinged Doors: 5 lbs applied perpendicular to door at latch.

3. Sliding or Folding Doors: 5 lbs app6ed parallel to door at latch.

4. Fire Rated Doors: Not Used

J. Where door closers are provided, adjust Sweep speed so that from an open position of 70 degrees the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

K. Thresholds shall be maximum 1/2 inch in height above floor and landing on both sides of openings. Bevel raised thresholds with a slope of not more than 1:2.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Each article of hardware shall be delivered individually packaged in the manufacturer's standard commercial carton or container, and shall be properly marked or labeled to be readily identifiable with the approved hardware schedule.

B. Manufacturer's printed installation instructions, fasteners, and special tools shall be included in each package.

C. Hardware shall be stored in a dry, secure locked area, complete with shelving for unpacking and sorting of the door hardware.

D. Deliver all master keys by restricted, receipted delivery directly from the manufacturer to the Owner.

1.07 COORDINATION

A. Provide hardware templates to the parties involved for doors, frames, and other work specified to be factory prepared for door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

B. When required by door or frame fabricator, furnish physical samples of each mortised and recessed hardware item required.

C. Furnish as required any hardware items or accessories requiring factory or shop installation.

D. Coordinate layout and installation of recessed pivots and closers with floor construction.

E. Electrical System Rough-in: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, access control system, and security system as applicable.

F. Keying Conference: N/A

1.08 WARRANTY

A. In addition to, and not precluding. other warranty requirements in the Contract Documents, the following hardware items shall carry extended minimum warranties as indicated:

1. Hinges: Ten years from date of Substantial Completion.

2. Locks: Five years from date of Substantial Completion.

3. Exit Devices: Three years from date of Substantial Completion.

4. Door Closers: Ten years from date of Substantial Completion.

1.09 MAINTENANCE

A. Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. At substantial completion, Contractor shall provide an on-hand inventory of spare/replacement parts, identical to the hardware items in the approved hardware schedule, and furnished in the quantities as follows:

1. Complete lock latch of each type and function, 1 each.

2. Complete surface closers, 2 each.

3. Door stops of each type, 2 each.

4. Exit device of each type, 1 each.

5. Door Seal (gasket / weatherstrip) of each type, 1 set.

6. Door bottom / sweep of each type, 2 each.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with requirements herein. provide products by one of the following manufacturers for each type of hardware:

1. Butt Hinges: Bommer Industries (BOM). Hager Companies (HAG), Stanley (STA).

2. Continuous Geared Hinges: Hager Companies (HAG), Pemko (PEM). Stanley (STA).

3. Cylinders and Keying: Best Access Systems (BAS) - no substitutions permitted.

4. Locks and Latches: Best Access Systems (BAS) - no substitutions permitted.

5. Self-Contained Electronic Locks: Best Access Systems (BAS) or Stanley Wireless Access Control - no substitutions permitted.

6. Exit Devices: Precision (PHI) – No Substitutions permitted.

7. Electric Strikes: Folger Adams (FOL), Hanchett Entry Systems (HES). Security Door Controls (SDC), Von Duprin (VON).

8. Door Position Switches: DynaLock (DYN), Security Door Controls (SDC), Control (SEN).

9. Flush Bolts and Door Coordinators: Door Controls Interactional (DCI), Ives (IVE), Rockwood {ROC), Trimco (TRI).

10. Surface Door Closers: Stanley (STA) 04550 Series. No Substitutions permitted.

11. Overhead-Concealed Door Closers: LCN (LCN) 2030 Series.

12. Overhead Holders and Stops: Architectural Builders Hardware (ABH), Glynn- Johnson (GLY), Rison (RIX), Rockwood (ROC).

13. Low Energy Door Operators and Accessories: Stanley (STA) - No Substitutions permitted.

14. Architectural Door Trim: Anemostat (ANE), Bums (BUR), Ives (IVE). Rockwood (ROC), Trimco (TRI).

15. Auxiliary Hardware: Burns (BUR), Ives (IVE), Rockwood (ROC), Trimco (TRI).

16. Door Bottoms. Metal Thresholds, Weatherstripping and Gaskets: National Guard Products (NGP), Pemko (PEM), Reese Enterprises (RSE).

2.02 MATERIALS AND FABRICATION

A. Products named or identified by make or model number, or other designation and described herein are base products. Base products establish the standards of type, in-service performance, physical properties, appearance, warranty, cost, and other characteristics required by the Project.

2.03 FASTENERS

A. Provide concealed fasteners or hardware items on exterior doors, which are exposed when door is closed.

B. Combination machine screws and expansion shields shall be used for attaching hardware to concrete or masonry.

C. Fasteners exposed to the weather in the finished work shall be of brass, bronze, or stainless steel.

2.04 BUTT HINGES

A. Butt hinges shall meet BHMA A156.1 requirements.

B. Hinge dimensions shall conform to BHMA A156.7.

C. Base Metal shall be steel plated (fire-rated doors not used); bronze or stainless steel for exterior outswinging doors; bronze or plated steel elsewhere as scheduled.

D. Provide hinges with antifriction bearings for doors with closers.

E. Unless otherwise indicated, size hinges as follows:

1. 1-3/8 inch thick doors to 36 inches width: 3-1/2 inch height, standard weight.

2. 1-3/4 inch thick doors to 36 inches width: 4-1/2 inch height, standard weight.

3. 1-3/4 inch thick doors over 36 inches width: 5 inch height, heavy weight.

F. Provide in minimum width sufficient to clear trim when door swings 180 degrees, whether or not shown on Drawings to swing 180 degrees.

G. Number of hinges per leaf shall be as follows:

1. Doors to 60 inches in height: 2 hinges.

2. Doors over 60 to 90 inches in height: 3 hinges.

3. Doors over 90 to 120 inches in height: 4 hinges.

4. For doors over 120 inches in height 4 hinges plus 1 hinge for every 30 inches, or fraction thereof, door height greater than 120 inches.

H. Screws: Flat head wood screws not less than 1-1/2 inches long for hinges for wood doors; flat head machine screws elsewhere.

I. Hinges for reverse bevel doors with locks shall have pins that are made non-removable when the door is in the closed position by means of a set screw in the hinge pin barrel.

2.05 CONTINUOUS GEARED HINGES

A. Continuous hinges shall meet BHMA A156.26 requirements.

B. Type: Heavy-duty assembly of 3 interlocking aluminum extrusions. Door leaf and jamb leaf shall be continuously geared together the full hinge length; secured together with full-length cover channel permitting 180 degree operation. Vertical door loads carried on integrated thrust bearings spaced no more than 3 inches apart.

C. Hinges shall have non-removable cap at hinge top to prevent foreign material from becoming lodged in hinge gear mechanism.

D. Provide factory finished to match door and frame finish.

E. Hole pattern for fasteners shall be symmetrical and located 10 template dimensions.

2.06 CYLINDERS, KEYING AND KEY STORAGE

A. Lock cylinders shall meet BHMA A156.5 requirements.

B. Masterkeying system shall meet BHMA A156.28 requirements.

C. All cylinders shall be interchangeable core type. Contractor to contact District Representative prior to procurement to coordinate District core coding as required.

D. Locks shall be keyed according to approved Keying Schedule.

E. Locks shall be furnished with a temporary keying system for interim use during construction.

F. Provide change keys in individual envelopes for each cylinder delivered. Envelopes shall be marked with respective door identification numbers.

G. Key set symbol, and inscription "Do Not Duplicate" shall be stamped on all key blanks.

H. Keys shall be supplied as follows:

1. Locks: 3 change keys each lock.

2. Blank keys: 100 total.

I. Subject to compliance with requirements, provide emergency entrance key vault(s); Knox Company 3200 Series, or equal.

1. Recessed mount with hinged door, with tamper switch; 1/4 inch plate steel housing; 1/2 inch thick steel door with gasket seal.

2. Exterior Dimensions: 7 inches (H) x 7 inches (W) x 3-1/4 inches (D).

3. Finish Color - Black, Dark Bronze or Aluminum as selected by Architect.

4. Provide recessed mounting kit and all other required mounting accessories.

5. Where indicated provide security key override switches for electrically activated openings.

6. Coordinate and provide keying and type per fire / police department, and other jurisdictional agency requirements.

2.07 LOCKSETS AND LATCHSETS

A. Mortise Locks and Latches shall meet BHMA A156.13 Grade 1 requirements.

B. Auxiliary locks shall meet BHMA A156.5 requirements.

C. Electrified locks shall also meet BHMA A15625 requirements.

D. Provide locking or latching functions as indicated in Hardware Sets.

E. Operating trim shall be lever type as indicated in Hardware Sets.

F. Lock trim shall be rose or escutcheon type as indicated in Hardware Sets; heavy wrought or cast brass, bronze, or stainless steel; through-bolted through door.

G. Lock functions, which include thumb turn trim, shall be provided with thumb turns compliant with accessibility code requirements.

H. Lock Throw: Comply with requirements for length of latch bolts to comply with labeled fire door requirements.

I. Lock backset shall be 2-3/4 inches unless otherwise indicated.

J. Provide curve-lip strike with dust box for each latch or lock bolt, with lip extended to protect frame, finished to match door hardware set, unless otherwise indicated.

2.08 SELF-CONTAINED ELECTRONIC LOCKS

A. Self-Contained Electronic Locks shall meet BHMA A 15625 requirements

B. Self-Contained Electronic locks: Internal, battery-powered, self-contained electronic key override cylinder shall be compatible with and master keyed to Project requirements as indicated herein.

C. Provide curved-lip strike with dust box for each latch or lock bolt, with lip extended to protect frame, finished to match door hardware set, unless otherwise indicated.

2.09 EXIT DEVICES

A. Exit devices and exit device accessories shall meet BHMA A156.3. Grade 1 requirements.

B. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.

C. Fire Exit Devices: Complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305.

D. Outside Trim: Design, material and finish to match Iocksets, unless otherwise indicated.

E. Adjustable strikes shall be provided for rim type and vertical rod devices.

F. Fire Exit Removable Mullions: Where indicated, provide removable mullions for use with fire exit devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL305. Mullions shall be used only with exit devices for which they have been tested.

2.10 ELECTRIC STRIKES

A. Electric strikes shall meet BHMA A156.31 Grade 1 requirements, and be listed and labeled under UL 1034 Burglary Resistant Electric Locking Equipment.

B. Electric strikes for fire rated openings shall be listed and labeled for such use by a testing agency acceptable to authorities having jurisdiction. Fail Secure (fail latched) strikes shall be used at all fire rated openings.

2.11 DOOR POSITION SWITCHES

A. Door position switches used on fire rated doors shall be listed and labeled by a testing agency acceptable to authorities having jurisdiction.

2.12 FLUSH BOLTS

A. Automatic flush bolts shall meet BHMA A156.3

B. Provide dust proof strikes for bottom bolts. Dust proof strikes shall meet BHMA A156.16.

2.13 DOOR COORDINATORS

A. Door coordinators shall meet BHMA A156.3 requirements.

B. Door coordinators shall be flat bar type: stop mounted with all necessary filler bars and mounting brackets to accommodate required hardware.

2.14 SURFACE DOOR CLOSERS

A. Door closing devices shall meet BHMA A156.4, Grade 1 requirements.

B. Surface closers shall be fully adjustable with sweep speed, latch speed, and back check position valves.

C. Surface closers on exterior doors without building overhang protection shall be primed with rust inhibitive primer before finish application.

D. Arm selection shall follow the requirements of the manufacturer's recommendations with brackets, drop plates and miscellaneous accessories provided as necessary.

E. Provide closers with arms designed to permit openings of doors as far as job conditions will permit; unless otherwise indicated closers with arms restricting opening of door will not be acceptable.

2.15 OVERHEAD CONCEALED DOOR CLOSERS

A. Overhead Concealed Door Closers shall meet BHMA A156.4, Grade 1 requirements.

B. Closers shall be fully adjustable with sweep speed; latch speed and back check position valves.

2.16 OVERHEAD HOLDERS AND STOPS

A. Overhead holders and stops shall meet BHMA A156.8 requirements.

B. Overhead door holders and stops shall be adjustable from 90 to 110 degrees dead stop or hold open position, as applicable.

C. Overhead doorstops shall have shock absorbers providing 5 to 7 degrees compression before dead stop.

D. Overhead stops shall not be provided with hold open function when used at fire rated doors.

2.17 LOW ENERGY DOOR OPERATORS

A. Overhead Concealed Operator: The operator header shall be mounted directly over the door and serve as the doorframe header. The operator output shaft shall connect to an arm that transmits power to the door via a slide block, which moves in track that is mounted at the top of the door.

B. Low Energy Door Operators shall meet BHMA A156.19 requirements.

1. Door shall not open to back check faster than 3 seconds, and shall require no more than 15 Ibs applied 1 inch from latch edge to stop door movement.

2. Door shall remain in fully open position for no less than 5 seconds.

3. Door shall close from 90 degrees to 10 degrees no faster than 3 seconds, and 10 degrees to fully close no faster than 1-1/2 seconds.

4. Power operation shall be activated by push plate switch(s), mounted 40 inches from finished floor to center of switch.

2.18 ARCHITECTURAL DOOR TRIM

A. Architectural door trim shall meet BHMA A156.6 requirements.

B. Door Protection Plates: Kick, mop, and armor plates shall be 0.050-inch thick brass, bronze, or stainless steel depending on finish indicated. Plates shall have beveled edges and shall be provided with countersunk mounting holes and NO.6 oval head screw fasteners. Width of kick and armor plates shall be 2 inches less than door width for single doors and 1 inch less for pairs of doors. Width of mop

plates shall be 1 inch less than door width. Unless otherwise indicated, height shall be 10 inches for kick and mop plates, and 34 inches for armor plates.

C. Door Edging and Astragals: Fabricated from 18 gauge cold-rolled steel or 304 stainless steel as indicated; factory prepared for all mortise hardware; countersunk screw mounting.

D. Push and pull plates shall be 0.050-inch thick brass, bronze, or stainless steel depending on finish indicated. Plates shall have beveled edges, and shall be furnished with countersunk mounting holes and No.6 oval head screw fasteners. Pull plates shall also be furnished with flat-head through bolts for pull grip.

E. Push and pull bars and grip handles shall be brass, bronze, or stainless steel depending on finish indicated.

2.19 AUXILIARY HARDWARE

A. Auxiliary hardware shall meet BHMA A156.16 requirements.

B. Door Stops: Stops shall be of heavy-duty construction, provided in finish indicated. Floor stops shall be of height required by floor conditions. Unless otherwise indicated, provide stops at all doors as follows:

1. At exterior, out-swinging doors provide heavy-duty floor stop Trimco 1214 x 1268K or equal, unless stop function is indicated in door closer. At all other doors provide floor stop Trimco 1211, or equal. Where it is not possible to properly place a floor stop, provide heavy duty concealed overhead type stop, or when door closer is indicated, provide heavy-duty dead stop function in closer.

C. Silencers: Gray rubber, non-marring configured for metal or wood frames as scheduled. Provide 3 per single door and 2 per pair of doors. Silencers shall be tamper resistant once installed in doorframe.

2.20 DOOR BOTTOMS

A. Door bottoms shall be of aluminum or extruded bronze of the type and finish indicated and shall provide proper clearance and an effective seal with specified thresholds.

B. Door bottom shall have a rubber, vinyl or neoprene seal as indicated.

C. The door bottom shall exclude light when the door is in the closed position and shall inhibit the flow of air through the unit.

2.21 METAL THRESHOLDS

A. Thresholds shall meet BHMA A156.21 requirements.

B. Thresholds shall be heavy-gauge aluminum of the configuration and finish indicated, and shall provide an effective seal with door bottom.

C. Where required, thresholds shall be prepared to accommodate floor closers, pivots, and projecting bolts of latching hardware.

2.22 METAL HOUSED TYPE WEATHERSTRIP

A. Metal Housed Type Weatherstrip shall meet BHMA A156.22 requirements.

B. Metal Housed Type Weatherstrip shall be aluminum or bronze of the type and finish indicated, comprised of metal retainers with vinyl, neoprene, silicone rubber, polyurethane or vinyl brush inserts as indicated.

C. Seals shall remain functional through all weather and temperature conditions.

2.23 GASKETING

A. Shall be a compression type product for use with wood or steel doors; labeled for use on fire-rated doors where required.

2.24 FINISHES

A. Provide hardware in finishes as indicated.

B. Unless otherwise indicated, finishes shall conform to those identified in BHMAA156.18. Comply with base material and finish requirements indicated by the following:

1. BHMA 600: Primed for painting, steel base metal.

2. BHMA 626: Satin chromium plated over nickel, brass or bronze base metal.

3. BHMA 628: Satin aluminum, clear anodized, aluminum base metal.

4. BHMA 630: Satin stainless steel, stainless-steel base metal.

5. BHMA 652: Satin chromium plated over nickel, steel base metal.

6. BHMA 689: Aluminum painted, any base material.

7. BHMA 719: Mill finish aluminum, uncoated, aluminum base metal.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine doors and frames for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Examine rough-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Installation shall be in accordance with DHI A115 and/or DHI A115-W, and DHI A115.lG.

B. Hardware for fire doors shall be installed conforming with NFPA 80, and all other applicable building codes and regulations.

C. Install each door hardware item according to manufacturer's written instructions, utilizing proper fasteners provided by manufacturer.

D. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in other Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

E. Set units level, plumb, and true to fine and location. Adjust and reinforce and maintain attachment substrates as necessary for proper installation and operation.

3.03 DOOR CLOSING DEVICES

A. Surface closers on doors opening to or from halls and corridors shall be mounted on the room side of the door.

B. 'Surface closers on exterior doors shall be mounted on the interior side of building utilizing regular arm, parallel arm, or top jamb mounting as required.

C. Door dosing devices shall be installed in accordance with the templates and printed instructions supplied by the manufacturer of the devices.

D. Door closing devices with adjustable spring power shall be adjusted for proper door operation, and compliance will all applicable codes and regulations.

E. The cutting of weatherstripping to accommodate closer installation will not be acceptable.

3.04 PUSH, PULL AND PROTECTIVE PLATES

A. All plates shall be installed using countersunk oval head screw fasteners, unless otherwise indicated.

B. Pull plate grip handles shall be through bolted through the door. When push plate is indicated on opposite door side, through bolts shall be countersunk with push plate mounted to conceal through bolts.

3.05 THRESHOLDS

A. Thresholds shall be secured with a minimum of 3 fasteners per single door width and 6 fasteners per double door width with a maximum spacing of 12 inches. Thresholds over 6 inches ill width shall be secured with a double row of fasteners.

B. Exterior thresholds shall be installed in a bed of sealant with combination expansion anchors and stainless steel machine screws, except that bronze or anodized bronze thresholds shall be installed with expansion anchors with brass screws.

C. Minimum screw size shall be No. 10 length dependent on job conditions, with a minimum of 1-inch thread engagement into the floor or anchoring device used.

D. Provide thresholds at doors where indicated in Hardware Sets. Refer to Door Schedule and Drawing details for type and configuration required. Additionally, provide fire door thresholds where combustible flooring passes under doors with rating greater than 20 minutes.

3.06 HARDWARE LOCATIONS

A. Unless otherwise indicated install hardware as follows:

1. Bottom Hinge or Pivot: 10 inches from door bottom to bottom of hinge.

2. Top Hinge or Pivot 5 inches from door top to top of hinge.

3. Center Hinge(s) or Pivot(s): Spaced equidistantly between top and bottom hinges/pivots.

4. Lockset / Latchset Exit Device Operating Trim: 38 inches from finished floor to center of lever/ trim. Trim to clear strike a minimum of 1/8".

5. Push/ Pull Plate: 42 inches from finished floor to center of pull.

6. Push-Pull Bars: 42 inches from finished floor to center of bar.

7. Exit Device: 38 inches from finished floor to center of push bar.

8. Floor Stop: Adjacent to wall; not to exceed 4 inches from face of wall; located 3 inches from latch edge of door; in any case never more than 50 percent of door width from latch edge of door.

3.07 ADJUSTING

A. Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended.

B. Engage a factory-authorized service representative to adjust door-closing devices, compensating for final operation of heating and ventilating equipment, and to comply with referenced accessibility requirements.

3.08 COMPLETION

A. When complete all hardware shall be properly secured in place and all exposed surfaces shall be clean and free from scratches, paint, and other defects and damages.

B. Contractor shall demonstrate that all keys properly operate the locks as identified in the approved Keying Schedule.

3.09 DOOR HARDWARE SETS

A. The following is a general listing of hardware requirements. Provide hardware items required by established standards and practices to meet state and local codes, whether or not specifically indicated in the following sets.

B. Silencers and gasketing, where listed in Hardware Sets, may be omitted at openings where door frames are provided with integral seals if integral seals satisfy all applicable Codes and Regulations.

C. Refer to Door Schedule and/ or Drawings for door opening information, hardware set assignment, and related requirements.

D. Door protection items - mop plates, kick plates, armor plates, and edge guards are not indicated in Hardware Sets. Refer to Door Schedule and/ or Drawings for required locations.

E. Final selection of hardware groups shall be performed by the Best Hardware subcontractor selected and shall be approved by the Architect as a shop drawing submittal.

GROUP 01

2 Ea.	Continuous Hinge	780-224HD		HAG
1 Ea.	Exit Device			PHI
1 Ea.	Exit Device			PHI
1 Ea.	Removable Mullion	5654	628	VON
1 Ea.	Self-Contained Electronic Lock	OMNILOCK WAMS	628	STA
2 Ea.	Cylinder to Suit Device	IE-72 OR IE-74	626	BAS
2 Ea.	OHC Closer	D-4550 Series		STA
1 Ea.	OH Stop (Leaf with Closer)	9 Series	689	RIX
2 Ea.	Door Pull	RM3140-16	630	ROC
1 Ea.	Threshold	171A 72” MS & ES10	719	PEM
2 Ea.	Auto Door Operator	4800 Series - Concealed x Track Arm	628	HOR
2 Ea.	RF Receiver	CP/RX		SED

2 Ea.	Push Plate Actuator - RF Type	619-HSS x CP/TX-J	630	SED
2 Ea.	Weatherstrip	290ASSTOP	630	PEM

GROUP 02

1 Pr	Hinges	AB750	652	HAG
1 Ea.	Classroom lock	45H7R15H	626	BAS
1 Ea.	Door Stop	1209		TRI
2 Ea.	Silencer	1229		TRI

GROUP 03

1.5 Pr	Hinges	AB750	652	HAG
1 Ea.	Classroom lock	45H7R15H	626	BAS
1 Ea.	Door Stop	1209		TRI
1 Ea.	Silencer	1229		TRI
1 Ea.	Cylinder to Suit Device	IE-74	626	BAS
1 Ea.	OHC Closer	D-4550 Series		STA

GROUP 04

1-1/2 Pr.	Hinges	AB850	630	HAG
1 Ea.	Exit Device			PHI
1 Ea.	Cylinder to Suit Device	IE-74	626	BAS
1 Ea.	Self-Contained Electronic Lock	OMNILOCK WAMS	628	STA
1 Ea.	Door Stop	1209	626	TRI
1 Ea.	Threshold	171A 36” MS & ES10	719	PEM
1 Ea.	Knox Box	3200		KNOX
1 Ea.	Door Sweep	345ANB	719	PEM
1 Set	Weatherstripping	290ASSTOP	630	PEM

GROUP 05

3 Pr.	Hinges	AB750	652	HAG
1 Ea.	Storeroom lock	45H7D15H	626	BAS
2 Ea.	Flush Bolt x DP Strike	780F1790F x 82	626	DCI
2 Ea.	Door Stop	1209	626	TRI
2 Ea.	Silencer	1229		TRI
1 Ea.	Threshold	171A 36” MS &ES10	719	PEM
2 Ea.	Door Sweep	345ANB	719	PEM
2 Set	Gasketing	S88		PEM
1 Ea.	Door Position switch	1078CTW		SEN
2 Ea.	Closer	D-4550 Series		STA

GROUP 07

2 Pr.	Hinges	AB750	652	HAG

1 Ea.	Storeroom Lock	45H7D15H	626	BAS
1 Ea.	Door Stop	1209	626	TRI
1 Ea.	Closer	D-4550 Series		STA
1 Ea.	Silencer	1229		TRI

GROUP 08

1.5 Pr.	Hinges	AB750	652	HAG
1 Ea.	Privacy lock	45HOL15H	626	BAS
1 Ea.	Occupancy Indicator	5004	626	TRI
1 Ea.	Door Stop	1209	626	TRI
1 Ea.	Silencer	1229		TRI
1 Ea.	Closer	D-4550 Series		STA
1 Set	Gasketing	S88		PEM
1 Ea.	Auto Door Bottom	4301CRL	628	PEM

GROUP 09

3 Pr.	Hinges	AB750	652	HAG
1 Ea.	Storeroom lock	45H7D15H	626	BAS
2 Ea.	Flush Bolt x DP Strike	780F1790F x 82	626	DCI
2 Ea.	Closer	D-4550 Series		STA
2 Ea.	Door Stop	1209	626	TRI
1 Set	Split Astragal	29324CNB	628	PEM

HW10

1.5 Pr.	Hinges	AB750	652	HAG
1 Ea.	Storeroom Lock	45H7D15H	626	BAS
1 Ea.	Closer	D-4550 Series		STA
1 Ea.	Door Stop	1209	626	TRI
1 Ea.	Silencer	1229		TRI

END OF SECTION