ADDENDUM NO. 01

Date: 21 August 2024

To: ALL BIDDERS OF RECORD

From: Frankfurt-Short-Bruza Associates, P.C.
5801 N. Broadway Ext., Suite 500
Oklahoma City, OK 73118

Subject: KELL169014: Construct Corrosion Control Facility, TX/ANG, JBSA Lackland, San Antonio, TX

FSB Project No.: 20190320

NOTE: This Addendum forms a part of the Contract Documents and modifies the Original Documents dated 2 August 2024. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

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ATTACHMENTS

Items in this addendum take precedence over the original bid documents. Items not specifically revised remain in effect. This addendum consists of (1) pages and the following attachments:

Specifications:

08 71 00 – DOOR HARDWARE

MODIFICATIONS TO THE SPECIFICATIONS

ITEM 01.1-1 Refer to attached Specification Section 08 71 00 – DOOR HARDWARE, dated 21 August 2024:

A. Specification Section 08 71 00 is hereby **revised and re-issued** in its entirety to remove BEST lockset system as specific product & revise number of tumblers. Replace Section 08 71 00 dated 2 August 2024 with attached revised Specification Section 08 71 00dated 21 August 2024.

SECTION 08 71 00

DOOR HARDWARE
02/16, CHG 4: 02/22

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E283	(2019) Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
ASTM F883	(2013; R 2022) Standard Performance Specification for Padlocks

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)

ANSI/BHMA A156.1	(2021) Butts and Hinges
ANSI/BHMA A156.2	(2022) Bored and Preassembled Locks and Latches
ANSI/BHMA A156.3	(2020) Exit Devices
ANSI/BHMA A156.4	(2013) Door Controls - Closers
ANSI/BHMA A156.5	(2020) Cylinder and Input Devices for Locks
ANSI/BHMA A156.6	(2021) Architectural Door Trim
ANSI/BHMA A156.7	(2016) Template Hinge Dimensions
ANSI/BHMA A156.8	(2021) Door Controls - Overhead Stops and Holders
ANSI/BHMA A156.10	(2017) Power Operated Pedestrian Doors
ANSI/BHMA A156.13	(2022) Mortise Locks & Latches Series 1000
ANSI/BHMA A156.14	(2013) Sliding and Folding Door Hardware
ANSI/BHMA A156.15	(2021) Release Devices Closer Holder, Electromagnetic and Electromechanical
ANSI/BHMA A156.16	(2023) Auxiliary Hardware
ANSI/BHMA A156.17	(2019) Self Closing Hinges & Pivots
ANSI/BHMA A156.18	(2020) Materials and Finishes

ANSI/BHMA A156.21	(2019) Thresholds
ANSI/BHMA A156.22	(2021) Gasketing
ANSI/BHMA A156.23	(2010) Electromagnetic Locks
ANSI/BHMA A156.24	(2012) Delayed Egress Locking Systems
ANSI/BHMA A156.25	(2013) Electrified Locking Devices
ANSI/BHMA A156.26	(2012) Continuous Hinges
ANSI/BHMA A156.29	(2012) Exit Locks, Exit Alarms, Alarms for Exit Devices
ANSI/BHMA A156.30	(2014) High Security Cylinders
ANSI/BHMA A156.31	(2013) Electric Strikes and Frame Mounted Actuators
ANSI/BHMA A156.36	(2010) Auxiliary Locks

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2023; ERTA 7 2023; TIA 23-15) National Electrical Code
NFPA 72	(2022; ERTA 22-1) National Fire Alarm and Signaling Code
NFPA 80	(2022) Standard for Fire Doors and Other Opening Protectives
NFPA 101	(2021; TIA 21-1) Life Safety Code
NFPA 252	(2022) Standard Methods of Fire Tests of Door Assemblies

STEEL DOOR INSTITUTE (SDI/DOOR)

SDI/DOOR A250.8	(2023) Specifications for Standard Steel Doors and Frames

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

36 CFR 1191	Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines

UNDERWRITERS LABORATORIES (UL)

UL Bld Mat Dir	(updated continuously online) Building Materials Directory

1.2 SUBMITTALS

Government approval is required for submittals with a "G" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submittals with an "S" classification are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Manufacturer's Detail Drawings; G

Verification of Existing Conditions; G

Hardware Schedule; G

Keying System; G

SD-03 Product Data

Hardware Items; G

SD-08 Manufacturer's Instructions

Installation

SD-10 Operation and Maintenance Data

Hardware Schedule Items, Data Package 1; G

SD-11 Closeout Submittals

Key Bitting

1.3 SHOP DRAWINGS

Submit manufacturer's detail drawings indicating all hardware assembly components and interface with adjacent construction. Indicate power components and wiring coordination for electrified hardware. Base shop drawings on verified field measurements and include verification of existing conditions.

1.4 PRODUCT DATA

Indicate fire-ratings at applicable components. Provide documentation of ABA/ADA accessibility compliance of applicable components, as required by 36 CFR 1191 Appendix D - Technical.

1.5 HARDWARE SCHEDULE

Prepare and submit hardware schedule in the following form:

Hardware Item	Quantity	Size	Reference Publi-cation Type No.	Finish	Mfr Name and Catalog No.	Key Control Symbols	UL Mark (If fire-rated and listed)	BHMA Finish Desig-nation

In addition, submit hardware schedule data package 1 in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA.

1.6 KEY BITTING CHART REQUIREMENTS

Coordinate door cylinder and keying requirements with the Joint Base San Antonio lock shop personnel, POC information listed below in this specification. Configure cores and cut keys to Joint Base San Antonio lock shop specifications and master keying strategy. Configured cores and cut keys shall be delivered with key bitting chart(s) to the Joint Base San Antonio lock shop for final installation. Final lockset core installation will be conducted by Joint Base San Antonio personnel.

1.6.1 Requirements

Submit key bitting charts to the Contracting Officer prior to completion of the work. Include:

1. Complete listing of all keys (e.g. AA1 and AA2).

2. Complete listing of all key cuts (AA1-123456, AA2-123458).

3. Tabulation showing which key fits which door.

4. Copy of floor plan showing doors and door numbers.

5. Listing of 20 percent more key cuts than are presently required in each master system.

1.7 QUALITY ASSURANCE

1.7.1 Hardware Manufacturers and Modifications

Provide, as far as feasible, locks, hinges, pivots, and closers of one lock, hinge, pivot, or closer manufacturer's make. Modify hardware as necessary to provide features indicated or specified.

1.7.2 Key Shop Drawings Coordination Meeting

Prior to the submission of the key shop drawing, the Contracting Officer, Contractor, Door Hardware Subcontractor, using Activity and Base Locksmith must meet to discuss and coordinate key requirements for the facility.

1.8 DELIVERY, STORAGE, AND HANDLING

Deliver hardware in original individual containers, complete with necessary appurtenances including fasteners and instructions. Mark each individual container with item number as shown on hardware schedule.

PART 2 PRODUCTS

2.1 TEMPLATE HARDWARE

Hardware applied to metal doors must be manufactured using a template. Provide templates to door and frame manufacturers in accordance with ANSI/BHMA A156.7 for template hinges. Coordinate hardware items to prevent interference with other hardware.

2.2 HARDWARE FOR FIRE DOORS AND EXIT DOORS

Provide all hardware necessary to meet the requirements of NFPA 72 for door alarms, NFPA 80 for fire doors, NFPA 101 for exit doors, NFPA 252 for fire tests of door assemblies, ABA/ADA accessibility requirements, and all other requirements indicated, even if such hardware is not specifically mentioned in paragraph HARDWARE SCHEDULE. Provide Underwriters Laboratories, Inc. labels for such hardware in accordance with UL Bld Mat Dir or equivalent labels in accordance with another testing laboratory approved in writing by the Contracting Officer.

2.3 HARDWARE ITEMS

Clearly and permanently mark with the manufacturer's name or trademark, hinges, pivots, locks, latches, exit devices, bolts and closers where the identifying mark is visible after the item is installed. For closers with covers, the name or trademark may be beneath the cover. Coordinate electrified door hardware components with corresponding components specified in Division 28 ELECTRONIC SECURITY SYSTEMS (ESS).

2.3.1 Hinges

Provide in accordance with ANSI/BHMA A156.1. Provide hinges that are 4-1/2 by 4-1/2 inch unless otherwise indicated. Construct loose pin hinges for exterior doors and reverse-bevel interior doors so that pins will be nonremovable when door is closed. Use BHMA type 5111 heavy weight antifriction bearing hinges on exterior doors and doors exposed to the hangar bays. Use BHMA type 8111 heavy weight antifriction bearing hinges on interior doors that form part of the building circulation systems, secure storage and primary shop doors. Use BHMA type 8112 on primary office suite doors, conference, briefing and all other doors not included above that are equipped with closers. Use BHMA type 8131 on all other doors. Other antifriction bearing hinges may be provided in lieu of ball-bearing hinges.

2.3.1.1 Maximum Security Pin (MSP)

ANSI/BHMA A156.1 Provide Maximum Security pins and security studs at all hinges identified as "with MSP" in the hardware schedule.

2.3.1.2 Non-Removeable Pin (NRP)

ANSI/BHMA A156.1 Provide at all hinges identified as "with NRP" in the hardware schedule.

2.3.2 Continuous Hinges

Where continuous hinges are required, provide in accordance with ANSI/BHMA A156.26.

2.3.3 Spring Hinges

Provide in accordance with ANSI/BHMA A156.17.

2.3.4 Locks and Latches

1. At exterior locations provide locksets of full stainless steel type 302 or 304 construction including fronts, strike, escutcheons, knobs, bolts and all interior working parts. Marine Grade I, fully non-ferrous.

2. In non-air-conditioned interior environments or humid interior environments, provide interior locksets on the same Marine Grade I, fully non-ferrous as exterior locksets.

2.3.4.1 Auxiliary Locks

Provide in accordance with ANSI/BHMA A156.36, Grade 1.compatible with Joint Base San Antonio keying system. Provide special features when described in the hardware schedule.

2.3.4.2 5-Button Mechanical Locksets

ANSI/BHMA A156.5, Function 40. Lockset provided shall be rated for outdoor use and be door system compatible. Lock shall be mechanical, 5-push button type, with lever handle (both sides of door, unless noted otherwise) and keyed cylindrical core, compatible with Joint Base San Antonio keying system. Lockset shall be installed in a manner that is permanent, sturdy, and that does not allow access to the latch release from the unsecure side.

2.3.4.3 Bored Locks and Latches

Provide in accordance with ANSI/BHMA A156.2, Series 4000, Grade 1. compatible with Joint Base San Antonio keying system

2.3.4.4 Mortise Locks and Latches

Provide in accordance with ANSI/BHMA A156.13, Series 1000, Operational Grade 1, Security Grade 2. compatible with Joint Base San Antonio keying system Provide mortise locks with escutcheons not less than 7 by 2-1/4 inch with a bushing at least 1/4 inch long. Cut escutcheons to fit cylinders and provide trim items with straight, beveled, or smoothly rounded sides, corners, and edges. Provide levers of mortise locks with screwless shanks and no exposed screws.

2.3.5 Exit Devices

Provide in accordance with ANSI/BHMA A156.3, Grade 1. Provide adjustable strikes for rim type and vertical rod devices. Provide open back strikes for pairs of doors with mortise and vertical rod devices. Provide

2.3.5.1 Electric Exit Devices

Provide electric actuated exit devices where identified in the hardware schedule. Grade and finish shall be similar to mechanical devices provided throughout the building.

2.3.6 Exit Locks With Alarm

Provide in accordance with ANSI/BHMA A156.3 and ANSI/BHMA A156.29, Type E0431 (with full width horizontal actuating bar) for single doors; Type E0431 (with actuating bar) or E0471 (with actuating bar and top and bottom bolts, both leaves active) for pairs of doors, unless otherwise specified. Provide terminals for connection to remote indicating panel. Provide outside control key. Provide door alarms integrated with the fire alarm system in accordance with NFPA 72.

2.3.7 Cylinders and Cores

Provide cylinders and cores for new locks, including locks provided under other sections of this specification. Provide cylinders and cores with ~~seven~~ **six** pin tumblers. Provide cylinders from the products of one manufacturer, and provide cores from the products of one manufacturer.

Provide cylinders for new locks, including locks provided under other sections of this specification. Provide fully compatible cylinders of Grade 1 products from products of one manufacturer with interchangeable cores that are removable by a special control key. Factory set the cores with ~~seven~~ **six** pin tumblers using the A4 system and F keyway. Submit a core code sheet with the cores. Provide master keyed cores in one system for this project. Provide construction interchangeable cores.2.3.7.1 High Security Cylinders

Provide in accordance with ANSI/BHMA A156.30, security level ABC for all high security cylinder components.

2.3.8 Push Button Mechanisms

Provide in accordance with ANSI/BHMA A156.5, Grade 1.

2.3.9 Electrified Hardware

Comply with the requirements of NFPA 70 for wiring of electrified hardware.

2.3.9.1 Electric Strikes and Frame Mounted Actuators

Provide in accordance with ANSI/BHMA A156.31, Grade 1. Provide electric strikes and actuators as required to meet operational requirements. Provide electric strikes that remain secure during power failure. Provide a separate power supply for electric strikes, other locking devices and ancillary parts. Provide strikes and actuators with a minimum opening force of 2300 pounds.

Provide facility interface devices that use direct current (dc) power to energize the solenoids. Provide electric strikes and actuators that incorporate end-of-line resistors to facilitate line supervision by the system. If not incorporated into the electric strike or local controller, provide metal oxide resistors (MOVs) to protect the controller from reverse current surges.

2.3.9.1.1 Solenoid

Provide actuating solenoid for strikes and actuators that are rated for continuous duty, cannot dissipate more than 12 Watts and must operate on 12 or 24 Volts dc. Inrush current cannot exceed 1 ampere and the holding current cannot be greater than 500 milliamperes. Actuating solenoid must

move from fully secure to fully open positions in less than 500 milliseconds.

2.3.9.1.2 Signal Switches

Provide strikes and actuators with signal switches to indicate to the system when the bolt is not engaged or the strike mechanism is unlocked. Signal switches must report a forced entry to the system.

2.3.9.1.3 Tamper Resistance

Provide strike guards that prevent tampering with the latch bolt of the locking hardware or the latch bolt keeper of the electric strike. Strike guards to bolt through the door using tamper resistant screws. Provide strike guards made of 1/8 inch thick brass and that are 11-1/14 inch high by 1-5/8 inch wide, with a minimum 5/32 inch wide offset.

2.3.9.1.4 Coordination

Provide electric strikes and actuators of a size, weight and profile compatible with each specified door frame. Field verify installation clearances prior to procurement.

2.3.9.1.5 Mounting Method

Provide electric strikes and actuators suitable for use with single and double doors, with mortise or rim type hardware specified, and for right or left hand mounting as specified. In double door installations, locate the lock in the active leaf and monitor the fixed leaf.

2.3.9.2 Electrified Mortise Locks

Provide in accordance with ANSI/BHMA A156.25, Grade 1. Provide electrified mortise locks that remain secure during power failure. Provide facility interface devices that use dc power to energize solenoids. Provide solenoids, resisters, and signal switches in accordance with paragraph ELECTRIC STRIKES AND FRAME MOUNTED ACTUATORS.

2.3.9.2.1 Power Transfer Hinges

Provide power transfer hinges with each electrified lock that route power and monitoring signals from the lockset to the door frame. Coordinate power transfer hinges with door frames.

2.3.9.3 Card Readers and Keypad Access Control Hardware

Provide in accordance with ANSI/BHMA A156.5 and ANSI/BHMA A156.25, Grade 1 components. Provide devices that are tamper alarmed, tamper and vandal resistant, solid state, and do not contain electronics which could compromise the access control subsystem should the subsystem be attacked. Provide surface, semi-flush, pedestal, or weatherproof mountable devices as specified for each individual location. Each device to contain a visual display, either mounted on the face, or on an integral part of the device, to indicate access or exit request processing, request approval, and request denial. Provide proximity insertion swipe through type card readers capable of reading magnetic stripe high coercivity magnetic stripe Wiegand Hollerith proximity Transmissive Infrared Keypad Smart Card type access control cards. Provide keypads that contain an integral 12-digit tactile keyboard with digits arranged in numerical order. Provide keypads

that are a standalone device or integrated into the card reader. Coordinate access control hardware with corresponding devices and systems specified in Division 28 ELECTRONIC SECURITY SYSTEMS (ESS).

2.3.9.4 Power Operated Pedestrian Door Hardware

Provide in accordance with ANSI/BHMA A156.10, Grade 1.

2.3.9.5 Release Devices

In accordance with ANSI/BHMA A156.15, Grade 1.

2.3.9.5.1 Closer Holders

Provide mounted closer holder devices connected by integral releasing to detecting devices.

2.3.9.5.2 Release Devices

Provide mounted release devices connected to detecting devices.

2.3.9.6 Electromagnetic Locks

Provide in accordance with ANSI/BHMA A156.23, Grade 1. Provide electromagnetic locks that do not contain any moving parts and depend solely upon electromagnetism to secure a portal by generating at least 1200 pounds of holding force. The lock must interface with the local processors without external, internal or functional alteration of the local processor. The electromagnetic lock must incorporate an end of line resistor to facilitate line supervision by the system. Provide metal-oxide resistors (MOVs) to protect controllers from reverse current surges, if not incorporated into the electromagnetic lock or local controller.

2.3.9.6.1 Armature

Provide electromagnetic locks with internal circuitry to eliminate residual magnetism and inductive kickback. Provide atuating armature that operates on 12 or 24 Volts dc and cannot dissipate more than 12 Watts. Holding current must be less than 500 milliamperes. Actuating armature must take less than 300 milliseconds to change the status of the lock from fully secure to fully open or fully open to fully secure.

2.3.9.6.2 Tamper Resistance

Provide lock mechanism encased in hardened guard barriers to deter forced entry.

2.3.9.6.3 Mounting Method

Provide electromagnetic lock suitable for use with single and double door with mortise or rim type hardware and compatible with right or left hand mounting.

2.3.9.7 Delayed Egress Locking System

Provide in accordance with ANSI/BHMA A156.24, Grade 1.

2.3.10 Keying System

Provide a grand master keying system

Provide cylinders of Grade 1 products from one manufacturer. Notify the Contracting Officer 90 days prior to the required delivery of the cylinders. Provide temporary cores and keys for the Contractor's use during construction, and for testing of locksets.

2.3.11 Lock Trim

Provide cast, forged, or heavy wrought construction and commercial plain design for lock trim.

2.3.11.1 Knobs and Roses

Provide in accordance with ANSI/BHMA A156.2 and ANSI/BHMA A156.13 for knobs, roses, and escutcheons. For unreinforced knobs, roses, and escutcheons, provide a 0.050 inch thickness. For reinforced knobs, roses, and escutcheons, provide an outer shell thickness of 0.035 inch and a combined total thickness of 0.070 inch, except at knob shanks. Provide knob shanks 0.060 inch thick.

2.3.11.2 Lever Handles

Provide lever handles where indicated in the Hardware Schedule. Provide in accordance with ANSI/BHMA A156.3 for mortise locks of lever handles for exit devices. Provide lever handle locks with a breakaway feature (such as a weakened spindle or a shear key) to prevent irreparable damage to the lock when force in excess of that specified in ANSI/BHMA A156.13 is applied to the lever handle. Provide lever handles return to within 1/2 inch of the door face.

2.3.12 Keys

Furnish one file key, one duplicate key, and one working key for each key change and for each master and grand master keying system. Furnish one additional working key for each lock of each keyed-alike group. Furnish two great grand master keys, two construction master keys, . Furnish a quantity of key blanks equal to 20 percent of the total number of file keys. Stamp each key with appropriate key control symbol and "U.S. property - do not duplicate." Do not place room number on keys.

Furnish seven change keys for each interchangeable core, furnish two control keys, six maters keys, and six construction master keys. Furnish a quantity of key blanks equal to 20 percent of the total number of change keys. Stamp each key with appropriate key control symbol and "U.S. property - do not duplicate." Do not place room numbers on keys. Coordinate with ~~Buckley ASSF~~ **149 Civil Engineer Squadron** Base lock shop personnel. Cut keys to ~~Buckley ASSF~~ **149 Civil Engineer Squadron** Base lock shop specifications.

2.3.13 Door Bolts

Provide in accordance with ANSI/BHMA A156.16. Provide dustproof strikes for bottom bolts, except at doors having metal thresholds. Provide automatic latching flush bolts in accordance with ANSI/BHMA A156.3, Type 25.

2.3.14 Closers

Provide in accordance with ANSI/BHMA A156.4, Series C02000, Grade 1, with PT 4C. Provide with brackets, arms, mounting devices, fasteners, full size covers, except at storefront mounting, and other features necessary for the particular application. Size closers in accordance with manufacturer's printed recommendations, or provide multi-size closers, Sizes 1 through 6, and list sizes in the Hardware Schedule. Provide manufacturer's 10 year warranty.

Use stainless steel inside bracketed or door mounted closers on exterior doors. Non-ferrous closers, such as aluminum or cast bronze, are permissible where door utilization is minimal. On interior doors use closers of 302 or 304 stainless steel or non-ferrous materials. On surface-mounted closers use or apply rust inhibiting finish on all ferrous parts. Also apply this finish on concealed closers.

2.3.14.1 Identification Marking

Engrave each closer with manufacturer's name or trademark, date of manufacture, and manufacturer's size designation in locations that will be visible after installation.

2.3.15 Overhead Holders

Provide in accordance with ANSI/BHMA A156.8.

2.3.16 Door Protection Plates

Provide in accordance with ANSI/BHMA A156.6.

2.3.16.1 Sizes of Kick Plates

2 inch less than door width for single doors; 1 inch less than door width for pairs of doors. Provide 10 inch kick plates for flush doors . Provide a minimum 36 inch armor plates for flush doors and completely cover lower panels of panel doors, except 16 inch high armor plates on fire doors. Provide 6 inch mop plates.

2.3.16.2 Edge Guards

Stainless steel, of same height as armor plates.

2.3.17 Door Stops and Silencers

Provide in accordance with ANSI/BHMA A156.16. Silencers Type L03011. Provide three silencers for each single door, two for each pair.

2.3.18 Padlocks

Provide in accordance with ASTM F883.

2.3.19 Thresholds

Provide in accordance with ANSI/BHMA A156.21. Use J35100, with vinyl or silicone rubber insert in face of stop, for exterior doors opening out, unless specified otherwise.

2.3.20 Weatherstripping Gasketing

Provide in accordance with ANSI/BHMA A156.22. Provide the type and function designation where specified in paragraph HARDWARE SCHEDULE. Provide a set to include head and jamb seals, sweep strips, and, for pairs of doors, astragals. Air leakage of weatherstripped doors not to exceed 1.25 cubic feet per minute of air per square foot of door area when tested in accordance with ASTM E283. Provide weatherstripping with one of the following:

2.3.20.1 Extruded Aluminum Retainers

Extruded aluminum retainers not less than 0.050 inch wall thickness with vinyl, neoprene, silicone rubber, or polyurethane inserts. Provide clear (natural) anodized aluminum.

2.3.20.2 Interlocking Type

Zinc or bronze not less than 0.018 inch thick.

2.3.20.3 Spring Tension Type

Spring bronze or stainless steel not less than 0.008 inch thick.

2.3.21 Gasketing

Provide in accordance with ANSI/BHMA A156.22. Provide adjustable doorstops at heads,jambs and automatic door bottoms in accordance with the hardware set, of extruded aluminum, clear (natural) anodized, surface applied, with vinyl fin seals between plunger and housing. Provide doorstops with solid neoprene tube, silicone rubber, or closed cell sponge gasket. Provide door bottoms with adjustable operating rod and silicone rubber or closed cell sponge neoprene gasket. Provide doorstops that are mitered at corners. Provide type and function designation where specified in paragraph HARDWARE SETS.

2.3.22 Rain Drips

Provide in accordance with ANSI/BHMA A156.22. Provide extruded aluminum rain drips, not less than 0.08 inch thick, clear anodized finish. Provide the manufacturer's full range of color choices to the Contracting Officer for color selection. Provide rain drips with a 4 inch overlap on each side of each exterior door that is not protected by an awning, roof, eave or other horizontal projection. Set drips in sealant and fasten with stainless steel screws.

2.3.22.1 Door Rain Drips

Approximately 1-1/2 inch high by 5/8 inch projection. Align bottom with bottom edge of door.

2.3.22.2 Overhead Rain Drips

Approximately 1-1/2 inch high by 2-1/2 inch projection. Align bottom with door frame rabbet.

2.3.23 Auxiliary Hardware (Other than locks)

Provide in accordance with ANSI/BHMA A156.16, Grade 1.

2.3.24 Sliding and Folding Door Hardware

Provide in accordance with ANSI/BHMA A156.14, Grade 1. Finishes to match other hardware specified herein.

2.3.25 Special Tools

Provide special tools, such as spanner and socket wrenches and dogging keys, as required to service and adjust hardware items.

2.4 FASTENERS

Provide fasteners of type, quality, size, and quantity appropriate to the specific application. Fastener finish to match hardware. Provide stainless steel or nonferrous metal fasteners in locations exposed to weather. Verify metals in contact with one another are compatible and will avoid galvanic corrosion when exposed to weather.

2.5 FINISHES

Provide in accordance with ANSI/BHMA A156.18. Provide hardware in BHMA 630 finish (satin stainless steel), unless specified otherwise. Provide items not manufactured in stainless steel in BHMA 626 finish (satin chromium plated) over brass or bronze, except aluminum paint prime coat finish for surface door closers, and except BHMA 600 finish (primed for painting) for steel hinges. Provide hinges for exterior doors in stainless steel with BHMA 630 finish or chromium plated brass or bronze with BHMA 626 finish. Furnish exit devices in BHMA 626 finish in lieu of BHMA 630 finish except where BHMA 630 is specified under paragraph HARDWARE SETS. Match exposed parts of concealed closers to lock and door trim. Match hardware finish for aluminum doors to the doors.

Provide in accordance with ANSI/BHMA A156.18. Provide hardware in BHMA 612 finish (satin bronze), unless specified otherwise. Finish surface door closers prime coat finish. Provide steel hinges in BHMA 600 finish (primed for painting). Provide exposed parts of concealed closers finish to match lock and door trim. Match hardware finish for aluminum doors to match the doors. Provide hardware showing on interior of bathrooms shower rooms toilet rooms and kitchens in BHMA 629 finish (bright stainless steel) or BHMA 625 finish (bright chromium plated).

2.6 KEY CABINET AND CONTROL SYSTEM

Provide in accordance with ANSI/BHMA A156.5, Type required to yield a capacity (number of hooks) 50 percent greater than the number of key changes used for door locks.

PART 3 EXECUTION

3.1 INSTALLATION

Provide hardware in accordance with manufacturers' printed installation instructions. Fasten hardware to wood surfaces with full-threaded wood screws or sheet metal screws. Provide machine screws set in expansion shields for fastening hardware to solid concrete and masonry surfaces. Provide toggle bolts where required for fastening to hollow core construction. Provide through bolts where necessary for satisfactory installation.

3.1.1 Weatherstripping Installation

Provide full contact, weathertight seals that allow operation of doors without binding the weatherstripping.

3.1.1.1 Stop Applied Weatherstripping

Fasten in place with color matched sheet metal screws not more than 9 inch on center after doors and frames have been finish painted.

3.1.1.2 Interlocking Type Weatherstripping

Provide interlocking, self adjusting type on heads and jambs and flexible hook type at sills. Nail weatherstripping to door 1 inch on center and to heads and jambs at 4 inch on center.

3.1.1.3 Spring Tension Type Weatherstripping

Provide spring tension type on heads and jambs. Provide bronze nails with bronze. Provide stainless steel nails with stainless steel. Space nails not more than 1-1/2 inch on center.

3.1.2 Installation

Provide as specified for stop applied weatherstripping.

3.1.3 Threshold Installation

Extend thresholds the full width of the opening and notch end for jamb stops. Set thresholds in a full bed of sealant and anchor to floor with cadmium-plated, countersunk, steel screws in expansion sleeves. For aluminum thresholds placed on top of concrete surfaces, coat the underside surfaces that are in contact with the concrete with fluid applied waterproofing as a separation measure prior to placement.

3.2 FIRE DOORS AND EXIT DOORS

Provide hardware in accordance with NFPA 72 for door alarms, NFPA 80 for fire doors, NFPA 101 for exit doors, and NFPA 252 for fire tests of door assemblies. .

3.3 HARDWARE LOCATIONS

Provide in accordance with SDI/DOOR A250.8, unless indicated or specified otherwise.

a. Kick and Armor Plates: Push side of single-acting doors. Both sides of double-acting doors.

b. Mop Plates: Bottom flush with bottom of door.

3.4 KEY CABINET AND CONTROL SYSTEM

Locate where directed. Tag one set of file keys and one set of duplicate keys. Place other keys in appropriately marked envelopes, or tag each key. Provide complete instructions for setup and use of key control system. On tags and envelopes, indicate door and room numbers or master or grand master key.

3.5 FIELD QUALITY CONTROL

After installation, protect hardware from paint, stains, blemishes, and other damage until acceptance of work. Submit notice of testing 15 days before scheduled, so that testing can be witnessed by the Contracting Officer. Adjust hinges, locks, latches, bolts, holders, closers, and other items to operate properly. Demonstrate that permanent keys operate respective locks, and give keys to the Contracting Officer. Correct, repair, and finish, errors in cutting and fitting and damage to adjoining work.

3.6 HARDWARE SETS

.

SET 1.0 (ENTRANCE DOOR - DOUBLE EXTERIOR)
DOOR: 101A

6 HINGE (SIZE PER SPEC, NRP AS APPLICABLE)
2 EXIT DEVICE, FUNCTION 10
1 PERMANENT CORE MATCH FACILITY KEYING
1 KEYED REMOVABLE MULLION
2 SURFACE CLOSER
2 GASKETING/WEATHER STRIPPING
2 RAIN GUARD
2 SWEEP W/HOOD
1 THRESHOLD

OPERATION:
1. ENTRANCE EXTERIOR LEVER. INSIDE KEY LOCKS/UNLOCKS EXTERIOR LEVER. OUTSIDE KEY ONLY RETRACTS LATCH.
2. INSIDE EXIT DEVICE IS ALWAYS FREE FOR IMMEDIATE EGRESS
3. IF THUMBTURN OR DEADBOLT IS ADDED, SIGNAGE MUST BE POSTED THAT READS "THIS DOOR TO REMAIN UNLOCKED WHILE BUILDING IS OCCUPIED," AND BE APPROVED BY LOCAL AHJ.

SET 2.0 (ENTRANCE DOOR - DOUBLE INTERIOR)
DOOR: 101B

6 HINGE (SIZE PER SPEC, NRP AS APPLICABLE)
2 EXIT DEVICE, FUNCTION 10
1 KEYED REMOVABLE MULLION
2 SURFACE CLOSER
2 GASKETING/WEATHER STRIPPING
2 RAIN GUARD
2 SWEEP W/HOOD
1 THRESHOLD

OPERATION:
1. ENTRANCE EXTERIOR LEVER. INSIDE KEY LOCKS/UNLOCKS EXTERIOR LEVER. OUTSIDE KEY ONLY RETRACTS LATCH.
2. INSIDE EXIT DEVICE IS ALWAYS FREE FOR IMMEDIATE EGRESS

SET 3.0 (STOREROOM DOOR - SINGLE EXTERIOR)
DOOR: 119B, 120C

3 HINGE (SIZE PER SPEC, NRP AS APPLICABLE)
1 EXIT DEVICE, MORTISE LOCKSET, FUNCTION 07, DEADLOCKING LATCH
1 PERMANENT CORE MATCH FACILITY KEYING
1 SURFACE CLOSER
1 KICK PLATE
1 GASKETING/WEATHER STRIPPING
1 RAIN GUARD
1 SWEEP W/HOOD
1 THRESHOLD

OPERATION:
1. LATCHBOLT RETRACTED BY KEY OUTSIDE OR BY OPERATING INSIDE LEVER.
2. OUTSIDE LEVER IS ALWAYS INOPERATIVE.
3. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

SET 4.0 (STOREROOM DOOR - DOUBLE EXTERIOR)
DOOR: 121, 122, 123

6 HINGE (SIZE PER SPEC, NRP AS APPLICABLE)
1 EXIT DEVICE, MORTISE LOCKSET, FUNCTION 07, DEADLOCKING LATCH (ACTIVE LEAF)
1 PERMANENT CORE MATCH FACILITY KEYING
1 MORTISE STIKE (INACTIVE LEAF)
1 ASTRAGAL
2 FLUSH BOLTS (INACTIVE LEAF)
2 SURFACE CLOSER
2 WALL /FLOOR STOP
2 GASKETING SMOKE/SOUND

OPERATION:
1. LATCHBOLT RETRACTED BY KEY OUTSIDE OR BY OPERATING INSIDE LEVER.
2. OUTSIDE LEVER IS ALWAYS INOPERATIVE ACTIVE LEAF.
3. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.
4. INACTIVE LEAF IS HELD IN PLACE BY SURFACE MOUNTED FLUSH BOLTS TOP AND BOTTOM AND CAN BE RETRACTED FROM INSIDE FACE ONLY.

SET 5.0 (EXIT ONLY - SINGLE EXTERIOR)
DOOR: 108, 118A, 118B, 118C, 118D

3 HINGE (SIZE PER SPEC, NRP AS APPLICABLE)
1 EXIT DEVICE, (NO EXTERIOR HARDWARE)
1 SURFACE CLOSER
1 WALL /FLOOR STOP
1 GASKETING SMOKE/SOUND

OPERATION:
1. NO EXTERIOR HARDWARE.
2. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

SET 6.0 (OVERHEAD - EXTERIOR)
DOOR: 119A

2 HIGH SECURITY SWITCH
SEE 08 36 13 SECTIONAL OVERHEAD DOORS FOR DOOR HARDWARE REQUIREMENTS.

NOTES:
1. HIGH SECURITY SWITCH TO SIGNAL DOOR OPEN/CLOSED TO THE INTRUSION DETECTION SYSTEM. PLACE SWITCHES ON THE LEFT AND RIGHT SIDE OF DOOR FRAME AT FLOOR LEVEL ON SECURE SIDE OF DOOR.

SET 7.0 (OFFICE DOOR - SINGLE INTERIOR)
DOOR: 103, 104

3 HINGE (SIZE PER SPEC, NRP AS APPLICABLE)
1 OFFICE, MORTISE LOCKSET, FUNCTION 04
1 PERMANENT CORE MATCH FACILITY KEYING
1 SURFACE CLOSER
1 WALL /FLOOR STOP
1 GASKETING SMOKE/SOUND

NOTES:
1. THRESHOLD, DOOR BOTTOM, AND SEALS PROVIDED BY STC DOOR MANUFACTURER
OPERATION:
1. LATCHBOLT RETRACTED BY LEVER FROM EITHER SIDE UNLESS OUTSIDE IS MADE

INOPERATIVE BY KEY OUTSIDE OR INSIDE PUSHBUTTON.
2. WHEN OUTSIDE IS LOCKED, THE LATCHBOLT IS RETRACTED BY KEY OUTSIDE OR BY LEVER INSIDE.
3. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS

SET 8.0 (STOREROOM DOOR - SINGLE INTERIOR)
DOOR: 106, 110

3 HINGE (SIZE PER SPEC, NRP AS APPLICABLE)
1 STOREROOM, MORTISE LOCKSET, FUNCTION 07, DEADLOCKING LATCH
1 PERMANENT CORE MATCH FACILITY KEYING
1 SURFACE CLOSER
1 WALL /FLOOR STOP
1 GASKETING SMOKE/SOUND

OPERATION:
1. LATCHBOLT RETRACTED BY KEY OUTSIDE OR BY OPERATING INSIDE LEVER.
2. OUTSIDE LEVER IS ALWAYS INOPERATIVE.
3. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

SET 9.0 (PUSH/PULL DOOR - SINGLE INTERIOR)
DOOR: 112, 115

3 HINGE (SIZE PER SPEC)
1 PULL PLATE
1 PUSH PLACE
1 SURFACE CLOSER
1 KICK PLATE
1 WALL /FLOOR STOP
1 GASKETING SMOKE/SOUND

OPERATION:
1. NO LATCHING IS REQUIRED. PUSH / PULL PLATE.

SET 10.0 (PASSAGE DOOR - SINGLE INTERIOR)
DOOR: 113, 116, 114A, 114C, 117A

3 HINGE (SIZE PER SPEC)
1 PASSAGE, MORTISE LOCKSET, FUNCTION 01
1 SURFACE CLOSER
1 WALL /FLOOR STOP
1 GASKETING SMOKE/SOUND

OPERATION:
1. LATCHBOLT RETRACTED BY LEVER FROM EITHER SIDE AT ALL TIMES.
2. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

SET 11.0 (ACCESS CONTROL DOOR - SINGLE INTERIOR)
DOOR: 114B, 117B, 119C, 120A

1 CONTINUOUS HINGE
1 STOREROOM-FAIL SECURE LOCK, FUNCTION 07, MORTISE LOCKSET, ELECTRIC LATCH RETRACTION, FIXED EXTERIOR LEVER HANDLE, KEY OVERRIDE, FAIL SECURE, (WITH ESS INTEGRATION)
1 PERMANENT CORE MATCH FACILITY KEYING
1 ELECTRIC TRANSFER DEVICE
1 SURFACE CLOSER
1 KICK PLATE
1 GASKETING SMOKE/SOUND

1 CARD READER / KEYPAD
1 POWER SUPPLY VOLTAGE X AMPERAGE AS REQ'D

OPERATION:
1. CARD READER / KEYPAD GRANTS ACCESS UPON PRESENTATION OF A VALID CREDENTIAL TO SIGNAL ELECTRIC LATCH RETRACTION.
2. LATCHBOLT RETRACTED BY KEY OUTSIDE OR BY OPERATING INSIDE HANDLE ON RESTRICTED SIDE.
3. OUTSIDE LEVER IS ALWAYS INOPERATIVE.
4. REQUEST SWITCH INSIDE HANDLE TO SIGNAL AUTHORIZED EGRESS TO THE ACCESS CONTROL SYSTEM. BALANCED MAGNETIC SWITCH TO SIGNAL DOOR OPEN/CLOSED TO THE INTRUSION DETECTION SYSTEM.
5. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS

SET 12.0 (OVERHEAD - INTERIOR)
DOOR: 120B

2 HIGH SECURITY SWITCH
SEE 08 36 13 SECTIONAL OVERHEAD DOORS FOR DOOR HARDWARE REQUIREMENTS.

NOTES:
1. HIGH SECURITY SWITCH TO SIGNAL DOOR OPEN/CLOSED TO THE INTRUSION DETECTION SYSTEM. PLACE SWITCHES ON THE LEFT AND RIGHT SIDE OF DOOR FRAME AT FLOOR LEVEL ON SECURE SIDE OF DOOR.

-- End of Section --