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9. Non-fire-rated exit devices shall have hex key dogging.

10. Where lever handles are specified as outside trim for exit devices, provide heavy-duty lever trims with forged or cast escutcheon plates. Provide vandal-resistant levers that will travel to a 90-degree down position when more than 35 pounds of torque are applied, and which can easily be re-set.

a. Lever style will match the lever style of the locksets.

11. Exit devices for fire rated openings shall be UL labeled fire exit hardware.

12. Provide electrical options as scheduled.

13. Provide power transfer sufficient for number and gage of wires to accommodate electric function of specified hardware. Electric power transfer is to be located per manufacturer's template and UL requirements, unless interference with operation of door or other hardware items.

14. Provide power supplies, recommended and approved by the manufacturer of the electrified exit device and other components requiring a power supply.

L. Key Pad Locks

1. Provide manually programmable locks conforming to ANSI A156 standards. Cylinders: Refer to 2.4 KEYING.

2. Provide manufacturers standard strikes.

3. Provide keypad product with a minimum of 100 users.

M. Electric Strikes

1. Provide electric strikes, as specified, designed for use with the type locks shown at each opening.

2. Provide electric strikes UL Listed as burglary-resistant electric door strikes and where required shall be UL Listed as electric strikes for fire doors and frames. Provide fail-secure type electric strikes, unless specified otherwise.

3. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

N. Door Closers – Heavy Duty

1. Provide heavy-duty door closers, at exterior doors where specified, certified to ANSI/BHMA A156.4 Grade 1 requirements by a BHMA certified independent testing laboratory. Surface mounted mechanical closers shall be certified to exceed ten million (10,000,000) full load cycles by a recognized independent testing laboratory. Closers shall be ISO 9000 certified. Units shall be stamped with date of manufacture code.

2. Door closers shall have fully hydraulic, full rack and pinion action with a high strength cast iron cylinder and shall utilize full complement bearings at shaft. Cylinder body shall be 1-1/2 inch diameter, and double heat-treated pinion shall be 11/16 inch diameter.

3. Provide hydraulic fluid requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F. Fluid shall be fireproof and shall pass the requirements of the UL10C "positive pressure" fire test.

4. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force as required by accessibility codes and standards. Hydraulic

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regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and backcheck.

5. Provide closers with a solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers. When closers are parallel arm mounted, provide closers which mount within a 6-inch top rail without the use of a mounting plate so that closer shall not be visible through vision panel from pull side.

6. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other finish hardware items interfering with closer mounting.

7. Mount closers inside of exterior and vestibule doors.

8. Door closers meeting this specification: As scheduled.

O. Electro-Mechanical Automatic Operators

1. Specified in Section 08720.

P. Door Trim

1. Provide flush pulls as specified. Where required, provide back-to-back mounted model.

2. Provide wire pulls of solid bar stock, diameter and length as scheduled.

Q. Protection Plates

1. Provide kick plates and armor plates minimum of 0.050 inch thick and beveled 4 edges as scheduled. Furnish with machine or wood screws, finished to match plates. Sizes of plates shall be as follows:

a. Kick Plates – 10 inches high x 2 inches less width of door on single doors, 1 inch less width of door on pairs

b. Armor Plates – 30 inches high x 2 inches less width of door on single doors, 1 inch less width of door on pairs. If labeled door doesn't allow 30 inch high armor plate provide 16 inch high kick plate.

c. Standard finish – stainless steel.

2. Acceptable manufacturers and/or products: Ives, Don-Jo, Rockwood.

R. Overhead Stops and Overhead Stop/Holders

1. Provide heavy duty concealed mounted overhead stop or overhead stop/holder as specified for exterior and interior vestibule single acting doors.

2. Provide medium duty concealed mounted overhead stop as specified for double acting doors with emergency release hardware.

3. Provide heavy or medium duty and concealed or surface mounted overhead stop or overhead stop/holder for interior doors as specified. Provide medium duty surface mounted overhead stop for interior doors and at any door that swings more than 140 degrees before striking a wall, open against equipment, casework, sidelights, and/or where conditions do not allow a wall stop or a floor stop presents a tripping hazard.

4. Where overhead holders are specified provide friction type at doors without a closer and positive type at doors with a closer.

2.3 FINISHES

A. Finish of all hardware shall be satin chrome plated US26D (BHMA 626) with the exceptions as follows:

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1. Door Closers: Metallic Powder Coat to Match.

2. Latch Protectors: To match.

3. Weather-stripping: Clear Anodized Aluminum.

4. Thresholds: Mill Finish Aluminum.

2.4 KEYING

A. Provide cores for the Owner's Existing Schlage key system conforming to the following requirements:

1. Provide removable core cylinders at all keyed devices. Provide construction cores with construction master keying for use during construction. The temporary construction cores are to be returned to the hardware supplier.

2. Provide permanent cores keyed by the manufacturer or authorized distributor into the existing key system as directed by the Owner. Provide owner with a copy of the blitting list, return receipt requested.

3. Provide keys as follows

a. Ten master keys for each set.

b. Three keys per core and/or cylinder.

c. Two construction core control keys

d. Two permanent core control keys

e. Six construction master keys for each type (Contractor is to provide one set of construction keys to Architect)

4. Visual key control:

a. Keys shall be stamped with their respective key set number and stamped "DO NOT DUPLICATE".

b. All keys shall be stamped with their respective key set letters.

c. Do not stamp any cores with key set on face (front) of Core. Stamp on back or side of cores so not to be visible when core is in cylinder.

d. Do not stamp any cores with key set on face (front) of Core. Stamp on back or side of cores so not to be visible when core is in cylinder.

5. Deliver all keys and/or key blanks from the factory or authorized distributor directly to the Owner in sealed containers, return receipt requested. Failure to comply with these requirements may be cause to require replacement of all or any part of the keying system that was compromised at no additional cost to the Owner.

6. Approved products: Schlage Everest B, No Substitute. Restricted keyway authorization letter included in this master specification.

2.5 KEY CONTROL SYSTEM

A. Provide a key control system, including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150% of the number of locks required for the Project.

1. Provide complete cross index system set up by the hardware supplier, and place keys on markers and hooks in the cabinet as determined by the final key schedule.

2. Provide hinged-panel type cabinet for wall mounting.

PART 3 - EXECUTION

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3.1 EXAMINATION

A. Prior to installation of any hardware, examine all doors, frames, walls and related items for conditions that would prevent proper installation of finish hardware. Correct all defects prior to proceeding with installation.

3.2 INSTALLATION

A. Coordination:

1. Prior to installation of hardware, General Contractor will schedule and hold a meeting with the installer for the purpose of instructing installers on proper installation and adjustment of finish hardware.

2. Prior to ordering electrified hardware, General Contractor will schedule and hold a meeting with the installer for the purpose of coordinating finish hardware with security, electrical, doors and frames, and other related suppliers.

B. Hardware will be installed by qualified tradesmen, skilled in the application of commercial grade hardware.

C. Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute.

D. Install each hardware item in compliance with the manufacturer's instructions and recommendations, using only the fasteners provided by the manufacturer.

E. Do not install surface mounted items until finishes have been completed on the substrate. Protect all installed hardware during painting.

F. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

G. Operating parts shall move freely and smoothly without binding, sticking, or excessive clearance.

H. Existing Doors and/or Frames: Remove existing hardware being replaced, tag, and store according to contract documents. Field modifies and prepares existing door and/or frame for new hardware being installed. Provide necessary fillers, Dutchmen, reinforcements, and fasteners for mounting new hardware and to cover existing door/frame preps.

I. Wire (including low voltage), conduit, junction boxes, and pulling of wire are by Division 16, Electrical. Electrical Contractor shall connect wire to door position switches and run wire to central room or area as directed by the Architect. Wires shall be tested and labeled with the Architects opening number. Connections to/from power supplies to electrified hardware and any connection to fire/smoke alarm system, and/or smoke evacuation system where specified is by Division 16 Electrical.

3.3 ADJUSTING, CLEANING, AND DEMONSTRATING

A. Adjust and check each operating item of hardware and each door, to insure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly.

B. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and makes a final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

C. Clean adjacent surfaces soiled by hardware installation.

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D. Instruct Owner's personnel in the proper adjustment, lubrication, and maintenance of door hardware and hardware finishes.

3.4 PROTECTION

A. Provide for the proper protection of complete items of hardware until the Owner accepts the project as complete. Damaged or disfigured hardware shall be replaced or repaired by the responsible party.

3.5 HARDWARE SCHEDULE

A. Provide hardware for each door to comply with requirements of Section "Finish Hardware," hardware set numbers indicated in door schedule, and in the following schedule of hardware sets.

B. It is intended that the following schedule includes complete items of finish hardware necessary to complete the work. If a discrepancy is found in the schedule, such as a missing item, improper hardware for a frame, door or fire codes, the preamble will be the deciding document.

C. Locksets, exit devices, and other hardware items are referenced in the Hardware Sets for series, type, and function. Refer to the preamble for special features, options, cylinders/keying, and other requirements.

D. Hardware Sets

HW SET: 01 INNER VESTIBULE MAIN LOBBY #02, ALUMINUM AUTOMATIC SLIDING DOOR, KEY FOB

1	EA	CYLINDER HOUSING	80-103 X 626	SCH
1	EA	CONSTRUCTION CORE	80-035 X GRN	SCH
1	EA	CYLINDER CORE	80-036 X 626 X B123 KEYWAY	SCH
1	EA	INSIDE THUMBTURN	AS SPECIFIED IN SECTION 08461	SCE
1	EA	BUTTON MINI BOX	660-PB	-
2	EA	KEY FOB, TIMING CIRCUIT	BY OWNER'S SECURITY VENDOR, GC TO WIRE BALANCE OF HARDWARE	-

ALL WIRING AND CONNECTIONS BY DIVISION 16.

OPERATIONAL DESCRIPTION:
 IMMEDIATE EGRESS ALWAYS ALLOWED. DOOR REMAINS LOCKED DURING BUSINESS HOURS. HEADER MOUNTED MOTION SENSOR IS DEACTIVATED FOR INCOMING TRAFFIC. AUTOMATIC OPERATION FOR ACCESS BY KEY FOB OR REMOTE RELEASE AT CONCIERGE DESK OR AUTOMATIC OPERATION FOR EGRESS BY MOTION SENSOR IN HEADER IN MAIN LOBBY WHICH RELEASES SECURE DOORS AND SIGNALS DOORS TO AUTOMATICALLY OPEN. LOCATE REMOTE RELEASE AS DIRECTED BY ARCHITECT.

A. POWER ON, FIRE ALARM QUIET
 - AUTOMATIC SLIDING DOORS ARE SECURE/UNSECURED VIA ROCKER SWITCH LOCATED IN DOOR OPERATOR AND LOCKING MECHANISM PER SECTION 08460.

B. POWER OUT, FIRE ALARM QUIET
 - AUTOMATIC SLIDING DOORS ARE INOPERABLE DUE TO LOSS OF POWER. EMERGENCY PANIC HARDWARE (PART OF DOOR PACKAGE) WILL ALLOW EGRESS FROM MAIN LOBBY BUT NOT GAIN ENTRY FROM OUTSIDE WITHOUT KEY.

C. POWER ON, FIRE ALARM ACTIVE
 - FIRE ALARM DE-ENERGIZES AUTOMATIC SLIDING DOORS. AUTOMATIC SLIDING DOORS ARE INOPERABLE DUE TO LOSS OF POWER. EMERGENCY PANIC HARDWARE (PART OF DOOR PACKAGE) WILL ALLOW EGRESS FROM MAIN LOBBY BUT NOT GAIN ENTRY FROM OUTSIDE WITHOUT KEY.

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HW SET: 2 INTERIOR - NON-RATED SGLE WITH OFFICE LOCKSET – OFFICES #15, #17 & CONFERENCE #18

3	EA	HINGES	BB1279 4-1/2 X 4-1/2 NRP	HAG
1	EA	OFFICE LOCK	B511BD D	FAL
1	EA	PERMANENT CORE	80-036 B123 KEYWAY	SCH
1	EA	CONSTRUCTION CORE	80-035	SCH
1	EA	STOP	WS407/FS436 AS SPECIFIED	IVE
3	EA	SILENCER	SR64/SR65	IVE
2	EA	COAT HOOK	BOBRICK B670	BOB

HW SET: 3 INTERIOR - SGLE WITH STOREROOM LOCKSET – STORAGE #37

3	EA	HINGES	B1191 4-1/2 X 4-1/2 NRP	HAG
1	EA	STOREROOM LOCK	AL80	SCH
1	EA	PERMANENT CORE	80-036 B123 KEYWAY	SCH
1	EA	STOP	236W/242F AS SPECIFIED	HAG
3	EA	SILENCER	307D	HAG
1	EA	SURFACE CLOSER	4030	LCN

HW SET: 4 INTERIOR - RATED OR NON-RATED SGLE WITH PRIVACY CLOSER – TOILET #22 & #23

3	EA	HINGES	B1191 4-1/2 X 4-1/2 NRP	HAG
1	EA	PRIVACY SET	AL40	SCH
1	EA	SURFACE CLOSER	4040XP	LCN
1	EA	KICK PLATE	194S 10" X 2" LDW	HAG
1	EA	STOP	236W/242F AS SPECIFIED	HAG
3	EA	SILENCER	307D	HAG
1	EA	COAT HOOK	BOBRICK B670	BOB

HW SET: 5 INTERIOR - SGLE WITH KEY FOB ACCESS CONTROL CLASSROOM LOCKSET X CLOSER – OFFICE #14

3	EA	HINGES	B1191 4-1/2 X 4-1/2 NRP	HAG
1	EA	KEY FOB	BY SECURITY VENDOR	-
1	EA	PERMANENT CORE	80-036 B123 KEYWAY	SCH
1	EA	SURFACE CLOSER	4030 AS SPECIFIED	LCN
1	EA	ELECTRIC STRIKE	7108 FAIL SECURE	ADA
1	EA	LOCK GUARD	LG11	IVE
1	EA	STOP	WS407/FS436 AS SPECIFIED	IVE
3	EA	SILENCER	SR64/SR65	IVE

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HW SET: 6 7PR INTERIOR - PAIR, STORAGE #09

6	EA	HINGES	AS SPECIFIED	IVE
1	EA	CYLINDER DEADLOCK D121		FAL
1	EA	PERMANENT CORE	80-036 B123 KEYWAY	SCH
1	EA	CONSTRUCTION CORE	80-035	SCH
2	EA	MANUAL FLUSH BOLT	FB358	IVE
1	EA	DUST PROOF STRIKE	DP1	IVE
2	EA	STOP	236W/242F AS SPECIFIED	IVE
2	EA	SILENCER	608	RCK

HW SET: 7 SGLE WITH CLASSROOM LOCKSET X CLOSER – CONTROLLED ENTRY – HUDDLE #10, FITNESS #13, CORRIDOR #19, ENGINEER SHOP #25, CORRIDOR #26

3	EA	HINGES	BB1279 4-1/2 X 4-1/2 NRP	HAG
1	EA	CLASSROOM LOCK	B561BD D	FAL
1	EA	KEY FOB	BY SECURITY VENDOR	-
1	EA	PERMANENT CORE	80-036 B123 KEYWAY	SCH
1	EA	CONSTRUCTION CORE	80-035	SCH
1	EA	ARMOR PLATE	194S 30" X 2" LDW	HAG
1	EA	STOP	236W/242F AS SPECIFIED	HAG
2	EA	WALL PLATE SWITCH	AS SPECIFIED IN 08720	LCN
3	EA	SILENCER	307D	HAG

ALL WIRING AND CONNECTIONS BY DIVISION 16.

OPERATIONAL DESCRIPTION:
 FOR CONTROLLED ENTRY (TOGGLE IN SECURE POSITION) - IMMEDIATE EGRESS ALWAYS ALLOWED. MANUAL ACCESS BY KEY. AUTOMATIC OPERATION FOR ACCESS BY REMOTE RELEASE AT RECEPTIONIST AND NURSE STATION OR AUTOMATIC OPERATION FOR EGRESS BY ACTUATOR IN TREATMENT AREA WHICH SIGNALS AUTOMATIC OPERATOR TO RELEASE ELECTRIC STRIKE AND OPEN DOOR. LOCATE REMOTE RELEASE AND ACTUATORS AS DIRECTED BY ARCHITECT.

FOR NON-CONTROLLED ENTRY (TOGGLE IN NON-SECURE POSITION) - IMMEDIATE EGRESS ALWAYS ALLOWED. TOGGLE (BY OTHERS) IN AUTOMATIC OPERATOR HEAD TO RELEASE AND HOLD ELECTRIC STRIKE AND ENABLE OUTSIDE AUTOMATIC OPERATOR ACTUATOR. MANUAL OPERATION BY PUSH N' GO FEATURE OR AUTOMATIC OPERATION BY PUSHING EITHER ACTUATOR OR REMOTE RELEASE WHICH WILL SIGNAL AUTOMATIC OPERATOR TO OPEN DOOR. LOCATE ACTUATORS AS DIRECTED BY ARCHITECT.

A. POWER ON, FIRE ALARM QUIET
 - DOOR OPERATOR IS SECURE/UNSECURED VIA ROCKER SWITCH LOCATED IN DOOR OPERATOR.

B. POWER OUT, FIRE ALARM QUIET
 - DOOR OPERATOR IS INOPERABLE DUE TO LOSS OF POWER. ELECTRIC STRIKE "FAIL SAFE". HARDWARE WILL ALLOW EGRESS FROM TREATMENT AREA AND ALLOW ENTRY FROM WAITING ROOM.

C. POWER ON, FIRE ALARM ACTIVE
 - FIRE ALARM DE-ENERGIZES ELECTRIC STRIKE AND DOOR OPERATOR. DOOR OPERATOR IS INOPERABLE DUE TO LOSS OF POWER. ELECTRIC STRIKE "FAIL SAFE". HARDWARE WILL ALLOW EGRESS FROM TREATMENT AREA AND ALLOW ENTRY FROM WAITING ROOM.

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HW SET: 8 POCKET DOOR – COPY #16

2	EA	PULLS	3G 6" X 3/4" BACK-TO-BACK	HAG
1	EA	POCKET SET	9850 HEAVY DUTY POCKET DOOR KIT	HAG

END OF SECTION

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EXPIRES 11-30-2018

I hereby certify that these plans were prepared under my supervision and that they comply to the best of my knowledge, with all the building codes and ordinances of the city of Chicago, IL.

NO.	DATE	DESCRIPTION
1	10/06/17	BACKGROUND
2	02/23/18	ISSUE FOR BID
3	03/30/18	ISSUE FOR PERMIT

A. WILLIAM SEEGBERS ARCHITECTS

Chicago, Illinois 60661
 117 North Jefferson St., Suite LL3B
 Phone 312-454-0099 E-mail AWSegbers@gmail.com

Drawing Title:
1st Floor Upgrade Repairs
 2101 S. Michigan Avenue
 Chicago, IL

DESCRIPTION:
DOOR HARDWARE

JOB NO. 1701
 DRAWN BY: AWS
 CHECKED BY: AWS
 DATE: 10-06-17
 SHEET NO.

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