TOWN OF

PLAINVILLE

ONE CENTRAL SQUARE, PLAINVILLE, CONNECTICUT 06062-1955

CONTRACT 2020-13

PLAINVILLE HIGH SCHOOL SECURITY VESTIBULE

ADDENDUM #2

ISSUED

June 15, 2020

Questions have arisen regarding the scope and details of the project. The architect has prepared the enclosed revisions to the specifications and drawings addressing questions and omissions. Please substitute as noted.

KAESTLE BOOS
associates, inc

A D D E N D U M

SECURITY VESTIBULE
PLAINVILLE HIGH SCHOOL
Plainville, Connecticut
KBA # **19018.00**

Date: June 15, 2020

The following changes to the Project Manual shall become a part of the Drawings, Specifications, Bidding Requirements and Contract Documents; superseding previously issued Drawings, Specifications, Bidding Requirements, Contract Documents and Addenda, to the extent modified by this Addendum.

CLARIFICATIONS

(none)

CHANGES TO SPECIFICATIONS

PROJECT MANUAL AND SPECIFICATIONS

Section 00 01 10 "Table of Contents"
Add Section 01 23 00 "Alternates"
Delete Section 10 14 00 "Signage"

DIVISION 01 – GENERAL REQUIREMENTS

Section 01 23 00 "Alternates"
Add Section in its entirety and replace with revised Section attached to this Addendum.

DIVISION 08 – OPENINGS

Section 08 06 00 "Openings Schedule"
Delete Section in its entirety and replace with revised Section attached to this Addendum.

Section 08 71 00 "Door Hardware"
Delete Section in its entirety and replace with revised Section attached to this Addendum.

DIVISION 10 - SPECIALTIES

Section 10 14 00 "Signage"
Delete Section in its entirety.

CHANGES TO DRAWINGS

R0.01 GENERAL INFORMATION I

Revise DEMOLITION LEGEND hatch note "MODIFY EXISITNG CARPET AS REQUIRED" to read "REMOVE EXISTING CARPET IN ITS ENTIRETY. WALL BASE TO REMAIN. REPLACE WALL BASE AS REQUIRED TO MATCH EXISITNG".

A1.01 MAIN LEVEL DEMO PLAN, FLOOR PLAN & REFLECTED CEILING PLAN

Revise DEMOLITION LEGEND hatch note "MODIFY EXISITNG CARPET AS REQUIRED" to read "REMOVE EXISTING CARPET IN ITS ENTIRETY. WALL BASE TO REMAIN. REPLACE WALL BASE AS REQUIRED TO MATCH EXISITNG"
See revised Demolition Plan on Addenda 01 SKA1.01 for related information.

A11.01 CASEWORK ELEVATIONS, SECTIONS AND PLANS

Detail 7
Delete note "CASEWORK BY OWNER".

ATTACHMENTS

Bid Questions and Responses:
RFI 001
RFI 002

KAESTLE BOOS
associates, inc

A D D E N D U M

SECURITY VESTIBULE
PLAINVILLE HIGH SCHOOL
Plainville, Connecticut
KBA # **19018.00**

Date: June 15, 2020

RFI 003

Sketches:
SKA-1.01
SKA-1.02
SKA-1.03

Specifications:
01 23 00 "Alternates" – 2 pages, dated June 15, 2020
08 06 00 "Openings Schedule" - 6 pages, dated June 10, 2020
08 71 00 "Door Hardware" – 16 pages, dated June 10, 2020

REQUEST FOR INFORMATION #1

Project: 2020-13E Plainville High School Security Vestibule
Architect: Kaestle Boos
Date: 6/3/20
Drawing No.: A101, A10.01
Specification:

Description:

1. Looking over Plainville HS plans, A10.01 calls for new doors A101 and A102, Floor Plan does not show A101 as a door like this?
2. Is this showing door A102 from both directions?
3. Or is A101 supposed to be the entire Vestibule with 6 pairs of doors?
4. Will this job be prevailing wage?
5. 11.01 Note says casework by owner. This morning you told us to provide a quote. Please clarify so everyone will bid the casework.
6. Door hardware-provide a spec for the doors to the lobby if you want it to be included as an add alternate and revise the bid form to show a line item for an add alternate.
7. Provide a spec for the ACT tile
8. Due to the virus, what will the procedure be to deliver an open the bids?

KBA Answers: June 4, 2020

1. The only new doors are A102, A103, A104A and the millwork doors A104B and A105.
2. 1/A10.01 shows door A102 from Vestibule A101. 2/A10.02 shows door A102 from Passage A102.
3. The six doors in Vestibule A101 are to remain. New hardware for the interior doors will be required. See Addendum No. 1.
4. The project is subject to the State of Connecticut's prevailing wage rate laws. Depending on the value of the renovations will depend on whether or not prevailing wages are used.
5. The note "Casework by Owner" was in error and shall be removed. See Addendum No. 1.
6. See Addendum No. 1.
7. Ceiling tile is noted to match existing. Armstrong Ultima #1911 or equal is acceptable for Passage A102.
8. -

RFI 002

Joe Aresco, President
Aresco Construction Company
175 North Main Street
Middletown, CT 06457

Project: Plainville High School - Security Vestibule
Architect: Kaestle Boos
Date: 6/4/20
Drawing No.: A101, A10.01
Specification:

Description:

1. Are permit fees waived from the town?
2. Confirm lights are supplied by owner but all wiring, switching, power items are by GC.
3. Does the owner have any carpet for repair where the old desk is removed and new desk is installed or should we carry some type of allowance per carpet spec
4. Plans and some areas of specs refer to a finish schedule. I could not find this schedule on the plans or in the specifications. Is this available?
5. Confirm if new millwork is by owner or GC. Plan detail 7 / A11.01 states casework by owner. If so does this include the electrical closet millwork doors as well?

6. Is there electrical work to be included for tie ins from some type of push button entry from reception desk to vesitbule and corridor doors (A102 and A104A) or is this work by others. I did not see any camera or aiphone system is this existing to be reused?

Response:

1. Yes, Contractor will have to pull permits but the fee is waived.
2. Correct, Owner will procure the lighting fixtures to be installed by contract.
3. See Addenda No. 1.
4. See Addenda No. 1.
5. The millwork (casework) is by the GC and it includes the electrical closet (A105). See Addendum No. 1 for the revision of the note.
6. The existing equipment for lock-down and communications will be maintained by Owner. If existing wiring is demolished, then the contractor would be responsible for replacing said wiring. Owner will provide and coordinate the location for one new HID card reader.

KBA 06/04/2020

RFI 003

From: Diversity Estimating
Mike Daigle Project Manager

Sent: Friday, June 5, 2020 8:59 AM

To: 'Busel, Steve' <busels@plainvilleschools.org>

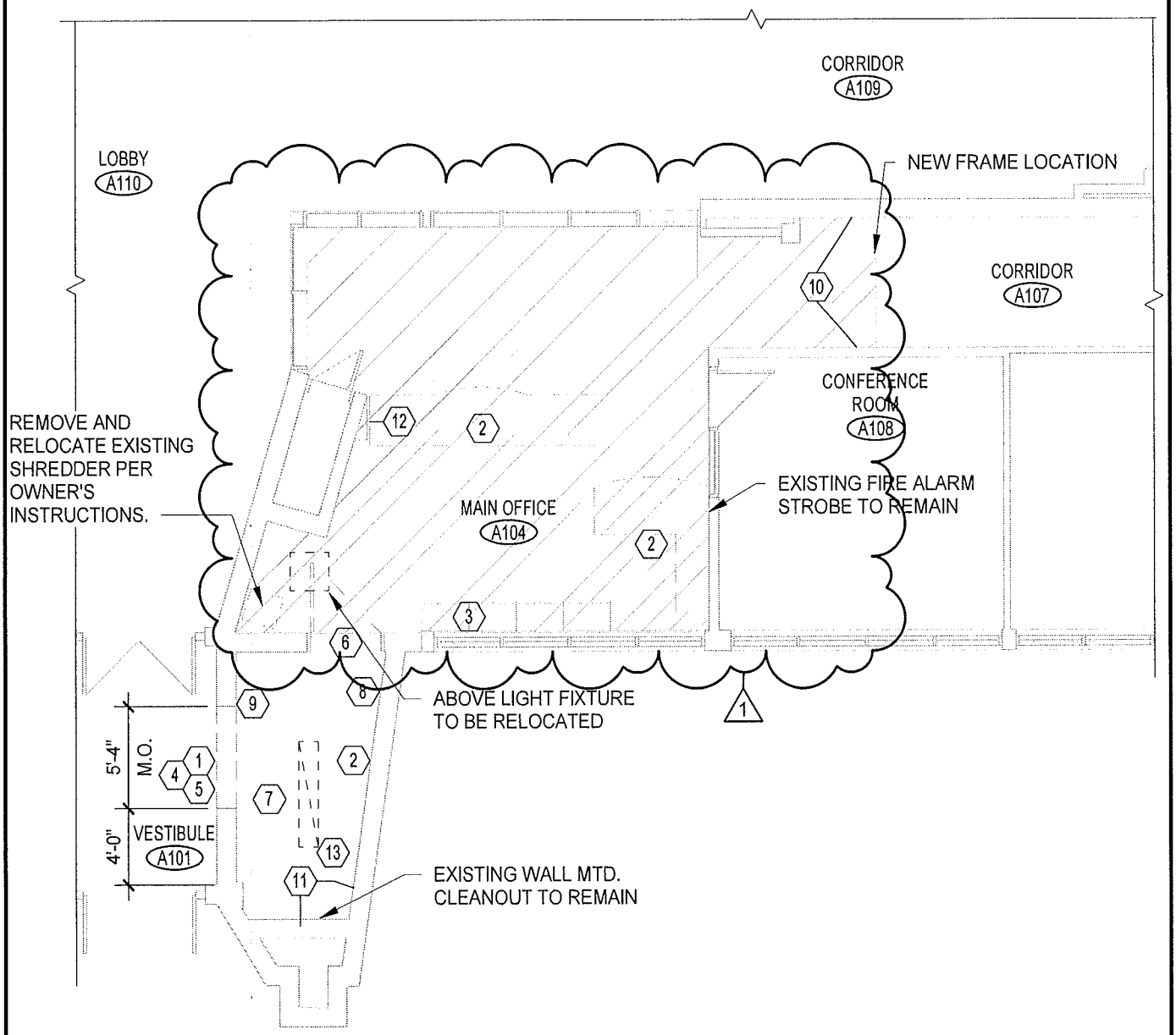
Subject: Plainville High Security Upgrade - Door Question

Description:
Hi Steve, I have a question regarding doors and hardware.
1). The specs in division 8 reference section 08-06 for the door schedule, which is not completed. There is no indication of size, thickness, etc. The elevations say "varies, see schedule" referring to door width so I have no information on door sizes. Also, for the hardware sets in section 08-71, it appears to be missing information on locksets.
2). There is a spec for signage but no schedule attached and not shown on drawings. Will this be part of the bid?

Response:

1). Door sizes are listed in the door schedule Section 08 06 00 in the specifications. Additional hardware is to be provided for the interior vestibule doors. See Addendum No. 1.
2). Signage is not part of this bid. See Addendum No. 1.

NS 06/05/2020



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CONSULTANT:

PROJECT:

PLAINVILLE HIGH SCHOOL SECURITY VESTIBULE

47 ROBERT HOLCOMB WAY
PLAINVILLE, CT 06062

THIS SKETCH TO BE READ IN CONJUNCTION WITH THE CONTRACT DOCUMENTS

SKETCH GENERATED FOR:

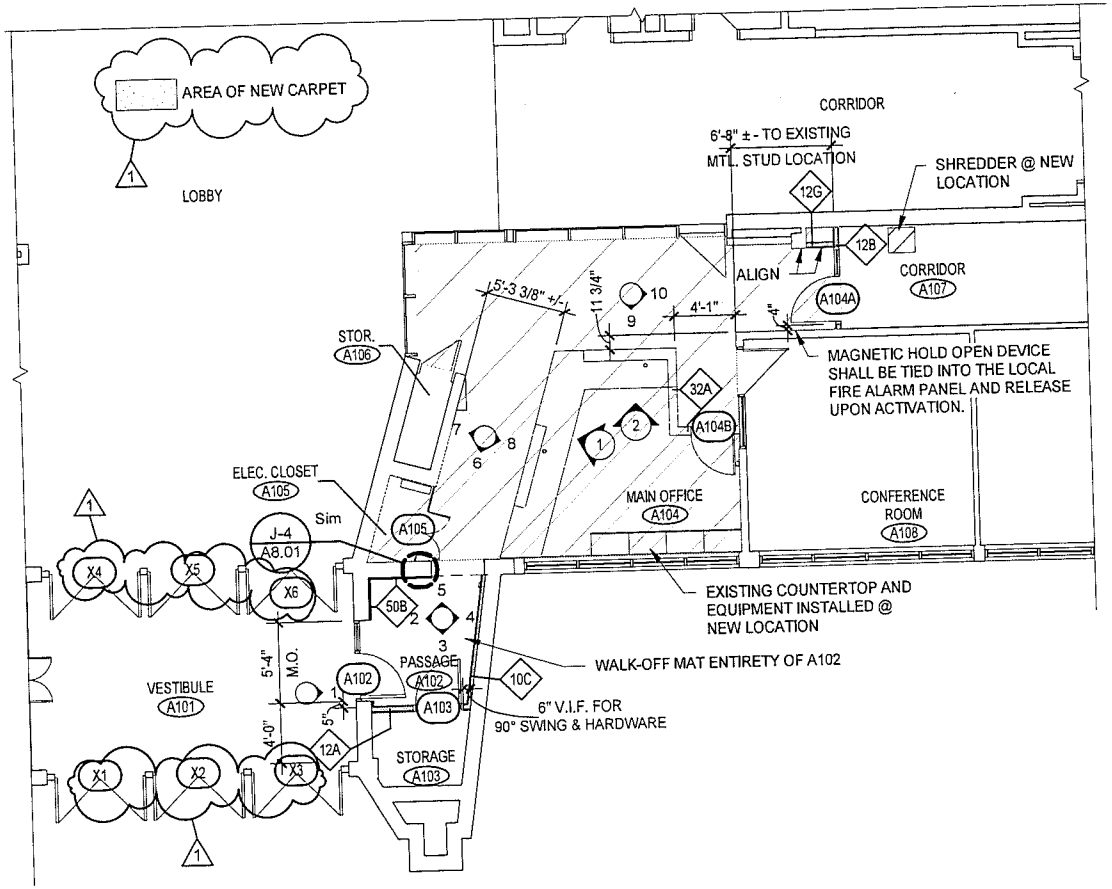
ADDENDUM:	R.R.F.I.	A.S.I.	P.R.	C.C.D.
1				

REFERENCE DETAIL/SHEET: 1/A1.01

TITLE: UPDATE TO DEMOLITION PLAN

DATE: 06/04/20 | DRAWN BY: LGG | DRAWING NO.: SKA1.01

SCALE: 1/8" = 1'-0" | PROJECT NO. 19018.00



KAESTLE BOOS associates, inc 416 Slater Road, P.O. Box 2360 New Britain, CT 06050-2360 Ph: 860-229-0311 F: 860-229-5303 16 Chestnut Street, Suite 301 Foxborough, MA 02035 Ph: 508-549-9905 F: 508-549-9907 313 Congress Street, Suite 150 Boston, MA 02210 Ph: 617-752-2212 20 Newman Avenue, Suite 206 I-A Rumford, RI 02916 Ph: 401-270-0365 Email: kbe@kbe-architects.com Web: www.kbe-architects.com	CONSULTANT:	PROJECT: PLAINVILLE HIGH SCHOOL SECURITY VESTIBULE 47 ROBERT HOLCOMB WAY PLAINVILLE, CT 06062	THIS SKETCH TO BE READ IN CONJUNCTION WITH THE CONTRACT DOCUMENTS	SKETCH GENERATED FOR: ADDENDUM 1 / R.F.I. / A.S.I. / P.R. / C.C.D. REFERENCE DETAIL/SHEET: 2/A1.01 TITLE: UPDATE TO NEW CONSTRUCTION MAIN LEVEL FLOOR PLAN DATE:06/04/20 / DRAWN BY: Author / DRAWING NO.: SKA1.02 SCALE: 1/8" = 1'-0" / PROJECT NO. 19018.00

GENERAL NOTES

1. FOR WALL TYPES, REFER TO DRAWING R0.01
2. FOR MASONRY REINFORCEMENT, REFER TO SPECIFICATIONS.
3. ALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF METAL STUD, AND TO THE CENTERLINE OF COLUMN, UNLESS OTHERWISE NOTED.
4. FOR CEILING LEGEND AND SOFFIT DETAILS REFER TO DRAWING SERIES A1.00.
5. FOR INTERIOR SUSPENDED CEILING CONTROL JOINT LOCATIONS, REFER TO REFLECTED CEILING PLANS. IF CONTROL JOINT IS REQUIRED IN CONFORMANCE WITH SPECIFICATION AND IS NOT SHOWN, CONSULT ARCHITECT FOR APPROVAL OF LOCATIONS.
6. FOR DOOR NUMBERS AND DETAILS, REFER TO SPECIFICATION SECTION 08 06 00 AND DRAWING SERIES A8.00
7. FOR INTERIOR ELEVATIONS, REFER TO DRAWING SERIES A10.00.
8. FOR CASEWORK ELEVATIONS, REFER TO DRAWING SERIES A11.00.
9. FOR FINISHES, SEE PLANS AND ELEVATIONS.
10. ALL NOTES AND DIMENSIONS DESIGNATED "TYPICAL" APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.
11. CONTRACTOR(S) TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF THE SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.
12. ALL WOOD AND WOOD-BASED CONSTRUCTION MATERIALS TO BE FIRE-RETARDANT TREATED.

FINISH NOTES

1. FOR FINISHES, SEE PLANS, ELEVATIONS, GENERAL NOTES AND FINISH NOTES.
2. REFER TO REFLECTED CEILING PLANS FOR CEILING TYPES AND HEIGHTS.
3. ALL NEW GYPSUM BOARD SOFFITS AND CEILING SHOWN ON REFLECTED CEILING PLANS TO BE PAINTED.
4. ALL NEW HOLLOW METAL FRAMES TO BE PAINTED. REFER TO FINISH NOTES FOR COLOR DESIGNATIONS.
5. ALL GYPSUM BOARD AND CONCRETE BLOCK WALLS IN ROOMS A102, A103, A104 AND A107 ARE TO BE PAINTED UNLESS OTHERWISE NOTED.
6. PAINT HOLLOW METAL FRAMES AND WALLS NOTED TO MATCH EXISTING COLORS.

GENERAL DEMOLITION & PATCHING NOTES

1. THE DEMOLITION SHOWN ON THE PLANS IS DIAGRAMMATIC AND INTENDED TO SHOW THE GENERAL EXTENT OF THE WORK ONLY. CONTRACTOR TO INCLUDE ALL DEMOLITION, WHETHER SPECIFICALLY CALLED FOR OR NOT, THAT IS NECESSARY TO ACCOMPLISH THE INTENT OF THE PLANS AND SPECIFICATIONS.
2. ALL OPENINGS WHERE EXISTING DUCTS, VENTS, PIPING OR ELECTRICAL CONDUIT HAVE BEEN REMOVED.SHALL BE FILLED OR PATCHED TO MATCH EXISTING OR NEW FINISH DESIGNATION, INCLUDING FIRE RATINGS.
3. WHEREVER NEW OPENINGS ARE CREATED, ALL SURROUNDING FINISHES SHALL BE PATCHED TO MATCH ADJACENT FINISH, OR NEW FINISH DESIGNATED, INCLUDING ALL FLOOR PATCHING, REPAIR OR FILLING IS REQUIRED.
4. RELOCATE AS NECESSARY ANY PIPING, ELECTRICAL CONDUIT OR OTHER MECH OR ELEC DEVICES EXPOSED WHEN EXISTING WALLS, CEILINGS OR FLOORS ARE ALTERED OR PUNCTURED FOR NEW OPENINGS.
5. ALL AREAS OF FLOORS, WALLS AND CEILINGS DISTURBED FROM DEMOLITION SHALL BE FILLED OR PATCHED TO MATCH EXIST. OR NEW FINISH DESIGNATED. SPECIAL ATTENTION SHALL BE GIVEN TO AREAS BEHIND CASEWORK, TACK & MARKER BOARDS, LOCKERS & PLUMBING CHASES WHICH ARE PRESENTLY CONCEALED.
6. GENERAL CONTRACTOR TO SAW CUT ALL MASONRY OPENINGS IN EXISTING WALLS UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL GIVE OWNER SUFFICIENT NOTIFICATION AND CLEAR IDENTIFICATION OF ITEMS REQUIRING RELOCATION PRIOR TO ANY DEMOLITION OR CONSTRUCTION IN THESE AREAS. CONTRACTOR TO DISCONNECT & MAKE SAFE ALL ELECTRICAL EQUIPMENT FOR OWNER'S STAFF TO REMOVE & RELOCATE.
8. DEMOLITION OF ALL ITEMS WHICH ARE SHOWN AS DASHED LINES IS TYPICAL FOR THE COMPLETE PROJECT AND SHALL BE REMOVED WHETHER IT IS SPECIFICALLY IDENTIFIED AS REMOVED WITH A DEMOLITION NOTE OR NOT.
9. ALL REMOVED ITEMS SHALL REMAIN THE OWNER'S PROPERTY OR BE DISPOSED OF BY THE G.C. AFTER OWNERS REVIEW.
10. REMOVE AS NECESSARY ANY EXISTING PIPING, ELECTRICAL CONDUIT OR OTHER MECHANICAL/ELECTRICAL DEVICES EXPOSED WHEN EXISTING WALLS, CEILINGS, OR FLOORS ARE ALTERED OR PUNCTURED FOR NEW OPENINGS.
11. ALL AREAS OF FLOORS, WALLS, AND CEILINGS DISTURBED FROM DEMOLITION ARE TO BE FILLED OR PATCHED TO MATCH EXISTING OR NEW ADJACENT FINISH DESIGNATION, INCLUDING FIRE RATINGS.
12. CONTRACTOR TO REFER TO FLOOR PLANS AND DETAILS PRIOR TO CUTTING OPENINGS IN EXISTING WALLS.
13. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING BUILDING SYSTEMS PRIOR TO DEMOLITION OF FLOOR AND WALL AREAS REQUIRED FOR THE INSTALLATION OF NEW STRUCTURAL, FIRE PROTECTION, MECHANICAL, AND ELECTRICAL SYSTEMS.
14. WHERE NEW OPENINGS ARE CREATED IN EXISTING CONSTRUCTION, PATCH SURROUNDING FINISHES TO MATCH EXISTING OR NEW FINISH DESIGNATION, INCLUDING FIRE RATINGS.
15. ANY ITEM TO BE SALVAGED WILL BE TAGGED BY THE OWNER PRIOR TO DEMOLITION.

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CONSULTANT:

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THIS SKETCH TO BE READ IN CONJUNCTION WITH THE CONTRACT DOCUMENTS

SKETCH GENERATED FOR:

ADDENDUM	R.R.F.I.	A.S.I.	P.R.	C.C.D.
1				

REFERENCE DETAIL/SHEET: R0.01

TITLE: UPDATE TO GENERAL INFORMATION NOTES

DATE: 06/05/20 | DRAWN BY: LGG | DRAWING NO.: SKA1.03

SCALE: 1/8" = 1'-0" | PROJECT NO. 19018.00

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the Related Documents identified in Division 01 Section "Summary."

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Door Hardware at Vestibule Doors.

1. Provide door hardware at Vestibule A101for doors X4, X5 and X6. Refer to Section 08 06 00 "Openings Schedule" and Section 08 71 00 "Door Hardware" for further information.

a. Wire power supply to the nearest power source.

END OF SECTION 01 23 00

OPENINGS SCHEDULE

● NEW WORK

DOOR											FRAME				FIRE RATING		FIRE CODE				ACCESSIBILITY REQUIREMENTS												
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL	SOUND DOOR AND GASKETING	U. L. RATING (IN MINUTES)	GASKETS AND SMOKE SEALS	PANIC RELEASE HARDWARE	POSITIVE LATCHING	AUTOMATIC CLOSING	ELECT. MAG. DOOR RELEASE	PUSH / PULL (Interior Oenpings)	"U" HANDLE / LEVER HANDLE	MOP, KICK, & ARMOR PLATES	TACTILE WARNING	ACCESSIBLE THRESHOLD	SECURITY DWGS DETAIL NUMBER	ELECTRICAL / SECURITY	HARDWARE SET NO.	OPENING NOTES	ALTERNATE #
A102	A1.01	●		3' - 0"			7' - 0"	1-3/4"	RH	90	AL	AL	EXLH-1	ALJ-1	T-4					●	●			●	●				AC	●	001	AC, EU.06.4PU, E1, CL02, SW1	
A103	A1.01	●		3' - 0"			7' - 0"	1-3/4"	LHR	90	WD	WD	H-2	J-2	T-2					●				●							003	CL03, SW1	
A104A	A1.01	●		3' - 0"			7' - 0"	1-3/4"	RHR		WD	WD	H-1	J-1	T-2					●	●	●		●	●				AC	●	002	AC, EU.06.4PU, E1, PS2, MH11	
A104B	A1.01	●						-	LH																					NHR	MILLWORK	
A105	A1.01		●					-	RHR-ACT																					NHR	MILLWORK	
X1	A1.01		○	3' - 0"	3' - 0"	7' - 0"	1-3/4"	RHR/LHR	90	AL	AL	EX	EX	EX					○	○	○		○							NHR	NWR	
X2	A1.01		○	3' - 0"	3' - 0"	7' - 0"	1-3/4"	RHR/LHR	90	AL	AL	EX	EX	EX					○	○	○		○							NHR	NWR	
X3	A1.01		○	3' - 0"	3' - 0"	7' - 0"	1-3/4"	RHR/LHR	90	AL	AL	EX	EX	EX					○	○	○		○							NHR	NWR	
X4	A1.01		○	3' - 0"	3' - 0"	7' - 6"	1-3/4"	RHR/LHR	90	AL	AL	EX	EX	EX					●	●	○		○							004	BODH	ALT 1
X5	A1.01		○	3' - 0"	3' - 0"	7' - 6"	1-3/4"	RHR/LHR	90	AL	AL	EX	EX	EX					●	●	○		○							004	BODH	ALT 1
X6	A1.01		○	3' - 0"	3' - 0"	7' - 6"	1-3/4"	RHR/LHR	90	AL	AL	EX	EX	EX					●	●	○		○							●	005	AC, AOR, PR.ER.MLR 1, BODH	ALT 1

DRAWING NO: ***A1.01*** ***MAIN LEVEL FLOOR PLAN***

SCHEDULE GENERAL NOTES

. CONSTRUCTION MANAGER / GENERAL CONTRACTOR:

CONSTRUCTION MANAGER / GENERAL CONTRACTOR / HARDWARE SUPPLER:
Shall coordinate an inspection, with all manufacturer's representatives to confirm that all hardware has been installed and adjusted properly;
See "Specification Section - 08 71 00 - 3.2 - INSTALLATION

HARDWARE SUPPLIER:
Must employ an experienced Architectural Hardware Consultant (AHC) who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation.

OPENINGS SCHEDULE

DOOR												FRAME					FIRE RATING		FIRE CODE				ACCESSIBILITY REQUIREMENTS								● NEW WORK	
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL	SOUND DOOR AND GASKETING	U. L. RATING (IN MINUTES)	GASKETS AND SMOKE SEALS	PANIC RELEASE HARDWARE	POSITIVE LATCHING	AUTOMATIC CLOSING	ELECT. MAG. DOOR RELEASE	PUSH / PULL (Interior Oenpings)	"U" HANDLE / LEVER HANDLE	MOP, KICK, & ARMOR PLATES	TACTILE WARNING	ACCESSIBLE THRESHOLD	*SECURITY DWGS DETAIL NUMBER*	ELECTRICAL / SECURITY	HARDWARE SET NO.		ALTERNATE #

CONFLICTS between the SPECIFIED DOOR HARDWARE and the DOORS / FRAMES must be brought to the attention of the ARCHITECT prior to submitting HARDWARE SUBMITTAL to the ARCHITECT.

HARDWARE SUPPLIER must schedule a pre - installation meeting to instruct installers on proper installation and adjustment of the Locks, Exit Devices, and Closers. A manufacturers' representative of each major hardware category shall be present to complete the instructions, and then certify to the Architect that the door hardware installer has been trained in the proper installation procedures and is certified to install the finish hardware.

DOOR HARDWARE INSTALLATION: All door hardware shall be installed according to manufactures' instructions.
This includes following the template required to complete the intended operation of the door hardware, and all fastener holes required shall be drilled and tapped to the correct size as detailed in the template. Template Hardware Installation so that Door will be able to swing a Minimum of 90 degrees. Doors swinging less than 90 Degrees will be reinstalled to meet ADA requirements.

All "DOOR HARDWARE FASTENERS" used during installation must be original hardware manufacturer's supplied fasteners.
The use of drywall screws or non "OEM" self tapping screws will be rejected, reinstallation of hardware will be required.
Fastener holes in doors and frames from the use of improper hardware fasteners will not be acceptable,
doors and frames will be replaced at no cost to the owner.

HARDWARE SUPPLIER shall confirm specified LOCK FUNCTIONS with the OWNER at the KEYING MEETING.

All "LOCKS" shall be of the same Manufacturer.
All "DOOR CLOSERS" shall be of the same Manufacturer unless specified as no substitution.
(Provide All Necessary Hardware To Complete Installation of Closers on Aluminum and Hollow Metal Frames)

Provide Blocking in walls for all Door Hardware (i.e., but not limited to: Door Closers, Wall & Overhead Stops)

Provide Blocking for Door Closers in Wood Doors (USE THRU BOLTS WHEN INSTALLING DOOR CLOSERS)

DOOR PROTECTION PLATES:
"KICKPLATES" Install on "PUSH SIDE" of Door.

HARDWARE / ELECTRICAL / SECURITY

OPENINGS SCHEDULE

DOOR												FRAME				FIRE RATING			FIRE CODE					ACCESSIBILITY REQUIREMENTS											SECURITY DWGS DETAIL NUMBER	ELECTRICAL / SECURITY	HARDWARE SET NO.	● NEW WORK	ALTERNATE #
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL	SOUND DOOR AND GASKETING	U. L. RATING (IN MINUTES)	GASKETS AND SMOKE SEALS	PANIC RELEASE HARDWARE	POSITIVE LATCHING	AUTOMATIC CLOSING	ELECT. MAG. DOOR RELEASE	PUSH / PULL (Interior Oenplngs)	"U" HANDLE / LEVER HANDLE	MOP, KICK, & ARMOR PLATES	TACTILE WARNING	ACCESSIBLE THRESHOLD								

CONDUIT & WIRING:

1. Install all conduits where required for electrified door hardware prior to applying in Grouting Solid or Spray Foam Solid in Door Frame.
2. All Conduits required for Power and Control Wiring, and Power Wiring, to be furnished and installed by Electrical Contractor.
3. All Low Voltage Access Control Wiring and Terminations are furnished and installed by the Access Control Contractor.
4. Controls and Control Wiring (provide 16 ga. Wire unless noted otherwise) of Electrified Devices, Transfer Hinges, and Power Supplies to be provided by Security Contractor.

DOOR & FRAMES:

1. Door Frame Supplier must coordinate Door Contact Frame Prep with Security Contractor.
2. Door and Frame Suppliers must prep doors and frames to accommodate all electrified hardware, including all required conduits in doors and frames, when prepping doors and frames for door hardware.

HARDWARE:

1. Hardware supplier must provide, Wiring Diagrams - Elevation and Riser & Point to Point, to Electrical Contractor.
2. Electromagnetic Door Release (Magnetic Door Holders) to be furnished by Section 08 71 00 and Installed by Electrical Contractor.

ACCESS CONTROL READERS:

1. "READERS" by Access Control / Security Contractor.

OPENINGS SCHEDULE

DOOR												FRAME					FIRE RATING		FIRE CODE				ACCESSIBILITY REQUIREMENTS								● NEW WORK	
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL	SOUND DOOR AND GASKETING	U. L. RATING (IN MINUTES)	GASKETS AND SMOKE SEALS	PANIC RELEASE HARDWARE	POSITIVE LATCHING	AUTOMATIC CLOSING	ELECT. MAG. DOOR RELEASE	PUSH / PULL (Interior Oenpings)	"U" HANDLE / LEVER HANDLE	MOP, KICK, & ARMOR PLATES	TACTILE WARNING	ACCESSIBLE THRESHOLD	*SECURITY DWGS DETAIL NUMBER*	ELECTRICAL / SECURITY	HARDWARE SET NO.		ALTERNATE #

OPENING NOTES

-	GENERAL DOOR NOTES: "A" All Doors Exiting 50 or More Persons shall have Panic Hardware. "B" All Door Hardware shall be Accessible to Persons with Disabilities. Hardware shall comply with ADA Standards. "C" Provide UL Rated KICK / ARMOR PLATES where detailed on UL Rated Openings. "D" Refer to Mechanical Series Drawing for all "Door Undercuts"
AC	ACCESS CONTROLLED OPENINGS: Opening hardware will include some form of mechanical or electrical access control. "AC" by "READER" "AC / AC" by "READER / READER" "AC" / KP" by "READER / KEYPAD"
AOR	"AO" AUTO OPERATOR - "RHR LEAF" ONLY - Interface Access Control / Latch Retraction with Auto Operator
BODH	Balance of Door Hardware to Remain
CL02	Provide Parallel Arm Closer with Integral Heavy Duty Stop Arm, (Install "PUSH SIDE" of Door).
CL03	Provide Parallel Arm Closer with Integral Heavy Duty Stop and Hold Open Arm.
E1	"E1" DOOR CONTACTS - Door Position Contacts to be furnished and installer by Security Contractor. Door(s) and Frame(s) to have factory preparations for Door Contact(s), coordinate with Door Position Contacts Supplied.

OPENINGS SCHEDULE

DOOR												FRAME					FIRE RATING		FIRE CODE				ACCESSIBILITY REQUIREMENTS									
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL	SOUND DOOR AND GASKETING	U. L. RATING (IN MINUTES)	GASKETS AND SMOKE SEALS	PANIC RELEASE HARDWARE	POSITIVE LATCHING	AUTOMATIC CLOSING	ELECT. MAG. DOOR RELEASE	PUSH / PULL (Interior Oenpings)	"U" HANDLE / LEVER HANDLE	MOP, KICK, & ARMOR PLATES	TACTILE WARNING	ACCESSIBLE THRESHOLD	*SECURITY DWGS DETAIL NUMBER*	ELECTRICAL / SECURITY	HARDWARE SET NO.	● NEW WORK	ALTERNATE #

EU.06.4PU

"EU06.4PL" MORTISE LOCK
"ELECTRICALLY CONTROLLED TRIM" - "FAIL SECURE operation"
"LATCHBOLT MONITOR"
"REQUEST TO EXIT SWITCH"
"CARD Reader" installer on the PUSH Side of the Opening.

System to have "FAIL SECURE operation" :
Section 08 71 00 to provide Electrically Locked Trim, provide Integral Latchbolt Monitor and Request to Exit Function.
Section 08 71 00 to provide (10 RETW) Wire Power Transfer Hinge, and Power Supply (See Hardware Sets for PS Requirements).

Latchbolt by Grip out side only when lock is energized.
Outside Grip locked when lock is not energized.
Latchbolt by key outside when lock is not energized.
Auxiliary latch deadlocks Latchbolt
Inside Grip always FREE.

NHR

No Hardware Required

PR.ER.MLR 1

"PR.EV.MLR 1" "EXISTING PULL x NIGHT LATCH FUNCTION" "RIGHT HAND REVERSE"
Electric Motorized Latch Retraction Panic Release Hardware.
Section 08 71 00 to provide ONE (1) POWER DOOR LOOP or ONE(1) each (10 RETW) Wire Power Transfer Hinge, and Power Supply (See Hardware Sets for PS Requirements).

PS2

"PS2" POWER SUPPLIES, SHARED , ELECTRIFIED TRIM & LOCKS:
See Opening A102

SW1

"SW1" DEGREE SWING (90) - Template Hardware (Door Closers / Overhead Stops) Installation to Specified Degree of Swing (90), See Door Schedule.

OPENINGS SCHEDULE

DOOR												FRAME					FIRE RATING		FIRE CODE				ACCESSIBILITY REQUIREMENTS								● NEW WORK	
OPENING NUMBER	SHEET NUMBER	SINGLE DOOR LEAF	DOUBLE DOOR LEAF	ACTIVE LEAF	ACTIVE LEAF (PRH & PP Hardware)	IN - ACTIVE LEAF	HEIGHT	THICKNESS	HANDING	DEGREE OF SWING REQUIRED	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL / THRESHOLD DETAIL	SOUND DOOR AND GASKETING	U. L. RATING (IN MINUTES)	GASKETS AND SMOKE SEALS	PANIC RELEASE HARDWARE	POSITIVE LATCHING	AUTOMATIC CLOSING	ELECT. MAG. DOOR RELEASE	PUSH / PULL (Interior Oenpings)	"U" HANDLE / LEVER HANDLE	MOP, KICK, & ARMOR PLATES	TACTILE WARNING	ACCESSIBLE THRESHOLD	*SECURITY DWGS DETAIL NUMBER*	ELECTRICAL / SECURITY	HARDWARE SET NO.		ALTERNATE #

SW2 "SW2" DEGREE SWING (110 - 120) - Template Hardware (Door Closers / Overhead Stops) Installation to Specified Degree of Swing (110 - 120), See Door Schedule.

SW3 "SW3" DEGREE SWING (180) - Door must be able to swing 180 degrees.
Template Hardware installation for 180 Degree swing operation.
(175 Degrees where limited by field conditions or hardware specified)

SECTION 08 71 00 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the Related Documents identified in Division 01 Section "Summary."

1.2 SUMMARY

A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same Sections as the doors and door frames on which they are installed. Furnish and deliver all door hardware necessary for all doors, also hardware as specified herein and as enumerated in hardware sets and as indicated and required by actual conditions at the building. The hardware shall include the furnishing of all necessary screws, bolts, expansion shields, drop plates, and all other devices necessary for the proper application of the hardware:

B. ALL DOOR HARDWARE MUST BE FURNISHED BY SECTION 08 71 00 DOOR HARDWARE SUPPLIER.

"CONTRACTS, Including Door Hardware, ISSUED TO ALUMINUM DOOR SUPPLIER" must stipulate aluminum door hardware must be purchased from SECTION 087100 HARDWARE SUPPLIER

C. ***HARDWARE SUPPLIER***: Must employ an experienced ***Architectural Hardware Consultant (AHC)*** who is available to Owner, Architect, and Contractor, at reasonable times during the Work, for consultation.

D. Related Sections:

1. Division 8 Section 08 06 00 "SCHEDULE FOR OPENINGS".
2. Division 8 Section 08 12 13 "HOLLOW METAL FRAMES".
3. Division 8 Section 08 14 16 " FLUSH WOOD DOORS".
4. Division 8 Section 08 41 13 "ALUM-FRAMED ENTRANCES AND STOREFRONTS".

1.3 REFERENCES

A. Standards:

1. ANSI/BHMA, A156.1 (2013) - Butts & Hinges.
2. ANSI/BHMA, A156.4 (2008) - Door Controls - Closers.
3. ANSI/BHMA, A156.6 (2010) - Architectural Door Trim.
4. ANSI/BHMA, A156.7 (2009) - Template Hinge Dimensions.
5. ANSI/BHMA, A156.13 (2012) - Mortise Locks & Latches, Series 1000.
6. ANSI/BHMA, A156.15 (2011) - Release Devices – Closer Holder, Electro Mag/Mech.
7. ANSI/BHMA, A156.18 (2012) - Materials and Finishes.

8. ANSI/BHMA, A156.25 (2007) - Electrified Locking Devices.
9. ANSI/BHMA, A156.28 (2007) - Recommended Practices for Keying Systems.
10. ANSI/BHMA, A156.30 (2003) - American National Standard for High Security Cylinders.
11. ANSI/BHMA, A156.36 (2010) - American National Standard for Auxiliary Locks.
12. ANSI/BHMA, A156.115 (2006) - Hardware Preparation in Steel Doors and Frames.
13. NFPA 80 - Fire Doors and Windows.
14. UL10C - Positive Pressure Fire Tests of Door Assemblies.
15. AIA 232 2009 - General Conditions of the Contract for Construction Manager as Risk Edition

B. Codes:

1. Applicable state and local building codes.
2. Connecticut. State Building Code IBC 2018.
3. NFPA 101 - Life Safety code.
4. NFPA 105 - Smoke and Draft Control Door Assemblies.
5. ICC / ANSI A117.1 - Accessible and Usable Buildings and Facilities.
6. ADA - Americans with Disabilities Act.

C. UL Underwriters Laboratories:

1. UL 10C – Fire Tests of Door Assemblies.
2. UL 305 – Panic Hardware.

D. DHI – Door and Hardware Institute:

1. Sequence and Form and for the Hardware Schedule.
2. Recommended Locations for Builders Hardware.

1.4 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Section 1 Specification Sections:

B. Product data including manufacturer's technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish of door hardware.

C. Final hardware schedule must be coordinated with doors, frames, and related work to ensure proper size, thickness, hand function, and finish of door hardware. Conflicts between the SPECIFIED DOOR HARDWARE and the DOORS / FRAMES must be brought to the attention of the ARCHITECT prior to submitting HARDWARE SUBMITTAL to the ARCHITECT.

D. HARDWARE SUPPLIER shall confirm specified LOCK FUNCTIONS with the OWNER at the KEYING MEETING.

1. Final Hardware Schedule Content: Based on hardware indicated, organize schedule into *"HARDWARE SETS"* indicating complete designation of every item required for each

door or opening. Include the following information. Type, style, function, size, and finish of each hardware item.

a. Name and manufacturer of each item.
b. Fastenings and other pertinent information.
c. Location of Hardware Set, cross-referenced to indication of Drawings both on floor plans, in door, and frame schedule.
d. Explanation of all abbreviations, symbols, and codes contained in schedule.
e. Mounting locations for hardware. Provide "DHI" Standard Mounting Locations in the Hardware Submittal.
f. Door and frame sizes and materials.
g. Keying information.
h. *Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finish floor. Locks used only for security purposes and not used for normal operation are permitted at any height.*

2. Submittal Sequence: submit final schedule at earliest possible date particularly where acceptance of hardware schedule must precede fabrication of other work that is critical in the Project construction schedule. Include with schedule the product data, samples, shop drawings of other work affected by door hardware, and other information essential to the coordinated review to schedule.

3. Keying Schedule: After a keying meeting between representatives of the Owner, Architect, hardware supplier, and, if requested, the representative for the lock manufacturer, provide a keying schedule, listing the levels of keying, as well as an explanation of the key system's function, the key symbols used, and the door numbers controlled.

E. Samples: If requested by Architect, submit samples of each type of exposed hardware unit in finish indicated and tagged with full description for coordination with schedule. Submit samples prior to submission of final hardware schedule:

1. Samples will be returned to the supplier. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated in the Work, within limitations of keying coordination requirements.

F. Templates for doors, frames, and other work specified to be factory prepared for the installation of 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.

G. Wiring Diagrams: Upon final approval of the hardware schedule, submit wiring and riser diagrams as required for the complete and proper installation of all electrical, electromechanical, and electromagnetic products. Submittals must represent that coordination has occurred with the security system submittals and shop drawings. Also, that shop drawings submitted, and schedules developed have been specifically reviewed and coordinated for both physical equipment fitment and power requirements with the security system contractor approved shop drawings.

H. "Hardware Schedule and Templates", Hardware schedules shall be created which reference specifically to the specified lock voltages and separately indicating whether the door is a "fail safe" or "fail secure" electrified lock arrangement.

I. Electrified Hardware: Electrified Hardware to be used for security purposes must be UL Listed for Burglary Applications.

J. At the completion of hardware installation, and prior to issuance of certificate of occupancy, prepare and submit the hardware inspection report to include the following:

1. Current and predictable problems of substantial nature in the performance of the hardware.
2. Hardware has been installed and adjusted in accordance with manufacturer's recommendations and instructions.

K. At the completion of the project, provide Owner with two (2) copies of an Operation and Maintenance Manual. This manual shall consist of a hard cover (3) ring binder with the project name listed on the front. Included will be:

1. A final copy of the approved and as built hardware schedule.
2. A final copy of the approved keying schedule.
3. Catalog cuts for each item used in the project.
4. Parts list and numbers for each item used.
5. Maintenance instructions for all items.
6. Name, address and phone number of local representatives for each item used.

1.5 QUALITY ASSURANCE

A. Substitutions: Products are to be those specified to ensure a uniform basis of acceptable materials. Requests for substitutions must be made in accordance with Section 1 requirements. If proposing a substitute to a specified item, indicate basis for substitution and savings to be made. Provide sample if requested. Certain products have been selected for their unique characteristics and particular project suitability. All Hardware is "Basis-of-Design" product specification as defined in Section 08 71 00. Model numbers (and Manufacturer's) listed in "Hardware Set Schedule" are "Basis-of-Design".

1. Items specified, as "no substitution" shall be provided exactly as listed.
2. Items listed with no substitute manufacturers listed have been requested by the Owner or Architect to match existing for continuity and/or future performance and maintenance standards or because there is no known equal product.
3. If no other products are listed in a category, then "no substitution" is implied.

B. Supplier Qualifications: A recognized architectural door hardware supplier, with warehousing facilities in the Project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that employs an experienced architectural hardware consultant (AHC) who is available to Owner, architect, and Contractor, at reasonable times during the course of the Work, for consultation.

1. Require supplier to meet with Owner to finalize keying requirements and to obtain final instructions in writing.

C. A pre-installation meeting shall be held to instruct installers on the proper installation and adjustment of door hardware. A representative of each major hardware category, including, but not limited to, Locks, Exit Devices, & Closers, shall instruct the installers on the correct installation of their products. The manufacturers of the Door Hardware provided on this project shall certify to the Architect that the door hardware installer for this project has been trained in the proper installation procedures and is certified to install the door hardware.

D. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by UL, Intertek Testing Services, Warnock Hersey, Factory Mutual, or other testing and inspecting organization acceptable to authorities having jurisdiction for use on types and sizes of doors indicated in compliance with requirements of fire-rated door and door frame labels.

E. Accessible Hardware: Door Hardware; *Handles, pulls, latches, locks and other operable parts on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. Such hardware shall 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.* EXCEPTION: *Locks used only for security purposes and not used for normal operation are permitted in any location.*

F. Accessible Hardware: Door-Opening Force; Fire Doors shall have the minimum opening force allowable by the appropriate administrative authority. The maximum force for pushing open or pulling open doors other than fire doors shall be as follows:

1. Interior hinged door: 5.0 pounds.
2. Sliding or folding door: 5.0 pounds.
3. Fire Doors: Minimum opening force allowable by authorities having jurisdiction, but not greater than 10 lbf. *These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. The maximum force required to release the latch shall not exceed 15 lbf.*
4. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
5. Adjust door closer sweep periods 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.

1.6 PRODUCT HANDLING

A. Tag each item or package separately with identification related to final hardware schedule and include basic installation instructions with each item or package.

B. Each item of hardware shall be individually packaged in manufacturer's original container.

C. Receiving and storing of door hardware is responsibility of supplier. Prior to delivery of door hardware to the project, Hardware Supplier must sort and clearly mark with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container.

D. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.

E. Deliver individually packaged door hardware items promptly to place of installation (shop or Project site).

F. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.

1.7 MAINTENANCE

A. Maintenance Tools and Instructions: Furnish two (2) complete sets of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware. Furnish two (2) extra screws or fasteners of each type size and of the same finish used in this project.

1.8 WARRANTY

A. Provide manufacturer's Standard Warrantees.

B. Starting date for all warranty periods to be date of substantial completion of the Project.

C. No liability is to be assumed where damage or faulty operation is due to improper installation, improper use, or abuse.

D. Products judged to be defective during the warranty period shall be replaced or repaired in accordance with the manufacturer's warranty, at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following.

1. Butts and Hinges:
   a. Hager Companies.
   b. Bommer.
   c. Ives, Allegion.
   d. PBB World Class Hinges.
   e. Stanley Hardware.
2. Continuous Hinges:
   a. Hager Companies.
   b. Bommer.
   c. Ives, Allegion.
   d. PBB World Class Hinges.
   e. Pemko
   f. Select
3. Key Control System:
   a. HPC.
   b. Lund, Inc.
   c. Telkee, Inc.
4. Cylinders and Locks:
   a. Sargent, Div of Assa Abloy "8200" Series.
5. Overhead Surface Closers:
   a. Sargent, Div of Assa Abloy, Inc., "351 (Heavy Duty Arms)" Series.
6. Electro Magnetic Hold Opens:

a. DORMA Architectural Hardware.
b. LCN, Allegion.
c. Rixson, Div of Assa Abloy.
d. Sargent, Div of Assa Abloy.

7. Door Control Devices:
   a. DORMA Architectural Hardware.
   b. Burns Manufacturing, Inc.
   c. Glynn Johnson, Allegion.
   d. MAG Security.
   e. Rixson, Div of Assa Abloy.
   f. Sargent, Div of Assa Abloy.

8. Kick and Mop Plates:
   a. Hager Companies.
   b. Burns Manufacturing, Inc.
   c. Ives, Allegion.
   d. Rockwood.

9. Weather-stripping and Seals:
   a. Hager Companies.
   b. National Guard Products.
   c. Pemko Manufacturing Co., Inc.
   d. Reese Enterprises, Inc.

10. Thresholds:
    a. Hager Companies.
    b. National Guard Products.
    c. Pemko Manufacturing Co., Inc.
    d. Reese Enterprises, Inc.

11. Door Stops:
    a. Hager Companies.
    b. Burns Manufacturing, Inc
    c. Glynn Johnson, Allegion
    d. Ives, Allegion.
    e. Rockwood Manufacturing.

12. Electrified Hinges:
    a. Hager Companies.
    b. Bommer.
    c. PBB World Class Hinges.
    d. Stanley Hardware.

13. Electrified Power Transfers:
    a. DORMA Architectural Hardware.
    b. Locknetics, Allegion.
    c. Security Door Controls.

d. Securitron, Div of Assa Abloy.
e. Von-Duprin, Allegion.

2.2 SCHEDULED HARDWARE

A. Requirements for each type of door hardware are indicated on the "Door Schedule", and in the Schedule at the end of this Section. Products are identified by using hardware designation numbers of the following:

1. Manufacturer's Product Designations: The product designation and name of one manufacturer are listed for each hardware type required for the purpose of establishing minimum requirements. Manufacturer and model numbers indicated in Hardware Sets constitute a "Basis-of-Design" product specification as defined in this Section.

2.3 MATERIALS AND FABRICATION

A. Manufacturer's Name Plate: Do not use manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.

1. Manufacturer's identification will be permitted on rim of lock cylinders only.

B. Base Metals: Product hardware units of basic metal and forming methods indicated, using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized), quality than specified for applicable hardware units by applicable ANSI/BHMA A156 series standards for each type of hardware item and with ANSI/BHMA A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.

C. Fasteners: Provide hardware manufactured to conform to published templates generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.

D. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive paint.

E. Provide concealed fasteners. Provide tamper resistant fasteners when they cannot be concealed. Fasteners shall be of the same finish as the balance of the hardware. Where thru-bolts are used as a means of reinforcing the work, provide sleeves for each thru-bolt or use sex screw fasteners.

2.4 HINGES, BUTTS, AND CONTINUOUS HINGES

A. Templates: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

B. Screws: Provide Phillips flat-head screws complying with the following requirements:

1. For metal doors and frames install machine screws into drilled and tapped holes.
2. For wood doors and frames install wood screws.
3. For fire-rated wood doors install #12 x ¼ inch, threaded-to-the-head steel wood screws.
4. Finish screw heads to match surface of hinges or pivots.

C. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:

1. Out-Swing Exterior Doors: Non-removable pins.
2. Interior Doors: Non-rising pins.
3. All "Card Reader Doors": Non-removable pins.

D. Number of Hinges: Provide number of hinges indicated but not less than 3 hinges per door leaf for doors 90 inches of additional height:

1. Fire-Rated Doors: Not less than 3 hinges per door leaf for doors 86 inches or less in height with same rule for additional hinges.

E. Size and weight of butts:

1. See Hardware Sets for Details.

F. Power Transfer Hinges:

1. Power transfer hinges may be EPT or ETW types. Armored cable may be used only where EPT or ETW electrified hinges are not practical.
2. Furnish all power transfer hinges as 12 conductor units.

2.5 LOCK CYLINDERS AND KEYING

A. Review the keying system with the Owner and provide the type required grandmaster or great grandmaster, integrated with Owner's existing system.

B. HARDWARE SUPPLIER SHALL CONFIRM SPECIFIED LOCK FUNCTIONS WITH OWNER AT THE KEYING MEETING.

C. Equip locks with manufacturer's 6-pin tumbler "interchangeable core" cylinder employing "RESTRICTED KEYWAY". Such cylinders have cores that are removable by the use of a special "control key". Deliver hardware to the contractor with temporary cores installed and keyed alike. Permanent cores are to be mastered keyed as directed by the owner. Deliver permanent cores and keys to the owner when notified by the owner in writing. Temporary cores and keys are to be returned to the hardware supplier by the contractor within 10 days of their replacement by permanent cores. (Do Not Provide Extra Key Blanks if Restricted Keyway has been specified.)

1. Furnish 12 each "Temporary Change Keys" and 2 each "Temporary Core Control Keys".
2. Key Quantity: Furnish 3 change keys for each lock, 5 master keys for each master system, and 5 grandmaster keys for each grandmaster system. Furnish 6 each "Core Control Keys".
3. Furnish 12 Temporary Change Keys and 2 Temporary Core Control Keys.
4. Furnish 12 each additional core for owner's stock.
5. Install "FINAL CORES" when instructed by Owner.
6. Deliver keys to Owner.

D. Metals: Construct lock cylinder parts from brass or bronze, stainless steel, or nickel silver.

E. Comply with Owner's instructions for master keying and, except as otherwise indicated, provide individual change key for each lock that is not designated to be keyed alike with a group of related locks.

F. Key Material: Provide keys of nickel silver only.

G. Final cores to be installed by the hardware supplier, installer must verify that all cylinders are working correctly.

2.6 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 percent of the number of "Key Sets" required for the Project:

1. Provide flat lip strikes for locks with 3 pieces, anti-friction latch bolt as recommended by manufacturer.

2.7 LOCKS, LATCHES, AND BOLTS

A. Strikes: Provide manufacturer's standard wrought box strike for each latch or lock bolt, with curved lip extended to protect frame, finished to match hardware set, unless otherwise indicated:

1. Provide complete cross-index system set up by key control manufacturer, 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.

B. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the 2010 ADA Standards, ICC/ANSI A117.1.

1. Comply with the following maximum opening-force requirements:

a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.

b. Folding Doors: 5 lbf applied parallel to door at latch.

c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction, but not greater than 10 lbf.

2. Comply with the following maximum closing speed requirements:

a. Adjust closers so that from an open position of 90 degrees, the time required to move the door to an open position of 12 degrees is to be 5 seconds minimum.

b. Adjust closers so that from an open position of 70 degrees, the time required to move the door to an open position of 3 inches from the latch is to be 3 seconds minimum.

C. Mortise Locks:

1. Mortise locks shall be certified as ANSI A156.13, Series 1000, Operational and Security Grade 1, and meets A117.1 Accessibility Code, and shall be manufactured from heavy gauge steel, containing components of steel with zinc dichromate plating for corrosion resistance. Lock case shall be multi-function and field reversible for handling.

2. Locks are to have a standard 2-3/4" backset with a full ¾" throw 2-piece stainless steel mechanical anti-friction latch-bolt.

Lever trim shall be solid brass, bronze, or stainless steel, cast or forged in the design specified, with wrought roses and external Security requirement. Levers shall be thru-bolted to assure proper alignment and shall have a 2-piece spindle. Lever trim on the secure side of doors serving rooms considered by the authority having jurisdiction to be hazardous shall have a tactile warning.

3. Provide electrical options as scheduled.

   a. All Openings scheduled to receive Electrified Hardware must include a Quick Connect Wiring Harness and Raceway in all Doors.

   b. "Request to Exit", Electrified Lockset shall be provided with one internal SPDT switch which monitors the Lever Trim, as called for on the security system drawings.

   c. "Latch bolt Monitoring", Electrified Lockset shall be provided with one internal SPDT switch which monitors the Lock Latch, as called for on the security system drawings.

   d. Lock Power Supplies: It is imperative that the security contractor and hardware supplier coordinate the lock voltage requirements, fail safe/fail secure requirements, lock in-rush current requirements, whether locks are continuous duty or not and any other related issues. Power supplies to be furnished by Door Hardware Suppliers and installed by the Security or Electrical Contractor. Locate power supplies and battery backup in the access control mechanical space when wire run lengths permit. Where wire runs exceed manufacturer's written recommendations, coordinate the installation location with Construction Manager / General Contractor and Architect

   e. Local Audible Alarms shall be furnished and installed by the Security Contractor.

   f. Power transfer hinges may be "EPT" or "ETW" types. Armored cable may be used only where "EPT" or "ETW" electrified hinges are not practical.

   g. Furnish all power transfer hinges as 12 conductor units.

2.8 CLOSERS AND DOOR CONTROL DEVICES

A. Size of Units: Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of door control unit depending on size of door, exposure to weather, and anticipated frequency of use:

   1. Where parallel arms are indicated for closers, provide closer with Heavy Duty Arm.

   2. Provide parallel arms for all overhead closers, except as otherwise indicated Provide parallel arms for all overhead closers, except as otherwise indicated.

   3. Closers must operate at 180 degree opening where indicated on plans and door schedule.

   4. Provide all necessary Drop Plate Brackets, Shims, and Angle Brackets, where required to complete installation of closers on doors and frames.

   5. Furnish and Install "THRU BOLTS" on Aluminum, Hollow Metal, and Wood Doors.

B. Access-Free Manual Closers: Where manual closers are indicated for doors required to be accessible to the physically handicapped, provide adjustable units complying with ANSI A117.1 provision for door opening force and closing speed.

C. Magnetic Holders: Provide wall- or floor-mounted electromagnetic door release with a minimum of 25 pounds of holding force. Projection of holder and armature must be coordinated with other hardware and wall conditions to ensure that door sits parallel to wall when fully open. Where magnetic holders are used on fire-rated doors, they must be wired into the fire control panel for fail-safe operation.

2.9 DOORSTOPS AND HOLDERS

A. It shall be the responsibility of the hardware supplier to provide door stops for all doors in accordance with the following requirements. Where overhead stops and holders are specified, or otherwise required, they shall have 3" pins on larger doors, and be heavy duty, and of solid brass or stainless steel with no plastic type parts. Provide Door Stops as indicated in Hardware Sets.

2.10 DOOR TRIM UNITS

A. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine screws or self-tapping screws.

B. Fabricate protection plates not more than 2 inches less than door width on push side of door and by height indicated.

1. Metal Plates: Stainless steel, 0.050 inch (U.S. 18 gage).
2. Provide UL Rated "KICK / ARMOR' Plates where detailed on UL Rated Openings.

2.11 MISCELLANEOUS HARDWARE

A. Furnish four (4) extra screws or fasteners of each type, used for the hinges, door closers, holders and protective plates of the same finish used in this project.

B. Furnish two (2) additional adjusting wrenches for the door closers.

2.12 HARDWARE FINISHES

A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if not latch or lock sets).

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

C. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes", including coordination with the traditional U.S. finishes show by certain manufacturers for their products.

PART 3 - EXECUTION

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 door hardware. Correct all defects prior to proceeding with installation.

3.2 INSTALLATION

A. All hardware to be installed by qualified tradesmen, skilled in the application of commercial grade hardware. For technical assistance if necessary, installers may contact the manufacturer's rep for the item in question.

B. Furnish and Install "THRU BOLTS" on Hollow Metal and Wood Doors.

C. Electronic hardware shall be furnished and installed by qualified tradesmen. Hardware shall be wired by the security system contractor. Door Hardware installer shall be present to complete final adjustments to door hardware, when security contractor completes electrical terminations.

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

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

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

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

H. All operating parts shall move freely and smoothly without binding, sticking, or excessive clearance.

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 to perform a final check and adjustment of all hardware items in such space or area. Clean operating doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

C. Clean adjacent surfaces soiled by hardware installation.

D. At the completion of "BALANCING" of all "AIR HANDLING SYSTEMS", prior to owner taking occupancy, 'Hardware Installer" will re-adjust all closer closing and latching cycles.

E. Approximately six months after the Date of Substantial Completion, the installer shall perform the following:

1. **Examine and readjust each item of door hardware as necessary to ensure function of doors, door hardware, and electrified hardware.**
2. **Consult with and instruct owners' personnel on recommend maintenance procedures.**
3. **Replace door hardware items that have deteriorated or failed due to faulty design, materials, or installation of door hardware units.**

3.4 FIELD QUALITY CONTROL

A. Prior to Substantial Completion, the installer, accompanied by representatives of the manufacturers of latchsets and locksets, door closers, and exit devices, and of other major hardware suppliers, shall perform the following work.

B. Examine (by representatives of the manufacturers) and re-adjust (by hardware installer) each item of door hardware as necessary to restore function of doors and hardware to comply with specified requirements.

C. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures.

D. Replace hardware items that have deteriorated or failed due to faulty design or materials (work to be performed by representatives of the manufacturers including removal and reinstallation).

E. Replace hardware items that have deteriorated or failed due to incorrect installation (work to be performed by hardware installer including removal and reinstallation) of hardware units.

F. Prepare a written report of current and predictable problems of substantial nature in the performance of the hardware.

3.5 PROTECTION

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

3.6 HARDWARE SCHEDULE

A. General: Provide hardware for each door to comply with requirements of this Section and the Door and Hardware Schedule Section 08 06 00", and the following Hardware Sets. The door hardware sets listed herein shall not be considered as a complete hardware schedule and shall only be considered as an indication of the hardware requirements desired by the Owner. It shall be this Contractor's responsibility to visit the site, examine the drawings and door schedule and provide all necessary hardware as shown. Such items shall be of same quality, quantity and type as that scheduled for similar doors or parts of the building used for similar purposes.

B. Door and Hardware Schedule Section 08 06 00, "BULLETS", "SCHEDULE GENERAL NOTES" and "OPENING NOTES" shall be considered part of Section 08 71 00.

C. Conflicts between the SPECIFIED DOOR HARDWARE and the DOORS / FRAMES must be brought to the attention of the ARCHITECT prior to submitting HARDWARE SUBMITTAL to the ARCHITECT.

Hardware Set 001

2	Hinge, Ball Bearing	BB1279 - 4.5 x 4.5 - US26D	Hager
1	Electric Hinge, Ball Bearing	BB1279 - 4.5 x 4.5 - US26D - RETW-QC (12-Wire)	Hager
1	Mortar Box	430	Hager
1	Electrically Unlocked	LX - RX - 8271 - LNL - 77-1141 (WSB) - US26D	Sargent
2	Door Harness	Door Harness with "QC" Connectors to match Door Hardware	McKinney
1	Closer, Overhead Parallel Arm	351 - PS - EN (Install "PUSH" Side)	Sargent
1	Kick Plate	K1050 - 08" x 34" - 18 ga. - US32D	Rockwood
3	Silencer, HM Dr. Frame	608 - Gray	Rockwood
1	Power Supply	3540 - 24V - 2 Amp	Sargent
1	Door Contact	Door Contact	By Others
1	Power Supply	Power Supply by Security Section	By Others
1	Diagrams	Diagrams - Elevation and Riser	By MFR
1	Diagrams	Diagrams - Point To Point	By MFR

Hardware Set 002

2	Hinge, Ball Bearing	BB1279 - 4.5 x 4.5 - US26D - NRP	Hager
1	Electric Hinge, Ball Bearing	BB1279 - 4.5 x 4.5 - US26D - RETW-QC (12-Wire)	Hager
1	Mortar Box	430	Hager
1	Electrically Unlocked	LX - RX - 8271 - LNL - 77-1141 (WSB) - US26D	Sargent
2	Door Harness	Door Harness with "QC" Connectors to match Door Hardware	McKinney
1	Closer, Overhead Parallel Arm	351 - PS - EN	Sargent
1	Kick Plate	K1050 - 08" x 34" - 18 ga. - US32D	Rockwood
1	Electromagnetic Door Release	998 - TRI-VOLTAGE - 689 (Wall Mounted Magnet)	Rixson
3	Silencer, HM Dr. Frame	608 - Gray	Rockwood
1	Door Contact	Door Contact	By Others
1	Power Supply, Shared	Power Supply (Shared) - See Opening "A102"	-
1	Power Supply	Power Supply by Security Section	By Others
1	Diagrams	Diagrams - Elevation and Riser	By MFR
1	Diagrams	Diagrams - Point To Point	By MFR

Hardware Set 003

3	Hinge, Ball Bearing	BB1279 - 4.5 x 4.5 - US26D - NRP	Hager
1	Lockset, Storeroom/Closet	8204 - LNL - 77-1141 (WSB) - US26D	Sargent
1	Closer, Overhead Parallel Arm	351 - PSH - EN	Sargent
1	Kick Plate	K1050 - 08" x 34" - 18 ga. - US32D	Rockwood
3	Silencer, HM Dr. Frame	608 - Gray	Rockwood

Hardware Set 004

1	Exit Device, Rim	16-1163-8810F X 630 - LHR	Sargent
1	Exit Device, Rim	16-1163-8810F X 630 - RHR	Sargent
1	Cylinder	1163-980-C1-626	Sargent
1	Mullion, Removable_Key	L980A - 628 - w/ All Necessary Mtg Bkts - 90"	Sargent
1	HBO	Hardware, Balance of Existing to Remain.	HBO

Heading Notes
Add new Exit Device to the "LHR" & "RHR" Leaf's
"ALTERNATE # 1"

Hardware Set 005

1	Power Transfer	TSB-C (18" Door Cord)	Securitron
1	Exit Device, Rim_E.LP	16-1163-56-8804F X 630 - RHR	Sargent
1	Exit Device, Rim	16-1163-8810F X 630 - LHR	Sargent
1	Cylinder	1163-980-C1-626	Sargent
1	Mullion, Removable_Key	L980A - 628 - w/ All Necessary Mtg Bkts - 90"	Sargent
1	HBO	Hardware, Balance of Existing to Remain.	HBO
1	Power Supply	BPS-24-1 (24VDC @ 1 Amps), (Provide Necessary Relays)	Securitron

Heading Notes
Add new Electric Latch Retraction Exit Device to the "RHR" Leaf. Interface existing Auto Operator with New Exit Device.
Add new Exit Device to the "LHR" Leaf
"ALTERNATE # 1"

END OF SECTION 08 71 00