Addenda

Date: June 14, 2024

Project: The Village at Discovery Park
Home2 Suites by Hilton

Addenda No.: **Two (2)**

Project No.: 22023

rosemann & ASSOCIATES P.C.

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

Attach the following to the Specifications. These items now become incorporated into the work defined by the Contract Documents effective as of the date of this Addenda.

ITEM NO. 1

Construction Documents-General, Remove the following sheets G-001 dated 05/17/2024 – CITY RESPONSE; and replace with the following sheet G-001 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 2

Construction Documents-Structure, Remove the following sheets S101, S102, S103, S400, S401, S402, S503, S533 & S534 dated 05/17/2024 – CITY RESPONSE; and replace with the following sheets dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 3

Construction Documents-Structure, Remove the following sheets S104, S535, S540 & S542 dated 04/17/2024 – CITY SUBMISSION; and replace with the following sheets S104, S535, S540 & S542 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 4

Construction Documents-Architectural, Remove the following sheets A-103, A-104, A-120, A-410, A-600 & A-601 dated 05/17/2024 – CITY RESPONSE; and replace with the following sheets A-103, A-104, A-120, A-410, A-600 & A-601 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 5

Construction Documents-Architectural, Remove the following sheets A-121, A-122, A-123, A-124, A-202, A-203, A-305, A-306, A-400, A-401, A-402, A-403, A-404, A-405, A-406, A-407, A-408, A-602, A-701, A-702, A-704, A-705, A-710 & A-711 dated 04/17/2024 – CITY SUBMISSION; and replace with the following sheets A-121, A-122, A-123, A-124, A-202, A-203, A-305, A-306, A-400,

A-401, A-402, A-403, A-404, A-405, A-406, A-407, A-408, A-602, A-701, A-702, A-704, A-705, A-710 & A-711 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 6

Construction Documents-MEP, Remove the following sheets MEP4 dated 05/17/2024 – CITY RESPONSE; and replace with the following sheets MEP4 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 7

Construction Documents-Mechanical, Remove the following sheets M101 & M601 dated 05/17/2024 – CITY RESPONSE; and replace with the following sheets M101 & M601 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 8

Construction Documents-Electrical, Remove the following sheets EP101 & EL101 dated 05/17/2024 – CITY RESPONSE; and replace with the following sheets EP101 & EL101 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 9

Construction Documents-Electrical, Remove the following sheets EP102, EP103, EP104, EP401, EL102, EL103, EL401, E501 & E602 dated 04/17/2024 – CITY SUBMISSION; and replace with the following sheets EP102, EP103, EP104, EP401, EL102, EL103, EL401, E501 & E602 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 10

Construction Documents-Plumbing, Remove the following sheets PS101, PW101, PW103, PW104 & P601 dated 05/17/2024 – CITY RESPONSE; and replace with the following sheets PS101, PW101, PW103, PW104 & P601 dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 11

Construction Documents-Plumbing, Remove the following sheets PS103 & PS104 dated 04/17/2024 – CITY SUBMISSION; and replace with the following sheets PS103 & PS104, dated 06/14/2024 – CITY & BRAND RESPONSE.

ITEM NO. 12

Specifications, Remove specification section 087100-1 – Door Hardware dated April 17, 2024 – City Submission; and replace with specification section 087100-1 – Door Hardware dated June 14, 2024 – Addenda 2.

ITEM NO. 13

Specifications, Remove specification section 095113 – Acoustical Panel Ceiling dated April 17, 2024 – City Submission; and replace with specification section 095113 – Acoustical Panel Ceiling dated June 14, 2024 – Addenda 2.

ITEM NO. 14

Specifications, Remove specification section 101423 – Signage – Interior/Exterior dated April 17, 2024 – City Submission; and replace with specification section 101423 – Signage – Interior/Exterior dated June 14, 2024 – Addenda 2.

END OF ADDENDA

PART 1 - GENERAL

1.1 CONDITIONS

A. Conditions of the contract (General and Supplementary Conditions) and Division One General Requirements, govern the work of this section.

B. This section includes all material, and related service necessary to furnish all finish hardware indicated on the drawings, or specified herein.

C. Furnish UL listed hardware for all labeled and 20 min. openings in conformance with the requirements for the class of opening scheduled. Underwriters' requirements shall have precedence over specification where conflicts exist.

D. All work shall be in accordance with all applicable state and local building codes. Code requirements shall have precedence over this specification where conflicts exist.

1.2 WORK INCLUDED

A. This section includes the following:

1. Furnish door hardware (for hollow metal, wood and aluminum doors) specified herein, listed in the hardware schedule, and/or required by the drawings.
2. Cylinders for Aluminum Doors
3. Thresholds and Weather-stripping (Aluminum frame seals to be provided by aluminum door supplier)
4. Electro-Mechanical Devices
5. Access Control components and or systems specified within this section.

B. Where items of hardware are not definitely or correctly specified and is required for the intended service, such omission, error or other discrepancy should be directed to the Architect prior to the bid date for clarification by addendum. Otherwise furnish such items in the type and quantity established by this specification for the appropriate service intended.

1.3 RELATED WORK IN OTHER SECTIONS

A. This section includes coordination with related work in the following sections:

1. Division 6 Section "Finish Carpentry".
2. Division 6 Section "Cabinet Hardware"
3. Division 8 Section "Hollow Metal Doors and Frames".
4. Division 8 Section "Wood Doors"
5. Division 8 Section "Aluminum Entrances and Storefronts"
6. Division 28 Sections "Electrical".

1.4 REFERENCES

A. Publications of agencies and organizations listed below form a part of this specification section to the extent referenced.

1. DHI - Recommended Locations for Builders' Hardware.
2. NFPA 80 - Standards for Fire Doors and Windows.
3. NFPA 101 - Code for Safety to Life from Fire in Buildings and Structures.
4. UL - Building Material Directory.
5. DHI - Door and Hardware Institute
6. WHI - Warnock Hersey
7. BHMA - Builders Hardware Manufacturers Association
8. ANSI – American National Standards Institute
9. IBC 2015 - International Building Code 2015 Edition (as amended by local building code)

1.5 SUBMITTALS

A. Within ten days after award of contract, submit detailed hardware schedule in quantities as required by Division 1 - General Conditions.

B. Schedule format shall be consistent with recommendations for a vertical format as set forth in the Door & Hardware Institute's (DHI) publication "Sequence and Format for the Hardware Schedule". Hardware sets shall be consolidated to group multiple door openings which share similar hardware requirements. Schedule shall include the following information:
   1. Door number, location, size, handing, and rating.
   2. Door and frame material, handing.
   3. Degree of swing.
   4. Manufacturer
   5. Product name and catalog number
   6. Function, type and style
   7. Size and finish of each item
   8. Mounting heights
   9. Explanation of abbreviations, symbols, etc.
   10. Numerical door index, indicating the hardware set/ group number for each door.

C. When universal type door closers are to be provided, the schedule shall indicate the application method to be used for installation at each door: (regular arm, parallel arm, or top jamb).

D. The schedule will be prepared under the direct supervision of a certified Architectural Hardware Consultant (AHC) employed by the hardware distributor. The hardware schedule shall be signed and embossed with the DHI certification seal of the supervising AHC. The supervising AHC shall attend any meetings related to the project when requested by the architect.

E. Check the specified hardware for suitability and adaptability to the details and surrounding conditions.

F. Review drawings from related trades as required to verify compatibility with specified hardware. Indicate unsuitable or in compatible items, and proposed substitutions in the hardware schedule.

G. Provide documentation for all hardware to be furnished on labeled fire doors indicating compliance with positive pressure fire testing UL 10C.

H. Furnish manufacturers' catalog data for each item of hardware in quantities as required by Division 1 - General Conditions.

I. Submit a sample of each type of hardware requested by the architect. Samples shall be of the same finish, style, and function as specified herein. Tag each sample with its permanent location so that it may be used in the final work.

J. Furnish with first submittal, a list of required lead times for all hardware items.

K. After final approved schedule is returned, transmit corrected copies for distribution and field use in quantities as required by Division 1 - General Conditions.

L. Furnish approved hardware schedules, template lists, and pertinent templates as requested by related trades.

M. Furnish necessary diagrams, schematics, voltage and amperage requirements for all electro-mechanical devices or systems as required by related trades. Wiring diagrams shall be opening specific and include both a riser diagram and point to point diagram showing all wiring terminations.

N. After receipt of approved hardware schedule, Hardware supplier shall initiate a meeting including the owner's representative to determine keying requirements. Upon completion of the initial key meeting, hardware supplier shall prepare a proposed key schedule with symbols and abbreviations as set forth in the door and hardware institute's publication "Keying Procedures, Systems, and Nomenclature". Submit copies of owner approved key schedule for review and field use in quantities as required by Division 1 - General Conditions. Wiring diagrams shall be included in final submittals transmitted for distribution and field use.

1.6 QUALITY ASSURANCE

A. Manufacturers and model numbers listed are to establish a standard of function and quality. Similar items by approved manufacturers that are equal in design, function, and quality, may be considered for prior approval of the architect, provided the required data and physical samples are submitted for approval as set forth in Division One General Requirements.

B. Where indicated in this specification, products shall be independently certified by ANSI for compliance with relevant ANSI/BHMA standards A156.1 - A156.36 – Standards for Hardware and Specialties. All products shall meet or exceed certification requirements for the respective grade indicated within this specification. Supplier shall provide evidence of certification when requested by the architect.

C. Obtain each type of hardware (hinges, latch & locksets, exit devices, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.

D. Electrical drawings and electrical specifications are based on the specific electrified hardware components specified in hardware sets. When electronic hardware components other than those indicated in hardware sets are provided, the supplier shall be responsible for all costs incurred by the design team and their consultants to review, and revise electrical drawings and electrical specifications. Supplier shall also be responsible for any additional costs associated with required changes in related equipment, materials, installation, or final hook up to insure the system will operate and function as indicated in the construction documents, including hardware set operational / functional descriptions.

E. All hardware items shall be manufactured no earlier than 6 months prior to delivery to site.

F. Hardware supplier shall be factory trained and certified by the manufacture to provide and support all computer managed locks and system components.

G. Installation of hardware shall be installed or directly supervised and inspected by a skilled installer certified by the manufacturer of locksets, door closers, and exit devices used on the project, or with not less than 3 years' experience in successful completion of projects similar in size and scope.

H. Provide hardware for all labeled fire doors, which complies with positive pressure fire testing UL 10C.

I. Comply with all applicable provisions of the standards referenced within section 1.4 of this specification.

J. Hardware supplier shall participate when reasonably requested to meet with the contractor and or architect to inspect any claim for incorrect or non-functioning materials; following such inspection, the hardware supplier shall provide a written statement documenting the cause and proposed remedy of any unresolved items.

1.7 DELIVERY, STORAGE AND HANDLING

A. Hardware supplier shall deliver hardware to the job site unless otherwise specified.

B. All hardware shall be delivered in manufacturers' original cartons and shall be clearly marked with set and door number.

C. Coordinate with contractor prior to hardware delivery and recommend secure storage and protection against loss and damage at job site.

D. Contractor shall receive all hardware and provide secure and proper protection of all hardware items to avoid delays caused by lost or damaged hardware. Contractor shall report shortages to the Architect and hardware supplier immediately after receipt of material at the job site.

E. Coordinate with related trades under the direction of the contractor for delivery of hardware items necessary for factory installation.

1.8 PRE-INSTALLATION MEETING

A. Schedule a hardware pre-installation meeting on site to review and discuss the installation of continuous hinges, locksets, door closers, exit devices, overhead stops, and electromechanical door hardware.

B. Meeting attendees shall be notified 7 days in advance and shall include: Architect, Contractor, Door Hardware Installers (including low voltage hardware), Manufacturers representatives for above hardware items, and any other effected subcontractors or suppliers.

C. All attendees shall be prepared to distribute installation manuals, hardware schedules, templates, and physical hardware samples.

1.9 WARRANTY

A. All hardware items shall be warranted against defects in material and workmanship as set forth in Division One General Requirements.

B. Repair, replace, or otherwise correct deficient materials and workmanship without additional cost to owner.

PART 2 - PRODUCTS

2.1 FASTENERS

A. All exposed fasteners shall be Phillips head or as otherwise specified, and shall match the finish of the adjacent hardware. All fasteners ex-posed to the weather shall be non-ferrous or stainless steel. Furnish correct fasteners to accommodate surrounding conditions.

B. Coordinate required reinforcements for doors and frames. Seek approval of the architect prior to furnishing through-bolts. Furnish through-bolts as required for materials not readily reinforced.

2.2 BUTT HINGES

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Stanley	Hager	McKinney
1. Standard Weight, Plain Bearing	5PB1	F179	1279	T2714
2. Standard Weight, Ball Bearing	5BB1	BB179	BB1279	TB2714
3. Standard Weight, Ball Bearing, Non-Ferrous	5BB1	FBB191	BB1191	TB2314
4. Heavy Weight, Ball Bearing	5BB1HW	FBB168	BB1168	T4B3786
5. Heavy Weight, Ball Bearing, Non-Ferrous	5BB1HW	FBB199	BB1199	T4B3386

B. Hinges shall be independently certified by ANSI for compliance with ANSI A156.1 (2006). Hinges shall meet or exceed the following ANSI grade requirements as indicated below:

1. Standard Weight, Plain Bearing Hinges: Grade 3
2. Standard Weight, 2 Ball Bearing Hinges: Grade 2
3. Heavy Weight, 4 Ball Bearing Hinges: Grade 1

C. Unless otherwise specified, furnish the following hinge quantities for each door leaf.

1. 3 hinges for doors up to 90 inches.
2. 1 additional hinge for every 30 inch on doors over 90 inches.
3. 4 hinges for Dutch door applications.

D. Unless otherwise specified, top and bottom hinges shall be located as specified in division 8 Section "Hollow Metal Doors and Frames". Intermediate hinges shall be located equidistant from others.

E. Unless otherwise specified, furnish hinge weight and type as follows:

1. Standard weight: plain bearing hinge 5PB1 for interior openings through 36 inches wide without a door closer.
2. Standard weight: ball bearing hinge 5BB1 for interior opening over 36 through 40 inches wide without a door closer, and for interior openings through 40 inches wide with a door closer.
3. Heavyweight: 4 ball bearing hinge 5BB1HW for interior openings over 40 inches wide, and for all vestibule doors.
4. Heavyweight: 4 ball bearing hinge 5BB1HWss for exterior openings unless otherwise listed in groups.

F. Unless otherwise specified, furnish hinges for exterior doors, fabricated from brass, bronze, or stainless steel. Unless otherwise specified, hinges for interior doors may be fabricated from steel.

G. Unless otherwise specified, furnish hinges in the following sizes:

1. 5" x 5" 2-1/4" thick doors
2. 4-1/2" x 4-1/2" 1-3/4" thick doors
3. 3-1/2" x 3-1/2" 1-3/8" thick doors

H. Furnish hinges with sufficient width to accommodate trim and allow for 180-degree swing.

I. Unless otherwise specified, furnish hinges with flat button tips with non-rising pins at interior doors, non-removable loose pins (NRP) at exterior and out-swinging interior doors.

J. Unless otherwise specified, furnish all hinges to template standards.

2.3 CONTINUOUS GEARED HINGES

A. Acceptable manufacturers and respective catalog numbers:

	Ives	HAGER	PEMKO	STANLEY
1. Full Mortise	112HD	780-112HD	FMSLFHD	661HD

A. Hinges shall be independently certified by ANSI for compliance with ANSI A156.26, Grade 1 (2012).

B. Continuous hinges shall be geared type hinge providing full height door support up to 600 lbs.

C. Hinge shall be non-handed with symmetrical template hole pattern and factory drilled.

D. Hinge to be able to carry Warnock Hersey Int. or UL for fire rated doors and frames up to 90 minutes.

E. Provide machine screws for doors which have been reinforced to accept machine screws.

F. Note: Fire label for doors and frames should be placed on the header and top rail of fire rated doors and frames.

2.4 POWER TRANSFERS

A. Acceptable manufacturers and respective catalog numbers:

	Von Duprin	ASSA	ABH
1. Concealed Two Wire	EPT-2	CEPT-10	PT200
2. Concealed Ten Wire	EPT-10	CEPT-10	PT1000

B. Concealed power transfers shall be concealed in the door and frame when the door is closed.

C. Concealed power transfers shall have a steel tube to protect wires from being cut.

D. Concealed power transfers with spring tubes shall be rejected.

E. Concealed power transfers shall be supplied with a mud box to house all terminations.

2.5 FLUSH BOLTS AND DUST PROOF STRIKES

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Door Controls	Hager
1. Dust Proof Strike	DP2	80	280X
2. Auto Flush Bolt (Metal Door)	FB31P	842	292D
3. Auto Flush Bolt (Wood Door)	FB41P	942	291D

B. Unless otherwise specified, provide 12" rods for manual flush bolts for door 7'6" or less, 24" top rods for doors over 7'6" to 8'6".

C. Unless otherwise specified, provide doors over 8'6" with automatic top bolts.

D. Provide automatic flush bolts where required to maintain fire door listing and or egress requirements on pairs of doors.

E. All flush-bolt applications shall be UL listed to be installed with top flush-bolt only. Provide auxiliary fire bolt as required for fire rated openings where less bottom bolt has been specified.

F. Provide all bottom flush bolts with non-locking dust proof strikes.

2.6 EXIT DEVICES

A. Acceptable manufacturers and respective catalog numbers:

		Falcon	Sargent	Detex
1.	Wide Stile, Push Pad	25 Series	GL-43-80 Series	Advantex (Wide Stile)
2.	Wide Stile, Electric Latch Retraction (motor driven)	EL-25 Series	GL-43-56-80 Series	Advante-ER x (Wide Stile)
3.	Narrow Stile, Push Pad	24 Series	GL-43-80 Series	Advantex (Narrow Stile)
4.	Narrow Stile, Electric Latch Retraction (motor driven)	EL-24 Series	GL-43-56-80 Series	AdvanteER-x (Narrow Stile)
5.	Lever Trim	510L / 511L Series	740 ET	"D/DM" Trim
6.	Pull Trim	512 Series	800 MAL	"C" Trim

B. Exit devices shall be independently certified by ANSI for compliance with ANSI A156.3, Grade 1 (2008).

C. Obtain exit devices from a single manufacturer, although several may be indicated as offering products complying with requirements.

D. All exit devices shall be equipped with a sound-dampening feature to reduce touch pad return noise.

E. On full glass doors there shall be no exposed fasteners on the back of the mechanism visible through the glass.

F. All exit devices shall be provided with flush end caps to reduce potential damage from impact.

G. All exit devices shall be provided with dead-locking latch bolts to insure security.

H. All exit devices shall be U.L. listed for accident hazard. Exit device for use on fire doors shall also be U.L. listed for fire exit hardware.

I. Provide optional strikes, special length rods, and adapter plates to accommodate door and frame conditions. Provide narrow style series devices in lieu of wide stile series devices where optional strikes will not accommodate door and frame conditions.

J. Coordinate with related trades to insure adequate clearance and reinforcement is provided in doors and frames. Provide thru bolts as required.

K. Refer to hardware groups for exit device applications utilizing the option of: "less bottom rod and floor strike" (LBR)

L. All exit devices shall be provided with optional trim designs to match other lever and pull designs used on the project.

M. Unless specific exit device dogging options are noted within hardware sets, provide dogging options as follows:

N. Fire Rated devices: Dogging not permitted.

O. Non-Rated Exit Only functions not equipped with outside trim or pull: Less Dogging.

P. Non-Rated Classroom functions: Less Dogging.

Q. Non-Rated devices utilizing electric latch retraction or electrified outside trim: Less Dogging.

R. All Other Non-Rated devices: Cylinder Dogging utilizing interchangeable core cylinders. Cylinder keyway shall match locksets furnished on this project.

S. Provide glass bead kits as required to accommodate door conditions. Screws shall not be visible through full glass doors.

T. Where specified, provide compatible keyed mullions with cylinder for pairs of doors.

U. Provide reinforced crossbars for all traditional style exit devices applied to doors over 36" wide.

2.7 LOCKS AND LATCHES

A. Acceptable manufacturers and respective catalog numbers:

	Schlage	Falcon	Sargent	Corbin	Onity (or architect approved equal
1. Grade 1 Mortise	L Series 07A	MA Series AG	8200 LNB	ML200 0 ASA	****
2. Grade 2 Cylindrical	AL Series JUP	B Series A Z Series A	7 Line LB	CL380 0 AZD	*****
3. Hotel Locks	****	****	****	****	Advance Lock

B. Bored locks shall be independently certified by ANSI for compliance with ANSI A156.2 (2011). Interconnected locks shall be independently certified by ANSI for compliance with ANSI A156.12 (2013). Mortise locks shall be independently certified by ANSI for compliance with ANSI A156.13 (2012).

C. Unless otherwise specified, all locks and latches to have:
1. 2-3/4" Backset
2. 1/2" minimum throw latchbolt
3. 1" throw deadbolt
4. 6 pin cylinders
5. ANSI A115.2 strikes

D. Provide guarded latch bolts for all locksets, and latch bolts with sufficient throw to maintain fire rating of both single and paired door assemblies.

E. Length of strike lip shall be sufficient to clear surrounding trim.

F. Provide wrought boxes for strikes at inactive doors, wood frames, and metal frames without integral mortar covers.

2.8 PULLS, PUSH BARS, PUSH/PULL PLATES

A. Acceptable manufacturers and respective catalog numbers:

	Burns	Hager	Ives
1. Offset Door Pull (1" dia., 10" ctc)	39C	12J	8190-0
2. Offset Pull / Push-Bar (1" dia., 10" ctc Pull)	422 x 39C	159	9190-0
3. Push Plate (.050 6"X 16")	56	30S 6 x 16	8200 6" X 16"
4. Pull Plate (1" dia., 10" ctc - .050" X 4" X 16")	5426C	34J 4 x 16	8303-0 4" X 16"

A. Adjust dimensions of push plates to accommodate stile and rail dimensions, lite and louver cutouts, and adjacent hardware. Where required by adjacent hardware, push plates shall be factory drilled for cylinders or other mortised hardware. All push plates shall be beveled 4 sides and counter sunk.

B. Where possible, provide back-to-back, and concealed mounting for pulls and push bars. Push bar length shall be 3" less door width, or center of stile to center of stile for stile & rail or full glass doors.

2.9 COORDINATORS

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Door Controls	Hager
1. Bar Coordinator	COR x FL	600 x Filler	297D x 297F
2. Mounting Bracket	MB Series	AB, C Series	297 Series

B. Provide coordinators at all pairs of doors having automatic flush bolts and closers on the inactive leaf, and for pairs of doors having vertical rod/mortise exit device combinations with overlapping astragals.

C. Provide appropriate filler bars, closer mounting brackets, carry bars, and special top latch preparations as required by adjacent hardware.

2.10 CLOSERS

A. Acceptable manufacturers and respective catalog numbers:

	LCN	Falcon	Norton	Corbin
1.	4050 /4050 EDA	SC70 FA / SC70 FA HD	R7500 / PR7500	DC8000 A10 /DC8000 A3
2.	1450	SC80	8301	DC6000 /DC6000 A3
3.	1250	SC60	1130 / 1131	51BC

B. Door closers shall be independently certified by ANSI for compliance with ANSI A156.4, Grade 1 2008.

C. Obtain door closers from a single manufacturer, although several may be indicated as offering products complying with requirements.

D. Provide extra heavy duty arm (EDA / HD) when closer is to be installed using parallel arm mounting.

E. Hardware supplier shall coordinate with related trades to insure aluminum frame profiles will accommodate specified door closers.

F. Provide "SPECIAL TEMPLATE - #1728 / #0723" closer arms as required to accommodate aluminum frame head details with "non-structural stops" when closers will be required to utilize parallel arm mounting positions. Frame mounting shoe shall be shortened, and pivot hub height shall be increased to permit frame mounted shoe to be positioned on frame rabbit (rather than the frame stop), and behind the frame stop rather than on top of the frame stop. Contact LCN Door Closers at: 877-671-7011 for pricing and design assistance.

G. Closers shall use high strength cast cylinders, forged main arms, and 1 piece forged steel pistons.

H. Closers shall utilize a stable fluid withstanding temperature range of +120deg F to -30deg F without seasonal adjustment of closer speed to properly close the door. Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with standards UL10C.

I. Unless otherwise specified, all door closers shall have full covers and separate adjusting valves for sweeps, latch, and backcheck.

J. Provide closers for all labeled doors. Provide closer series and type consistent with other closers for similar doors specified elsewhere on the project.

K. Provide closers with adjustable spring power. Size closers to insure exterior and fire rated doors will consistently close and latch doors under existing conditions. Size all other door closers to allow for reduced opening force not to exceed 5 lbs.

L. Install closers on the room side of corridor doors, stair side of stairways and interior side of exterior doors.

M. Closers shall be furnished complete with all mounting brackets and cover plates as required by door and frame conditions, and by adjacent hardware.

N. Door closers shall be provided with a powder coat finish to provide superior protection against the effects of weathering. Powder coat finish shall successfully pass a 100 hour salt spray test.

O. Pressure Relief Valve, PRV, shall not be acceptable.

2.11 KICK PLATES AND MOP PLATES

A. Furnish protective plates as specified in hardware groups.

B. Where specified, provide 10" kick plates, 34" armor plates, and 4" mop plates. Unless otherwise specified, metal protective plates shall be .050" thick; plastic plates shall be 1/8" thick.

C. Protective plates shall be 2" less door width, or 1" less door width at pairs. All protective plates shall be beveled 4 sides and counter sunk. Protection plates over 16" shall not be provided for labeled doors unless specifically approved by door manufacturers listing.

D. Where specified, provide surface mounted door edges. Edges shall butt to protective plates. Provide edges with cutouts as required adjacent hardware.

E. Adjust dimensions of protection plates to accommodate stile and rail dimensions, lite and louver cutouts, and adjacent hardware. Where required by adjacent hardware, protection plates shall be factory drilled for cylinders or other mortised hardware.

2.12 OVERHEAD STOPS

A. Acceptable manufacturers and respective catalog numbers:

	Glynn-Johnson	Rixson	Sargent
1. Heavy Duty Surface Mount	GJ900 Series	9 Series	590
2. Heavy Duty Concealed Mount	GJ100 Series	1 Series	690
3. Medium Duty Surface Mount	GJ450 Series	10 Series	1540
4. Medium Duty Concealed Mount	GJ410	2 Series	1530

B. Unless otherwise specified, furnish GJ900 series overhead stop for hollow metal or 1-3/4" solid core doors equipped with regular arm surface type closers that swing more than 140 degrees before striking a wall, for hollow metal or 1-3/4" solid core doors that open against equipment, casework, sidelights, or other objects that would make wall bumpers inappropriate, and as specified in hardware groups.

C. Furnish sex bolt attachments for wood and mineral core doors unless doors are supplied with proper reinforcing blocks.

D. Provide special stop only ("SE" suffix) overhead stops when used in conjunction with electronic hold open closers.

E. Do not provide holder function for labeled doors.

2.13 WALL STOPS AND HOLDERS

A. Acceptable manufacturers and respective catalog numbers:

		Ives	Hager	Burns
1.	Wrought Convex Wall Bumper	WS406CVX	232W	570
2.	Wrought Concave Wall Bumper	WS406CCV	236W	575
3.	Spring Stop	060	Or equal	Or equal

B. Furnish a stop or holder for all doors. Furnish floor stops or hinge pin stops only where specifically specified.

C. Where wall stops are not applicable, furnish overhead stops.

D. Do not provide holder function for labeled doors.

2.14 MAGNETIC HOLD OPENS

A. Acceptable manufacturers and respective catalog numbers:

	LCN	ABH	Edwards
1. Wall Holder	SEM 7800	2000	1500

B. Magnetic hold opens shall be independently certified by ANSI for compliance with ANSI A156.15, Grade 1 (2006).

C. Magnetic holder's housing and armature shall be constructed of a die cast zinc material.

D. Provide types as listed in groups.

E. Where wall conditions do not permit the armature to reach the magnet, provide extensions.

F. Provide proper voltage and power consumption as required by Division 16.

G. Coordinate electrical requirements and mounting locations with other trades.

2.15 WEATHERSTRIP, GASKETING

A. Acceptable manufacturers and respective catalog numbers:

		Zero	Pemko	NGP	Reese
1.	Weatherstrip	429	2891_PK	700NA	755
2.	Adhesive Gasket	188	S88	5050	797
3.	Sweeps	8192	18061_NB	B606	964
4.	Sweep w/ drip	8198	345_N	C627	354
5.	Drip Cap	142	346	16	R201

B. Weatherstrip and gasketing shall be independently certified by ANSI for compliance with ANSI A156.22 (2005).

C. Where specified in the hardware groups, furnish the above products unless otherwise detailed in groups.

D. Provide weatherstripping all exterior doors and where specified.

E. Provide intumescent and other required edge sealing systems as required by individual fire door listings to comply with positive pressure standards UL 10C.

F. Provide Zero 188 smoke gaskets at all fire rated doors and smoke and draft control assemblies.

G. Provide gasketing for all meeting edges on pairs of fire doors. Gasketing shall be compatible with astragal design provided by door supplier as required for specific fire door listings.

2.16 SOUND SEALS

A. Acceptable manufacturers and respective catalog numbers:

Zero	Pemko	NGP	Reese

1.	Automatic Door Bottom (HD Concealed) (When Sealing Against A Solid Surface)	360	434_RL	423N	430
2.	Automatic Door Bottom (HD Concealed) (When Sealing Against Carpet)	350	434_NBL	683	943

A. Weatherstrip and gasketing shall be independently certified by ANSI for compliance with ANSI A156.22 (2012).

B. Where specified in the hardware groups, furnish the above products unless otherwise detailed in groups.

C. Provide intumescent and other required edge sealing systems as required by individual fire door listings to comply with positive pressure standards UL 10C.

2.17 THRESHOLDS

A. Acceptable manufacturers and respective catalog numbers:

	Zero	Pemko	NGP	Reese
1. Saddle Thresholds	8655	171	425	S205

A. Thresholds shall be independently certified by ANSI for compliance with ANSI A156.21 (2001).

B. Hardware supplier shall verify all finish floor conditions and coordinate proper threshold as required to insure a smooth transition between threshold and interior floor finish.

C. Threshold Types:

1. Unless otherwise specified, provide saddle threshold similar to Zero 8655 for all exterior openings with an interior floor finish less than or equal to 1/4" in height.
2. Unless otherwise specified, provide half saddle threshold similar to Zero 1674 for all exterior openings with an interior floor finish greater than 1/4" in height. Threshold height shall match thickness of interior floor finish.

2.18 POWER SUPPLIES

A. Provide quantities and types as specified in hardware sets. Shared power supplies will not be accepted without prior approval from the owner.

B. All power supplies shall have the following features:

1. 12/24 VDC Output, field selectable.
2. Class 2 Rated power limited output.
3. Universal 120-240 VAC input.
4. Low voltage DC, regulated and filtered.
5. Polarized connector for distribution boards.
6. Fused primary input.
7. AC input and DC output monitoring circuit w/LED indicators.
8. Cover mounted AC Input indication.
9. Tested and certified to meet UL294.
10. NEMA 1 enclosure.
11. Hinged cover w/lock down screws.
12. High voltage protective cover.

C. All power supplies shall incorporate fused distribution boards.

D. All electro-mechanical systems requiring fail safe circuits shall be capable of interfacing with the fire alarm system to cut power to appropriate system components. Unless already provided in another system component, all power supplies utilized in fail safe circuits shall include an integral relay which when connected to the N/C fire alarm contact will cut power to all openings connected to the individual power supply. Power supply, unless otherwise specified, will automatically reset itself when fire alarm relay returns to normal state following a fire alarm.

2.19 ELECTRONIC SECURITY SYSTEM

General:

Install a network ready electronic lock system, complete and including without limitation, the following components:

Lock Technology: RFID (radio-frequency identification), proximity activated, network ready.

Blue Tooth Low Energy (BLE) proximity activated lock is required.

Approved Manufacturers:

Onity, A UTC Building & Industrial Systems Company (800-424-1433)

Provide Auto Deadbolt Option (ADB) at all Guestroom Entry Doors.

a) "Onity HT24 Series RFID with BLE"

b) "Onity HT34 Series RFID with BLE"

c) "Onity Advance Mag RFID with BLE"

d) "Onity Advance RFID with BLE"

e) "Onity Trillium RFID with BLE"

a. "Onity Advance Trillium RFID with BLE"

Guest Room Locking System, Front Desk System

"Onity HT24W"; Onity, A UTC Building & Industrial Systems Company (800-424-1433)

1) No Substitutions

Microprocessor based Front Desk Controller System shall be a PC based network RFIDencoding, handheld unitwith lock integration (LPI) feature. Include the following:

Main PC Base computer, RS232 Cable and support hardware.

Note: Verify with Owner quantity of keycard encoder stations for subparagraph below.

[2] Each Network RFID keycard encoder station and power supply.

1 Each Basic System Items: Manuals, etc.

1 Each System Printer with Serial Cable

Keycards: Generic reusable plastic RFID keycards. Quantity: 2000.

Note: Only Trillium or Advance Trillium are approved Onity RFID locks for compatibility with Hilton's digital key program. 'Onportal' operating system required. Do not purchase 'Onpoint' encoders. Mifare Ultralight C keycards are needed for guests, and Mifare Plus 4k keycards are needed for team members.

Contact onitysalesnam.hilton@carrier.com for additional information

System shall be designed for the following features:

Password access to front desk system

Transaction log of last 4,000 transactions

Simple three-step check in progress

Encoder must encode and validate cards

Encoder must be able to "read a card"

Fail-safe key cards in case of catastrophic power failure

Handheld Unit: Password protected and be able to program up to 50 locks. In addition HHU associated with the Front Desk System. This unit will be used for lock interrogation, diagnostics and programming. Program shall include:

(a) Set time clock
(b) Perform diagnostic check
(c) Interrogate up to last 100 entries: time, date and card identification

Guest Room: Locks shall be opened by a correctly coded card, upon placement of card on RFID reader. Use of a newly issued card shall automatically re-key the lock to void the previous card, and guest cards shall additionally self-cancel by date and time automatically. Perimeter door reader to allow authorized guest cards. Canceled cards must not access perimeter reader.

Audit trail in lock of last 100 entries - time, date, and card identification

Office/passage function by card for offices, entry doors or hospitality suites

Reusable ABA or ISO 14443 standard Mifare RFID cards

Three (3) or Four (4) standard AA batteries or a Four (4) AA battery pack

Non-volatile memory lock will not lose program even if the batteries are removed

Four (4) levels of master/staff cards; 50 masters per level

Staff cards shall be individualized to identify individual card holder via lock audit

All cards are time limited

For Finish and Lever design see hardware sets

Deadbolt override cards for emergency level.

Simultaneous retraction of deadbolt and latchbolt (1" steel dead bolt with security pins and 3/4" anti-friction latch bolt).

Intelligent power shutdown feature. Batteries remain deactivated until keycard is inserted. Master level card key will activate a flashing LED "Low Battery" light warning system 30 days in advance of battery failure.

Mortise lockset to conform to BHMP Grade One, and meet UL Fire Rating A (3-Hour) through C (3/4-Hour).

Exterior door applications shall have special weather protection stand.

ANSI grade entry/egress/door ajar tracking mortise.

1. Intercom System:

Products:

Basis-of-Design Product: Subject to compliance with requirements, provide "LEM-1 DLS System" by Aiphone Corporation.

No Substitutions

Complete intercom system including, but not limited to, master unit, door station, power supply and substations, if applicable.

Master Unit	LEM-1
Door Station Transmitter	L-ED
Power Supply	PT120NS

2.20 FINISHES AND BASE MATERIALS

A. Unless otherwise indicated in the hardware groups or herein, hardware finishes shall be applied over base metals as specified in the following finish schedule:

	HARDWARE ITEM	BHMA FINISH AND BASE MATERIAL
1.	Butt Hinges: Exterior, or Non-Ferrous	630 (US32D - Satin Stainless Steel)
2.	Butt Hinges: Interior	652 (US26D - Satin Chromium)
3.	Continuous Hinges	630 (US32D - Satin Stainless Steel)
4.	Flush Bolts	626 (US26D - Satin Chromium)
5.	Exit Devices	626 (US26D - Satin Chromium)
6.	Locks and Latches	626 (US26D - Satin Chromium)
7.	Pulls and Push Plates/Bars	630 (US32D - Satin Stainless Steel)
8.	Coordinators	600 (Prime painted or mill alum.)
9.	Closers	689 (Powder Coat Aluminum)
10.	Protective Plates	630 (US32D - Satin Stainless Steel)
11.	Overhead Stops	630 (US32D - Satin Stainless Steel)
12.	Wall Stops and Holders	630 (US32D - Satin Stainless Steel)
13.	Thresholds	628 (Mill Aluminum)
14.	Weather-strip, Sweeps Drip Caps (wood and hollow metal doors)	Aluminum Anodized
15.	Weather-strip, Sweeps Drip Caps (aluminum doors)	Match finish of aluminum doors.
16.	Magnetic Holders	Sprayed Aluminum
17.	Miscellaneous	626 (US26D - Satin Chromium)

2.21 KEYING

A. Acceptable manufacturers and respective catalog numbers:

	Schlage	Sargent	Corbin	Falcon
1.	Everest	Signature	Pyramid	A Keyway

B. All locks under this section shall be keyed as directed by the owner to a new Patented Master Key System.

C. Furnish a total of 2 keys per cylinder. Actual cut keys to be determined by owner.

D. Master keys and control keys to be delivered by registered mail to the owner. Change keys shall be delivered in a set up key cabinet. Construction keys shall be delivered to the contractor.

2.22 KEY CABINETS

A. Acceptable manufacturers and respective catalog numbers:

	Lund	Key Control	Telkee
1.	2600 Series	6L Series	CDF Series

B. Furnish 1 each model 2600 series key cabinet with a capacity 1.5 times the number of key sets.

C. Provide one key cabinet with at least one hook for each key set, plus additional hooks for 50% expansion.

D. Furnish key cabinet complete with cam lock, permanent key tags, and change key cards.

E. Hardware supplier shall prepare all key change index records, tag all keys and place permanent file keys in cabinet.

2.23 FIRE DEPARTMENT ACCESS BOX

A. Acceptable manufacturers, subject to compliance with specified requirements, acceptable manufacturers and products are:

1. Dama, S3 (surface-mount)
2. Dama, R3 (recessed mount)
3. Knox-Box, 3200 Series

4. Tru-Lock (recessed mount), Eau Claire, WI

B. Verify manufacturer is acceptable to local Fire Department.

C. Requirements:
   1. Coordinate keying requirements with the authority having jurisdiction.
   2. Verify surface or flush mount box with E/A.
   3. Finish: Corrosion resistant.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to installation of hardware, installer shall examine door frame installation to insure frames have been set square and plumb. Installer shall examine doors, door frames, and adjacent wall, floor, and ceiling for conditions, which would adversely affect proper operation and function of door assemblies. Do not proceed with hardware installation until such deficiencies have been corrected.

3.2 INSTALLATION

A. Before hardware installation, general contractor/construction manager shall coordinate a hardware installation seminar with a 1 week notice to all parties involved. The seminar is to be conducted on the installation of hardware, specifically of locksets, closers, exit devices, continuous hinges and overhead stops. Manufacturer's representative of the above products to present seminar. Seminar to be held at the job site and attended by installers of hardware (including low voltage hardware) for aluminum, hollow metal and wood doors. Training to include use of installation manuals, hardware schedule, templates and physical products samples.

B. Install all hardware in accordance with the approved hardware schedule and manufacturers instructions for installation and adjustment.

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

D. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accord with industry standards.

E. Drill appropriate size pilot holes for all hardware attached to wood doors and frames.

F. Shim doors as required to maintain proper operating clearance between door and frame.

G. Unless otherwise specified, locate all hardware in accordance with the recommended locations for builders hardware for standard doors and frames as published by the Door and Hardware Institute.

H. Use only fasteners supplied by or approved by the manufacturer for each respective item of hardware.

I. Mortise and cut to close tolerance and conceal evidence of cutting in the finished work.

J. Conceal push and pull bar fasteners where possible. Do not install through bolts through push plates.

K. Install hardware on UL labeled openings in accordance with manufacturer's requirements to maintain the label.

L. Apply self-adhesive gasketing on frame stop at head & latch side and on rabbet of frame at hinge side.

M. Install hardware in accordance with supplemental "S" label instructions on all fire rated openings.

N. Install wall stops to contact lever handles or pulls. Do not mount wall stops on casework, or equipment.

O. Where necessary, adjust doors and hardware as required to eliminate binding between strike and latchbolt. Doors should not rattle.

P. Overhead stops used in conjunction with electrified hold open closers shall be templated and installed to coincide with engagement of closer hold open position.

Q. Install door closers on corridor side of lobby doors, room side of corridor doors, and stair side of stairways.

R. Adjust spring power of door closers to the minimum force required to insure exterior and fire rated doors will consistently close and latch doors under existing conditions. Adjust all other door closers to insure opening force does not to exceed 5 lbs.

S. Adjust "sweep", "latch", & "back check" valves on all door closers to properly control door throughout the opening and closing cycle. Adjust total closing speed as required to comply with all applicable state and local building codes.

T. Install "hardware compatible" (bar stock) type weatherstripping continuously for an uninterrupted seal. Adjust templating for parallel arm door closers, exit devices, etc., as required to accommodate weatherstripping.

U. Unless otherwise specified or detailed, install thresholds with the bevel in vertical alignment with the outside door face. Notch and closely fit thresholds to frame profile. Set thresholds in full bed of sealant.

V. Compress sweep during installation as recommended by sweep manufacturer to facilitate a water resistant seal.

W. Deliver to the owner 1 complete set of installation and adjustment instructions, and tools as furnished with the hardware.

3.3 FIELD QUALITY CONTROL

A. After installation has been completed, the hardware supplier and manufacturers representative for locksets, door closers, exit devices, and overhead stops shall check the project and verify compliance with installation instructions, adjustment of all hardware items, and proper application according to the approved hardware schedule. Hardware supplier shall submit a list of all hardware that has not been installed correctly.

B. After installation has been completed, the hardware supplier and manufacturers representative shall meet with the owner to explain the functions, uses, adjustment, and maintenance of each item of hardware. Hardware supplier shall provide the owner with a copy of all wiring diagrams. Wiring diagrams shall be opening specific and include both a riser diagram and point to point diagram showing all wiring terminations.

3.4 ADJUSTMENT AND CLEANING

A. At final completion, and when H.V.A.C. equipment is in operation, installer shall make final adjustments to and verify proper operation of all door closers and other items of hardware. . Lubricate moving parts with type lubrication recommended by the manufacturer.

B. All hardware shall be left clean and in good operation. Hardware found to be disfigured, defective, or inoperative shall be repaired or replaced.

3.5 HARDWARE SCHEDULE

A. The following schedule of hardware groups are intended to describe opening function. The hardware supplier is cautioned to refer to the preamble of this specification for a complete description of all materials and services to be furnished under this section.

Abbreviation	Name
AIP	Aiphone Corporation
BYO	By Others
FAL	Falcon
GLY	Glynn-Johnson Corp
IVE	H.B. Ives
LCN	Lcn Commercial Division
PEM	Pemko Mfg Co
ROC	Rockwood Manufacturing Co.
SAF	Saflok
SCE	Schlage Electronic Security
SCH	Schlage Lock Company
VON	Von Duprin
ZER	Zero International Inc

Legend:
Link to catalog cut sheet
Electrified Opening

Hardware Group No. 01

For use on Door #(s):
002 015 016 133B

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY EPT / 224XY EPT AS REQ'D		628	IVE
1	EA	POWER TRANSFER	EPT10	✓	689	VON
1	EA	ELEC PANIC HARDWARE	RX-MEL-25-R-NL-OP 24 VDC	✓	626	FAL
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	CYLINDER HOUSING	VERIFY TYPE REQ'D		626	FAL
1	EA	FSIC CONST. CORE	23-030-ICX			SCH
1	EA	90 DEG OFFSET PULL	8190HD 10" L		630	IVE
1	EA	SURFACE CLOSER	4050A SCUSH		689	LCN
1	EA	THRESHOLD	655A-MSLA-10		A	ZER
1	EA	RFID READER	PROVIDED BY OTHERS			
1	EA	DOOR CONTACT	679-05	✓	WHT	SCE
1	EA	POWER SUPPLY	PS902 120/240 VAC	✓	LGR	SCE
1	SET	WIRING DIAGRAMS	AS REQUIRED			
1	EA		WEATHERSTRIP BY DOOR/FRAME MANUFACTURER			

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL AT CARD READER WILL UNLOCK ELECTRIFIED LOCKSET AND ALLOW FOR ENTRY. DOOR ALWAYS AVAILABLE FOR FREE EGRESS.

COORDINATE WITH ELECTRICAL AND SECURITY SYSTEM.

Hardware Group No. 02

For use on Door #(s):
051 052B

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5 NRP		630	IVE
1	EA	FIRE EXIT HARDWARE	F-25-R-EO		626	FAL
1	EA	SURFACE CLOSER	4050A SCUSH		689	LCN
1	EA	RAIN DRIP	142AA		AA	ZER
1	EA	GASKETING	429A		A	ZER
1	EA	DOOR SWEEP	39A		A	ZER
1	EA	THRESHOLD	655A-MSLA-10		A	ZER

DOOR IS EXIT ONLY. DOOR ALWAYS AVAILABLE FOR FREE EGRESS.

COORDINATE WITH ELECTRICAL AND SECURITY SYSTEM.

Hardware Group No. 03

For use on Door #(s):
003B

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY EPT / 224XY EPT AS REQ'D		628	IVE
1	EA	POWER TRANSFER	EPT10	✓	689	VON
1	EA	ELEC PANIC HARDWARE	RX-MEL-25-R-NL-OP 24 VDC	✓	626	FAL
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	FSIC CONST. CORE	23-030-ICX			SCH
1	EA	90 DEG OFFSET PULL	8190HD 10" L		630	IVE
1	EA	SURFACE CLOSER	4050A SCUSH		689	LCN
1	EA	RFID READER	PROVIDED BY OTHERS			
1	EA	POWER SUPPLY	PS902 120/240 VAC	✓	LGR	SCE
1	EA		WEATHERSTRIP BY DOOR/FRAME MANUFACTURER			

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL AT CARD READER WILL UNLOCK LOCKSET AND ALLOW FOR ENTRY, DOOR TO BE LOCKED AFTER HOURS. DOOR ALWAYS AVAILABLE FOR FREE EGRESS.

Hardware Group No. 04

For use on Door #(s):
251 252 351 352 451 452

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	F-25-R-L-BE-QUA		626	FAL
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER

Hardware Group No. 05

For use on Door #(s):
052A

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	F-25-R-L-BE-QUA		626	FAL
1	EA	OH STOP	90S		630	GLY
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	GASKETING	188SBK PSA		BK	ZER

Hardware Group No. 06

For use on Door #(s):
017 020 021

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	3PB1 4.5 X 4.5		652	IVE
1	EA	PRIVACY LOCK W/ OUTSIDE INDICATOR	L9040 17A L583-363 OS-OCC		626	SCH
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 07

For use on Door #(s):
023

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	PERMANENT CORE	AS REQUIRED			
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 08

For use on Door #(s):
010

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	PERMANENT CORE	AS REQUIRED			
1	EA	OH STOP	450S J		630	GLY
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 09

For use on Door #(s):
006A 006B

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	CLASSROOM LOCK	AL70TD NEP		626	SCH
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	MAGNET	SEM7850 12V/24V/120V	✓	689	LCN
3	EA	GASKETING	188SBK PSA		BK	ZER

DOORS HELD OPEN BY MAGNETIC HOLD OPENS. UPON ACTIVATION OF FIRE ALARM, DOORS WILL CLOSE AND LATCH.

COORDINATE WITH ELECTRICAL AND FIRE SYSTEMS.

Hardware Group No. 10

For use on Door #(s):
012B

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	PASSAGE SET	AL10S NEP		626	SCH
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	MAGNET	SEM7850 12V/24V/120V	✓	689	LCN
1	EA	GASKETING	188SBK PSA		BK	ZER

DOORS HELD OPEN BY MAGNETIC HOLD OPENS. UPON ACTIVATION OF FIRE ALARM, DOORS WILL CLOSE AND LATCH.

COORDINATE WITH ELECTRICAL AND FIRE SYSTEMS.

Hardware Group No. 11

For use on Door #(s):
133A

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	F-25-R-L-BE-QUA		626	FAL
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	MAGNET	SEM7850 12V/24V/120V	✓	689	LCN
3	EA	GASKETING	188SBK PSA		BK	ZER

DOORS HELD OPEN BY MAGNETIC HOLD OPENS. UPON ACTIVATION OF FIRE ALARM, DOORS WILL CLOSE AND LATCH.

COORDINATE WITH ELECTRICAL AND FIRE SYSTEMS.

Hardware Group No. 12

For use on Door #(s):
018

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP		630	IVE
1	EA	STOREROOM LOCK	AL80TD NEP		626	SCH
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	SURFACE CLOSER	4050A SCUSH		689	LCN
1	EA	RAIN DRIP	142AA		AA	ZER
1	EA	GASKETING	429A		A	ZER
1	EA	DOOR SWEEP	39A		A	ZER
1	EA	THRESHOLD	655A-MSLA-10		A	ZER

Hardware Group No. 13

For use on Door #(s):
026B

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP		630	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	SURFACE CLOSER	4050A SCUSH		689	LCN
1	EA	RAIN DRIP	142AA		AA	ZER
1	EA	GASKETING	429A		A	ZER
1	EA	DOOR SWEEP	39A		A	ZER
1	EA	THRESHOLD	655A-MSLA-10		A	ZER

Hardware Group No. 14

For use on Door #(s):
010B

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	AL80TD NEP		626	SCH
1	EA	PERMANENT CORE	AS REQUIRED			
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 15

For use on Door #(s):
013A 025B

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	AL80TD NEP		626	SCH
1	EA	PERMANENT CORE	AS REQUIRED			
1	EA	OH STOP	450S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 16

For use on Door #(s):
016B 022

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	AL80TD NEP		626	SCH
1	EA	PERMANENT CORE	AS REQUIRED			
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER

Hardware Group No. 17

For use on Door #(s):
001C 014

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	AL80TD NEP		626	SCH
1	EA	PERMANENT CORE	AS REQUIRED			
1	EA	SURFACE CLOSER	1450 CUSH		689	LCN
3	EA	GASKETING	188SBK PSA		BK	ZER

Hardware Group No. 18

For use on Door #(s):
026A

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	PERMANENT CORE	AS REQUIRED			
1	EA	SURFACE CLOSER	1450 CUSH		689	LCN
3	EA	GASKETING	188SBK PSA		BK	ZER

Hardware Group No. 19

For use on Door #(s):
235 335 435

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL AT CARD READER WILL UNLOCK LOCKSET AND ALLOW FOR ENTRY. DOOR ALWAYS AVAILABLE FOR FREE EGRESS.

Hardware Group No. 20

For use on Door #(s):
015A 015B

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	AUTO FLUSH BOLT	FB31T/FB41T		630	IVE
1	EA	STOREROOM LOCK	AL80TD NEP		626	SCH
1	EA	COORDINATOR	COR X FL		628	IVE
2	EA	SURFACE CLOSER	1450 CUSH		689	LCN
1	EA	GASKETING	188SBK PSA		BK	ZER
1	EA	MEETING STILE	8195AA		AA	ZER

Hardware Group No. 21

For use on Door #(s):
024

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	CONT. HINGE	112XY/224XY AS REQ'D		628	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL AT CARD READER WILL UNLOCK LOCKSET AND ALLOW FOR ENTRY, DOOR TO BE LOCKED AFTER HOURS. DOOR ALWAYS AVAILABLE FOR FREE EGRESS.

Hardware Group No. 22

For use on Door #(s):
234 334 434

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1SC 4.5		652	IVE
1	EA	AUTO FLUSH BOLT	FB31T/FB41T		630	IVE
1	EA	PASSAGE SET	AL10S NEP		626	SCH
1	EA	COORDINATOR	COR X FL		628	IVE
2	EA	MOUNTING BRACKET	MB		689	IVE
2	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
2	EA	MAGNET	SEM7850 12V/24V/120V		689	LCN
1	EA	GASKETING	188SBK PSA		BK	ZER
1	EA	MEETING STILE	8195AA		AA	ZER

NOTE: HOLD OPEN TO RELEASE UPON FIRE ALARM OR LOSS OF POWER.

Hardware Group No. 23

For use on Door #(s):
003A

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY/224XY AS REQ'D		628	IVE
1	EA	PUSH/PULL BAR	9190EZHD-12"-NO		630-316	IVE
1	EA	SURFACE CLOSER	4050A RW/PA		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA		WEATHERSTRIP BY DOOR/FRAME MANUFACTURER			

Hardware Group No. 24

For use on Door #(s):
007A 028 029 030

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL AT CARD READER WILL UNLOCK LOCKSET AND ALLOW FOR ENTRY. DOOR ALWAYS AVAILABLE FOR FREE EGRESS.

Hardware Group No. 25

For use on Door #(s):
007B 009

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	OH STOP	90S		630	GLY
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	GASKETING	188SBK PSA		BK	ZER
1	EA	DOOR VIEWER	627 (WITH COVER) @ 009		626	ROC

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL AT CARD READER WILL UNLOCK LOCKSET AND ALLOW FOR ENTRY. DOOR ALWAYS AVAILABLE FOR FREE EGRESS.

Hardware Group No. 26

For use on Door #(s):
012A 013 027

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS		626	B/O
1	EA	PERMANENT CORE	AS REQUIRED		626	SCH
1	EA	SURFACE CLOSER	1450 REG OR PA AS REQ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS @ 013 & 027		630	IVE
1	EA	ARMOR PLATE	8402 36" X 2" LDW B-CS @ 012A		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL AT CARD READER WILL UNLOCK LOCKSET AND ALLOW FOR ENTRY. DOOR ALWAYS AVAILABLE FOR FREE EGRESS.

Hardware Group No. 27

For use on Door #(s):

GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01	GR-01	GR-01	GR-01	GR-01	GR-01
GR-01					

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PRIVACY LATCH	PDL	626	PEM
1	EA	ADVANCE CARDLOCK	PROVIDED BY OTHERS	626	B/O
1	EA	OH STOP	450S	630	GLY
1	EA	SURFACE CLOSER	1250 RW/PA SLIM	689	LCN
1	EA	GASKETING	488SBK PSA	BK	ZER
1	EA	DOOR SWEEP	253A	A	ZER
1	EA	TRANSITION THRESHOLD	EV2325BL	SS	PEM
1	EA	DOOR VIEWER	627 (WITH COVER)	626	ROC

PROVIDE TWO DOOR VIEWERS AT ADA UNITS.
ELECTRICALLY UNLOCKED VIA PRESENTATION OF VALID CREDENTIAL TO CARD READER. SELF-CLOSING. DEADBOLT THROWN BY THUMBTURN INSIDE. INSIDE LEVER RETRACTS DEADBOLT AND LATCHBOLT FOR IMMEDIATE EGRESS.

Hardware Group No. 28 (NOT USED)

Hardware Group No. 29

For use on Door #(s):

GR-03	GR-03	GR-03	GR-03	GR-03	GR-03
GR-03	GR-03	GR-03	GR-03	GR-03	GR-03
GR-03	GR-03	GR-03	GR-03	GR-03	GR-03
GR-03	GR-03				

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	3PB1 4.5 X 4.5		652	IVE
1	EA	PRIVACY LATCH	PDL		626	PEM
1	EA	EXIT LOCK	AL25D NEP		626	SCH
1	EA	DOOR BOLT	B580			SCH
1	EA	OH STOP	450S		630	GLY
1	EA	GASKETING	488SBK PSA		BK	ZER
1	EA	DOOR BOTTOM	360AA6		AA	ZER
1	EA	THRESHOLD	ADJ232V8BL		BLK	PEM

AL25 EXIT LOCK, BLANK PLATE OUTSIDE. INSIDE LEVER ALWAYS UNLOCKED. DEADBOLT THROWN AND RETRACTED BY THUMBTURN INSIDE. NO OUTSIDE TRIM. VERIFY USE OF DEADBOLT WITH LOCAL BUILDING OFFICIAL AND STATE FIRE MARSHALL'S OFFICE.

Hardware Group No. 30

For use on Door #(s):

GR-02 GR-04

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	3PB1 4.5 X 4.5		652	IVE
1	EA	PRIVACY LOCK	AL40S NEP		626	SCH
1	EA	OH STOP	450S J - USE IN LIEU OF WALL STOP IF DOOR SWINGS INTO UNIT ENTRY DOOR		630	GLY
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 31

For use on Door #(s):

GR-05

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	3PB1 4.5 X 4.5		652	IVE
1	EA	PRIVACY LOCK	AL40S NEP		626	SCH
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 32

For use on Door #(s):
001A 001B

Provide each SL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR

NOTE: HARDWARE BY DOOR MANUFACTURE, REFERENCE SPEC SECTION FOR AUTOMATIC SLIDING DOOR SYSTEMS.

Hardware Group No. 33

For use on Door #(s):
025

Provide each PR door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR

CASED OPENING, NO HARDWARE REQUIRED

END OF SECTION

SECTION 09 5113
ACOUSTICAL PANEL CEILINGS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes acoustical panels and exposed suspension systems for ceilings.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of size indicated below.
   1. Acoustical Panel: Set of 6-inch- (150-mm-) square Samples of each type, color, pattern, and texture.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical panels, suspension-system components, and accessories to Project site in original, unopened packages and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical panels, permit them to reach room temperature and a stabilized moisture content.

C. Handle acoustical panels carefully to avoid chipping edges or damaging units in any way.

1.04 FIELD CONDITIONS

A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

PART 1 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   1. Flame-Spread Index: Comply with ASTM E 1264 for Class A materials.
   2. Smoke-Developed Index: 50 or less.

B. Fire-Resistance Ratings: Comply with ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.02 ACOUSTICAL PANELS, GENERAL

A. Source Limitations:
   1. Acoustical Ceiling Panel: Obtain each type from single source from single manufacturer.
   2. Suspension System: Obtain each type from single source from single manufacturer.

B. Glass-Fiber-Based Panels: Made with binder containing no urea formaldehyde.

C. Acoustical Panel Standard: Provide manufacturer's standard panels of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectances unless otherwise indicated.
   1. Mounting Method for Measuring NRC: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches (400 mm) away from test surface according to ASTM E 795.

D. Acoustical Panel Colors and Patterns: Match appearance characteristics indicated for each product type.
   1. Where appearance characteristics of acoustical panels are indicated by referencing pattern designations in ASTM E 1264 and not manufacturers' proprietary product designations, provide products selected by Architect from each manufacturer's full range that comply with requirements indicated for type, pattern, color, light reflectance, acoustical performance, edge detail, and size.

2.03 ACOUSTICAL PANELS

A. Basis-of-Design Product: Subject to compliance with requirements, provide TECTUM Create by Armstrong Ceilings or comparable product.

B. Classification: Provide panels complying with ASTM E 1264 for type, form, and pattern as follows:
   1. As scheduled in the basis of design.

C. Color: see basis of design.

D. LR: Not less than 0.80.

E. NRC: Not less than 0.70.

F. CAC: Not less than 35 .

G. Edge/Joint Detail: Reveal sized to fit flange of exposed suspension-system members.

H. Thickness: 3/4 inch (19 mm).

I. Modular Size: 24 by 48 inches (610 by 1219.2 mm).

2.04 METAL SUSPENSION SYSTEMS, GENERAL

A. Metal Suspension-System Standard: Provide manufacturer's standard direct-hung metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable requirements in ASTM C 635/C 635M.

B. Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

C. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:
   1. Zinc-Coated, Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
   2. Size: Select wire diameter so its stress at three times hanger design load (ASTM C 635/C 635M, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.106-inch- (2.69-mm-) diameter wire.

D. Angle Hangers: Angles with legs not less than 7/8 inch (22 mm) wide; formed with 0.04-inch- (1-mm-) thick, galvanized-steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation; with bolted connections and 5/16-inch- (8-mm-) diameter bolts.

2.05 METAL SUSPENSION SYSTEM

A. Wide-Face, Capped, Double-Web, Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet; prepainted, electrolytically zinc coated, or hot-dip galvanized according to ASTM A 653/A 653M, not less than G30 (Z90) coating designation; with prefinished 15/16-inch- (24-mm-) wide metal caps on flanges.
   1. Structural Classification: Intermediate-duty system.
   2. End Condition of Cross Runners: Override (stepped) or butt-edge type.
   3. Face Design: Flat, flush.
   4. Cap Material: Steel or aluminum cold-rolled sheet.
   5. Cap Finish: Painted white.

2.06 METAL EDGE MOLDINGS AND TRIM

A. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that comply with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension-system runners.
   1. Provide manufacturer's standard edge moldings that fit acoustical panel edge details and suspension systems indicated and that match width and configuration of exposed runners unless otherwise indicated.
   2. For lay-in panels with reveal edge details, provide stepped edge molding that forms reveal of same depth and width as that formed between edge of panel and flange at exposed suspension member.
   3. For circular penetrations of ceiling, provide edge moldings fabricated to diameter required to fit penetration exactly.

PART 1 EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.

B. Examine acoustical panels before installation. Reject acoustical panels that are wet, moisture damaged, or mold damaged.

3.02 PREPARATION

A. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders, and comply with layout shown on reflected ceiling plans.

3.03 INSTALLATION

A. General: Install acoustical panel ceilings to comply with ASTM C 636/C 636M and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."

B. Suspend ceiling hangers from building's structural members and as follows:
   1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
   2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
   3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension-system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
   4. Secure wire hangers to ceiling-suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
   5. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
   6. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers unless otherwise indicated; provide hangers not more than 8 inches (200 mm) from ends of each member.

7. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.

C. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.
   1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
   2. Screw attach moldings to substrate at intervals not more than 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet (3.2 mm in 3.6 m). Miter corners accurately and connect securely.
   3. Do not use exposed fasteners, including pop rivets, on moldings and trim.

D. Install suspension-system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

E. Install acoustical panels with undamaged edges and fit accurately into suspension-system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit.
   1. For reveal-edged panels on suspension-system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges.
   2. Paint cut edges of panel remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer.
   3. Protect lighting fixtures and air ducts to comply with requirements indicated for fire-resistance-rated assembly.

3.04 CLEANING

A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension-system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

SECTION 10 1423
SIGNAGE - INTERIOR/EXTERIOR

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Room-identification signs for building and identification numbers. See basis of design.
   2. Exterior Signage - see basis of design.

1.02 COORDINATION

A. Furnish templates for placement of sign-anchorage devices embedded in permanent construction by other installers.

B. Furnish templates for placement of electrical service embedded in permanent construction by other installers.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For panel signs.
   1. Include fabrication and installation details and attachments to other work.
   2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
   3. Show message list, typestyles, graphic elements, including raised characters and Braille, and layout for each sign at least half size.
   4. Show locations of electrical service connections.
   5. Include diagrams for power, signal, and control wiring.

C. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.
   1. Include representative Samples of available typestyles and graphic symbols.

D. Samples for Verification: For each type of sign assembly showing all components and with the required finishes, in manufacturer's standard size unless otherwise indicated and as follows:
   1. Room-Identification Signs: Full-size Sample.
   2. Variable Component Materials: Full-size Sample of each base material, character (letter, number, and graphic element) in each exposed color and finish not included in Samples above.
   3. Exposed Accessories: Full-size Sample of each accessory type.

E. Sign Schedule: Use same designations indicated in a sign schedule.

1.04 CLOSEOUT SUBMITTALS

A. Maintenance Data: For signs to include in maintenance manuals.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer of products.

1.06 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Deterioration of finishes beyond normal weathering.
      b. Deterioration of embedded graphic image.
      c. Separation or delamination of sheet materials and components.
   2. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Accessibility Standard: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for signs.

2.02 MANUFACTURERS:

A. Harlan Graphics
   1. Contact: Carrie Naber, Email: cnaber@harlangraphics.com, Phone: 513-577-2344
   2. Website: www.harlangraphics.com

B. Hotel Signs
   1. Contact: Sandy Dalton, Email: emailus@hotelsigns.com , Phone: 888-273-8726
   2. Website: www.hotelsigns.com

2.03 ACCESSORIES

A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signage, noncorrosive and compatible with each material joined, and complying with the following:
   1. Use concealed fasteners and anchors unless indicated to be exposed.

B. Adhesives: As recommended by sign manufacturer and with a VOC content of 70 g/L or less for adhesives used inside the weatherproofing system and applied on-site when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Two-Face Tape: Manufacturer's standard high-bond, foam-core tape, 0.045 inch (1.14 mm) thick, with adhesive on both sides.

D. Hook-and-Loop Tape: Manufacturer's standard two-part tape consisting of hooked part on sign back and looped side on mounting surface.

E. Magnetic Tape: Manufacturer's standard magnetic tape with adhesive on one side.

2.04 FABRICATION

A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.
   1. Preassemble signs and assemblies in the shop to greatest extent possible. Disassemble signs and assemblies only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation; apply markings in locations concealed from view after final assembly.
   2. Mill joints to a tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
   3. Comply with AWS for recommended practices in welding and brazing. Provide welds and brazes behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded and brazed connections of flux, and dress exposed and contact surfaces.
   4. Conceal connections if possible; otherwise, locate connections where they are inconspicuous.
   5. Internally brace signs for stability and for securing fasteners.
   6. Provide rebates, lugs, and brackets necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.

2.05 GENERAL FINISH REQUIREMENTS

A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

C. Directional Finishes: Run grain with long dimension of each piece and perpendicular to long dimension of finished trim or border surface unless otherwise indicated.

D. Organic, Anodic, and Chemically Produced Finishes: Apply to formed metal after fabrication but before applying contrasting polished finishes on raised features unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of signage work.

B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.

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

3.02 INSTALLATION

A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
   1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
   2. Install signs so they do not protrude or obstruct according to the accessibility standard.
   3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
   4. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

B. Room-Identification Sign and Other Accessible Signage: Install in locations on walls according to accessibility standard.

C. Mounting Methods:
   1. Concealed Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
      a. Masonry Substrates: Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place sign in position and push until flush to surface, embedding studs in holes. Temporarily support sign in position until adhesive fully sets.
      b. Thin or Hollow Surfaces: Place sign in position and flush to surface, install washers and nuts on studs projecting through opposite side of surface, and tighten.
   2. Projecting Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
      a. Masonry Substrates: Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place spacers on studs, place sign in position, and push until spacers are pinched between sign and substrate, embedding the stud ends in holes. Temporarily support sign in position until adhesive fully sets.
      b. Thin or Hollow Surfaces: Place spacers on studs, place sign in position with spacers pinched between sign and substrate, and install washers and nuts on stud ends projecting through opposite side of surface, and tighten.
   3. Through Fasteners: Drill holes in substrate using predrilled holes in sign as template. Countersink holes in sign if required. Place sign in position and flush to surface. Install through fasteners and tighten.
   4. Brackets: Remove loose debris from substrate surface and install backbar or bracket supports in position so that signage is correctly located and aligned.
   5. Adhesive: Clean bond-breaking materials from substrate surface and remove loose debris. Apply linear beads or spots of adhesive symmetrically to back of sign and of suitable quantity to support weight of sign after cure without slippage. Keep adhesive away from edges to prevent adhesive extrusion as sign is applied and to prevent visibility

of cured adhesive at sign edges. Place sign in position, and push to engage adhesive. Temporarily support sign in position until adhesive fully sets.

6. Two-Face Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position, and push to engage tape adhesive.
7. Hook-and-Loop Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply sign component of two-part tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage; push to engage tape adhesive. Keep tape strips 0.250 inch (6.35 mm) away from edges to prevent visibility at sign edges when sign is initially installed or reinstalled. Apply substrate component of tape to substrate in locations aligning with tape on back of sign; push and rub well to fully engage tape adhesive to substrate.
8. Magnetic Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position.

3.03 ADJUSTING AND CLEANING

A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.

B. Remove temporary protective coverings and strippable films as signs are installed.

C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 101423