SALT LAKE CITY DEPARTMENT OF AIRPORTS

Design and Construction Management Division
3920 West Terminal Drive, Third Floor
P.O. Box 145550
Salt Lake City, UT 84114-5550

GATEWAY SKYBRIGDE DOOR REPLACEMENT
PROJECT NO. 542613
CONTRACT NO. CA-007438
ADDENDUM NO. 1

February 3, 2026

All bidders submitting proposals on the project referenced above shall be governed by the following addendum changes and/or clarifications and the work designated herein shall be part of and included in the contract and contract documents.

The bidder shall acknowledge receipt of this Addendum by indicating so in SECTION 2 – CONTRACTOR'S BID "ADDENDA" on page 5 of the Bid Form.

This addendum package consists of the following:

- Addendum Document, including this cover page, and the Acknowledgement of Receipt, and Bidder's question (4 pages)
- SECTION 08 11 13 Hollow Metal Doors and Frames (14 pages)
- SECTION 08 71 00 Door Hardware Schedule (20 pages)

Robert S. Bailey, P.E.
Assistant Director,
Design and Project Mgmt.

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ACKNOWLEDGEMENT OF RECEIPT

ADDENDUM NO. 1

February 3, 2026

The undersigned hereby acknowledges they have received for and on behalf of the company stated below, one copy of Addendum No. 1 for the Gateway Skybridge Door Replacement.

Please return this form via email to allie.bastian@slc.gov.

_____
COMPANY

_____
BY

_____
DATE

CHANGES TO THE SPECIFICATIONS

Item 1 Section 08 11 13 Hollow Metal Doors and Frames

REMOVE: Section 08 11 13 dated January 04, 2019
REASON: Two of the same sections were added. The older version was removed.

REMOVE: Section 08 11 13 – Hollow Metal Doors and Frames
REPLACE: Section 08 11 13 – Hollow Metal Doors and Frames, Addendum No. 1, with added door slab cut sheets
REASON: The cut sheets were added to the specifications for clarification on a pre-bid question asked.

Item 2 Section 08 71 00 Door Hardware Schedule

ADD: Section 08 71 00 – Door Hardware Schedule, Addendum No. 1, Pages 1-20
REASON: This specification was not previously included. The hardware group was provided in the drawings so the specifications were updated as well.

CHANGES TO THE CONTRACT DRAWINGS

N/A

QUESTIONS SUBMITTED BY BIDDERS

Item 3 BIDDER QUESTIONS AND ANSWERS

QUESTION 1 – There are two spec sections labeled 081113 Hollow Metal Doors & Frames. Can you clarify which specification we are to use?

ANSWER – Use the 081113 Hollow Metal Doors & Frames Section dated July 1, 2025.

QUESTION 2 – Who is the fire alarm provider for the airport and what system is currently installed?

ANSWER – The fire alarm installer and programmer is JCI. It is a Simplex system.

QUESTION 3 – Can you provide an estimated construction budget for bonding purposes?

ANSWER – The estimated construction cost has a range from $500,00 t o $615,000.

QUESTION 4 – In reviewing the bid for the six double egress doors on AR600 and have a few questions. I'm seeing a discrepancy between the door elevation, the hardware set, and the basis of design in the specifications. The spec calls for a Ceco Trio-E hollow metal door, but the elevation appears to depict a Total Door double egress with integrated hardware. As written, the hardware set would not be compatible with the Total Door system. I've included screenshots below. I do not see a section in the specification for Total Doors or double egress doors.

ANSWER – The door hardware description on AR600 is correct. The specification for the Ceco Trio is also correct. See attached cut sheet from SLCIA showing their preferred door. The door system is not a Total Door System.

END OF ADDENDUM NO. 1

PROJECT SPECIFICATION

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

SALT LAKE CITY INTERNATIONAL AIRPORT

REV.	DATE	ISSUANCE
4	01.04.19	Bulletin 26
3	05.05.18	Bulletin 17
2	08.18.16	Bulletin 01
1	05.13.16	Issue for Construction

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes hollow-metal doors and frames, in solid and glazed configurations.

B. See Division 09 Section “High Performance Coatings” for field finish painting.

C. See Division 08 Section “Glazing” for glass in hollow metal doors.

1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according SDI A250.8.

B. Standard Hollow Metal Work: Hollow metal work fabricated according to ANSI/SDI A250.8

1.4 COORDINATION

A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

B. Coordinate installation and activation of the security system with the hollow metal doors and frames as required.

1.5 PREINSTALLATION MEETINGS

A. Preinstallation Meetings: Conduct conferences at Project site.

1.6 SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, core descriptions, temperature-rise ratings, and finishes.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
4. Locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.
6. Details of anchorages, joints, field splices, and connections.
7. Details of accessories.
8. Details of moldings, removable stops, and glazing.

    a. Coordinate glazing frames and stops with glass and glazing requirements.

9. Details of conduit and preparations for power, signal, and control systems.

    a. Electric Hardware and Devices: Indicate routing of electrical conduit for electric hardware and devices.
    b. Security System Components: Indicate all cutouts required to steel door and frame components to accept security system components.

C. Coordination Drawings: Drawings of each opening, including door and frame, drawn to scale and coordinating door hardware. Show elevations of each door design type, showing dimensions, locations of door hardware, and preparations for power, signal, and control systems

D. Sustainable Design Submittals:

1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
2. Product Certificates for Credit MR 5: For products and materials that comply with requirements for regionally manufactured and regionally extracted and manufactured materials. Include statement indicating cost for each regionally manufactured material.
3. Product Data for Credit IEQ 4.2: For paints and coatings, documentation including printed statement of VOC content showing credit compliance.

E. Samples for Initial Selection: For units with factory-applied color finishes.

F. Samples for Verification:

1. Prepare Samples approximately 8 by 10 inches to demonstrate compliance with requirements for quality of materials and construction:

    a. Doors: Show vertical-edge, top, and bottom construction; core construction; and hinge and other applied hardware reinforcement. Include separate section showing glazing if applicable.
    b. Frames: Show profile, corner joint, floor and wall anchors, and silencers. Include separate section showing fixed hollow-metal panels and glazing if applicable.

G. Schedule: Provide a schedule of hollow-metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final Door Hardware Schedule.

H. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.

I. Oversize Construction Certification: For assemblies required to be fire rated and exceeding limitations of labeled assemblies.

1.7 TRADE CONTRACTOR'S QUALITY CONTROL

A. Manufacturer Qualifications: A member of the Steel Door Institute (SDI).

B. Installer Qualifications: An employer of workers trained and approved by manufacturer.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Use only vented plastic.

1. Provide additional protection to prevent damage to factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch- (102-mm-) high wood blocking. Provide minimum 1/4-inch (6-mm) space between each stacked door to permit air circulation.

1.9 PROJECT CONDITIONS

A. Field Measurements: Verify openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish opening dimensions and proceed with fabricating custom steel frames without field measurements. Coordinate wall construction to ensure that actual opening dimensions correspond to established dimensions.

1.10 COORDINATION

A. Coordinate installation of anchorages for custom steel frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following members of the Steel Door Institute (SDI):
   1. Ceco Door Products; an Assa Abloy Group company. (Basis of Design _Trio-E Energy Efficient Steel Stiffened Door)
   2. Pioneer Industries, Inc.
   3. Republic Doors and Frames.
   4. Steelcraft; an Ingersoll-Rand company.

B. Source Limitations: Alternate manufacturers are acceptable but must be reviewed by Owner and Architect prior to approval ~~Obtain hollow metal work from single source from single manufacturer.~~

2.2 REGULATORY REQUIREMENTS

A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

   1. Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.

B. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a testing agency acceptable to authorities having jurisdiction that doors comply with standard construction requirements for tested and labeled fire-protection-rated door assemblies except for size.

2.3 INTERIOR DOORS AND FRAMES

A. Construct interior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Standard-Duty Doors and Frames: SDI A250.8, Level 1. At locations indicated in the Door and Frame Schedule.

   1. Physical Performance: Level B according to SDI A250.4.
   2. Doors:

      a. Type: As indicated in the Door and Frame Schedule.
      b. Thickness: 1-3/4 inches (44.5 mm).

c. Face: Metallic-coated, cold-rolled steel sheet, 18ga. face sheets, minimum thickness of 0.042 inch (0.8 mm) unless otherwise noted on door schedule. ~~Door schedule indicates gage thickness.~~ Manufacturer shall provide closest thickness that is gage equivalent as per NAAMM.
d. Edge Construction: Model 1, Full Flush.
e. Core: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core at manufacturer's discretion.
f. Exposed finish: Prime

3. Frames:
a. Materials: Metallic-coated steel sheet, minimum thickness of .053 (1.3 mm) unless otherwise noted on door schedule. Door schedule indicates gage thickness. Manufacturer shall provide closest thickness that is gage equivalent as per NAAMM.

b. Construction: Full profile welded.

4. Exposed Finish: Prime.

2.4 EXTERIOR HOLLOW-METAL DOORS AND FRAMES Noted as SD-01 and SD-02

A. Construct exterior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Heavy-Duty Doors and Frames: SDI A250.8, Level 2. At locations indicated in the Door and Frame Schedule.
1. Physical Performance: Level B according to SDI A250.4.
2. Doors:
a. Type: As indicated in the Door and Frame Schedule.
b. Thickness: 1-3/4 inches (44.5 mm.)
c. Face: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum A40 (ZF120) coating.
d. Selected doors are .067 (1.7 mm) and .093 (2.3 mm); see door schedule. Provide A40 coating.
e. Edge Construction: Model 1, Full Flush.
f. Core: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core at manufacturer's discretion.
g. Finish: factory prime
3. Frames:
a. Materials: Metallic-coated steel sheet, minimum thickness of 0.067 inch (1.7 mm), with minimum A60 (ZF180) coating.
b. Selected door frames are minimum thickness .093 (2.3mm); see schedule. Provide A60 coating.
c. Construction: Full profile welded.
d. Exposed Finish: Prime.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch (1.0 mm) thick, with corrugated or perforated straps not less than 2 inches (51 mm) wide by 10 inches (254 mm) long; or wire anchors not less than 0.177 inch (4.5 mm) thick.
2. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch (1.0 mm) thick.

B. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch (1.0 mm), and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch (51-mm) height adjustment. Terminate bottom of frames at finish floor surface.

2.6 MATERIALS

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

B. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

C. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

D. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

E. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

F. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

G. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

H. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M. Use only at CMU or concrete walls.

I. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

J. Polystyrene core: standard to the manufacturer for the insulation value required.

K. Glazing: Comply with requirements in Division 08 Section “Interior Glazing."

2.7 FABRICATION

A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Hollow-Metal Doors:

1. Steel-Stiffened Door Cores: Provide minimum thickness 0.026 inch (0.66 mm), steel vertical stiffeners of same material as face sheets extending full-door height, with vertical webs spaced not more than 6 inches (152 mm) apart. ~~Spot weld to face sheets no more than 5 inches (127 mm) o.c.~~ Face sheets to be chemically bonded to all interior surfaces Fill spaces between stiffeners with polyurethane ~~glass- or mineral-fiber~~ insulation.
2. Fire Door Cores: As required to provide fire-protection and temperature-rise ratings indicated.
3. Vertical Edges for Single-Acting Doors: Bevel edges 1/8 inch in 2 inches (3.2 mm in 51 mm).
4. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets.
5. Bottom Edge Closures: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets.
6. Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch (19 mm) beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

C. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

1. Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
3. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.

4. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottoms of jambs.
5. Jamb Anchors: Provide number and spacing of anchors as follows:

    a. Masonry Type: Locate anchors not more than 16 inches (406 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c., to match coursing, and as follows:

        1) Two anchors per jamb up to 60 inches (1524 mm) high.
        2) Three anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
        3) Four anchors per jamb from 90 to 120 inches (2286 to 3048 mm) high.
        4) Four anchors per jamb plus one additional anchor per jamb for each 24 inches (610 mm) or fraction thereof above 120 inches (3048 mm) high.

    b. Stud-Wall Type: Locate anchors not more than 18 inches (457 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c. and as follows:

        1) Three anchors per jamb up to 60 inches (1524 mm) high.
        2) Four anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
        3) Five anchors per jamb from 90 to 96 inches (2286 to 2438 mm) high.
        4) Five anchors per jamb plus one additional anchor per jamb for each 24 inches (610 mm) or fraction thereof above 96 inches (2438 mm) high.

    c. Compression Type: Not less than two anchors in each frame.
    d. Postinstalled Expansion Type: Locate anchors not more than 6 inches (152 mm) from top and bottom of frame. Space anchors not more than 26 inches (660 mm) o.c.

6. Head Anchors: Two anchors per head for frames more than 42 inches (1067 mm) wide and mounted in metal-stud partitions.
7. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.

    a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
    b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

D. Fabricate concealed stiffeners and edge channels from either cold- or hot-rolled steel sheet.

E. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.

1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

3. Coordinate cutouts and placement for all security conduits, connections and placement of security hardware as indicated on the approved shop drawings.

F. Stops and Moldings: Provide stops and moldings around glazed lites and louvers where indicated. Form corners of stops and moldings with butted or mitered hairline joints.

1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow-metal work.
2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
4. Provide loose stops and moldings on inside of hollow-metal work.
5. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.

2.8 STEEL FINISHES

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

B. Grout Guards: Formed from same material as frames, not less than 0.016 inch (0.4 mm) thick.

PART 3 - EXECUTION

3.1 EXAMINATION

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

B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.

C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

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

3.2 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with Drawings and manufacturer's written instructions.

B. Do not remove factory installed shipping spreaders until frame is set and secured in the opening.

C. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 as required by standards specified.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.

    a. At fire-rated openings, install frames according to NFPA 80.
    b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.

2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.

    a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.

3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation inside frames at rated and/or insulated walls. Non-rated or non-insulated walls do not require frames to be filled.
4. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout. Dry pack grout before installing frame.
5. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:

    a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
    c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

D. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Steel Doors:

a. Between Door and Frame Jambs and Head: 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm).
b. Between Edges of Pairs of Doors: 1/8 inch (3.2 mm) to 1/4 inch (6.3 mm) plus or minus 1/32 inch (0.8 mm).
c. At Bottom of Door: 5/8 inch (15.8 mm) plus or minus 1/32 inch (0.8 mm).
d. Between Door Face and Stop: 1/16 inch (1.6 mm) to 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm).

2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
3. Smoke-Control Doors: Install doors and gaskets according to NFPA 105.

E. Glazing: Comply with installation requirements in Section “Interior Glazing" and with hollow-metal manufacturer's written instructions.

1. Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (51 mm) o.c. from each corner.

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow-metal work immediately after installation.

C. Factory Prime Touchup: Clean abraded areas and repair with same material used for factory prime according to manufacturer's written instructions.

D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION

Strong

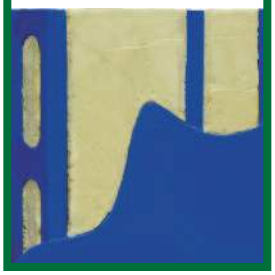
Steel stiffened

Beautiful

Smooth face sheets
No weld marks

Green

Energy efficient
polyurethane foam filled



Trio™ Laminated Core Door

Ideal for Exterior Applications

Strong, Beautiful and Green, best describes Trio™, the innovative new product from Ceco Door. Trio is a fusion of composite and steel stiffened cores to create a new patent pending laminated core design like no other. Trio contains all the aesthetic and insulating benefits of a Ceco Imperial foam door but with the added strength of a steel stiffened laminated core.

Strong
- Steel stiffened laminated core for added strength and durability
- 30% less thermal bow than most polyurethane foam core doors

Beautiful
- No vertical weld marks on door face sheets so aesthetically pleasing gloss paint can be applied
- Many door designs and color options available

Green
- High recycled steel content for LEED points up to 58.8%
- Injected polyurethane foam option for superior insulation and energy efficiency

Energy Efficient

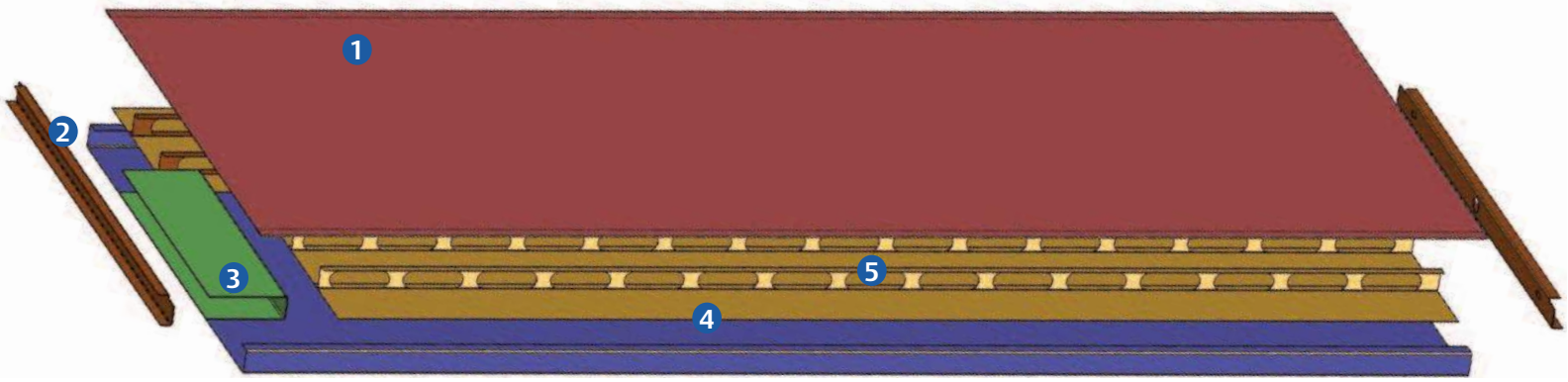
- ADDENDUM 01

Ceco Door
ASSA ABLOY

ASSA ABLOY, the global leader in door opening solutions

Trio Standard Features

1. 18 gage face sheets, 16 and 14 gage optional.
2. 16 gage inverted end channels welded to both face sheets for added strength.
3. 14 gage closer reinforcement.
4. 18 gage face sheet plus 22 gage core plate is effectively 14 gage thick on threat side of the door.
5. 22 gage steel stiffeners spaced every 6" apart and welded to core plate every 5" on center for total surface support.



Design Patent Pending

Other Features and Options

Available Sizes:

- 4'0" x 8'0" maximum single, 8'0" x 8'0" maximum pair

Material:

- Cold rolled or galvanneal steel

Core Options:

- Injected polyurethane foam or fiberglass insulation in between the stiffeners

Edge Construction:

- Mechanically interlocked, hemmed vertical edge seams
- Seamless edges available

Hardware Reinforcements:

- Reinforcing for most lock preps, including concealed hardware
- 7 gage steel hinge reinforcements

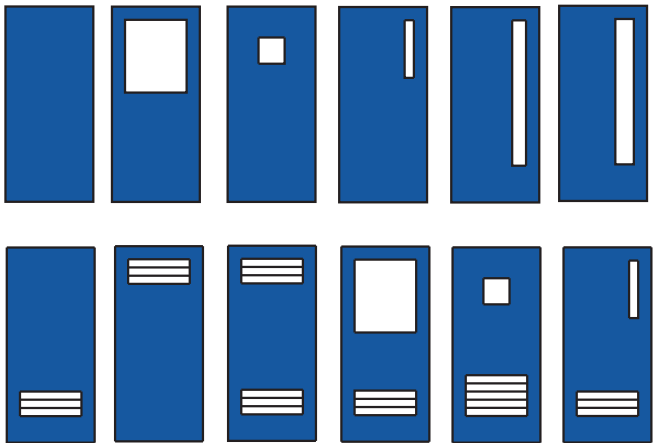
Paint:

- Electrostatically applied prime base coat
- Optional Colorstyle factory pre-finish

Performance

- Thermal Insulation: Polyurethane core values U-Factor 0.09, R-Value 11.0 (ASTM C518), For test data regarding ASTM C1363 and ASTM E 283, please refer to our website under Energy Efficiency. Plus STC 38 rating with fiberglass core.
- Physical endurance testing: Meets ANSI A250.4 performance test, level A (1,000,000 cycles) class 1 stiffness
- Fire rating: Up to and including 3 hours 4'0"x 8'0" singles and 8'0"x 8'0" pairs (no astragal required!) (UL10C) UL & WH agencies

Door Designs



Steel SlimTrim kits or Flush Welded kits*

*Fiberglass core only

Ceco Door
9159 Telecom Drive • Milan, TN 38358
Tel (888) 232-6366 • Fax (888) 232-6462
archhelp@cecodoor.com
www.cecodoor.com

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- ADDENDUM 01

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50109-3/11R

PROJECT SPECIFICATION

SECTION 08 71 00

DOOR HARDWARE SCHEDULE

SALT LAKE CITY INTERNATIONAL AIRPORT

REV.	DATE	ISSUANCE
10	05.24.24	Bulletin 020
09	03.29.24	Bulletin 019
08	01.19.24	Bulletin 018
07	06.30.23	Bulletin 014
06	09.21.22	Bulletin 009
05	05.06.22	Bulletin 007
04	03.18.22	Bulletin 006
03	08.06.21	Bulletin 005
02	05.11.20	Bulletin 002
01	11.17.17	Issue For Construction

SECTION 087100 - DOOR HARDWARE SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Door hardware for wood doors, steel doors, aluminum framed entrance doors, all glass entrance doors, and miscellaneous hardware items.

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

1.2 REFERENCED STANDARDS

A. American National Standards Institute (ANSI):
1. ANSI A117.1 Accessible and Usable Buildings and Facilities

B. Builders Hardware Manufacturers Association (BHMA):
1. ANSI/BHMA A156.1 Butts and Hinges.
2. ANSI/BHMA A156.2 Bored and Preassembled Locks and Latches.
3. ANSI/BHMA A156.3 Exit Devices.
4. ANSI/BHMA A156.4 Door Controls - Closers.
5. ANSI/BHMA A156.5 Auxiliary Locks and Associated Products.
6. ANSI/BHMA A156.6 Architectural Door Trim.
7. ANSI/BHMA A156.7 Template Hinge Dimensions.
8. ANSI/BHMA A156.8 Door Controls - Overhead Stops and Holders.
9. ANSI/BHMA A156.10 Power Operated Pedestrian Doors.
10. ANSI/BHMA A156.13 Mortise Locks and Latches.
11. ANSI/BHMA A156.14 Sliding and Folding Door Hardware.
12. ANSI/BHMA A156.15 Release Devices: Closer Holders, Electromagnetic and Electromechanical.
13. ANSI/BHMA A156.16 Auxiliary Hardware.
14. ANSI/BHMA A156.17 Self-Closing Hinges and Pivots.
15. ANSI/BHMA A156.18 Materials & Finishes.
16. ANSI/BHMA A156.19 Power Assist & Low Energy Power Operated Doors.
17. ANSI/BHMA A156.21 Thresholds.
18. ANSI/BHMA A156.22 Door Gasketing and Edge Seal Systems.
19. ANSI/BHMA A156.23 Electromagnetic Locks.
20. ANSI/BHMA A156.24 Delayed Egress Locks.
21. ANSI/BHMA A156.25 Electrified Locking Devices.
22. ANSI/BHMA A156.26 Continuous Hinges.
23. ANSI/BHMA A156.27 Power and Manual Operated Revolving Pedestrian Doors.
24. ANSI/BHMA A156.28 Recommended Practices for Mechanical Keying Systems.
25. ANSI/BHMA A156.29 Exit Locks, Exit Locks with Exit Alarms, Exit Alarms, Alarms for Exit.
26. ANSI/BHMA A156.30 High Security Cylinders.
27. ANSI/BHMA A156.31 Electrified Strikes and Frame Mounted Activators.
28. ANSI/BHMA A156.115 Hardware Preparation in Steel Doors with Steel Frames.
29. ANSI/BHMA A156.115W Hardware Preparation in Wood Doors with Wood or Steel Frames.

C. Door and Hardware Institute (DHI):
1. ANSI/DHI A115.IG Installation Guide for Doors and Hardware
2. DHI Keying Systems and Nomenclature
3. DHI Sequence and Format for the Hardware Schedule

D. International Building Code (IBC)

E. National Fire Protection Association (NFPA):
1. NFPA 80 Fire Doors and Other Opening Protectives
2. NFPA 252 Fire Tests of Door Assemblies

F. Underwriters Laboratories Inc. (UL):
1. UL 10C Positive Pressure Fire Tests Of Door Assemblies
2. UL 305 Panic Hardware
3. UL 437 Drill and Pick Resistant Key Cylinders
4. UL 1034 Burglary-Resistant Electric Locking Mechanisms

1.3 SUBMITTALS

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

B. Door Hardware Schedule: Vertical format conforming to DHI "Sequence and Format for the Hardware Schedule." Horizontal format schedules will be rejected without review. Format shall be 8-1/2 by 11 inch (A4) page size. Organize Schedule into headings, grouping doors to receive same hardware items, indicating quantity and complete designations of every item required for each door opening. The schedule shall include:
1. Cover sheet indicating name and location of Project; name of Architect; name of Contractor; name, address and phone of hardware supplier, name of hardware consultant preparing the schedule; date of submittal or revised submittal.
2. A list of abbreviations used in schedule.
3. An index of door openings, listed in numerical order, with hardware heading identification cross-referenced to Architect's set identification.
4. Hardware headings shall be listed in numerical order corresponding, as closely as possible, with numerical order of Architect's set numbers.
5. Each hardware heading shall have each door listed in numerical order according to door numbers in the Architect's door schedule, and denoting: location, configuration (single, pair, etc.), type (elevation, etc.), door and frame size(s), door and frame material(s), handing, fire rating, and key set identification.
6. Type, complete model number, style, function, size, hand, and finish of each door hardware item.
7. Manufacturer of each item.
8. Fastenings and other pertinent information.

C. Manufacturer's Technical Product Data / Catalog Cut Sheets: Clearly marked for each hardware item, including installation details, material descriptions, dimensions of individual components and profiles, and finishes. Format shall be 8-1/2 by 11 inch (A4) page size.

D. Wiring Diagrams: No later than 14 days after receipt of reviewed hardware schedule submittal, submit detailed wiring diagrams for power, signaling, monitoring, and control of the access control system electrified hardware; identified by door number(s), and detailed specifically for each type and function of electrified door opening. Format shall be 8-1/2 by 11 inch (A4) page size. Include the following:
   1. System Description of Operation. Include description of component functions including, but not limited to, the following situations: normal secured/unsecured state of door; authorized access; authorized egress; unauthorized access; unauthorized egress; fire alarm and loss of power conditions, and interfaces with other building control systems.
   2. Elevation single-line diagram, showing interface between electrified door hardware and fire alarm, power, access control, and security systems as applicable.
   3. Point-to-point wiring diagram for field-installed wiring.

E. Keying Schedule: In accordance with Owner's final keying instructions for locks. Conform to DHI “Keying Systems and Nomenclature.” Format shall be 8-1/2 by 11 inch (A4) page size.

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

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

H. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

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

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

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

1.5 REGULATORY REQUIREMENTS

A. Fire-Rated Door Assemblies: Provide door hardware for assemblies complying with all applicable regulations, listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction.
   1. At rated doors with panic exit devices, provide devices labeled as “Fire Exit Device.”

B. Comply with all applicable accessibility regulations as set forth in Americans with Disabilities Act (ADA) -- Accessibility Guidelines for Buildings and Facilities (ADAAG) and ANSI A117.1.

C. Latching and locking doors that are hand-activated and that are in a path of travel shall be operable with a single effort by lever-type hardware, panic bars, push-pull activating bars, or other hardware designed to be easy to grasp with one hand, not requiring tight grasping, tight pinching or twisting of the wrist; from egress side shall not require the use of a key, tool, or special knowledge for operation.
   1. All hand-activated hardware shall be mounted between 34 inches (865 mm) and 48 inches (1220 mm) above finished floor.

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

E. Door closing devices shall comply with the following maximum opening-force requirements:
   1. Interior Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door at latch.
   2. Exterior Hinged Doors: 8.5 lbf (37.7 N) applied perpendicular to door at latch.
   3. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
   4. Fire Rated Doors: 5 lbf (22.2 N) applied perpendicular to door at latch. To insure latching, may be increased to the minimum force allowable by the appropriate administrative authority, not to exceed 15 lbf (67 N).

F. Where door closers are provided, adjust sweep speed so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

G. Thresholds shall be maximum 1/2 inch (13 mm) in height above floor and landing on both sides of openings. Bevel raised thresholds with a slope of not more than 1:2.

1.6 DELIVERY, STORAGE, AND HANDLING

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

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

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

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

1.7 COORDINATION

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

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

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

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

E. Pre-Installation Conference: Arrange conference at job site to coordinate door, frame, hardware and electronic security hardware installation; to be attended by the Architect, Owner, Contractor and representative personnel of firms involved in the provision and installation of said items.

F. Keying Conference: Arrange conference with Owner, or designated representative, and Manufacturer's/ Hardware Supplier's Architectural Hardware Consultant to establish keying requirements. Incorporate keying conference decisions into Keying Schedule.

1.8 WARRANTY

A. In addition to, and not precluding, other warranty requirements in the Contract Documents, the following hardware items shall carry extended minimum warranties as indicated:
1. Hinges: Ten years from date of Substantial Completion.
2. Locks: Five years from date of Substantial Completion.
3. Exit Devices: Three years from date of Substantial Completion.
4. Door Closers: Ten years from date of Substantial Completion.

1.9 MAINTENANCE

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

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with requirements herein, provide products by one of the following manufacturers for each type of hardware:
1. Butt Hinges: Bommer (BOM), Hager (HAG), Ives (IVE), McKinney (MCK), Stanley (STA), or approved equal.
2. Continuous Geared Hinges: Hager (HAG). No substitutions allowed.
3. Pivots: Dorma (DOR), Ives (IVE), Rixson (RIX), or approved equal.
4. Cylinders and Keying: Corbin Cylinders (COR); No Substitution Allowed; Kaba Peaks Preferred Cores (KAB); No Substitution Allowed.
5. Locksets and Latchsets: Corbin CLX3300 Series (COR), No Substitution Allowed.
6. Keypad Locksets: Kaba E-PLEX E5031-C-WL-626-41 (KAB); No Substitution Allowed.
7. Exit Devices: ASSA Abloy Accentra 2100/7000 Series (AAA); No Substitution Allowed.
8. Monitored Dummy Pushbars: Rofu 9500 Series (ROF) No substitutions.
9. Electric Strikes: Adams Rite (ADR), Hanchett Entry Systems (HES), Rutherford Controls Intl. (RCI), Security Door Controls (SDC), No substitutions allowed.
10. Electromagnetic Lock Assemblies – NON-DELAYED EGRESS: SDC (SDC) No substitutions.
0
11. Electrical Power Transfers: Adams Rite (ADR), Keedex (KEE), Rixson (RIX), Rofu (ROF), Securitron (SEC), Security Door Controls (SDC), Von Duprin (VON), or approved equal.

12. Mechanical Switch Bar : SDC (SDC) MSB550 Series, No substitutions.
13. SDC (SDC) Delayed egress exit device Exit Check S6000-101 x EKEOZU series. No substitutions.Door Position Switches: George Risk Industries (GRI), G.E. Security (GES), Securitron (SEC), Security Door Controls (SDC), or approved equal.
14. Power Supplies for Electrified Hardware: Architectural Control Systems (ACS), Command Access Technologies (CAT), Securitron (SEC), Security Door Controls (SDC), Von Duprin (VON), ASSA Abloy Accentra (AAA), or approved equal.
15. Flush Bolts and Door Coordinators: Door Controls International (DCI), Ives (IVE), Rockwood (ROC), Trimco (TRI) , or approved equal.
16. Surface Door Closers: Dorma (DOR) 8900 Series, LCN (LCN) 4000 Series, Norton (NOR) 7500 Series, Sargent (SAR) 351 Series, Stanley (STA) D4550 Series, or approved equal.
17. Overhead Concealed Door Closers: Dorma (DOR), International (INT), LCN (LCN), Norton (NOR), Rixson (RIX), or approved equal.
18. Floor Closers: Dorma (DOR), Rixson (RIX), or approved equal.
19. Overhead Holders And Stops: Architectural Builders Hardware (ABH), Glynn-Johnson (GLY), Rixson (RIX), Rockwood (ROC), or approved equal.
20. Overhead Surface and Concealed Automatic / Low Energy Door Operators: Besam (BSM), Horton (HOR), Stanley (STA), or approved equal.
21. Door Operator Accessories: BEA (BEA), Besam (BSM), Larco (LAR), Sedco (SED), Wikk (WIK), or equal.
22. Electromagnetic Holder / Releases: Architectural Builders Hardware (ABH), LCN (LCN), Rixson (RIX), Security Door Controls (SDC), or approved equal.
23. Architectural Door Trim: Anemostat (ANE), Ives (IVE), Markar (MAR), Rockwood (ROC), Trimco (TRI), or approved equal.
24. Auxiliary Hardware: Ives (IVE), Rockwood (ROC), Trimco (TRI), or approved equal.
25. Door Bottoms, Metal Thresholds, Weatherstripping and Gaskets: KN Crowder (KNC), National Guard Products (NGP), Pemko (PEM), Reese (RSE), Zero (ZER), or approved equal.
26. Folding and Sliding Door Hardware: Hawa (HAW), Hafele (HAF), KN Crowder (KNC), Pemko (PEM), or approved equal.
27. Key Storage System: Lund (LUN), MMF Industries (MMF), Telkee (TEL), or approved equal.
28. Gate Hinges: Guardian/Gorilla (GAR), or approved equal.
29. Gate Hardware: Henderson (HEN), Division of Pemko, an ASSA ABLOY Brand Company; or approved equal.

2.2 MATERIALS AND FABRICATION

A. Requirements for grade, materials, size, and other distinctive qualities of each type of door hardware are indicated herein. Furnish items in types, sizes or weight, in accordance with manufacturer's standards, appropriate for the conditions of installation and service, unless otherwise indicated.

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

2.3 FASTENERS

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

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

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

2.4 BUTT HINGES

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

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

C. Base Metal shall be steel plated for fire-rated doors; bronze or stainless steel for exterior outswinging doors; bronze or plated steel elsewhere as scheduled.

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

E. Unless otherwise indicated, provide hinges in heights as follows:
1. Doors to 36 inches wide: 4-1/2 inches.
2. Doors over 36 inches to 48 inches wide: 5 inches.
3. Doors over 48 inches wide: 6 inches.

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

G. Number of hinges per leaf shall be as follows:
1. Doors to 60 inches in height: 2 hinges.
2. Doors over 60 to 90 inches in height: 3 hinges.
3. Doors over 90 to 120 inches in height: 4 hinges.
4. For doors over 120 inches in height: 4 hinges plus 1 hinge for every 30 inches, or fraction thereof, door height greater than 120 inches.

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

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

J. Electrified hinges:
1. Coordinate number and size of wires for electrified hardware served.
2. Provide junction box/ mortar shield for each electrified hinge.

2.5 CONTINUOUS PINNED HINGES

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

B. Type: Pin and barrel construction; 1/4 inch diameter stainless steel pin; split nylon or stainless steel bearings. Fabricated from 14 gauge cold-rolled steel or 304 stainless steel as indicated.

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

D. Hole pattern for fasteners shall be symmetrical and located to template dimensions.

E. Provide continuous hinges at doors 36” in width and greater and 90” in height and greater.

2.6 CONTINUOUS GEARED HINGES

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

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

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

D. Unless otherwise noted, provide factory finished to match door and frame finish.

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

F. Provide continuous hinges at doors 36” in width and greater and 90” in height and greater.

2.7 PIVOT HINGES

A. Pivot hinges shall meet ANSI/BHMA A156.4 Grade 1 requirements.

B. Pivots shall be constructed of steel, cast or forged bronze, or stainless steel as indicated by BHMA finish specified.

C. Where offset pivots are used, provide intermediate pivots as follows:
1. Doors over 60 to 90 inches in height provide one intermediate pivot.
2. For doors over 90 inches in height provide one additional intermediate pivot for every 30 inches, or fraction thereof.

D. Electrified pivots:
1. Coordinate number and size of wires for electrified hardware served.
2. Provide junction box/ mortar shield for each electrified pivot.

2.8 CYLINDERS, KEYING AND KEY STORAGE

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

B. Keying system shall meet ANSI/BHMA A156.28 requirements.

C. Key Cylinders: Utility patented, restricted complying with guidelines in ANSI/BHMA A156.30.
1. Existing System:
   a. Provide LFIC to match Owner’s existing Kaba Peaks system.
   b. Provide 10% additional cores for Attic Stock

c. Cores to be uncombinated
d. Provide pinning kits sufficient to pin all cores + 10% Attic Stock.
e. Keying and Installation by Owner.
f. No substitutes.
g. Provide 3 keys per core + 10% Attic Stock.
h. All keys and cores to be ordered from Robert I Merrill, Attn.: David Olivia 801-262-2700.

D. Temporary cores for the construction period as needed are to be provided by Contractor, keyed by the Contractor and installed by the Contractor. Cores to match Owner's existing system. Owner shall remove cores and install permanent cores.

E. All cylinders shall be interchangeable core type.

F. Cylinders at exit devices shall be interchangeable core type. Provide mortise or rim type cylinders as required by device for all exit devices having key locking function.

G. Cylinders shall be High-Security type, listed and labeled as complying with drill and pick-resistant testing requirements of UL 437.
1. Cylinders at Customs and Border Patrol (CBP) **HW** 500 series to be Medeco UL 437 certified with Dealer Key Control. Contact Nick Mesker nick.mesker@slcgov.com 801.531.4606 for dealer coordination.
2. Cylinders at Transportation Safety Administration (TSA) **HW** 600 series to be Medeco UL 437 certified with Dealer Key Control. Contact Nick Mesker nick.mesker@slcgov.com 801.531.4606 for dealer coordination.

H. Keying shall be provided to integrate with existing system as directed.
1. Coordinate keying requirements with Salt Lake City TRP: **HW** 01 – **HW** 499.
2. Coordinate keying requirements with Customs Border Patrol (CBP): **HW** 500 series.
3. Coordinate keying requirements with Transportation Safety Administration (TSA): **HW** 600 series.

I. Keys shall be supplied as follows:
1. Locks: 3 change keys each lock.
2. Interchangeable Core control keys: 2 total.
3. Construction keys: 10 total.
4. Blank keys: 100 total.

J. Provide Key Storage / Control System conforming to ANSI/BHMA A156.5, including key-holding hooks, labels, two sets of key tags with self-locking key holders, key-gathering envelopes, and temporary and permanent markers. Contain system in metal cabinet with baked-enamel finish and key locking door.
1. Key tags and holders shall be inscribed with key-change number and key-control to conform with approved hardware schedule for identification.
2. Key Storage System shall be large enough to accommodate 150 percent of the facility.

K. Subject to compliance with requirements, provide emergency entrance key vault(s); Knox Company 3200 Series, or equal.
1. Finish Color – Black, Dark Bronze or Aluminum as selected by Architect.
2. Where indicated provide security key override switches for electrically activated openings.

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

2.9 LOCKSETS AND LATCHSETS

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

B. Cylindrical Locks and Latches shall meet ANSI/BHMA A156.2 Series 4000 Grade 1 requirements.

C. Auxiliary Locks shall meet ANSI/BHMA A156.5 requirements.

D. Electrified Locks shall also meet ANSI/BHMA A156.25 requirements.

E. Operating trim shall be lever type: Corbin NZD, ASSA Abloy Accentra AU.

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

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

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

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

I. Electromechanical locksets utilized at fire rated openings shall be listed and labeled by a testing agency acceptable to authorities having jurisdiction, and shall maintain door in positive latched position when power is off.

J. Mechanical Combination Locks: Comply with UL Standard 768 Group 1.

K. Deadbolts in Customs and Border Patrol area, **HW** 500 series and Transportation Safety Administration area **HW** 600 series; Medeco Maxum; No Substitutions Allowed.

2.10 EXIT DEVICES

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

B. Electromechanical exit devices shall also meet ANSI/BHMA A156.25 requirements.

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

D. Fire Exit Devices: Complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252.

E. Outside Trim: Design, material and finish to match locksets, unless otherwise indicated.

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

G. Fire Exit Removable Mullions: Where indicated, provide removable mullions for use with fire exit devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252. Mullions shall be used only with exit devices for which they have been tested.

H. Electromechanical exit devices utilized at fire rated openings shall be listed and labeled by a testing agency acceptable to authorities having jurisdiction, and shall maintain door(s) in positive latched position when power is off.

2.11 ELECTRIC STRIKES

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

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

2.12 ELECTROMAGNETIC LOCK ASSEMBLIES

A. Electromagnetic lock assemblies shall meet ANSI/BHMA A156.23 Grade 1 requirements.

B. Locks shall be field-selectable for 12 or 24 VDC operation, and provide 1,500 lbf minimum holding force for direct pull applications.

C. Wiring connections shall be via on-board screw terminal connections. Lock shall have built-in circuit/ surge and voltage kickback suppression protection.

D. Where indicated, locks shall be equipped with concealed sensors to monitor magnetic bond status and door position status.

E. Locks used on fire rated doors shall be listed and labeled for such use by a testing agency acceptable to authorities having jurisdiction.

2.13 ELECTRICAL POWER TRANSFERS

A. Electrical power transfers shall be capable of transferring sufficient electrical current to properly operate electrified hardware in door.

B. Electrical power transfers used on fire rated doors shall be listed and labeled by a testing agency acceptable to authorities having jurisdiction.

2.14 DOOR POSITION SWITCHES

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

2.15 POWER SUPPLIES FOR ELECTRIFIED HARDWARE

A. Power supplies shall be UL listed for applicable use; shall be housed in an approved enclosure; and provide both Class 1 and Class 2 outputs.

B. Output shall be filtered and regulated. Relay, timer, and logic modules shall be provided as required for interface to related security components; and shall be assembled, connected, and fully contained within the power supply enclosure. A fire alarm emergency release input terminal shall be provided for connection to fire / life safety system at fire-rated openings.

C. Power supplies shall provide sufficient power capacity for the worst-case condition that could occur in the operating environment without any loss or degradation of operation.

2.16 FLUSH BOLTS

A. Automatic flush bolts shall meet ANSI/BHMA A156.3

B. Manual flush bolts shall meet BHMA A156.16 requirements.
1. Bottom bolt shall have 12 inch long operating rod. Top bolt operating rod shall be determined by door height, assuring the operator is located less than 72 inches above the floor.
2. Manual Flush Bolts are not to be utilized except where a pair of non-rated doors serving a room not normally occupied is needed for the movement of equipment.

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

2.17 DOOR COORDINATORS

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

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

C. Provide carry bar at each pair of doors equipped with an overlapping astragal, except when automatic or self-latching bolts are used.

2.18 SURFACE DOOR CLOSERS

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

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

C. Provide closers size adjusted in accordance with ANSI/BHMA A156.4; sized as required to insure closing and latching of doors.

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

2.19 OVERHEAD CONCEALED DOOR CLOSERS

A. Overhead Concealed Door Closers shall meet ANSI/BHMA A156.4 requirements.

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

C. Provide closers size adjusted in accordance with ANSI/BHMA A156.4; sized as required to insure closing and latching of doors.

2.20 FLOOR CLOSERS

A. Floor Closers shall meet ANSI/BHMA A156.4, Grade 1 requirements.

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

C. Floor closers shall have cement boxes.

D. Pivots used on doors with floor closers shall be of the same manufacturer as the floor closers.

E. Provide flush floor cover plates for floor closers unless thresholds are indicated. Match door hardware finish, unless otherwise indicated.

F. Provide recessed floor plates to accommodate insert of floor finish material for floor closers, unless thresholds are indicated. Provide extended closer spindle to accommodate thickness of floor finish.

2.21 OVERHEAD HOLDERS AND STOPS

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

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

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

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

2.22 AUTOMATIC AND LOW ENERGY DOOR OPERATORS

A. Surface Applied Operator: The operator header shall be mounted to the surface of the door frame or wall. Connecting hardware shall be a double arm arrangement that can either push the door or pull the door open to suit the job condition. Provide parallel arm when operator mounting is on the pull side, and adjacent wall is within 4 inches of the door frame. Provide fire labeled unit for use at rated doors.

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

C. Automatic Door Operators shall meet ANSI/BHMA A156.10 requirements.
   1. Provide guard rails and safety sensors to meet A156.10 requirements and all applicable codes.

2. Power operation shall be activated by push plate switch, motion detector, or other actuators as indicated.

D. Low Energy Door Operators shall meet ANSI/BHMA A156.19 requirements.
1. Provide safety sensors and features to meet A156.19 requirements and all applicable codes.
2. Door shall not open to back check faster than 3 seconds, and shall require no more than 15 lbf applied 1 inch from latch edge to stop door movement.
3. Door shall remain in fully open position for no less than 5 seconds.
4. Door shall close from 90 degrees to 10 degrees no faster than 3 seconds, and 10 degrees to fully close no faster than 1-1/2 seconds.
5. Power operation shall be activated by push plate switch, or other actuators as indicated.

E. Provide UL labeled operators at fire-rated openings. Provide power-disconnect interface to Fire Alarm; doors to be self-closing and latching, in full compliance with Code requirements for "Fire Assembly, Self-Closing" doors.

F. Provide UL labeled operators at smoke barrier openings. Provide hold-open circuitry and power-disconnect interface to Fire Alarm; doors to be automatic closing and latching, in full compliance with Code requirements for "Fire Assembly, Automatic Closing" doors.

2.23 ELECTROMAGNETIC HOLDER / RELEASES

A. Electromagnetic holders shall meet ANSI/BHMA A156.15 requirements.

B. Size and configuration shall provide degree of swing and hold open position as indicated on the drawings.

2.24 ARCHITECTURAL DOOR TRIM

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

B. Door Protection Plates: Kick, mop, and armor plates shall be 0.050 inch thick brass, bronze, or stainless steel depending on finish indicated. Plates shall have beveled edges, and shall be provided with countersunk mounting holes and No. 6 oval head screw fasteners. Width of kick and armor plates shall be 2 inches less than door width for single doors and 1 inch less for pairs of doors. Width of mop plates shall be 1 inch less than door width. Unless otherwise indicated, height shall be 10 inches for kick and mop plates, and 34 inches for armor plates.
1. At fire rated doors, provide UL labeled protection plates in sizes, types, fasteners and materials only in accordance with door manufacturer's listings for respective ratings.

C. Door Edging and Astragals: Fabricated from 18 gauge cold-rolled steel or 304 stainless steel as indicated; factory prepared for all mortise hardware; countersunk screw mounting.
1. At fire rated doors, provide UL labeled edge protection in sizes, types, fasteners and materials only in accordance with door manufacturer's listings for respective ratings.

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

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

2.25 AUXILIARY HARDWARE

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

B. Door Stops: Stops shall be of heavy duty construction, provided in finish indicated. Wall bumpers shall have no visible fasteners. Floor stops shall be of height required by floor conditions. Unless otherwise indicated, provide stops at all doors as follows:
   1. Detention areas: At exterior and interior doors provide heavy duty wall bumper Rockwood 467, Trimco 1209W, or approved equal. Where it is not possible to place a wall stop, provide heavy duty floor stop Rockwood 462, Trimco 1209, or approved equal. Where it is not possible to properly place a wall or floor type stop, provide heavy duty concealed overhead type stop, or when door closer is indicated, provide stop function in closer mechanism.
   2. All other areas: At exterior, outswinging doors provide heavy duty floor stop Rockwood, 481H, Trimco 1214H, or approved equal, unless stop function is indicated in door closer. At all other doors provide floor stop Rockwood 441CU, Trimco 1211, wall bumper Rockwood 409, Trimco 1270CV, or approved equal. Where it is not possible to properly place a floor or wall type stop, provide heavy duty concealed overhead type stop, or when door closer is indicated, provide heavy-duty dead stop function in closer.

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

2.26 DOOR BOTTOMS

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

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

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

2.27 METAL THRESHOLDS

A. Thresholds shall meet ANSI/BHMA A156.21 requirements.

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

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

D. Thresholds at floor closers shall have mitered returns and removable access portion for floor closer maintenance.

E. Provide thresholds at doors where indicated. Refer to Door Schedule and Drawing details for type and configuration required. Additionally, where combustible flooring passes under doors, provide fire door thresholds in accordance with applicable regulatory requirements.

2.28 METAL HOUSED TYPE WEATHERSTRIP

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

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

2.29 GASKETING

A. Gasketing shall meet ANSI/BHMA A156.22 requirements.

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

2.30 FOLDING AND SLIDING DOOR HARDWARE

A. Folding and Sliding Door Hardware shall meet ANSI/BHMA A156.14 requirements.

B. Provide complete sets of type indicated, consisting of overhead track, hangers, supports, track stoppers, floor guides, and other required accessories.

2.31 ATTIC STOCK

A. Maintenance Material: See Division 01 Section 017846 “Extra Stock Materials” for requirements related to this section.

2.32 FINISHES

A. Provide hardware in finishes as indicated.

B. Unless otherwise indicated, finishes shall conform to those identified in ANSI/BHMA A156.18. Comply with base material and finish requirements indicated by the following:
1. BHMA 600: Primed for painting, steel base metal.
2. BHMA 626: Satin chromium plated over nickel, brass or bronze base metal.
3. BHMA 627: Satin aluminum, clear coated, aluminum base metal.
4. BHMA 628: Satin aluminum, clear anodized, aluminum base metal.
5. BHMA 630: Satin stainless steel, stainless-steel base metal.
6. BHMA 652: Satin chromium plated over nickel, steel base metal.
7. BHMA 689: Aluminum painted, any base material.
8. BHMA 719: Mill finish aluminum, uncoated, aluminum base metal.

PART 3 – EXECUTION

3.1 EXAMINATION

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

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

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

3.2 INSTALLATION

A. Steel doors shall be factory prepared for hardware per ANSI/BHMA A156.115.

B. Wood doors shall be factory prepared for hardware per ANSI/BHMA A156.115W.

C. Installation shall be in accordance with DHI A115.IG.

D. Hardware for fire door assemblies shall be installed conforming with NFPA 80, and all other applicable building codes and regulations.

E. Hardware for smoke door assemblies shall be installed conforming with NFPA 105, and all other applicable building codes and regulations.

F. Install each door hardware item according to manufacturer's printed instructions, utilizing templates and proper fasteners provided by manufacturer.

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

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

3.3 DOOR CLOSING DEVICES

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

B. Surface closers on doors opening into stairs or stair vestibules shall be mounted on the stair or stair vestibule side of the door.

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

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

E. Cutting of gasketing or weatherstripping to accommodate closer installation is not acceptable.

3.4 PUSH-PULL PLATES

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

3.5 KEY CONTROL STORAGE SYSTEMS

A. Key control storage system shall be installed where directed by the Architect.

B. Place keys on markers and hooks in key control system cabinet, as determined by final keying schedule.

3.6 THRESHOLDS

A. Thresholds shall be secured with a minimum of 3 fasteners per single door width and 6 fasteners per double door width with a maximum spacing of 12 inches; with a minimum of 1 inch thread engagement into the floor or anchoring device used. Thresholds over 6 inches in width shall be secured with a double row of fasteners.

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

3.7 ASTRAGALS

A. Unless otherwise indicated install overlapping astragals as follows:
1. At out-swing pairs of doors, mount astragal on active leaf.
2. At in-swing pairs of doors, mount astragal on inactive leaf.

3.8 HARDWARE LOCATIONS

A. Unless otherwise indicated install hardware as follows:
1. Hinges and Strikes Standard Ceco Locations
2. Push Plate/ Pull Plate: 42 inches from finished floor to center of pull.
3. Wall Bumper: Centered at point on wall where lever, or other operating trim, first makes contact with wall.
4. Floor Stop: Adjacent to wall; not to exceed 4 inches from face of wall; located 3 inches from latch edge of door; in any case never more than 50 percent of door width from latch edge of door.

3.9 ADJUSTING

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

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

C. Follow-up Adjustment: Approximately 6 months after date of Substantial Completion, Installer shall perform the following:

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

3.10 FIELD QUALITY CONTROL

A. Independent Architectural Hardware Consultant:
1. Engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
2. Independent Architectural Hardware Consultant shall inspect door hardware and prepare written report whether installed work complies with or deviates from requirements, whether door hardware is properly installed and adjusted, and prepare a specific list of any deficiencies, a copy of which shall be provided to Architect.
3. Contractor shall correct all deficiencies noted in above report.
4. Independent Architectural Hardware Consultant shall re-inspect door hardware and prepare a report certifying correction of deficiencies and compliance with requirements.

3.11 COMPLETION

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

B. Contractor shall demonstrate that all keys properly operate the locks.

3.12 DOOR HARDWARE SETS

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

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

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

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

Set 169F	**Double Egress 90° Hold Open**	
1 ea	Continuous Hinge	780-157HD
2 ea	Fire Exit Device	7160(F) 90 EO LBR
1 ea	Split Astragal	29324CNB
2 ea	Closer	PR7500CPS
1 set	Gasketing	S88
2 ea	Mag Holder	2000 Series
Note:	Electromagnetic holder(s) require 120V AC/24V AC or DC 12V D Fire Alarm	