



Addendum No. 2
Page 1 of 1

DATE: March 7, 2022

Joliet Junior College
1215 Houbolt Road
Joliet, IL 60431

TO: Prospective Bidders
SUBJECT: Addendum No. 2
PROJECT NAME: City Center Roof Access Door & Equipment Stairs
JJC PROJECT NO.: B22020

This Addendum forms a part of the Bidding and Contract Documents and modifies the original bidding document as posted on the JJC website. Acknowledge receipt of this addendum in the space provided on the Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

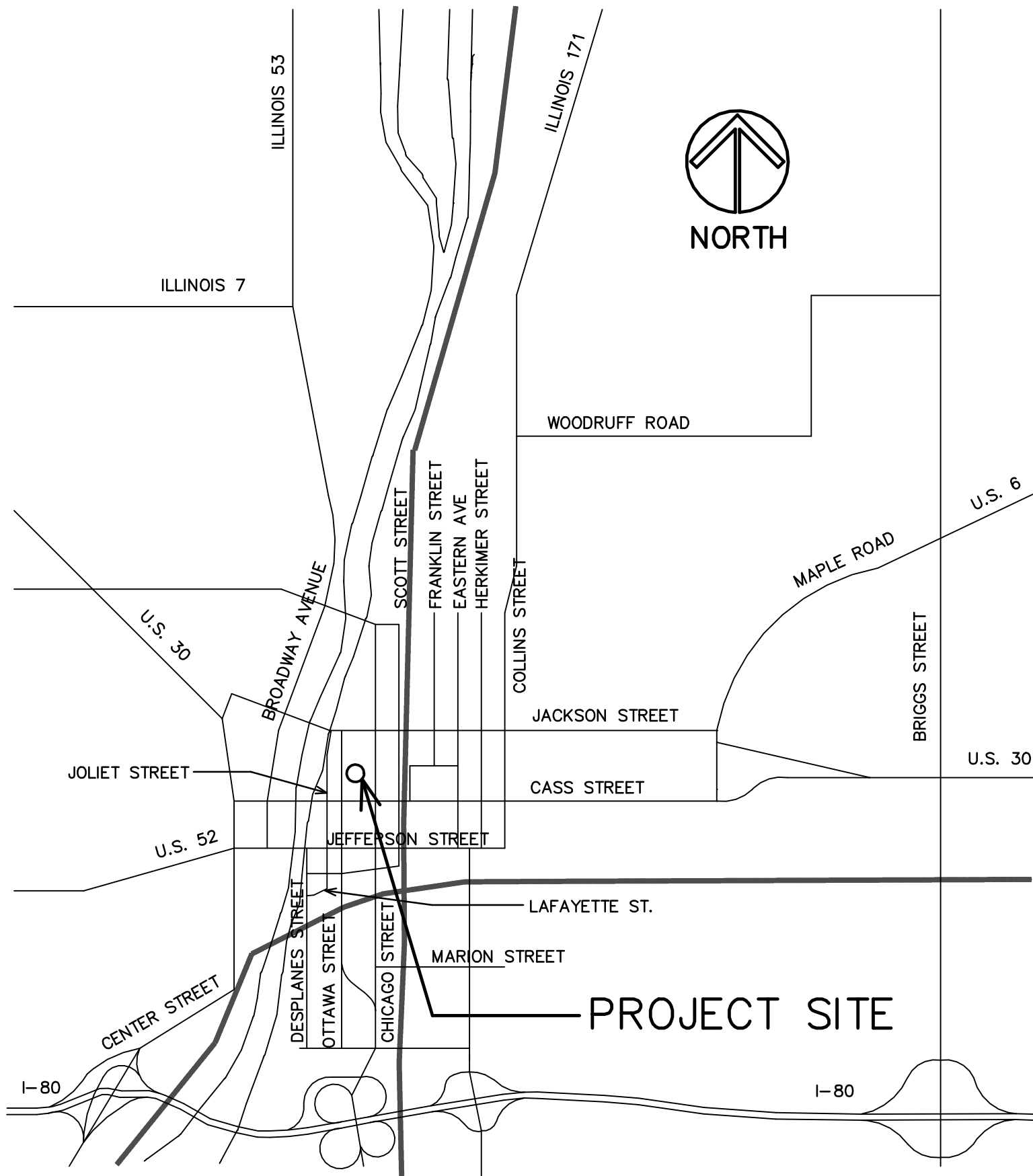
The purpose of this addendum is to supply updated drawings and specifications to add two additional roof access ladders to this project. In addition to answering previously submitted addendum questions.

1. Attached are revised drawings and specification, which we added two additional roof access ladders to this project.
2. Are the hollow metal doors required to be steel stiffened?
See Bid document Specification for Door and Frame construction requirements.
3. How many are the access doors?
Project Documents is calling for two new hollow metal doors and frames
4. Are the access doors fire rated or have any special requirements?
New Interior Hollow metal door and frame is to be Fire Rated see bid document specifications for Requirements
5. Revised date Recap
 - Walkthrough RSVP 3/21/22 12:00 pm
 - Walkthrough 3/22/22 3:00 pm
 - Questions Due 3/24/22 end of day via ESM Solutions
 - Addendum Issued 3/29/22 end of day
 - Bids due 3/31/22 9:00:00 AM via ESM Solutions

End of Addendum #1

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LOCATION MAP



INDEX OF SHEETS

- T1 PROJECT TITLE, LOCATION, INDEX OF SHEETS
- A1 PARTIAL THIRD FLOOR/ROOF DEMO AND NEW PLANS
- A2 DETAILS AND SECTIONS
- A3 PARTIAL ROOF PLAN AND SECTIONS

NOTE:
GENERAL CONTRACTOR TO PROVIDE A \$5,000 ALLOWANCE IN HIS/HER BID FOR UNFORESEEN/MISCELLANEOUS CONDITIONS. WHEN FIGURING THIS ALLOWANCE IN THE BID, THE CONTRACTOR IS TO INCLUDE ALL NECESSARY OVERHEAD AND PROFIT TO CARRY THIS DOLLAR VOLUME. THIS ALLOWANCE IS NOT FOR THE CONTRACTOR'S BENEFIT, AND IS ONLY AUTHORIZED TO CHARGE AGAINST THIS ALLOWANCE WHEN DIRECTED AND APPROVED BY JOLIET JUNIOR COLLEGE. THE CONTRACTOR WILL BE ALLOWED TO INVOICE FOR DIRECT MATERIAL AND RAW LABOR COSTS ONLY.

NEW ROOF ACCESS DOOR AND EQUIPMENT STAIRS

JOLIET JUNIOR COLLEGE
CITY CENTER
235 N. CHICAGO STREET
JOLIET, ILLINOIS

STROMSLAND + DE YOUNG + PRYBYS
ARCHITECTURE GROUP

20620 BURL COURT
JOLIET, IL 60433
PHONE: 815-727-1311
FAX: 815-727-5210

REGISTRATION

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L. N. : 184-00437

NUMBER

SET

NEW ROOF ACCESS DOOR AND EQUIPMENT STAIRS
JOLIET JUNIOR COLLEGE- CITY CENTER
235 N CHICAGO STREET
JOLIET, ILLINOIS

DATE:
10/21/2021
REVISED: 3/15/2022

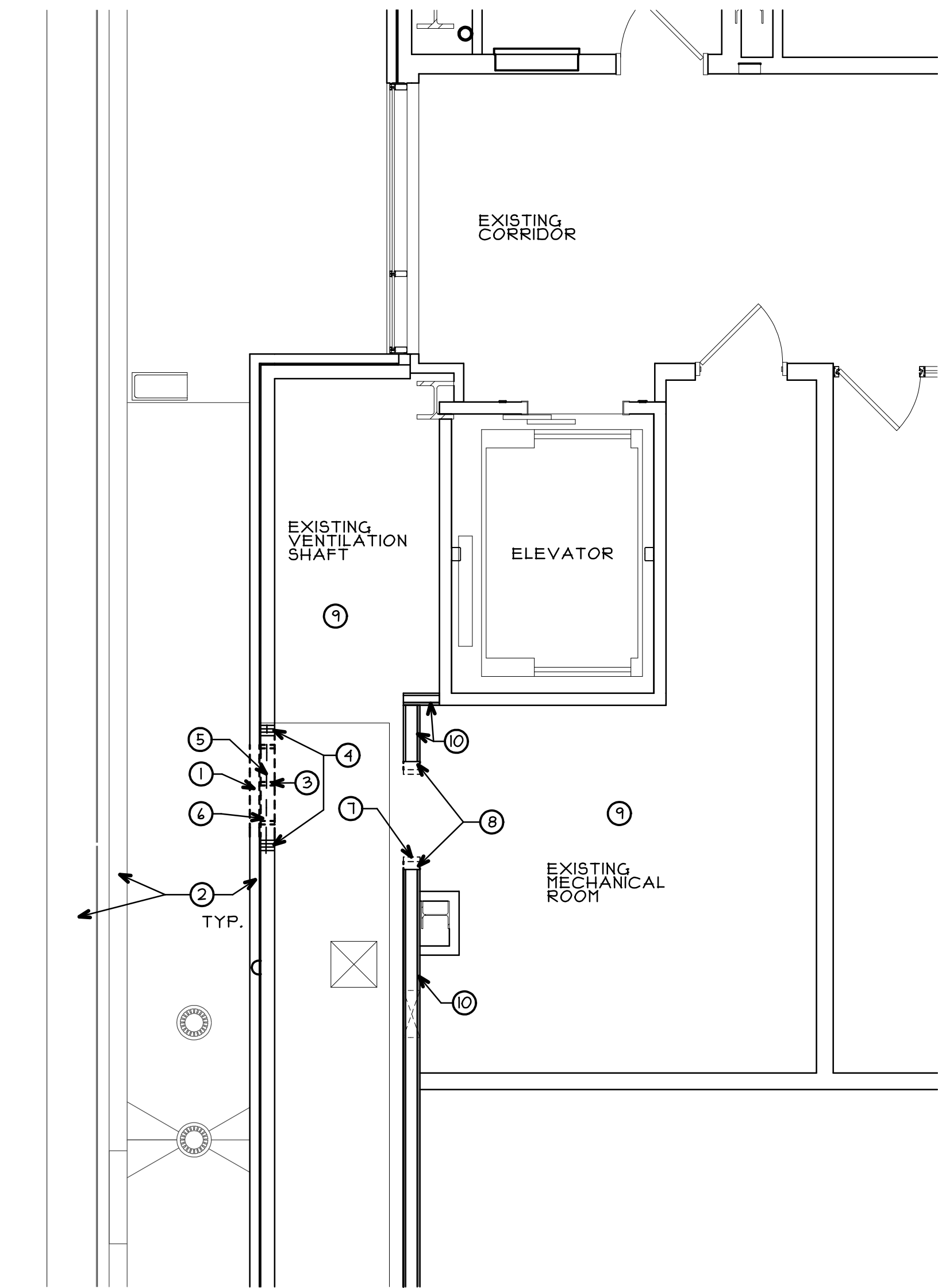
PROJECT NO.
2108-01

SHEET NUMBER

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OF 1 SHEETS

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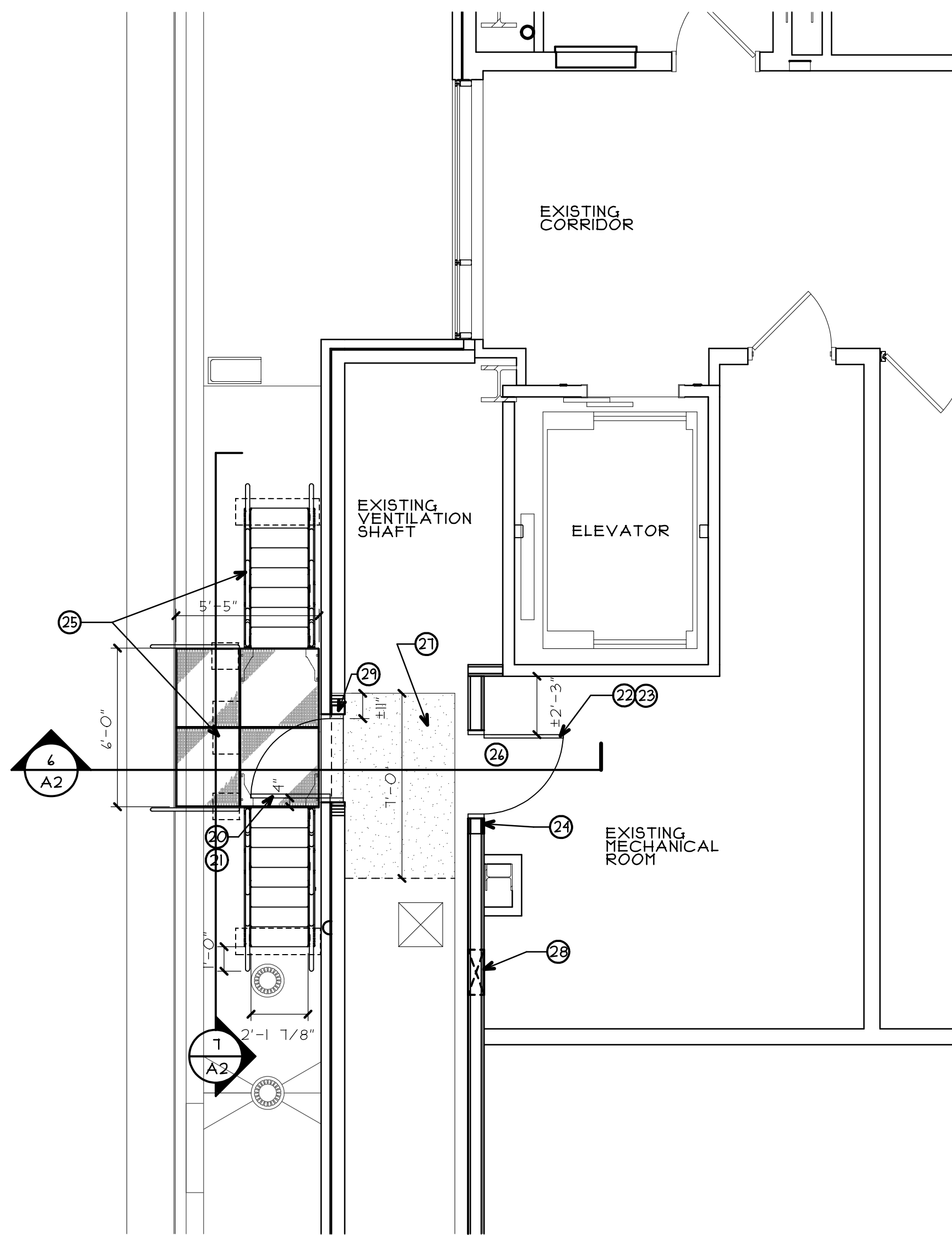
 **PARTIAL DEMO THIRD FLOOR /ROOF PLAN**
SCALE: 1/4" = 1'-0"

DEMOLITION PLAN GENERAL NOTES

- ALL SALVAGED ITEMS NOT REUSED SHALL BE PLACED IN STORAGE, ON SITE, AT A LOCATION DESIGNATED BY THE OWNER.
- ALL ITEMS REMOVED AND NOT SALVAGED SHALL BE PROPERLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
- PATCH & REPAIR HOLES AND/OR DAMAGED SURFACES CAUSED TO ADJACENT CONSTRUCTION DURING DEMOLITION.

DEMOLITION PLAN KEY NOTES

- REMOVE PORTION OF EXISTING EXTERIOR WALL E.I.F.S SYSTEM AND SHEATHING FOR NEW DOOR OPENING. SEE FLOOR PLAN FOR LOCATION AND SIZE. (V.I.F.)
- EXISTING EXTERIOR WALL TO REMAIN. (V.I.F.)
- EXISTING METAL STUDS TO BE MODIFIED BETWEEN TRIPLE STUDS FOR NEW DOOR OPENING. EXISTING BOTTOM TRACK TO BE REMOVED MODIFIED AS REQUIRED. (V.I.F.)
- EXISTING TRIPLE METAL STUDS TO REMAIN. (V.I.F.)
- EXISTING METAL WALL STRAPPING BETWEEN TRIPLE STUDS TO BE REMAIN TO BE RELOCATED UP TWO" STUD HOLES TO BE ABOVE NEW DOOR OPENING. (V.I.F.)
- EXISTING STEEL ANGLE TO BE GROUND DOWN TO METAL DECK 50" AS TO NOT STICK ABOVE NEW FLOOR SLAB. (V.I.F.)
- REMOVE EXISTING INCORRECT FIRE RATED DOOR FRAME . SALVAGE TO OWNER (V.I.F.)
- REMOVE EXISTING METAL STUD INFILL IN EXISTING SHAFT WALL ASSEMBLY. (V.I.F.)
- EXISTING CONCRETE FLOOR SLAB TO REMAIN. (V.I.F.)
- EXISTING TWO HOUR SHAFT WALL ASSEMBLY TO REMAIN. (V.I.F.)



 **PARTIAL THIRD FLOOR/ROOF PLAN**
SCALE: 1/4" = 1'-0"

FLOOR/ROOF PLAN GENERAL NOTES

- VERIFY ALL EXISTING DIMENSIONS IN FIELD AND REPORT ALL DISCREPANCIES PRIOR TO NEW CONSTRUCTION.
- ALL PENETRATIONS OF FIRE WALLS NEW/EXISTING IN PROJECT AREA SHALL BE SEALED WITH AN APPROPRIATE UL LISTED THROUGH-WALL PENETRATION FIRESTOPPING SYSTEM.
- EXISTING EXTERIOR E.I.F.S WALL SYSTEM IS BELIEVED TO BE "STO POWERWALL NEXT DRAINAGE SYSTEM" WITH "STOLIT" ACRYLIC TEXTURED FINISH PER ORIGINAL BUILDING CONSTRUCTION AS-BUILT DATED JUNE 2019 (V.I.F.) PATCHING OF SYSTEM SHALL BE DONE WITH A SYSTEM THAT IS COMPATIBLE WITH SYSTEM NOTED ABOVE AND FINISH TEXTURE TO MATCH EXISTING. FINISH COLOR TO MATCH EXISTING. PROVIDE OWNER WITH COLOR SAMPLES TO MAKE SELECTION.
- PROVIDE 3/8" THICK RUBBER ROOF PROTECTION PADS (DUG-PAD BY W.R. MEADOWS OR APPROVED EQUAL) UNDER SUPPORT POINTS OF ALL NEW ROOF EQUIPMENT (LADDERS, PLATFORM SUPPORTS, ETC.)

FLOOR/ROOF PLAN KEY NOTES

- PROVIDE 3'-0" X 1'-0" EXTERIOR INSULATED HOLLOW METAL DOOR AND FRAME SEE DETAILS 1023 ON SHEET A2 (DOOR AND FRAME TO BE PAINTED BY OWNERS STAFF)
- DOOR HARDWARE:
 - 3 FIVE KNUCKLE BALL BEARING HINGES
 - 1 LEVER HANDLE STORAGE LOCK (FURNISHED BY OWNER INSTALLED BY CONTRACTOR)
 - 1 SET OF WEATHER STRIP GASKETING
 - 1 DOOR CLOSER WITH OVERHEAD STOP
 - 1 ALUMINUM THRESHOLD WITH BULB SEAL
- PROVIDE 3'-0" X 1'-0" FIRE RATED (90 MINUTE) METAL DOOR AND FRAME. SEE DETAILS 45 ON SHEET A2. INSTALL TO ONE SIDE OF WALL OPENING. (DOOR AND FRAME TO BE PAINTED BY OWNERS STAFF)
- DOOR HARDWARE:
 - 3 FIVE KNUCKLE BALL BEARING HINGES
 - 1 LEVER HANDLE STORAGE LOCK (FURNISHED BY OWNER)
 - 1 SET OF FIRE/SMOKE GASKETING WITH INTUMESCENT SEAL
 - 1 DOOR CLOSER
 - 1 FLOOR STOP
- INFILL (2) HOUR SHAFT WALL ASSEMBLY WITH "LIKE MATERIALS" (UL V413 SYSTEM B) AT ONE SIDE OF NEW DOOR FRAME. TAPE IN AND FINISH GYPSUM BOARD TO EXISTING GYP BOARD. (V.I.F.) (INFILL TO BE PAINTED BY OWNERS STAFF)
- PROVIDE NEW ROOF TOP ALUMINUM EQUIPMENT PLATFORM AND STAIRS. (ALUMINUM PERFECT STEP SYSTEM BY ERECTASTEP OR APPROVED EQUAL) NEW PLATFORM AND STAIR ASSEMBLY TO BE DESIGNED BY MANUFACTURER AND SHOP DRAWINGS TO BE SIGNED AND STAMPED BY STRUCTURAL ENGINEER LICENSED IN THE STATE OF ILLINOIS. NEW PLATFORM AND STAIR MAY NOT ANCHOR TO EXISTING ROOF AND MAY ONLY BE ANCHORED TO EXISTING WALL AS SHOWN IN SEE SECTIONS AND DETAILS.
- EXISTING CONCRETE FLOOR TO REMAIN. (V.I.F.)
- PROVIDE NEW CONCRETE #3 1/2" TOPPING WITH 4X4-12X12-12X12 W/IR ON TOP OF EXISTING METAL DECK (THICKNESS TO BE MATCH EXISTING) (PROVIDE STEEL CONCRETE ANGLE STOP ON EXPOSED EDGE OF NEW CONCRETE AREA)
- INFILL GYPSUM BOARD SHAFT WALL ASSEMBLY (2 HOUR) WITH "LIKE MATERIALS" (UL V413 SYSTEM B) AT EXISTING OPENING IN WALL. TAPE IN GYPSUM BOARD TO EXISTING AND FINISH TO MATCH EXISTING. (V.I.F.) (FINAL PAINTING TO BE BY OWNERS STAFF)
- INFILL WALL FRAMING BACK TO NEW DOOR ROUGH OPENING AS REQUIRED WITH SALVAGED WALL STUDS. (V.I.F.)
- EXISTING PENTHOUSE TO REMAIN. (V.I.F.)
- EXISTING DUCT WORK TO REMAIN. (V.I.F.)
- EXISTING ROOF VENT TO REMAIN. (V.I.F.)
- PROVIDE NEW ALUMINUM VERTICAL FIXED ROOF ACCESS LADDER WITH GRAB RAILS (VERTICAL RISE ±10") (KATTCLIMB RL 3) WITH NON- PENETRATING BASE - LD419F BY FIXFASTUSA OR APPROVED EQUAL). LADDER TO BE ATTACHED TO WALL ONLY DO NOT ANCHOR BASE TO EXISTING ROOF.
- PROVIDE NEW ALUMINUM ANGLED FIXED ROOF ACCESS LADDER WITH GRAB RAILS (VERTICAL RISE ±34") (KATTCLIMB RL 2) WITH NON- PENETRATING BASE - LD419F BY FIXFASTUSA OR APPROVED EQUAL). LADDER TO BE ATTACHED TO WALL ONLY DO NOT ANCHOR BASE TO EXISTING ROOF.
- EXISTING ROOF PIPES AND EQUIPMENT TO REMAIN. (V.I.F.)
- EXISTING ROOF PARAPET WALL TO REMAIN. (V.I.F.)
- EXISTING WINDOW IN WALL BELOW. (V.I.F.)
- PROVIDE NEW ALUMINUM CROSSOVER SHIPS STAIR WITH 36" PLATFORM WITH WITH GRAB RAILS FROM LOWER ROOF UP TO ABOVE PARAPET AND EXISTING PIPE DOWN TO UPPER ROOF. (SL-03 BY PRECISION LADDER OR APPROVED EQUAL). LADDER TO BE ATTACHED TO WALL ONLY DO NOT ANCHOR BASES TO EXISTING ROOFS. SEE SECTION
- PROVIDE (32"x 48") 3/4" THICK RUBBER ROOF PROTECTION PAD (DUG-PAD BY W.R. MEADOWS OR APPROVED EQUAL) UNDER EACH STAIR LANDING OR SUPPORT.
- EXISTING GRAVEL ON ROOF MEMBRANE TO REMAIN. (V.I.F.)
- EXISTING EPDM ROOF TO REMAIN. (V.I.F.)

 **ROOF PLAN**
SCALE: 1/4" = 1'-0"

NEW ROOF ACCESS DOOR AND EQUIPMENT STAIRS
JOLIET JUNIOR COLLEGE- CITY CENTER
235 N CHICAGO STREET
JOLIET, ILLINOIS

DATE: 10/21/2021
REVISED: 3/15/2022

PROJECT NO.
2108-01

SHEET NUMBER

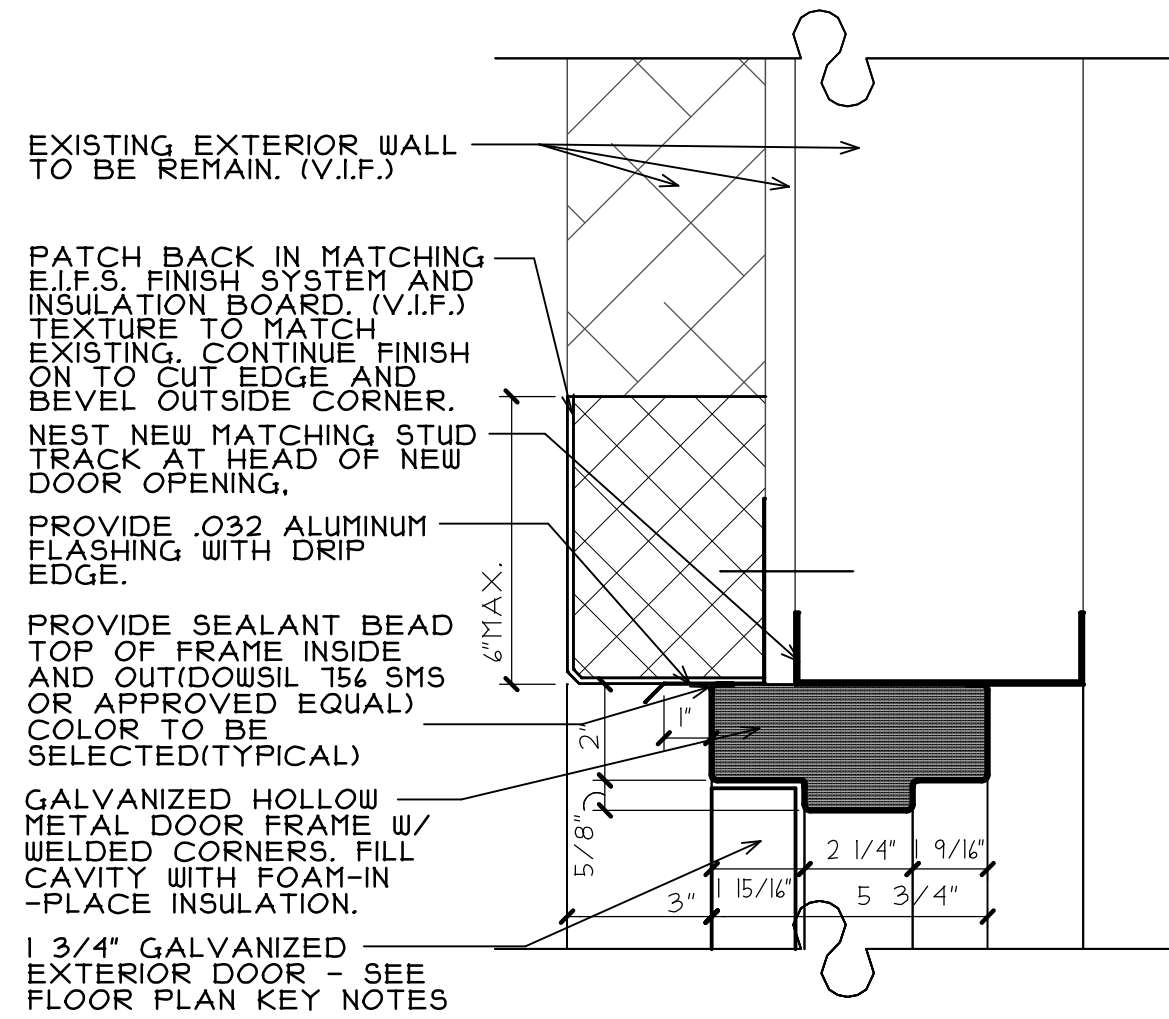
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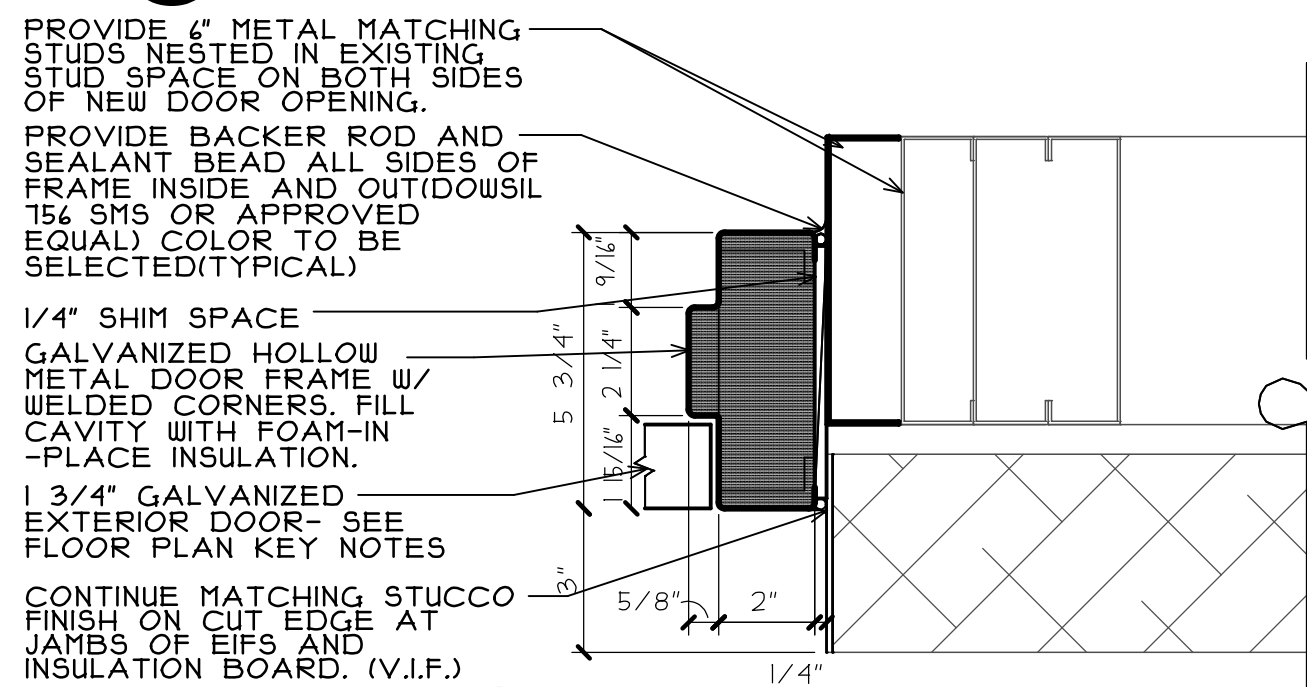
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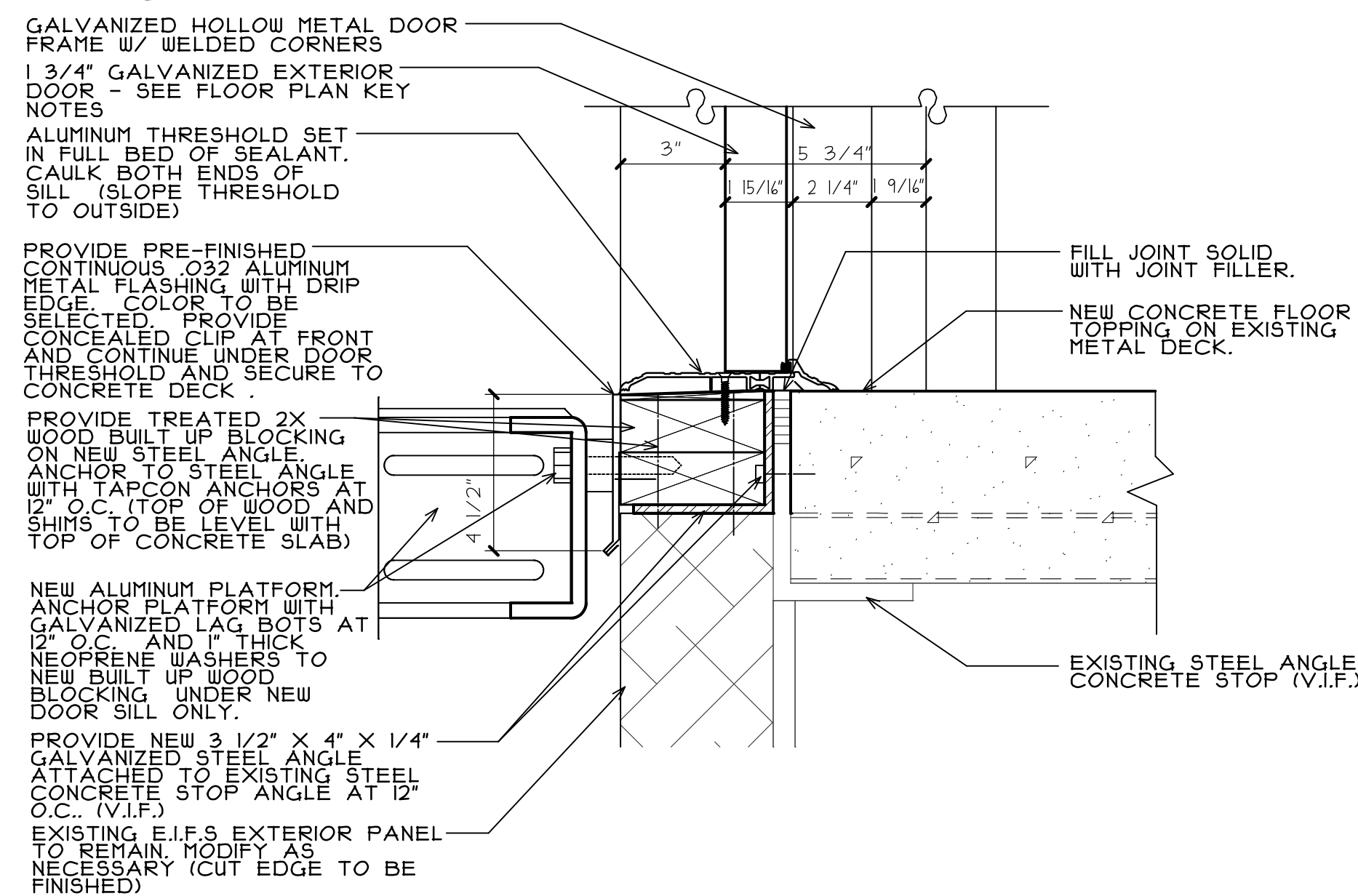
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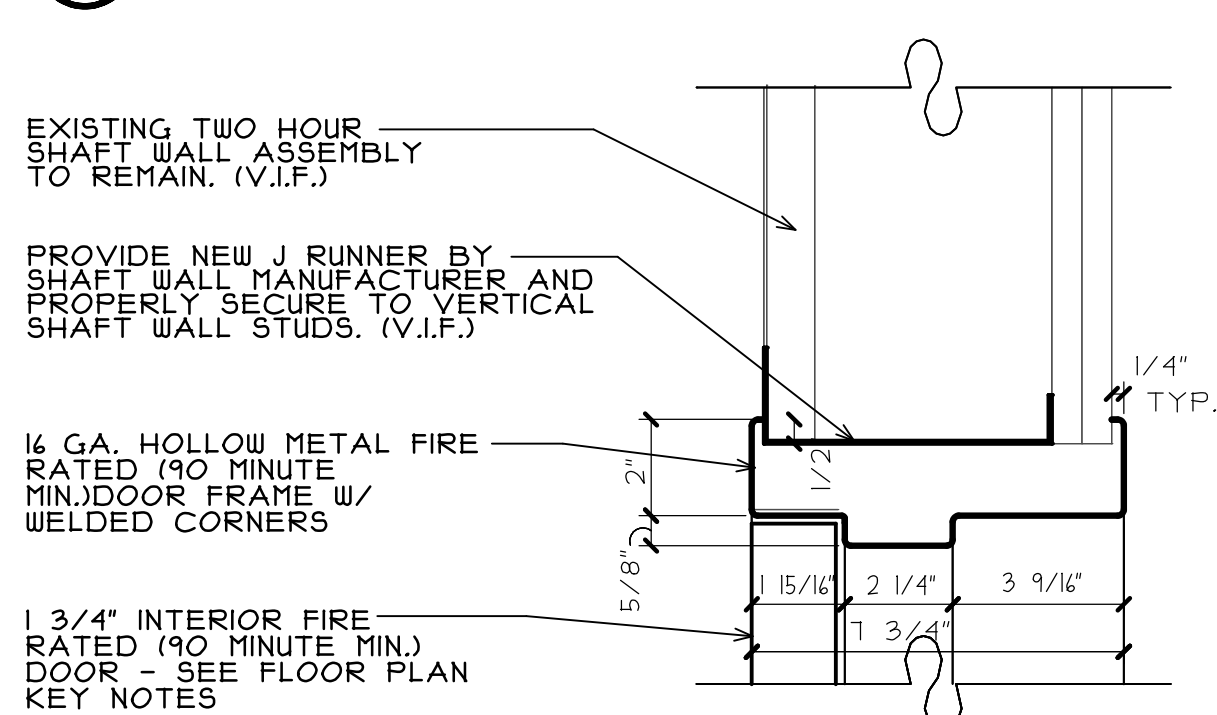
1 HEAD DETAIL
A2 SCALE: 3" = 1'-0"



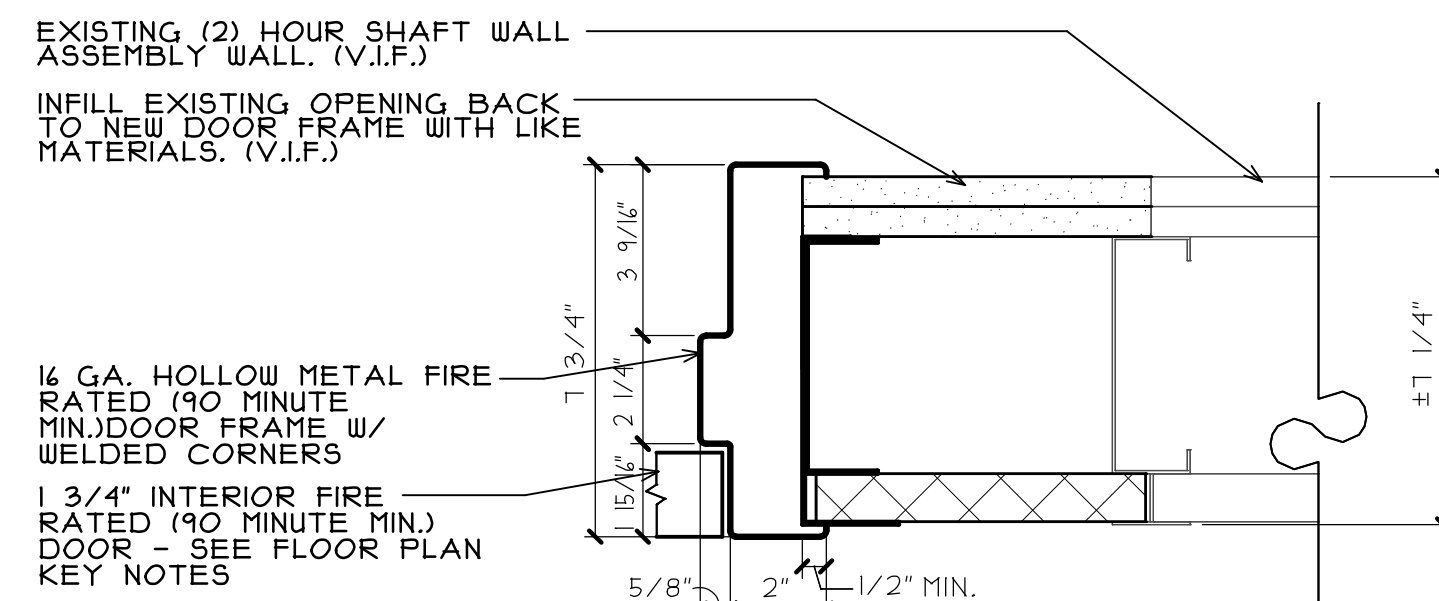
2 JAMB DETAIL
A2 SCALE: 3" = 1'-0"



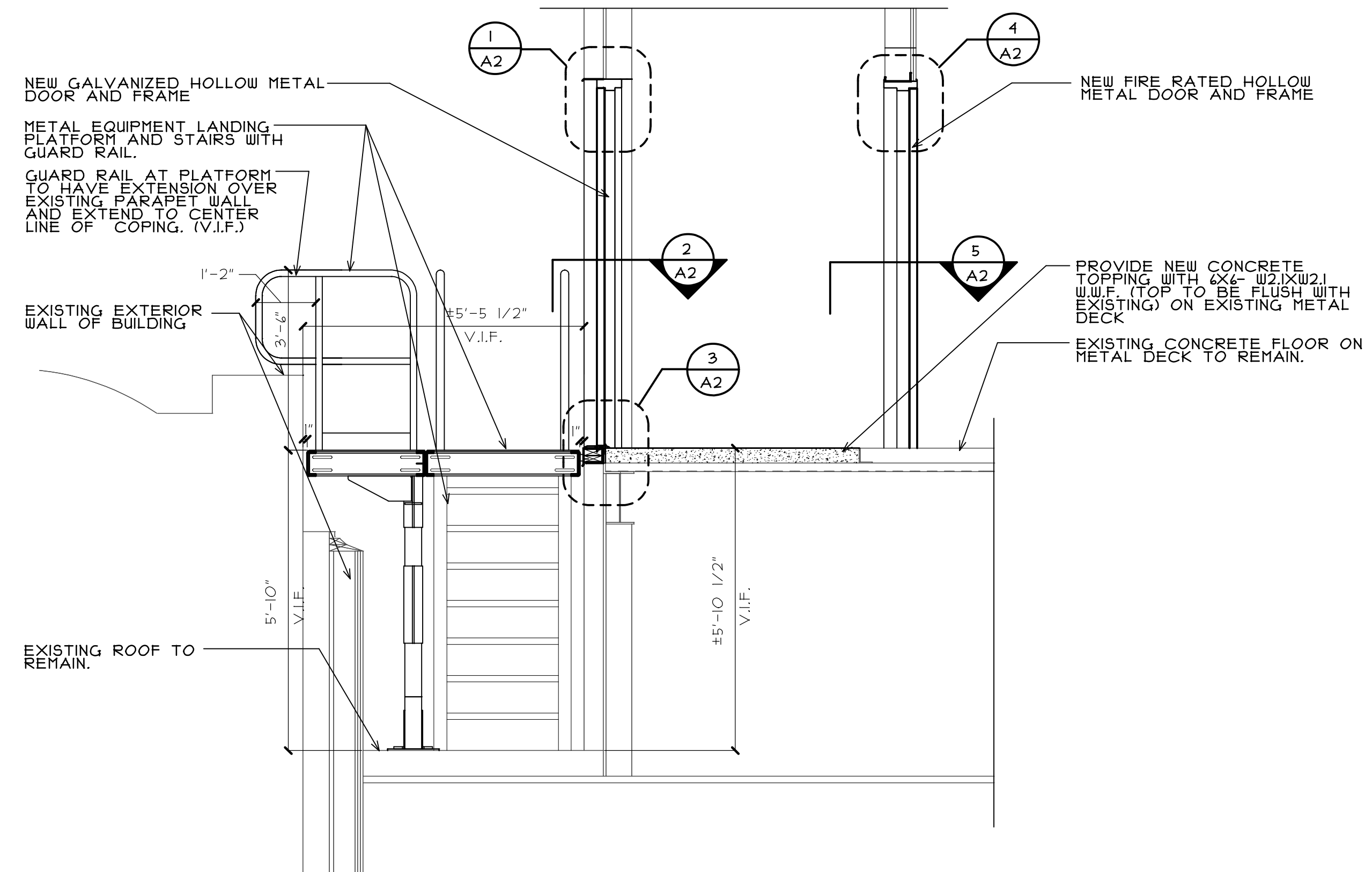
3 SILL DETAIL
A2 SCALE: 3" = 1'-0"



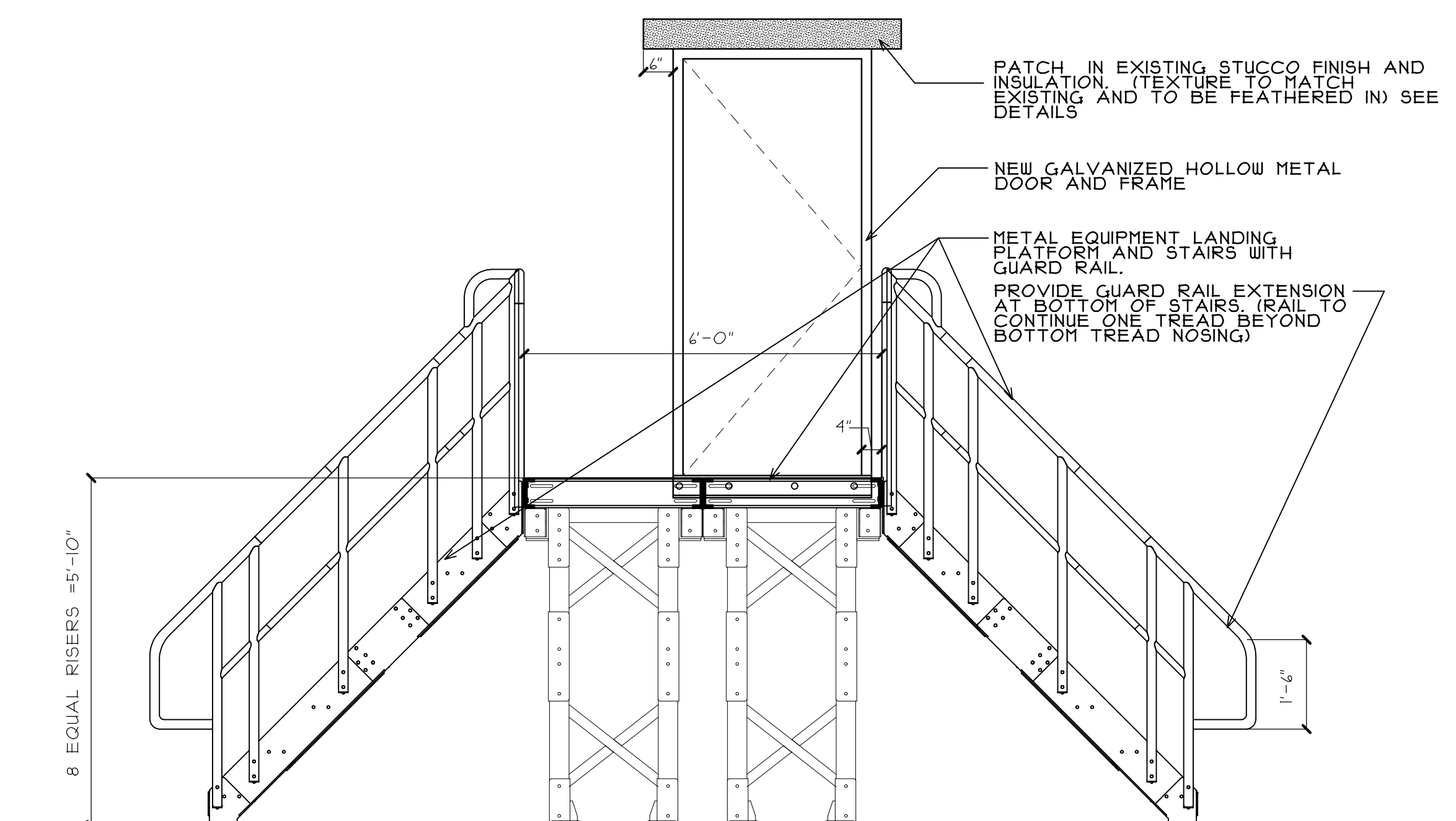
4 HEAD DETAIL
A2 SCALE: 3" = 1'-0"



5 JAMB DETAIL
A2 SCALE: 3" = 1'-0"



6 SECTION AT NEW DOORS
A2 SCALE: 3" = 1'-0"



1 ELEVATION AT NEW DOOR AND PLATFORM
A2 SCALE: 3" = 1'-0"

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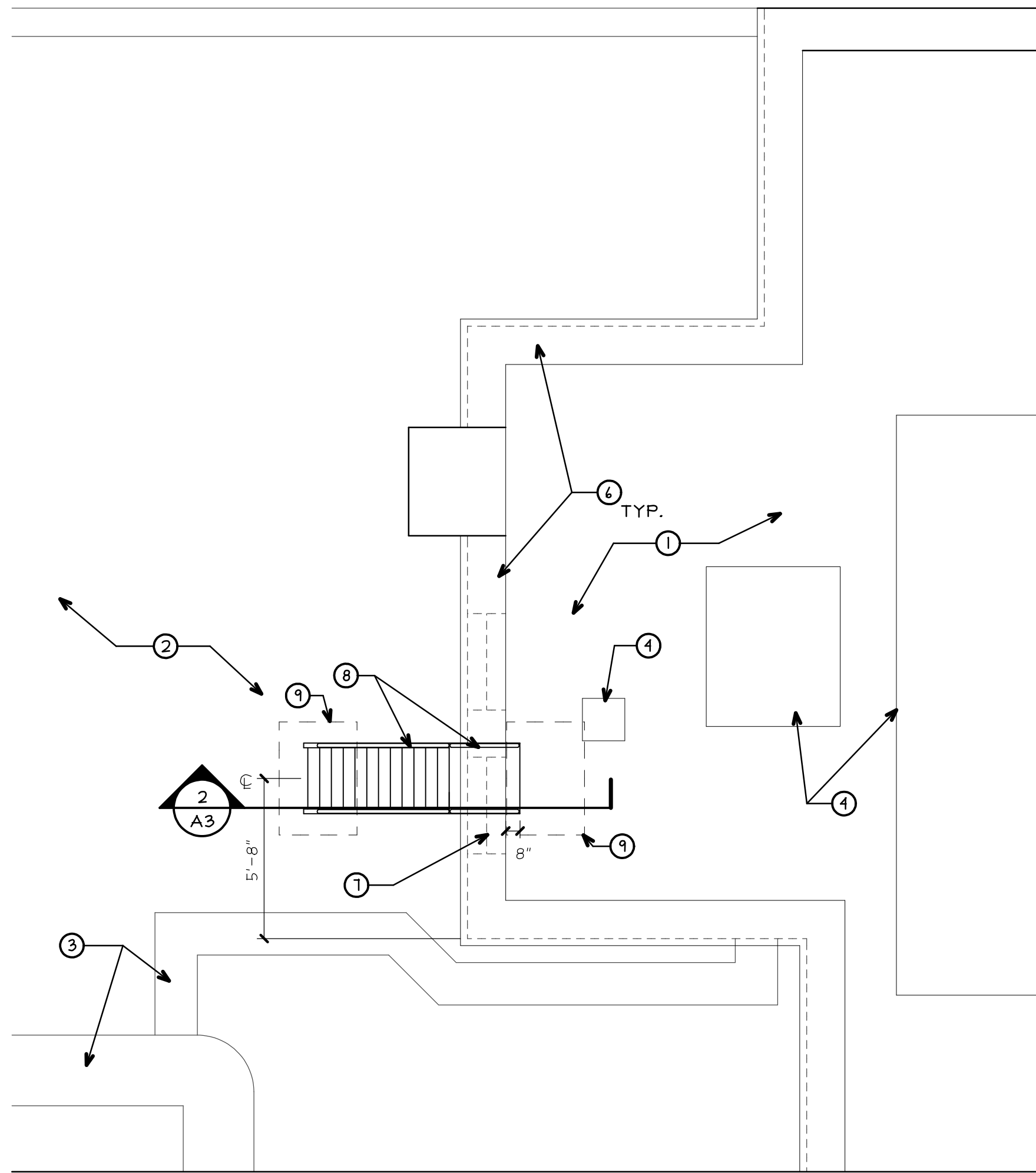
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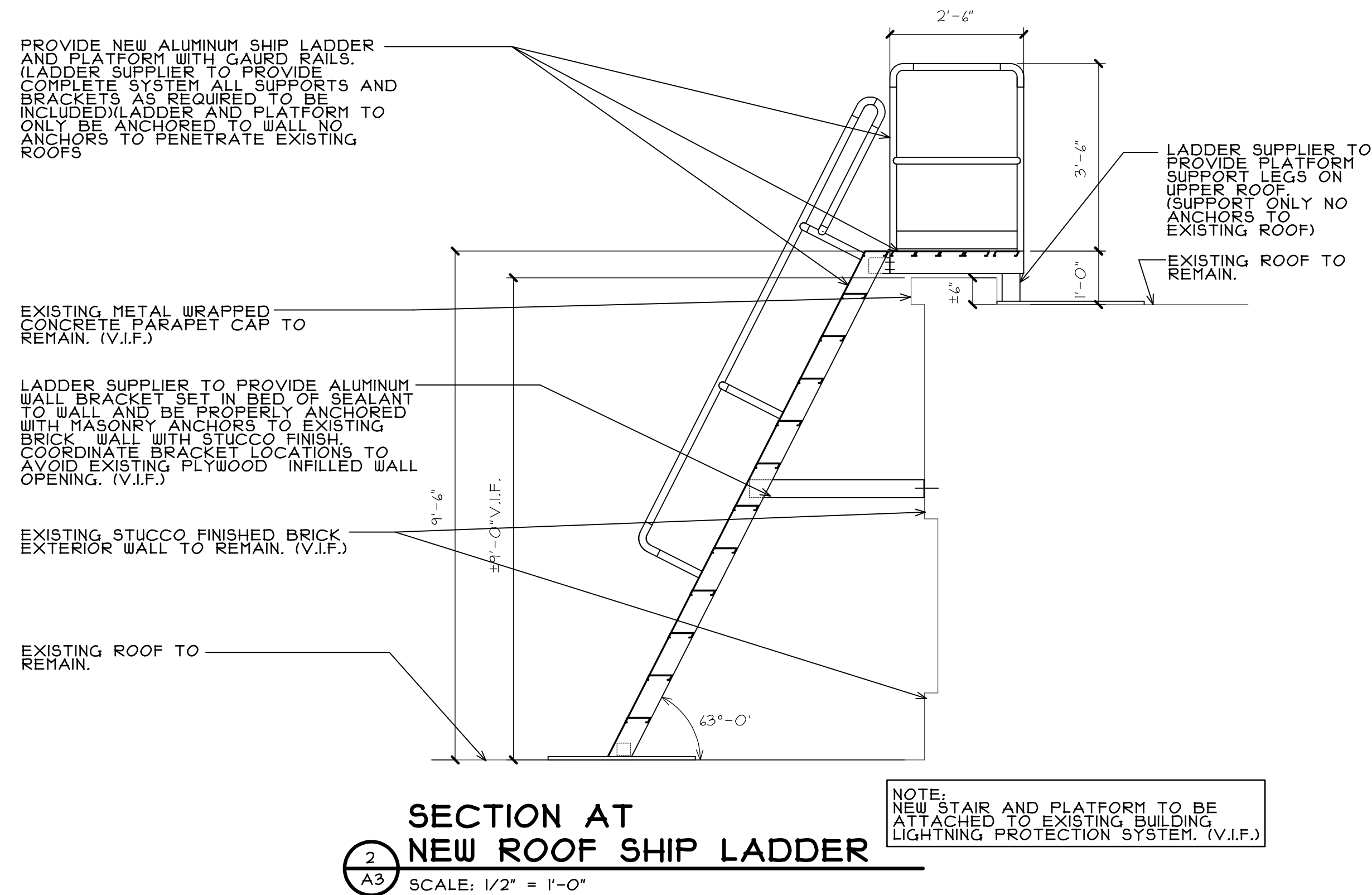
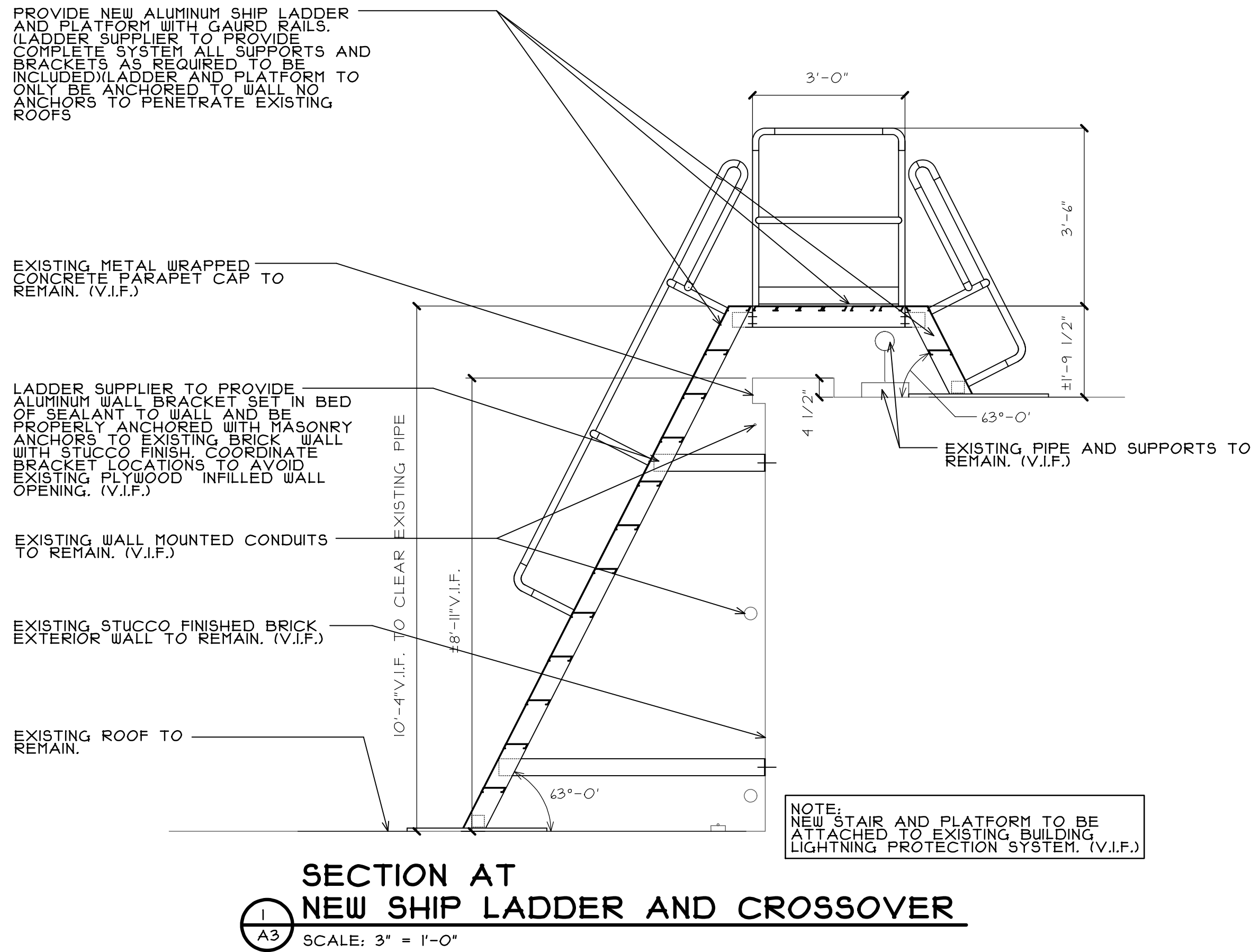
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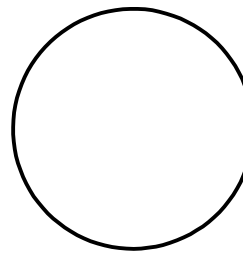


 **ROOF PLAN**
SCALE: 1/4" = 1'-0"
NORTH

ROOF PLAN KEY NOTES

- ① EXISTING EPDM ROOF TO REMAIN. (V.I.F.)
- ② EXISTING GRAVEL ON ROOF MEMBRANE TO REMAIN. (V.I.F.)
- ③ EXISTING DUCT WORK TO REMAIN. (V.I.F.)
- ④ EXISTING ROOF PIPE PORTAL TO REMAIN. (V.I.F.)
- ⑤ EXISTING ROOF EQUIPMENT TO REMAIN. (V.I.F.)
- ⑥ EXISTING ROOF PARAPET WALL TO REMAIN. (V.I.F.)
- ⑦ EXISTING PLYWOOD WALL OPENING INFILL BELOW TO REMAIN. (V.I.F.)
- ⑧ PROVIDE NEW ALUMINUM SHIPS STAIR WITH 30" PLATFORM WITH GRAB RAILS FROM LOWER ROOF UP TO ABOVE PARAPET DOWN TO UPPER ROOF. (SLOPE BY PRECISION LADDER OR APPROVED EQUAL). LADDER TO BE ATTACHED TO WALL ONLY DO NOT ANCHOR BASES TO EXISTING ROOFS. SEE SECTION
- ⑨ PROVIDE (33"X 48") 3/4" THICK RUBBER ROOF PROTECTION PAD (DUO-PAD BY W.R. HEADOW OR APPROVED EQUAL) UNDER EACH STAIR LANDING OR SUPPORT.



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NUMBER SET	
NEW ROOF ACCESS DOOR AND EQUIPMENT STAIRS JOLIET JUNIOR COLLEGE- CITY CENTER 235 N CHICAGO STREET JOLIET, ILLINOIS	
DATE: 3/15/2022 REVISED:	
PROJECT NO. 2108-01	
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SECTION 081113 - 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:
 - 1. Interior standard steel doors and frames.
 - 2. Exterior standard steel doors and frames.

1.3 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or 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 requirements for installation of door hardware, electrified door hardware, and access control and security systems.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, core descriptions, fire-resistance 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. Details of each different wall opening condition.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow-metal doors and frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented 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 doors and frames vertically under cover at Project site with head up. Place on minimum 4-inch-high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Apex Industries, Inc.
 - 2. Ceco Door; AADG, Inc.; ASSA ABLOY.
 - 3. LaForce, LLC.
 - 4. Steelcraft; Allegion plc.

2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings indicated on Drawings, based on testing at positive pressure according to NFPA 252 or UL 10C.
- B. Thermally Rated Door Assemblies: Provide door assemblies with U-factor of not more than 0.091 deg Btu/F x h x sq. ft. when tested according to ASTM C518.

2.3 INTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Heavy-Duty Doors and Frames: ANSI/SDI A250.8, Level 2; ANSI/SDI A250.4, Level B.
 - 1. Doors:
 - a. Thickness: 1-3/4 inches.
 - b. Face: Uncoated steel sheet, minimum thickness of 0.042 inch.
 - c. Edge Construction: Model 1, Full Flush.

- d. Edge Bevel: Bevel lock edge 1/8 inch in 2 inches.
 - e. Fire-Rated Core: Manufacturer's standard vertical steel stiffener core for fire-rated doors.
2. Frames:
- a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch.
 - b. Construction: Face welded.
3. Exposed Finish: Prime.

2.4 EXTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Heavy-Duty Doors and Frames: ANSI/SDI A250.8, Level 2; ANSI/SDI A250.4, Level B..

1. Doors:
- a. Thickness: 1-3/4 inches.
 - b. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch, with minimum A40 coating.
 - c. Edge Construction: Model 1, Full Flush.
 - d. Edge Bevel: Bevel lock edge 1/8 inch in 2 inches.
 - e. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
 - f. Bottom Edges: Close bottom edges of doors with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
 - g. Core: Foamed-in place Polyurethane.
2. Frames:
- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum A40 coating.
 - b. Construction: Face welded.
3. Exposed Finish: Prime.

2.5 FRAME ANCHORS

- A. Jamb Anchors:
 - 1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
 - 2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.

- B. Material: ASTM A879/A879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.

2.6 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B.
- C. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A153/A153M.

2.7 FABRICATION

- A. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.
 - 1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 - 2. 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. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to ANSI/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 BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

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 ANSI/SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 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. Touch up factory-applied finishes where spreaders are removed.
- B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.2 INSTALLATION

- A. Install hollow-metal doors and frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions.
- B. Hollow-Metal Frames: Comply with ANSI/SDI A250.11.
 - 1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
 - 2. Fire-Rated Openings: Install frames according to NFPA 80.
 - 3. Solidly pack with mineral-fiber insulation for interior frames.
 - 4. Fill frame with foam-in-place insulation for exterior frames.
 - 5. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.
- C. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.
 - 1. Non-Fire-Rated Steel Doors: Comply with ANSI/SDI A250.8.
 - 2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.

3.3 REPAIR

- A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

END OF SECTION 081113

SECTION 087100 - DOOR HARDWARE

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:
 - 1. Mechanical door hardware for the following:
 - a. Swinging doors.

1.3 COORDINATION

- A. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Door Hardware Schedule: See Drawings

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and of an Architectural Hardware Consultant who is available during the course of the Work to consult Contractor, Architect, and Owner about door hardware and keying.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including excessive deflection, cracking, or breakage.
 - b. Faulty operation of doors and door hardware.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
 - 2. Warranty Period: One years from date of Substantial Completion unless otherwise indicated below:
 - a. Manual Closers: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain each type of door hardware from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Door Assemblies: Where fire-rated doors are indicated, provide door hardware complying with NFPA 80 that is listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

2.3 HINGES

- A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Allegion plc, IVES.
 - b. Hager Companies.
 - c. McKinney Products Company; ASSA ABLOY Accessories and Door Controls Group, Inc.; ASSA ABLOY.
 - 2. Hinge Type A: Exterior hollow metal door and frame. Full mortise hinge, ball bearing, stainless steel with non-removable pin.
 - 3. Hinge Type B: Interior hollow metal door and frame. Full mortise hinge, ball bearing, steel with steel pin.

2.4 MECHANICAL LOCKS AND LEVERS

- A. Lever handle locks to be furnished by Owner and installed by contractor. (Schlage ND80JDRH0626 Storeroom Lever)

2.5 SURFACE CLOSERS

- A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written instructions for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Allegion plc, LCN.
 - b. Norton Door Controls; ASSA ABLOY.
 - c. SARGENT Manufacturing Company; ASSA ABLOY.
2. Door Closer Type A: Exterior hollow metal door and frame. Parallel arm closer with closer plus spring stop and cover.
3. Door Closer Type B: Interior wood or hollow metal door and frame. Regular arm closer with cover.

2.6 MECHANICAL STOPS AND HOLDERS

- A. Wall- and Floor-Mounted Stops: BHMA A156.16.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Allegion plc, IVES.
 - b. Hager Companies.
 - c. Rockwood Manufacturing Company; ASSA ABLOY Accessories and Door Controls Group, Inc.; ASSA ABLOY.
- B. Floor Stop: Cast Brass with rubber bumper.

2.7 DOOR GASKETING

- A. Door Gasketing: BHMA A156.22; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. National Guard Products, Inc.
 - b. Pemko Manufacturing Company Inc.; ASSA ABLOY Accessories and Door Controls Group, Inc.; ASSA ABLOY.
 - c. Zero International; Allegion plc.
- B. Maximum Air Leakage: When tested according to ASTM E283 with tested pressure differential of 0.3-inch wg, as follows:
 - 1. Gasketing on Single Doors: 0.3 cfm/sq. ft. of door opening.

2.8 SADDLE THRESHOLDS

- A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. National Guard Products, Inc.
 - b. Pemko Manufacturing Company Inc.; ASSA ABLOY Accessories and Door Controls Group, Inc.; ASSA ABLOY.
 - c. Zero International; Allegion plc.

2.9 FABRICATION

- A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rating labels and as otherwise approved by Architect.
 - 1. Manufacturer's identification is permitted on rim of lock cylinders only.
- B. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.
- C. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware unless otherwise indicated.
 - 1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
 - 2. Fire-Rated Applications:
 - a. Wood or Machine Screws: For the following:

- 1) Hinges mortised to doors or frames.
 - 2) Strike plates to frames.
 - 3) Closers to doors and frames.
3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
4. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.10 FINISHES

- A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Steel Doors and Frames: For surface-applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.
 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
- B. Install each door hardware item to comply with manufacturer's written instructions. 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. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- C. Hinges: Install types and in quantities indicated in door hardware schedule, but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- D. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."
- E. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.
- F. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
1. Do not notch perimeter gasketing to install other surface-applied hardware.

3.4 ADJUSTING

- A. Initial Adjustment: 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. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

3.5 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

END OF SECTION 087100