

ADDENDUM # 01
DATE: 01-31-2024

TO CONTRACT DOCUMENTS ENTITLED:

PROJECT MANUAL FOR:
LABORATORY FOR INFECTIOUS DISEASE RESEARCH
(LIDR)
Renovate West Animal Holding, Rms 144-149
PROJECT NUMBER: CP220692

ADVERTISEMENT DATE: January 9, 2024

PREPARED FOR: The Curators of the University of Missouri

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Drawings and Specifications for the above noted project and the work covered thereby are herein modified as follows, and except as set forth herein, otherwise remain unchanged and in full force and effect:

PROJECT MANUAL:

Item 1-1 SECTION 07 42 13 – FORMED METAL PANELS

a. REVISED per resubmitted section.

Item 1-2 SECTION 08 11 13 – HOLLOW METAL DOORS AND FRAMES

a. REVISED per resubmitted section.

Item 1-3 SECTION 08 16 13 – FIBERGLASS REINFORDED POLYMER DOORS

a. REVISED per resubmitted section.

Item 1-4 SECTION 09 67 33 - TROWEL-APPLIED RESINOUS FLOORING

a. REVISED per resubmitted section.

Item 1-5 SECTION 10 28 00 – TOILET AND BATH ACCESSORIES

a. REVISED per resubmitted section.

Item 1-6 SECTION 23 40 00 – CONTAINMENT FILTER HOUSING ASSEMBLIES

- a. Per substitution request(s): additional manufacturer(s) of assemblies and associated dampers may bid the project (including Ruskin, Flanders/Continental, and P&G) openly provided the drawings and specifications are met.

DRAWINGS:

Item 1-7 SHEET A0.10 – FIRST FLOOR AND FIRST FLOOR REFLECTED CEILING DEMOLITION PLANS

- a. REVISED note per attached resubmitted sheet.

Item 1-8 SHEET A1.10 – FIRST FLOOR AND FIRST FLOOR REFLECTED CEILING PLANS

- b. REVISED door schedule remark; door details reference; door details; key note per attached resubmitted sheet.

Item 1-9 SHEET LF1.00 – ENLARGED PLAN AND ELEVATIONS

- c. REVISED interior elevations per attached resubmitted sheet.

Item 1-10 SHEET E3-01 – ELECTRICAL SCHEDULES

- a. REVISED schedule per attached resubmitted sheet.

END OF ADDENDUM 01

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SECTION 07 42 13 – FORMED METAL PANELS

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. Concealed-fastener, lap-seam metal wall panels.
 - 2. Metal Soffit Panels

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
- B. Shop Drawings:
 - 1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
 - 2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches.
- C. Samples for Verification: For each type of exposed finish, prepared on Samples of size indicated below:
 - 1. Metal Panels: 12 inches long by actual panel width. Include fasteners, closures, and other metal panel accessories.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

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- B. Product Test Reports: For each product, for tests performed by a qualified testing agency.
- C. Field quality-control reports.
- D. Sample Warranties: For special warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For metal panels to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on metal panels during installation.

1.8 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.9 COORDINATION

- A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

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1.10 WARRANTY

- A. **Special Warranty:** Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
 - a. Structural failures including rupturing, cracking, or puncturing.
 - b. Deterioration of metals and other materials beyond normal weathering.
 2. Warranty Period: Two years from date of Substantial Completion.
- B. **Special Warranty on Panel Finishes:** Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. **Structural Performance:** Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592:
1. Wind Loads: As indicated on Drawings.
 2. Deflection Limits: For wind loads, no greater than 1/180 of the span.
- B. **Thermal Movements:** Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

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2.2 LAP-SEAM METAL WALL PANELS

- A. General: Provide factory-formed metal panels designed to be field assembled by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.
- B. Flush-Profile, Exposed-Fastener Metal Wall Panels.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Berridge Manufacturing Company. “M” Panel
 - b. Or equal if and as specifically approved by Architect by Addendum during the bidding period.
 - 2. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 coating designation; structural quality. Pre-painted by the coil-coating process to comply with ASTM A 755/A 755M.
 - a. Nominal Thickness: 0.034 inch.
 - b. Exterior Finish: Two-coat fluoropolymer.
 - c. Color: Zinc Grey (confirm to match existing).

2.3 METAL SOFFIT PANELS

- A. General: Provide factory-formed metal panels designed to be field assembled by lapping and interconnecting side edges of adjacent panels. Include accessories required for weathertight installation.
- B. Flush-Profile, Concealed-Fastener Metal Soffit Panels to match existing metal soffit panels – Basis of Design: Dimensional Metals Inc. FP10.
 - 1. Aluminum Sheet: Coil-coated sheet, ASTM B 209, alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
 - a. Thickness: 0.040 inch.
 - b. Width: Match existing.
 - c. Surface: Smooth, flat finish.
 - d. Exterior Finish: Three-coat fluoropolymer.
 - e. Color: As selected by Architect from manufacturer's full range to match existing.

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2.4 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Sub-framing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 coating designation or ASTM A 792/A 792M, Class AZ50 aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.
- B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
 - 1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
 - 2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
 - 3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or pre-molded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
- C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
- D. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.
- E. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are non-staining, and do not damage panel finish.
 - 1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, non-staining tape 1/2 inch wide and 1/8 inch thick.
 - 2. Joint Sealant: ASTM C 920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
 - 3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.5 FABRICATION

- A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements

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demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

- B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.
- C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- D. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.
- E. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
 - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
 - 2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
 - 3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
 - 4. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
 - 5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
 - 6. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
 - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

2.6 FINISHES

- A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. 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 same piece are not acceptable. Variations in appearance of other components are acceptable if

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they are within the range of approved Samples and are assembled or installed to minimize contrast.

C. Steel Panels and Accessories:

1. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
 1. Examine wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.
 2. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
 - a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Miscellaneous Supports: Install sub-framing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.3 METAL PANEL INSTALLATION

- A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise

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indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
3. Install screw fasteners in predrilled holes.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.
6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.

B. Fasteners:

1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.

C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.

D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.

1. Lap ribbed or fluted sheets one full rib. Apply panels and associated items true to line for neat and weathertight enclosure.
2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.
3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
5. Flash and seal panels with weather closures at perimeter of all openings.

E. Watertight Installation:

1. Apply a continuous ribbon of sealant or tape to seal lapped joints of metal panels, using sealant or tape as recommend by manufacturer on side laps of nesting-type panels; and elsewhere as needed to make panels watertight.
2. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
3. At panel splices, nest panels with minimum 6-inch end lap, sealed with sealant and fastened together by interlocking clamping plates.

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- F. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal wall panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.

- G. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
 - 1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof performance.
 - 2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect completed metal wall panel installation, including accessories.
- B. Remove and replace metal wall panels where tests and inspections indicate that they do not comply with specified requirements.
- C. Additional tests and inspections, at Contractor's expense, are performed to determine compliance of replaced or additional work with specified requirements.

3.5 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
- B. After metal panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.

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- C. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 07 42 13

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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 work.
- B. Related Requirements:
 - 1. Section 08 71 00 "Door Hardware" for door hardware for hollow-metal doors.
 - 2. Section 08 16 13 "Fiberglass Reinforced Polymer Doors"

1.3 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.

1.4 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. 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.

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

C. 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.

1.5 INFORMATIONAL SUBMITTALS

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

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal work 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 work 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. Ceco Door Products; an Assa Abloy Group company.
2. Curries Company; an Assa Abloy Group company.
3. Republic Doors and Frames.
4. Steelcraft; an Ingersoll-Rand company.
5. West Central Manufacturing
6. Or equal if and as specifically approved by Architect by Addendum during the bidding period.

B. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

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2.2 INTERIOR DOORS AND FRAMES, STANDARD HOLLOW METAL

- 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. Heavy-Duty Doors and Frames: SDI A250.8, Level 2. All interior locations.
 - 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.
 - c. Face: Uncoated, cold-rolled steel sheet, minimum thickness of 0.042 inch.
 - d. Edge Construction: Model 2, Seamless.
 - e. Core: Manufacturer's standard polyisocyanurate core at manufacturer's discretion.
 - 3. Frames:
 - a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch.
 - b. Construction: Full profile welded.
 - 4. Exposed Finish: Prime.

2.3 INTERIOR FRAMES, STAINLESS STEEL

- A. Doors and Frames for Clean Room Environments:
 - 1. Stainless Steel Frames:
 - a. Materials: Type 304 stainless steel sheet.
 - b. Door Frames for Openings 48 Inches Wide or Less: Fabricate from stainless steel sheet, minimum thickness 0.078 inch.
 - c. Door Frames for Openings More Than 48 Inches (1219 mm) Wide: Fabricate from stainless steel sheet, minimum thickness 0.078 inch.
 - d. Construction: Full profile welded.
 - 2. Hardware Reinforcement: Stainless steel sheet.
 - 3. Finish: ASTM A480/A480M No. 4, Directional Satin.

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.

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B. Heavy-Duty Doors and Frames: ANSI/SDI A250.8, Level 2; ANSI/SDI A250.4, Level B.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule on Drawings.
- b. Thickness: 1-3/4 inches.
- c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch, with minimum A60 coating.
- d. Edge Construction: Model 2, Seamless.
- e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
- f. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
- g. 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.
- h. Core: Manufacturer's standard.

2. Frames:

- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum A60 coating.
- b. Construction: Full profile welded.

3. Exposed Finish: Prime.

4. Frames:

- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum **A60** coating.
- b. Construction: Full profile welded.

5. Exposed Finish: Prime.

2.5 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.
- D. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.

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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.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. 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.
- G. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.
- H. 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.
- I. Glazing: Comply with requirements in Section 08 80 00 "Glazing."

2.6 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, steel vertical stiffeners of same material as face sheets extending full-door height, with vertical webs spaced not more than 6 inches apart. Spot weld to face sheets no more than 5 inches o.c. Fill spaces between stiffeners with glass- or mineral-fiber insulation.
 2. Fire Door Cores: As required to provide fire-protection ratings indicated.
 3. Vertical Edges for Single-Acting Doors: Bevel edges 1/8 inch in 2 inches.
 4. Top Edge Closures: Flush edge closures of same material as face sheets.
 5. Bottom Edge Closures: Close bottom edges of doors with end closures or channels of same material as face sheets.
 6. Exterior Doors: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.
 7. 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 beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

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- 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. **Sidelight and Transom Bar 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. **Stud-Wall Type:** Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Three anchors per jamb up to 60 inches high.
 - 2) Four anchors per jamb from 60 to 90 inches high.
 - 3) Five anchors per jamb from 90 to 96 inches high.
 - 4) Five anchors per jamb plus one additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
 - b. **Compression Type:** Not less than two anchors in each frame.
 6. **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 non-templated, 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.
- 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.

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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.

2.7 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.

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 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. 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.

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- D. **Metallic-Coated Surface Touchup:** Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- E. **Factory-Finish Touchup:** Clean abraded areas and repair with same material used for factory finish according to manufacturer's written instructions.
- F. **Touchup Painting:** Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 08 11 13

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SECTION 08 16 13 – FIBERGLASS-REINFORCED POLYMER (FRP) DOORS

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.
- B. Section 08 11 13 "Hollow Metal Doors and Frames".
- C. Section 08 71 00 "Door Hardware".

1.2 QUALITY ASSURANCE

- A. Construction: Verify that FRP doors are manufactured utilizing pultruded fiberglass components.
- B. Resins: Resins shall comply with USDA and FDA standards for incidental food contact
- C. Physical Endurance: FRP Doors and frames to successfully complete 1,000,000 cycles Grade A swing test in compliance with ANSI/SDI A250.4-2011.
- D. Impact Strength: FRP doors 10.32 foot-pounds per inch, ASTM D-256.
- E. Tensile Strength:
 - 1. FRP doors 12,000 psi, ASTM D-638.
- F. Flexural Strength: FRP doors and frames 25,000 psi, ASTM D-790.
- G. Compressive Strength:
 - 1. FRP doors 18,000 psi, ASTM D-695.
 - 2. .
- H. Water Absorption: FRP doors.27%, ASTM D-570.
- I. Hardware Reinforcements: FRP doors and frames fabricated with a minimum screw holding strength of 1,000 lbs. Tested with a #12 x 1-1/4" hinge screw.
- J. Warranty: Life of the initial installation against failure due to corrosion. Additionally, lifetime warranty against failure due to materials and workmanship from date of substantial completion.

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1.3 SUBMITTALS

- A. Product Data: For each type of door and frame indicated, include door designation, type, level and model, material description, core description, construction details and finishes.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver doors and frames crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.
- B. Inspect doors and frames on delivery for damage and notify shipper and supplier if damage exists. Minor damages may be repaired provided refinished items match new work and are acceptable to the Architect. Remove and replace damaged items that cannot be repaired as directed.
- C. Store doors and frames at building site under cover. Avoid using non-vented plastic or canvas covers that could create a humidity chamber.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. FRP Architectural Doors Inc.
 - 2. Weiland
 - 3. Special-Lite, Inc.
 - 4. Others submitted and approved by Architect prior to bid submittal.
- B. Interior Doors: Provide doors complying with requirements indicated below:
 - 1. CF34 (Heavy Duty).
 - 2. Doors to have at least two internal full height vertical FRP stiffeners for warp resistance.
 - 3. Polystyrene foam core standard.
- C. Vision Lite Systems: Lite cutout shall be built-in during door assembly, utilizing FRP tubing.

2.2 FABRICATION

- A. General: Fabricate fiberglass door and frame units to be rigid and free from defects including warp and buckle.
- B. Core Construction: Manufacturer's standard core construction that complies with the following:

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1. Expanded polystyrene or polyurethane foam core.
- C. Stiles and Rails: Fabricate doors using FRP pultrusions.
- D. Door Faces: Fiberglass face skins shall be fused to the stile and rail assembly, including the vertical stiffeners and core material, utilizing polyurethane adhesive.
- E. Clearances: Not more than 1/8" at jambs and heads. Not more than 1/4" between pairs of doors. Not more than 3/4" at bottom unless indicated otherwise.
- F. Door Edges: Lock stile to be factory beveled 3 degrees, standard.
- G. Tolerances: Maximum diagonal distortion 1/8" measured with straight edge, corner-to-corner.
- H. Hardware Reinforcement: Fabricate all hardware reinforcements using FRP pultrusions.
- I. Exposed Fasteners: Unless otherwise indicated, provide stainless steel, countersunk flat or oval heads for exposed screws and bolts.
- J. Hardware Preparations: Prepare doors and frames to receive mortised and concealed hardware according to final door hardware schedule and templates provided by hardware supplier.
- K. Hardware Locations: Locate hardware as indicated on shop drawings or, if not indicated, according to manufacturer's standard locations.
- L. Glazing Stops: Two-piece PVC lite kits.
 1. Provide screw-applied, removable, glazing stops on inside of opening, louvers, and other panels in doors.
 2. Glass to be supplied and installed under section 08800, unless stated otherwise.

2.3 FINISHES

- A. Two-component acrylic urethane topcoat custom color, factory-finished.

PART 3 EXECUTION

3.1 INSTALLATION

- A. General: Install FRP doors, frames, and accessories according to shop drawings, manufacturer's data, and as specified.

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- B. Placing Frames: Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set.
1. Except for frames located in existing walls, place frames before construction of enclosing walls and ceilings.
 2. In masonry construction, provide at least three wall anchors per jamb; install adjacent to hinge locations on hinge jamb and at corresponding heights on strike jamb, utilizing masonry wire anchors.
 3. In existing concrete or masonry construction, provide at least three completed opening anchors per jamb; install adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Set frames and secure to adjacent construction with stainless steel expansion bolts.
 4. For openings 90" or more in height, install an additional anchor at hinge and strike jambs.
- C. Factory Finished Doors: Restore finish before installation if fitting or machining is required at Project site.
- D. Door Installation: Fit fiberglass doors accurately in frames. Shim as necessary.

END OF SECTION 08 16 13

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SECTION 09 67 33 – TROWEL-APPLIED RESINOUS FLOORING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Sections, apply to work of this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Seamless resinous flooring.
 - 2. Coved seamless wall base.

1.3 QUALITY ASSURANCE

- A. All materials must be recommended and manufactured by a single supplier to insure compatibility and proper chemical and mechanical bond.
- B. Surfacing shall be applied by a surfacing applicator approved by the Architect, with a minimum of seven (7) years experience installing the brand of surfacing in similar size and function projects. A list of ten (10) completed projects using the specified materials must be submitted proving seven (7) years experience by the lead mechanic.
- C. Surfacing applicator shall provide to the architect a completed list of jobs including the names of the Architect, General Contractor, Owner, telephone numbers of all concerned, materials used, quantity installed and date completed on similar projects.
- D. Surfacing applicator must provide a written guarantee for materials and workmanship between applicator and surfacing manufacturer for one (1) year.
- E. Surfacing applicator or manufacturer seeking approval of products other than what is specified must supply samples, full product information, technical data with specifications, certification from an independent testing laboratory that the product being submitted for approval meets all requirements of the performance properties specified within this specification, installation instructions and comply with the above quality assurances in writing fourteen (14) days before bid letting. Omission of any item will result in an automatic rejection.
- F. Bidders will be notified by addendum of substitute surfacing materials, if approved.

1.4 SUBMITTALS

- A. Surfacing applicator shall submit samples of color and textures for Architect's approval.
- B. Prior to commencing work, applicator shall install a 18" x 18" square mockup on the job of desired

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color and texture and when approved, this will serve as the standard for the entire project.

1.5 PRODUCT STORAGE AND ENVIRONMENTAL CONDITIONS

- A. Material temperatures shall be a minimum of 55°F before use.
- B. Work on seamless flooring shall not commence until the building can be maintained at a minimum temperature of 55°F for 48 hours before, during and 48 hours after application. Areas shall also be broom clean and reasonably dust free and shall have adequately controlled ventilation with bright, uniform lighting.

1.6 PROJECT CONDITIONS

- A. Before commencing work, ensure environmental and site conditions are suitable for application and curing.
- B. Surfaces shall be acceptable in accordance with flooring manufacturer's recommendations.
- C. Notify Architect and Contractor in writing of unsuitable surfaces and conditions. Commencement of work shall imply acceptance of surfaces and working conditions.
- D. Recommended Moisture Vapor Transmission Considerations:
 - 1. Placement of on-grade slabs over a Class A vapor retarder as defined by ASTM E-145.
 - 2. A water cement ratio of 0.45 and 0.5.
 - 3. Curing by ASTM C-171 sheet materials for curing concrete.
 - 4. A slump in the range of 3 to 4 inches which can be increased by the use of super plasticizers.

1.7 PROTECTION

- A. Protect adjacent surfaces from damage resulting from work of this trade. If necessary, mask and/or cover adjacent surfaces, fixtures, cabinet work, equipment, etc. by suitable means.

1.8 WARRANTY

- A. Manufacturer's written warranty against defects and wear for a period of five (5) years, including:
 - 1. Delamination from substrate.
 - 2. Loss of aggregate.
 - 3. Degradation of finish.
 - 4. Cracking and spalling
 - 5. Water penetration.

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PART 2 PRODUCTS

2.1 MATERIALS

A. Seamless Floor and wall Covering where called for on the drawings, basis-of-design product:

- a. Desco Quartz Cremona TG With SR CO POLYMER (No Broadcast allowed) Floor manufactured by Desco Coatings, Inc. 1-800-426-4164.

Or equal product by

- b. Stonhard®, Inc
c. Tnemec Company
d. Dur-a-Flex

B. Provide cove base with radius cove as indicated on drawings and vertical application of flooring to height indicated.

B. Binder and all successive grout and top coats shall be 100% solids clear/epoxy resin.

C. Finish shall utilize a single color of quartz, selected by architect to match existing flooring color. No color mixes shall be used.

D. Minimum Performance Characteristics:

- | | |
|--------------------------------------|-------------|
| 1. Compressive Strength (ASTM C-579) | 10,000 psi |
| 2. Tensile Strength (ASTM C-307) | 2,250 psi |
| 3. Flexural Strength | 4,000 psi |
| 4. Shore D Hardness (ASTM D-2240) | 85-90 |
| 5. Bond Strength (ASTM D-4541) | 425 psi |
| 6. Abrasion Resistance (ASTM D-4060) | 0.08 gm |
| 7. Pot Life | 35 min |
| 8. Cure Time @ 77° F | 10-12 hours |

Epoxy top coats shall produce no color shift after exposure to fluorescent lighting on the "b" axis yellow index after 3 weeks exposure.

20% Hydrochloric Acid
Urine
Coffee
Ethyl Alcohol

10% Lactic Acid
Tea
Mustard
Mercurochrome
Betadyne

PART 3 EXECUTION

3.1 TESTING OF CONCRETE SUBSTRATE

A. One of the following three methods shall be used to determine moisture content of slab at time of application. These test only measure the specific area tested at the time of the test and are not

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predictors of future substrate conditions.

- B. Using a Tramax concrete moisture detection device, firmly apply the test apparatus to concrete that has had sealers or other subsequent coatings removed. The readings shall be 4.2% or less. If readings are higher, use ASTM F-2170 for non conditional spaces and/or ASTM F1869 for conditioned spaces.
- C. ASTM F-2170 in site Relative Humidity Test. Follow test procedures of manufacturer of testing equipment. Reading should be below 80%.
- D. ASTM F-1869 Calcium Chloride Moisture Vapor Transmission Test. Follow test procedures of manufacturers of MVT kits. Results should be below 3 to 4 lbs/1,000 square feet/24 hours.

3.2 FLOORING PREPARATION

- A. Surface must be clean, sound and dry.
- B. Effectively remove concrete laitance on accessible floor surfaces by mechanical shot blast. Acid etching is not acceptable.
- C. Areas where flooring is existing must be cleaned to remove all floor material, grease or any residue that might retard interfacial adhesion between substrate and surfacing. Installer shall prepare existing flooring and wall base as required and provide testing as required to ensure adhesion.

3.3 FLOORING APPLICATION

- A. Apply flooring in accordance with manufacturer's printed instructions, employing lead mechanic qualified under the quality assurance portion of this specification, using equipment specifically designed for this purpose.
- B. Desco Quartz Cremona TG is a hand troweled grade 11 Desco quartz aggregate with 20% of grade 28 as a filler. The system should be hand troweled to 3/16" thickness over epoxy primer.
 - 1. All necessary fill for sloping to drains to be Desco epoxy resin and selected aggregate. If thickness is greater than 2", apply in multiple lifts.
- C. Install cove base to height as indicated with radius cove.
 - 1. Trowel apply vertical cove base.
 - 2. Hand sand
 - 3. Apply three coats of resin to assure a smooth surface and cove.
 - 4. Do not allow resin to puddle in cove.

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- D. Apply SR60 aggregate on floor for slip resistance. Amount to be determined on actual mock-up from end user.
- E. Finished work shall match approved samples; be uniform in thickness, sheen, color, pattern, and texture; and be free from defects detrimental to performance.

3.4 PROTECTION

- A. After completion of flooring the General Contractor/Owner shall protect flooring from damage by other trades.

END OF SECTION 09 67 33

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SECTION 10 28 00 – TOILET AND BATH ACCESSORIES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Framed Mirror
2. Shelf: Satin-Finish Stainless Steel Shelf
3. Clothes (Utility) Hook.
4. Grab Bar: Satin-Finish Stainless Steel, 1-1/2" (38 mm) diameter.

1.3 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include the following.
 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
 2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
 3. Retain subparagraph below if units are required that connect to building electrical system.
 4. Manufacturer's warranty.
- B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.
 1. Identify locations using room designations indicated.

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2. Identify accessories using designations indicated.

1.5 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For manufacturer's special warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For accessories to include in maintenance manuals.

1.7 WARRANTY

- A. Manufacturer's Standard Warranty: Manufacturer's standard form in which manufacturer agrees to repair, restore, or replace defective automated hand dryer components and labor within specified warranty period.

1. Warranty Period: One (1) year limited for labor and five (5) years for parts.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch (0.8-mm) minimum nominal thickness unless otherwise indicated.
- B. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.
- C. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.2 FRAMED MIRROR

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 1. Bobrick Washroom Equipment, Inc.
 2. Bradley Corporation
 3. Foundations Worldwide, Inc.
 4. ASI Group
 5. Or equal if and as specifically approved by Architect by Addendum during the bidding period.
- B. Bobrick Washroom Equipment, Inc., Channel Frame, Product #B-165 2448

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2.3 STAINLESS STEEL WALL SHELF (SSSH)

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - 1. Bobrick Washroom Equipment, Inc.
 - 2. Bradley Corporation
 - 3. Foundations Worldwide, Inc.
 - 4. ASI Group
 - 5. Or equal if and as specifically approved by Architect by Addendum during the bidding period.
- C. Bobrick Washroom Equipment, Inc., Stainless Steel Shelf, Product # B-295 24.
 - 1. 18-8 S, type 304, 18-gauge (1.2 mm) stainless steel. Shelf shall be 5" W with 3/4" (19 mm) return edges. Front edge shall be hemmed for safe handling. Mounting Brackets—18-8 S, type 304, 16-gauge (1.6 mm) stainless steel. Welded to back return of shelf and secured inside front hem of shelf. Finish: Satin-Finish Type #304 Stainless Steel.
 - a. Length: As indicated on drawings.

2.4 CLOTHES (UTILITY) HOOK (CH)

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - 1. Safco
 - 2. Bobrick Washroom Equipment, Inc.
 - 3. Bradley Corporation
 - 4. Foundations Worldwide, Inc.
 - 5. ASI Group
 - 6. Or equal if and as specifically approved by Architect by Addendum during the bidding period.
- C. Safco 4162 Wall Coat Hook.

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1. Description: Heavy-duty wall mounted with six chrome-plated double steel hooks with ball tips.
2. Size: 36 x 33/4 x 7"

D. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

PART 3 -EXECUTION

3.1 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Remove temporary labels and protective coatings.
- C. Clean and polish exposed surfaces according to manufacturer's written instructions.

END OF SECTION 10 28 00

DEMOLITION KEY NOTES (A1)	
A-WALLS	
A1	COORDINATE DEMOLITION WITH PHASING WORK AND SHUTDOWN OF MECHANICAL EQUIPMENT AS REQUIRED AND COORDINATED WITH OWNER. REMOVE EXISTING GYP TEMPORARY WALL IN ITS ENTIRETY FROM FLOOR TO TOP OF WALL TO THE EXTENT SHOWN. PREP WALL AREAS TO RECEIVE NEW ARCOPLAST WALL FINISH.
A2	REMOVE EXISTING C.M.U. WALL PARTITION IN ITS ENTIRETY FROM FOOTING TO TOP OF WALL TO THE EXTENT SHOWN, INCLUDING BUT NOT LIMITED TO C.M.U., TRIMS, ELECTRICAL AND MECHANICAL (STRUCTURAL STEEL TO REMAIN). REMOVE FLOOR AS NEEDED TO DEMOLISH PARTITION TO FOOTINGS. REMOVE ELECTRICAL AND MECHANICAL BACK TO JUNCTION OR MAIN SUPPLYING UTILITY AND CAP. REPAIR WALL, FLOORING, CEILING AND ADJACENT WALL(S), IF APPLICABLE, TO MATCH EXISTING FINISH OR COORDINATE W/ NEW CONSTRUCTION & INTERIOR FINISHES.
A3	REMOVE EXISTING WALL PARTITION SECTION TO THE EXTENT SHOWN TO ALLOW FOR NEW DOOR OR WINDOW. COORDINATE SIZE & LOCATION W/ FLOOR PLAN. DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO C.M.U., PLASTER OR GYP BOARD, TRIMS, FRAMING, ELECTRICAL AND MECHANICAL (STRUCTURAL STEEL TO REMAIN). REMOVE FLOOR AS NEEDED TO DEMOLISH PARTITION TO FOOTINGS. REMOVE ELECTRICAL AND MECHANICAL BACK TO JUNCTION OR MAIN SUPPLYING UTILITY AND CAP. ADJUST SUSPENSION AND/OR BRACE WALLS AS REQUIRED. REPAIR WALL, FLOORING, CEILING AND ADJACENT WALL(S), IF APPLICABLE, TO MATCH EXISTING FINISH, OR COORDINATE W/ NEW CONSTRUCTION & INTERIOR FINISHES. WALL GUARDS TO BE REMOVED AT NEW WALL DEMOLITION.
B-FLOORS	
B1	PREPARE EXISTING FINISH FLOORING AND WALL BASE FOR FULL EXTENTS OF THE ROOM TO RECEIVE NEW FINISH PER SPECIFICATIONS. ALL MOBILE EQUIPMENT AND FURNITURE SHALL BE TEMPORARILY REMOVED TO PERFORM WORK. PROVIDE EQUIPMENT AND FURNISHING STAGING PLAN AND VERIFY ACCESS TO EACH SPACE WITH OWNER PRIOR TO COMMENCEMENT OF WORK.
D-DOORS & OPENINGS	
D1	REMOVE EXISTING DOOR IN ITS ENTIRETY TO THE ROUGH OPENING, INCLUDING BUT NOT LIMITED TO DOOR LEAF, DOOR FRAME, SIDELIGHT GLAZING, TRANSOM GLAZING, HARDWARE AND ALL SEALANT. PROTECT AND SALVAGE DOOR & HARDWARE. RETURN TO OWNER FOR RE-USE. PROTECT AND SALVAGE ADJACENT FINISHED SURFACES. REPAIR WALL, VAPOR BARRIER, INSULATION, FLOORING, CEILING AND ADJACENT WALL(S), IF APPLICABLE, TO MATCH EXISTING FINISH, OR COORDINATE W/ NEW CONSTRUCTION & INTERIOR FINISHES.
G-ROOF	
G1	(ADD ALT #4) REMOVE PARAPET SHEET METAL COPING AND BLOCKING FOR NEW CONSTRUCTION
G2	(ADD ALT #4) REMOVE AND DISPOSE OF DOWNSPOUTS.
G3	(ADD ALT #4) REMOVE AND DISPOSE OF GLITTER.
G4	(ADD ALT #4) REMOVE ROOF MEMBRANE, INSULATION AND SHEATHING TO EXPOSE STRUCTURAL DECK AS NEEDED FOR NEW WORK.

CEILING NOTES:
 THE MAJORITY OF DEMOLITION FOR PREVIOUSLY EXISTING CEILING HAVE BEEN COMPLETED IN THE CURRENT PROJECT SCOPE LOCATION (ABSLS); EXISTING LIGHT FIXTURES AND ELECTRICAL DEVICES HAVE BEEN STORED ON SITE FOR RE-USE. EXISTING CEILING PANELS ARE STORED BY OWNER FOR RE-USE. PROVIDE ADDITIONAL EXISTING FRAMING DEMOLITION AS REQUIRED FOR NEW CEILING WORK.



2 FIRST FLOOR CEILING DEMOLITION PLAN
 SCALE: 1/8" = 1'-0"



GENERAL DEMOLITION NOTES

- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL OF ALL SALVAGEABLE ITEMS.
- PROTECT ITEMS NOT BEING REMOVED FROM DAMAGE DURING CONSTRUCTION.
- CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS PRIOR TO BIDDING TO DETERMINE THE TOTAL QUANTITIES AND SCOPE OF WORK THAT IS TO OCCUR AND COORDINATE ANY DISCREPANCIES WITH THE ARCHITECT.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE INSTALLATION OF NEW WORK WITHIN EXISTING CONDITIONS.
- ALL MATERIALS REMOVED AND NOT REUSED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFICALLY DESIGNATED TO REMAIN THE PROPERTY OF THE OWNER.
- ALL WALLS INDICATED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ALL ELECTRICAL RECEPTACLES, SWITCHES AND CONDUITS, TELEPHONE OUTLETS, WIRING, MECHANICAL PIPING AND PLUMBING, ETC.
- REMOVE ALL SURFACE MOUNTED OBJECTS IN AREA OF WORK THAT ARE ABANDONED AND NOT INTENDED FOR REUSE. PREPARE SURFACE FOR NEW FINISH.
- COORDINATE ALL DEMOLITION WORK BETWEEN TRADES.
- CONTRACTOR SHALL NOTIFY THE ARCHITECT IF DEMOLITION WORK APPEARS TO AFFECT THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDING BEFORE PROCEEDING WITH DEMOLITION ACTIVITIES.
- REFER TO REFLECTED CEILING PLANS, MECHANICAL SHEETS, & ELECTRICAL SHEETS FOR ADDITIONAL DEMOLITION INFORMATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING MATERIALS TO REMAIN RESULTING FROM WORK UNDER THIS CONTRACT AND SHALL RESTORE SUCH DAMAGE TO ITS ORIGINAL CONDITION.
- BEFORE DEMOLITION BEGINS, CONTRACTOR SHALL CONFER WITH THE OWNER AND/OR BUILDING USERS TO SCHEDULE DISRUPTION OF DAILY ACTIVITIES.
- ALL PRODUCTS AND EQUIPMENT SHALL BE KEPT CLEAN AND SAFE. DISPOSE OF DEBRIS DAILY AND CLEAN AREAS OF WORK UPON COMPLETION.
- CONSTRUCTION AREA SHALL BE KEPT CLEAN AND SAFE. DISPOSE OF DEBRIS DAILY AND CLEAN AREAS OF WORK UPON COMPLETION.
- FINAL CLEANING SHALL INCLUDE THE FOLLOWING:
 - REMOVE LABELS THAT ARE NOT INTENDED TO BE PERMANENT.
 - CLEAN ALL TRANSPARENT SURFACES, INCLUDING MIRRORS AND GLASS IN DOORS AND WINDOWS.
 - CLEAN EXPOSED SURFACES AND INTERIOR HARD-SURFACED FINISHES TO A DUST-FREE CONDITION.
- REMOVE AND DISPOSE OF EXISTING WALL GUARD/BUMPER PROTECTION @ DEMOLITION LOCATIONS AND WHERE NEW FINISH WALL CONSTRUCTION TO OCCUR.



1 FIRST FLOOR DEMOLITION PLAN
 SCALE: 1/8" = 1'-0"



SHEET HISTORY:
 ISSUED 12/18/23 Contract Documents
 A - 001 01/31/24 ADDENDUM #1

Contract Documents

LIDR - Renovate West Animal Holding, Rms 144-149

1020 East Campus Loop
 University of Missouri
 Columbia, MO 65211
 CE No.: 624-216-22
 UM No.: CP220692

December 18, 2023

First Floor and First Floor Reflected Ceiling Demolition Plans

KEY NOTES	
1	INSTALL NEW CEILING FRAMING PER FRAMING JOIST SCHEDULE, SHEET A1.10
2	INSTALL MOISTURE-RESISTIVE 3/4" TYPE X GYPSUM BOARD OVER EXISTING CEILING
3	NEW 5" CONCRETE PAD W/ 6X6 2 1/2" WWF
4	RE-PAINT FULL WALL W/ EPOXY COATING @ NEW DOOR INSTALL
5	PATCH/REPAIR EPOXY FLOOR AND BASE @ WALL DEMOLITION

RCP GENERAL NOTES:

- NEW CEILING IN EXISTING BUILDING SHALL BE INSTALLED AT EXISTING HEIGHT. FIELD VERIFY PRIOR TO DEMOLITION.
- GPWV BULKHEADS SHALL BE FRAMED WITH 25 GAUGE 3.8" STEEL STUDS @ 16" O.C. 8" SP TYPE X GPWV TO 4" ABOVE FINISH CEILING. BRACE AS REQUIRED.
- LIGHTING FIXTURES AND MECHANICAL DIFFUSERS / GRILLES ARE SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR EXACT LOCATIONS.
- ELEVATION TAGS ARE IN REFERENCE TO ARCHITECTURAL ELEVATIONS.

REFLECTED CLG LEGEND

	5/8" SUSPENDED GPWV CEILING SYSTEM
	ACOUSTICAL PANEL CEILING SYSTEM. SEE ROOM FINISH SCHEDULE & RCP FOR TYPE.
	ACRYLOYL CEILING SYSTEM. REF. SPEC.
	2x2 ACCESS PANEL. REF. SPEC.
	RETURN AIR / EXHAUST AIR GRILLE. REF. MECHANICAL.
	SUPPLY AIR DIFFUSER. REF. MECHANICAL.
	RETURN AIR / EXHAUST AIR. REF. MECHANICAL.
	LIGHT FIXTURE. REF. ELECTRICAL.

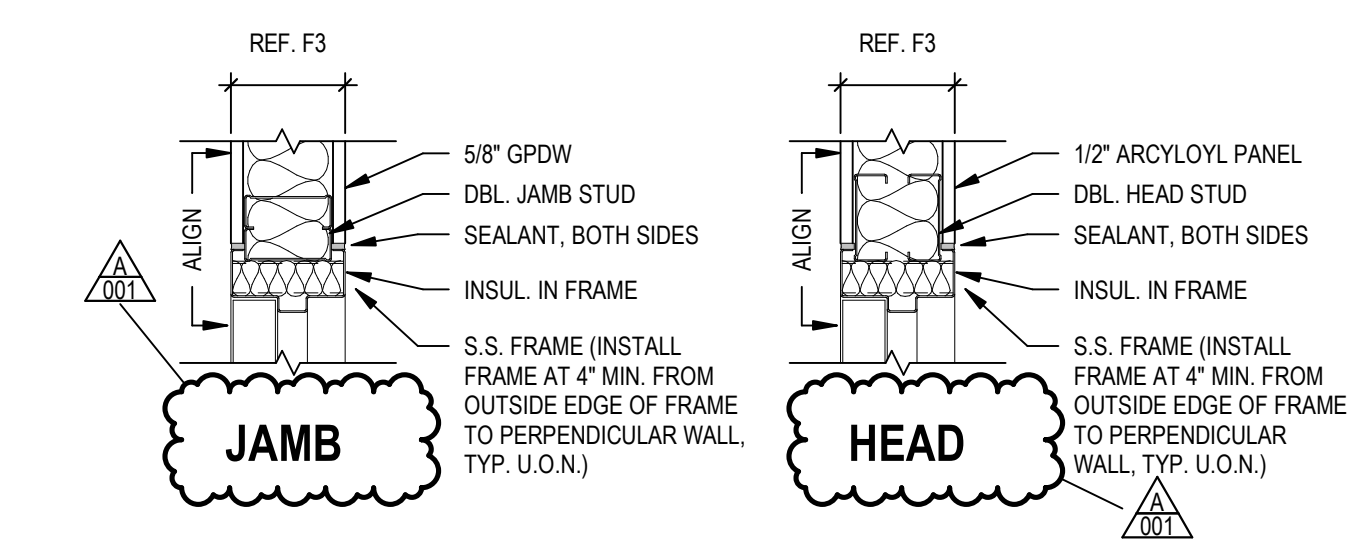
RCP ABBREVIATIONS

ACR - ACRYLOYL CEILING SYSTEM
 APC - ACOUSTICAL PANEL CEILING SYSTEM
 GPWV - GYPSUM DRY WALL

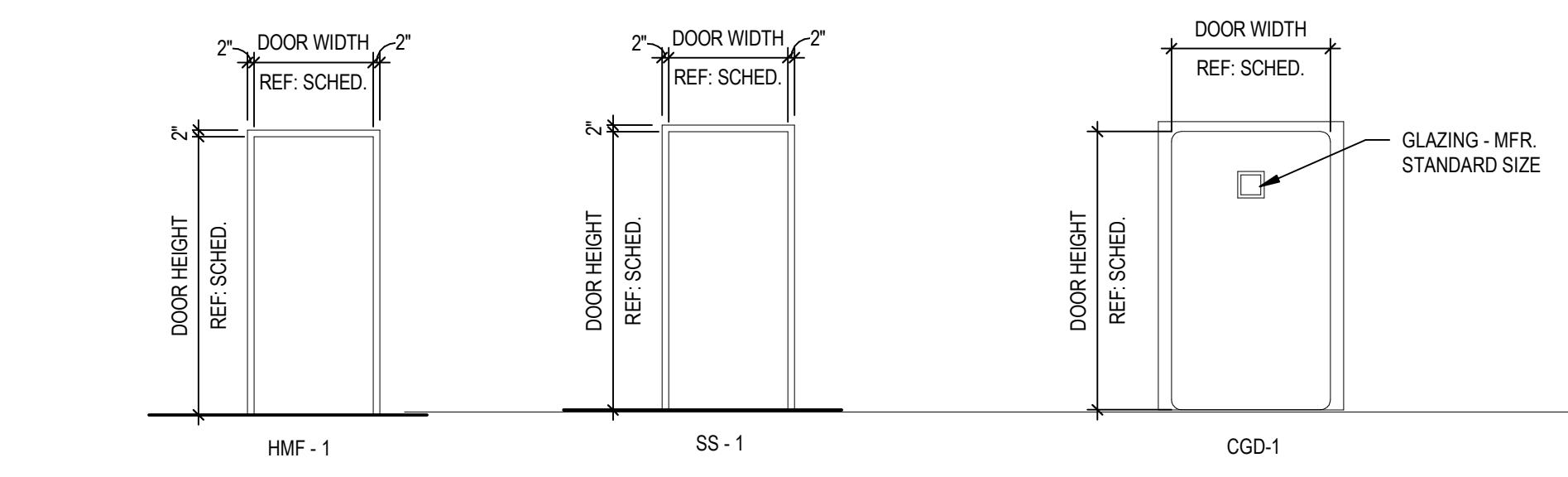
EXISTING CEILING MATERIAL

ACRYLOYL CEILING PANELS FOR USE IN NEW INSTALLATION:
 - 11 - 4X8 PANELS
 - 2 - 4X12 PANELS
 - 15 - 4X14 PANELS
 CONFIRM QUANTITIES WITH OWNER

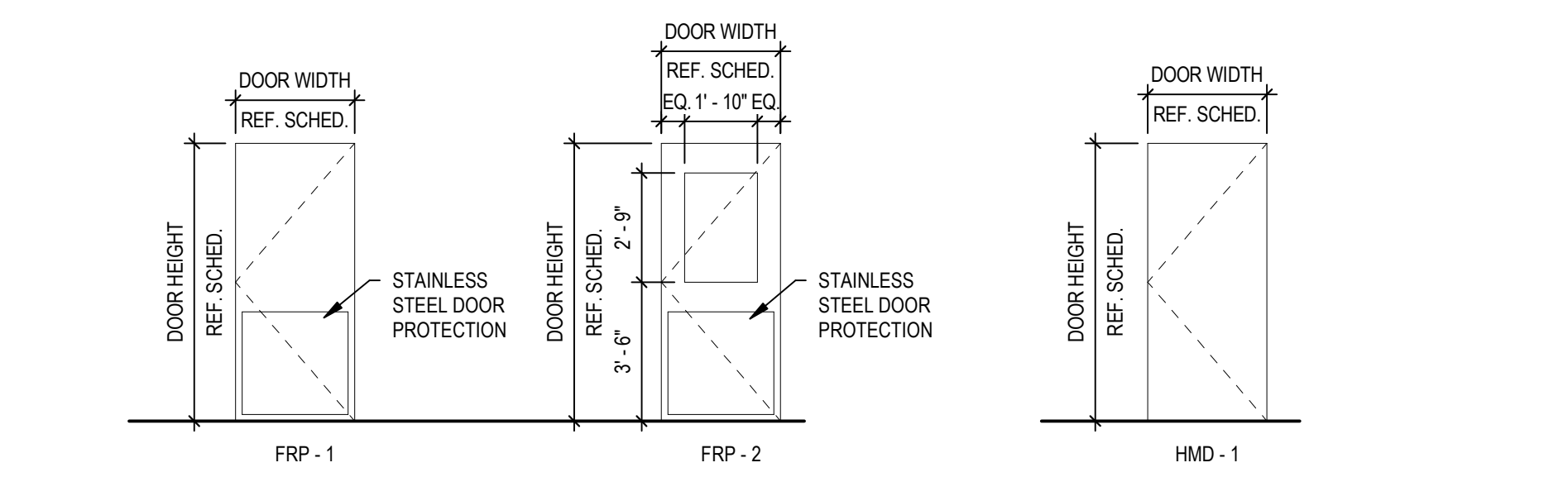
SHEET HISTORY:
 ISSUED 12/18/23 Contract Documents
 A - 001 01/31/24 ADDENDUM #1



3 DOOR DETAIL @ METAL STUD
 SCALE: 1/12" = 1'-0"



HOLLOW METAL FRAME TYPES SCALE: 1/4" = 1'-0"
STAINLESS STEEL FRAME TYPES SCALE: 1/4" = 1'-0"
CGD-1 DOOR TYPE SCALE: 1/4" = 1'-0"



FIBERGLASS-REINFORCED POLYMER DOOR TYPES SCALE: 1/4" = 1'-0"
HOLLOW METAL DOOR TYPES SCALE: 1/4" = 1'-0"

DOOR SCHEDULE														
DOOR NO.	DOOR				FRAME				HEAD	JAMB	PRE-BATING	Door - Card Reader	Door - In & Out Card Readers	REMARKS
	PAIR WIDTH	WIDTH	HEIGHT	TYPE	FINISH	TYPE	FINISH	FINISH						
146	4'-0"	7'-0"	7'-0"	FRP-2	FF	SS-1	SS	3A1.10	3A1.10	X	X	X	2.0	3.4,8,10
146A	3'-0"	7'-0"	7'-0"	FRP-1	FF	SS-1	SS	3A1.10	3A1.10	X	X	X	3.0	3.4,5,8
146B	3'-0"	7'-0"	7'-0"	SPD-1	FF	SS-1	SS	14L1.10	14L1.10	X	X	X	6.0	12
146C	3'-0"	7'-0"	7'-0"	SPD-1	FF	SS-1	SS	15A1.00	15A1.00	X	X	X	6.0	12
146D	3'-0"	7'-0"	7'-0"	FRP-1	FF	SS-1	SS	3A1.10	3A1.10	X	X	X	4.0	5
148B	4'-0"	7'-0"	7'-0"	BY DRG	FF	SS-1	SS	BY DRG	BY DRG	X	X	X	6.0	1,4
149	3'-0"	7'-0"	7'-0"	FRP-2	FF	SS-1	SS	7A3.10	7A3.10 SIM	X	X	X	5.0	9
151B	4'-0"	7'-0"	7'-0"	HMD-1	PT	HMF-1	PT	15A1.10	15A1.10	X	X	X	1.0	7

EXISTING DOOR SCHEDULE														
DOOR NO.	DOOR				FRAME				HEAD	JAMB	PRE-BATING	Door - Card Reader	Door - In & Out Card Readers	REMARKS
	PAIR WIDTH	WIDTH	HEIGHT	TYPE	FINISH	TYPE	FINISH	FINISH						
144	4'-0"	7'-0"	7'-0"	HMD-1	PT	HMF-1	PT			X	X	X	7.0	
145	4'-0"	7'-0"	7'-0"	HMD-1	PT	HMF-1	PT			X	X	X	7.0	
147	4'-0"	7'-0"	7'-0"	HMD-1	PT	HMF-1	PT			X	X	X	7.0	
150	4'-0"	7'-0"	7'-0"	HMD-1	PT	HMF-1	PT			X	X	X	8.0	11
151C	4'-0"	7'-10"	7'-10"	HMD-1	PT	HMF-1	PT			X	X	X	2.0	

DOOR SCHEDULE REMARKS	
NO.	DOOR REMARKS
1	SPECIALIZED DOOR ASSEMBLY, PNEUMATIC SEAL ON JAMB AND HEAD
2	NO NEW WORK
3	PUSH LEVER OPENERS, FULL GASKET, AUTOMATIC DOOR BOTTOM, SS KICK PLATE, FRAME PROTECTION
4	INTER LOCK CONNECTION BETWEEN DOORS: 146, 146A, 148B
5	INTER LOCK CONNECTION BETWEEN DOORS: 146A, 146D
6	EXISTING CARD READER ON 151 SIDE AND NEW CARD READER TO BE ADDED TO 150 SIDE
7	DOOR POSITION SWITCH, 15SEC DELAY ON PUSH BAR EXIT, EXTERIOR SIDE TO HAVE CYLINDER WITH NO PULL
8	REQUIRES A MANUAL OFFSET AIR ORIFICE, RE: 5A4.10, RE: MECH
9	PUSH LEVER OPENERS, SS KICK PLATE, FRAME PROTECTION
10	TIE INTO EXISTING MAG LOCK CONNECTION BETWEEN DOORS: 144, 145, 147
11	CARD READER FUNCTION TO BE DEACTIVATED - ADD REQUEST TO EXIT IN EXISTING JUNCTION AND INTERFACE W/ EXIST. MAG LOCK
12	SOLID PLASTIC DOOR IN SELECTING DOOR HINGE W/ STAINLESS STEEL HARDWARE - REFER TO SPECIFICATION SECTION 10 21 19 PLASTIC TOILET COMPARTMENTS

ABBREVIATIONS:
 FF: FACTORY FINISH
 HMD: HOLLOW METAL DOOR
 HMF: HOLLOW METAL FRAME
 SS: STAINLESS STEEL
 PT: PAINT
 CGD: COMPRESSION GASKET DOOR
 FRP: FIBERGLASS-REINFORCED POLYMER
 SPD: SOLID PLASTIC DOOR



2 FIRST FLOOR REFLECTED CEILING PLAN
 SCALE: 1/8" = 1'-0"



1 FIRST FLOOR PLAN
 SCALE: 1/8" = 1'-0"

Floor Finish Legend

EPOXY

FLOOR FINISH NOTES:

- IF HATCHED AREA EXTENDS UNDERNEATH COUNTERTOP, SINK, OR EQUIPMENT, FLOOR AREA IS INTENDED TO RECEIVE NEW FLOOR FINISH. EXISTING FIXED SINK BASE CABINETS AND CASEWORK ARE TO REMAIN IN PLACE AND HAVE NEW BASE APPLIED. ALL OTHER COUNTERTOP SUPPORTS AND EQUIPMENT SHALL BE REMOVED AND REINSTALLED AS REQUIRED TO PROVIDE NEW FLOOR FINISH.
- OWNER-SUPPLIED EXISTING MATERIALS TO BE UTILIZED TO EXTENT POSSIBLE.
 - TWO (2) 50 GAL PART A EPOXY RESIN TMEC3 SERIES 222, 223, 224, 284, 285
 - TWO (2) 1 GAL PART C SERIES 248 EVERTHANE ALIPHATIC URETHANE
 - 30" 24" WIDE ROLLED FLOOR PROTECTION

CONFIRM QUANTITIES WITH OWNER

GENERAL PLAN NOTES

- THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS SHOWN ON THE PLANS PRIOR TO COMMENCEMENT OF THE WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE INSTALLATION OF NEW WORK WITHIN THESE EXISTING CONDITIONS. ANY DEVIATIONS IN EXISTING CONDITIONS OR DIMENSIONS INDICATED SHALL BE COORDINATED WITH THE ARCHITECT AND OWNER.
- ALL WALL / GENERAL PLAN DIMENSIONS ARE TO FACE OF MASONRY, FACE OF CONCRETE, AND TO FACE OF GYP. BOARD, TYP.
- CONSTRUCTION OF WALLS ARE DESIGNATED STARTING ON TAG SIDE OF WALL.
- ALL INTERIOR WALL FRAMING NOTED IN WALL TYPE SCHEDULE EXTENDS TO DEEP STRUCTURAL BECKING, BRACE AS REQUIRED. PROVIDE DEEP LEG SLIP TRACK AT TOP OF ALL INTERIOR WALLS / STUDS EXTENDING TO STRUCTURE TO ALLOW FOR DEFLECTION OF STRUCTURE.
- INTERIOR DOOR FRAMES SHALL BE INSTALLED WITH THE HINGE SIDE OF DOOR FRAME 4" FROM ADJACENT WALL, UNLESS OTHERWISE DIMENSIONED.
- ALL STEEL STUDS ARE MIN. 18 GA. UNLESS NOTED OTHERWISE. 20 GA STEEL STUDS REQUIRED AT ALL CEMENTITIOUS BACKER BOARD AND ABUSE RESISTANT GYPSUM BOARD AS SPECIFIED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PRICING AND INSTALLATION OF APPROPRIATE FRAMING NEEDED FOR WALLS HEIGHT. REFER TO INTERIOR STEEL STUD FRAMING GAGE TABLE (1) ON SHEET A0.00 FOR FRAMING GAGES AND STUD SIZING REQUIREMENTS.
- REFER TO EXISTING CODE COMPLIANCE PLANS FOR LOCATION OF FIRE RATED WALLS AND SMOKE SEPARATION WALL LOCATIONS AND REQUIREMENTS.
- ALL OPENINGS IN RATED ASSEMBLIES SHALL BE SEALED WITH FIRE / SMOKE RATED MATERIALS AND ASSEMBLIES. INSTALL RATED JOINT SEALANTS AT BOTH FACES OF PARTITIONS, AT PERIMETERS, AND THROUGH FIRE RATED ASSEMBLIES. REFERENCE CODE COMPLIANCE PLANS FOR LOCATION OF RATED ASSEMBLIES.
- ALL STC-RATED WALL ASSEMBLIES AND PARTITIONS INDICATED SHALL HAVE STAGGERED SHEATHING AND GYP. BOARD JOINTS ON OPPOSITE SIDES OF ASSEMBLIES. REFERENCE WALL TYPE SCHEDULE FOR SOUND ATTENUATION INSULATION REQUIRED WITHIN STUD CAVITIES. SEAL ASSEMBLIES AT CONSTRUCTION PERIMETERS, DECKING MATERIAL (TOP & BOTTOM), BEHIND CONTROL JOINTS, AND AT ALL OPENINGS AND PENETRATIONS WITH A CONTINUOUS BEAD OF ACOUSTICAL JOINT SEALANT. INSTALL ACOUSTICAL JOINT SEALANTS AT BOTH FACES OF ASSEMBLIES.
- GENERAL CONTRACTOR SHALL COORDINATE REPAINTING OF WALLS BETWEEN SUBCONTRACTORS AFTER EXISTING FIXTURES ARE SCHEDULED TO BE REMOVED AND PRIOR TO FIXTURES BEING REINSTALLED. REFER TO ELECTRICAL & MECHANICAL PLANS.
- ALL WALL BOARD IN MECHANICAL ROOMS SHALL BE MOLD & MOISTURE RESISTANT DRYWALL.
- ALL SINK PEDALS WITHIN SCOPE ARE TO BE REMOVED AND REINSTALLED.
- ALL CRASH GUARDS WITHIN SCOPE ARE TO BE REMOVED AND REINSTALLED.

Contract Documents

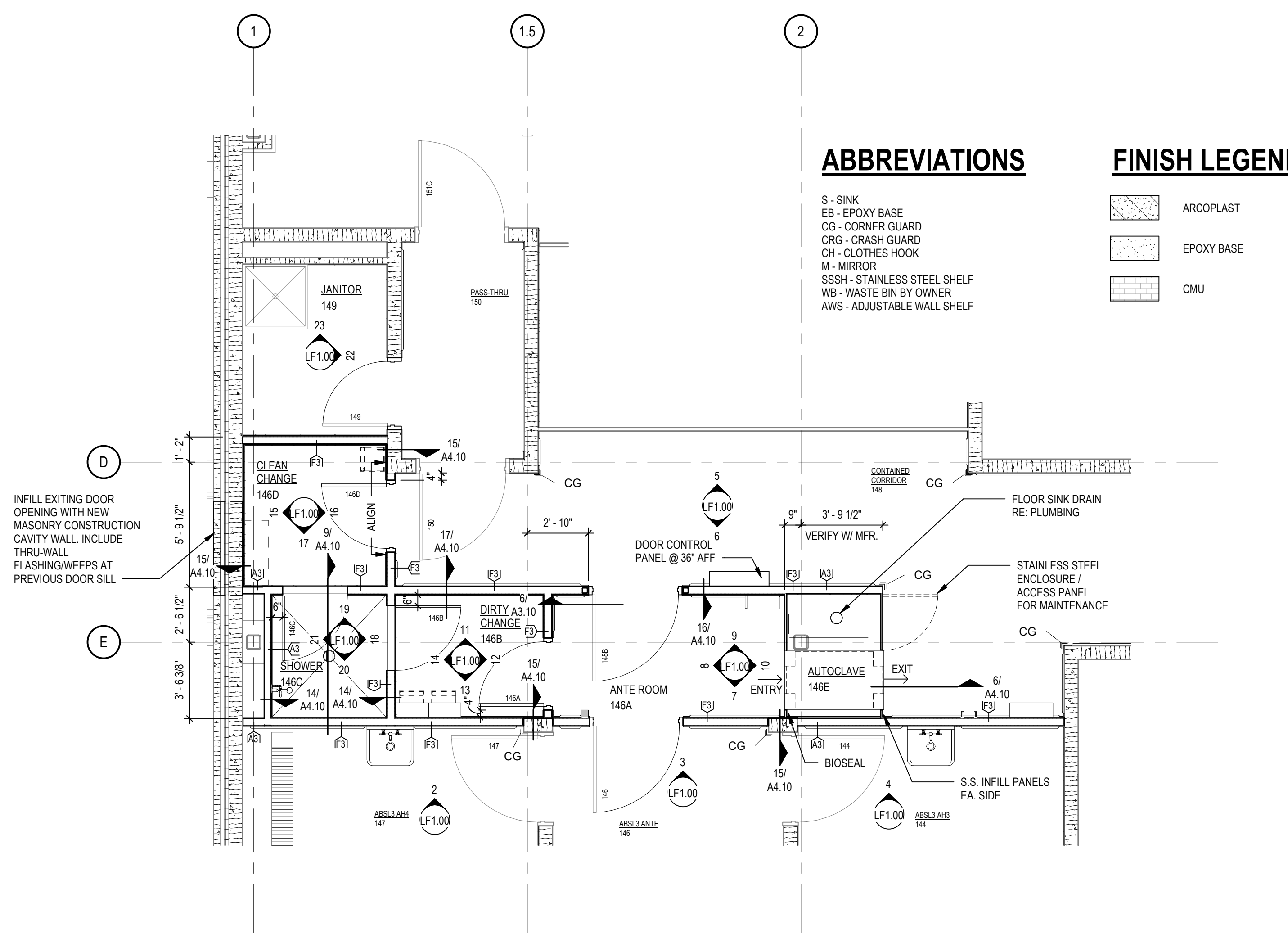
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 CE No.: 624-216-22
 UM No.: CP220692

December 18, 2023

First Floor and First Floor Reflected Ceiling Plans

A1.10



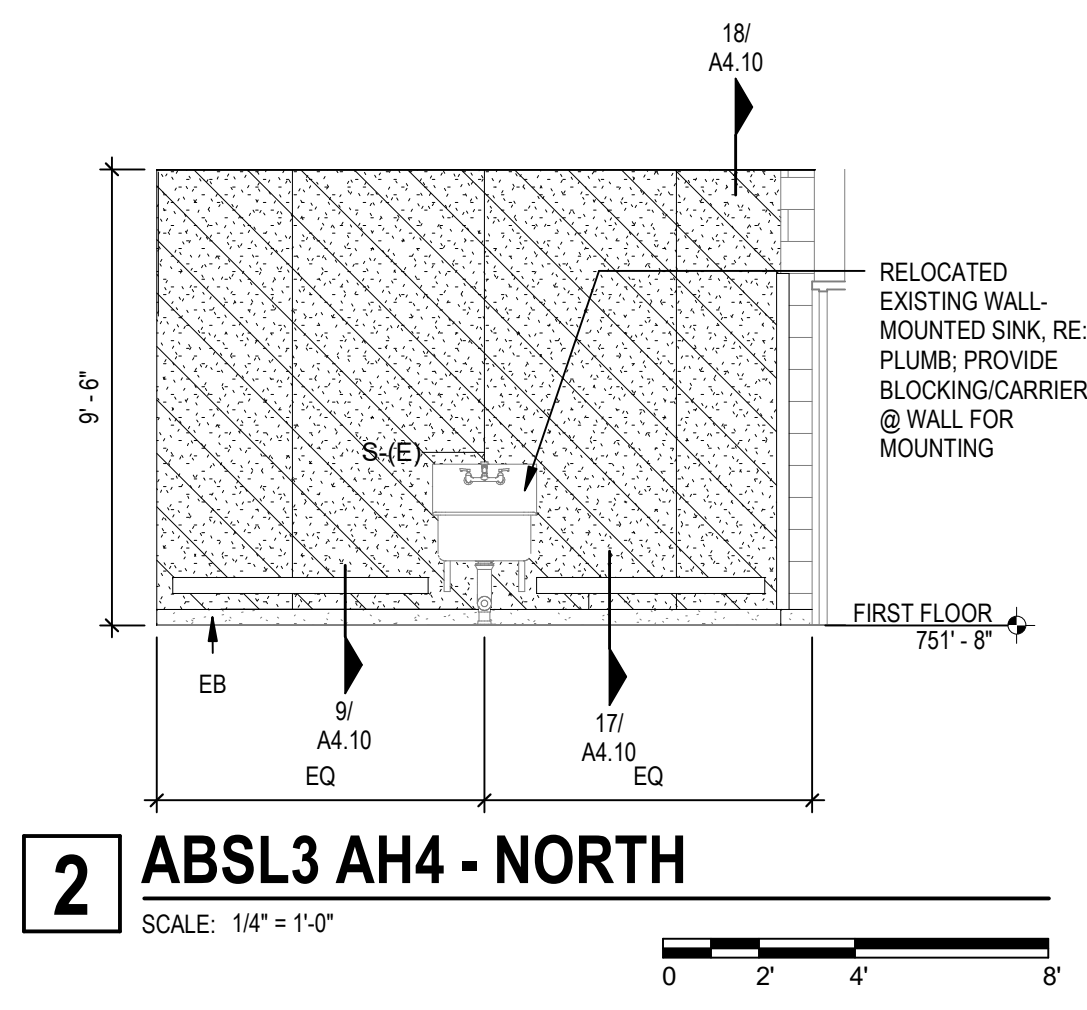
1 FIRST FLOOR - ENLARGED PLAN
 SCALE: 1/4" = 1'-0"

ABBREVIATIONS

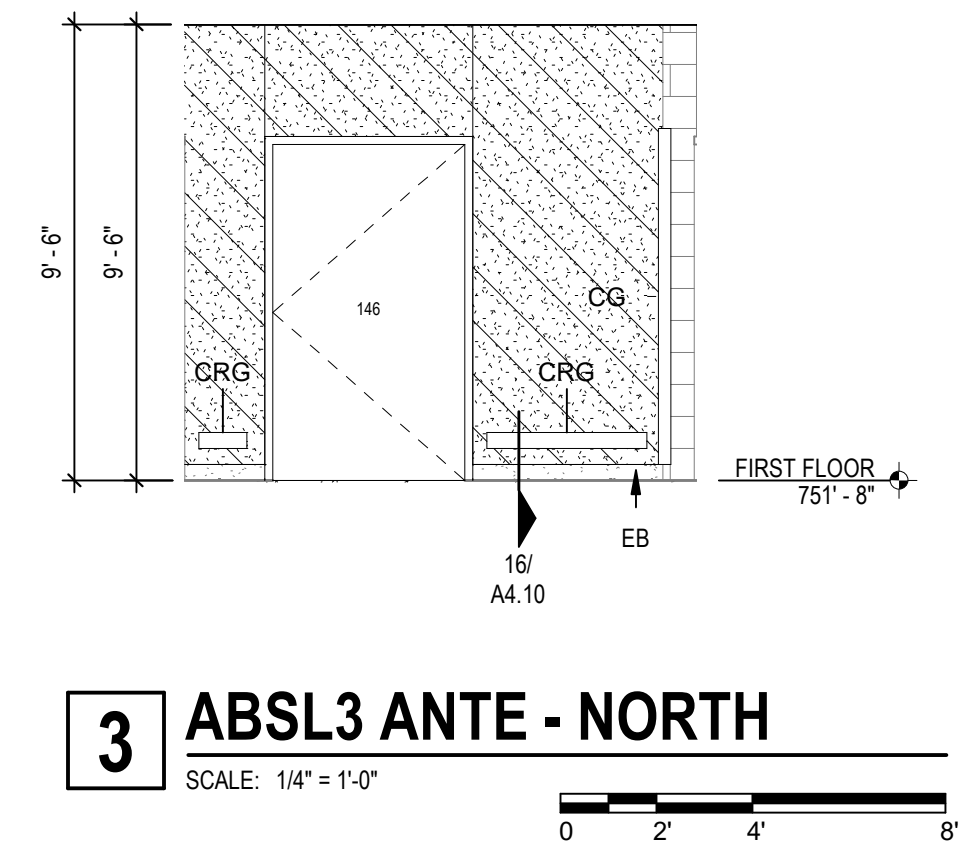
- S - SINK
- EB - EPOXY BASE
- CG - CORNER GUARD
- CRG - CRASH GUARD
- CH - CLOTHES HOOK
- M - MIRROR
- SSSH - STAINLESS STEEL SHELF
- WB - WASTE BIN BY OWNER
- AWB - ADJUSTABLE WALL SHELF

FINISH LEGEND

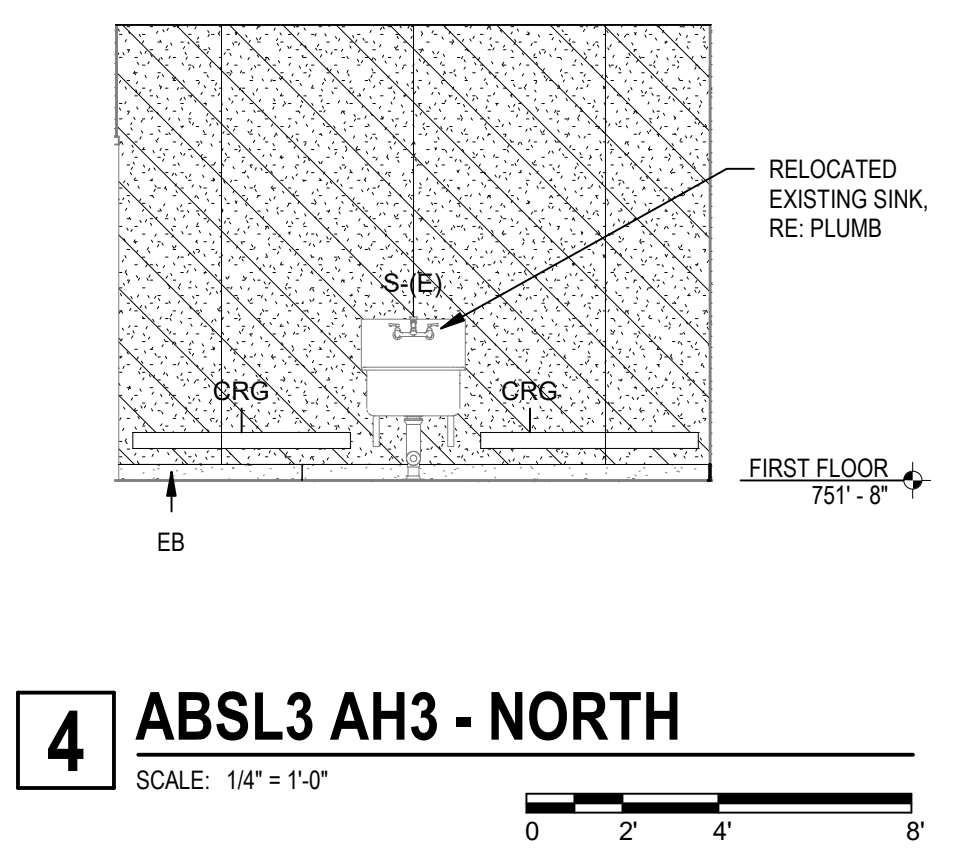
- ARCOPLAST
- EPOXY BASE
- CMU



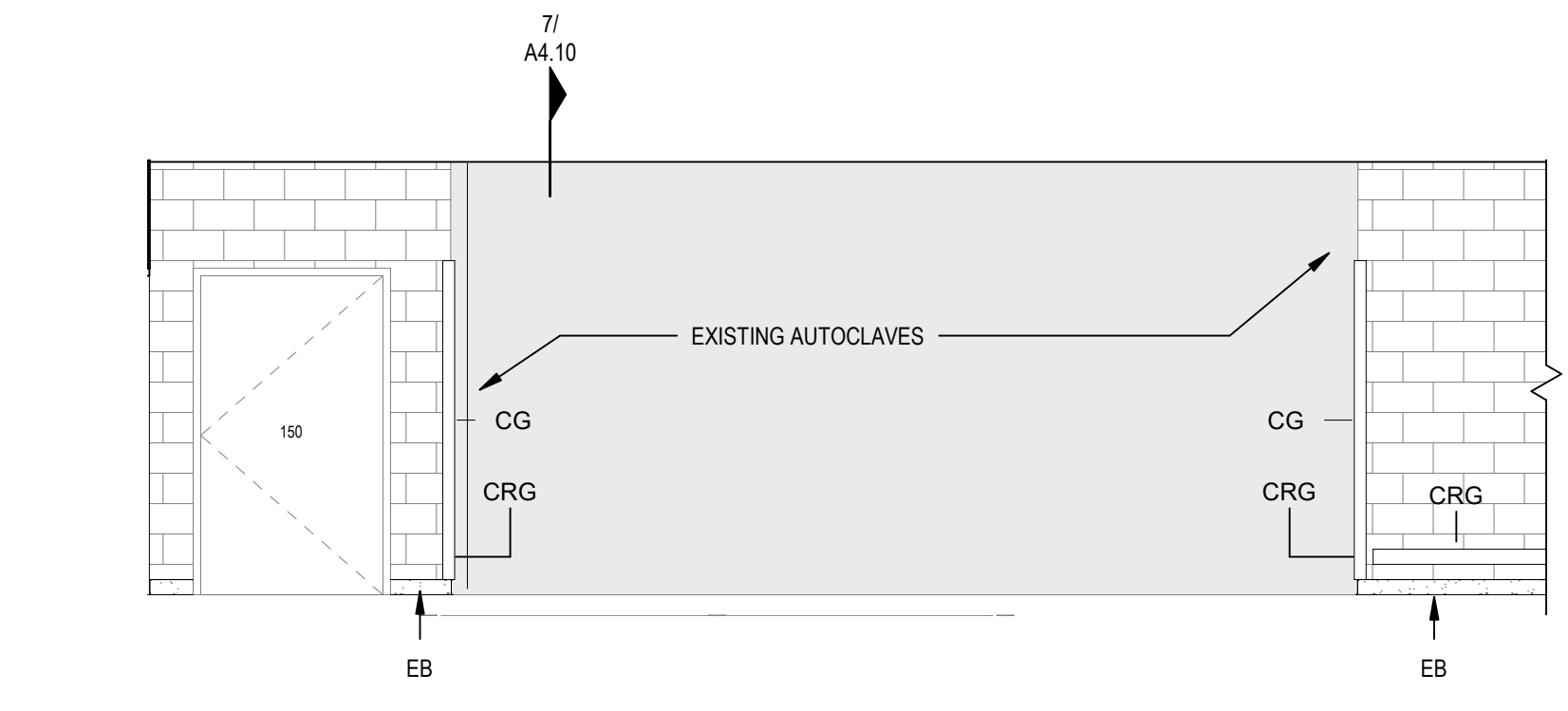
2 ABSL3 AH4 - NORTH
 SCALE: 1/4" = 1'-0"



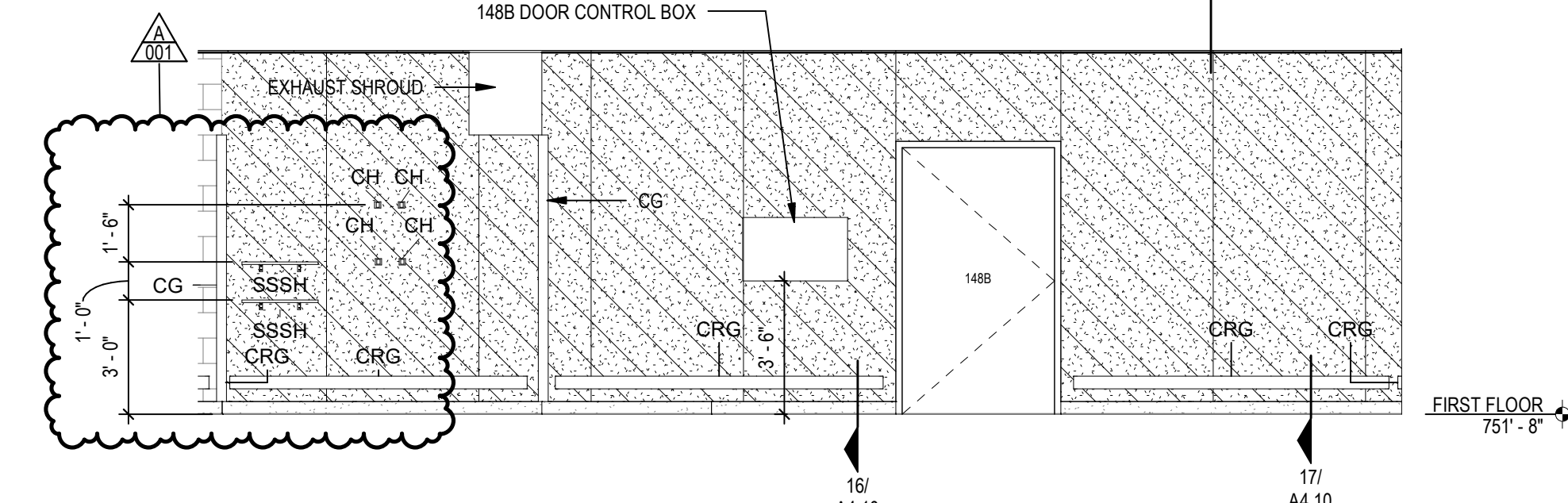
3 ABSL3 ANTE - NORTH
 SCALE: 1/4" = 1'-0"



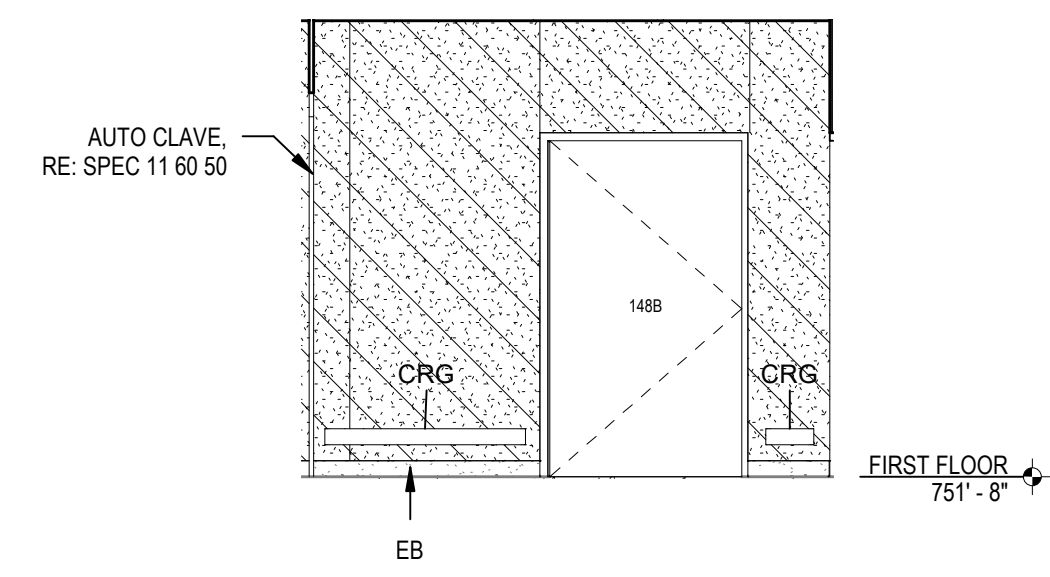
4 ABSL3 AH3 - NORTH
 SCALE: 1/4" = 1'-0"



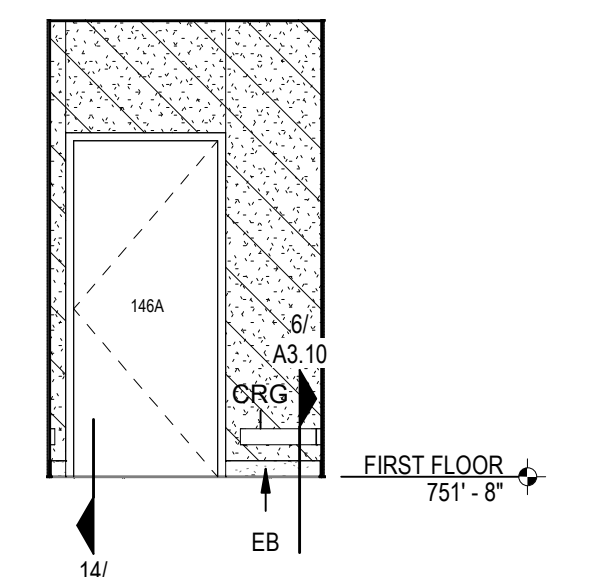
5 CONTAINED CORRIDOR - NORTH
 SCALE: 1/4" = 1'-0"



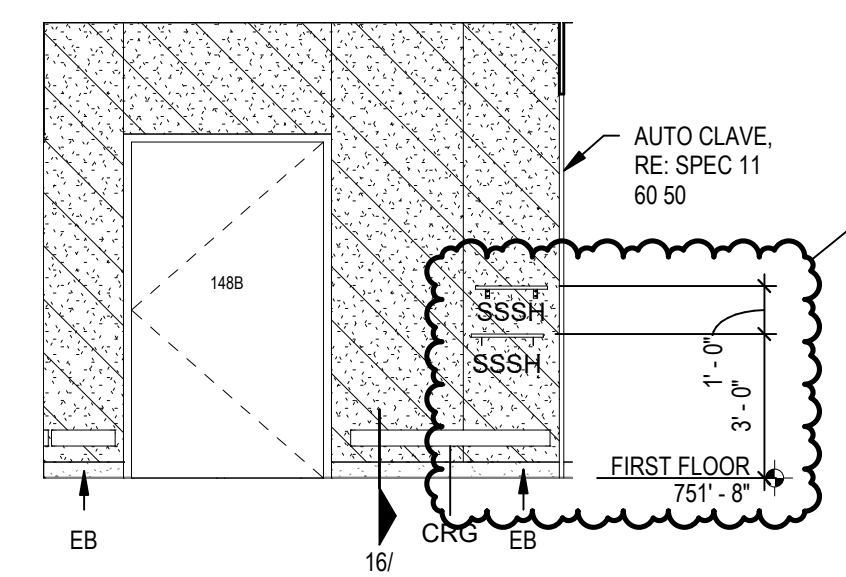
6 CONTAINED CORRIDOR - SOUTH
 SCALE: 1/4" = 1'-0"



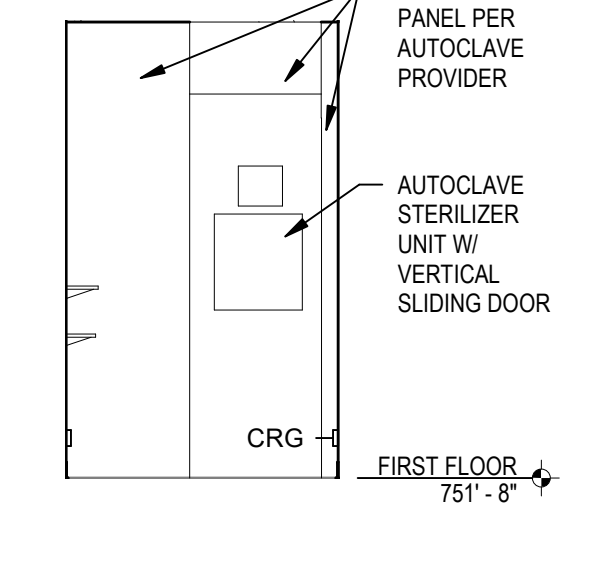
7 ANTE ROOMS - SOUTH
 SCALE: 1/4" = 1'-0"



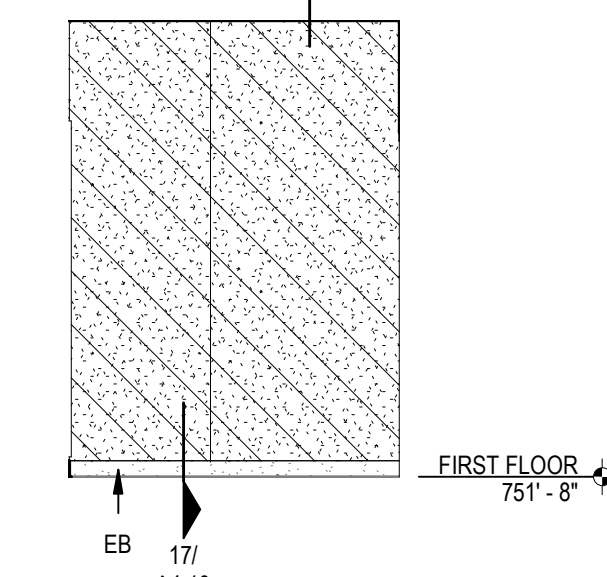
8 ANTE ROOM - WEST
 SCALE: 1/4" = 1'-0"



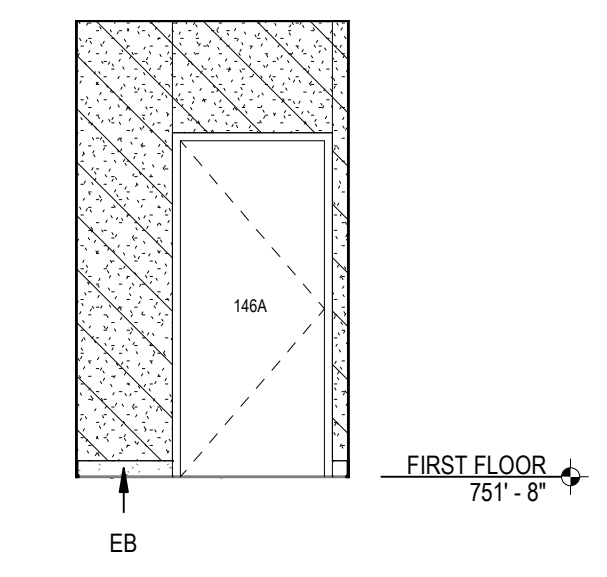
9 ANTE ROOM - NORTH
 SCALE: 1/4" = 1'-0"



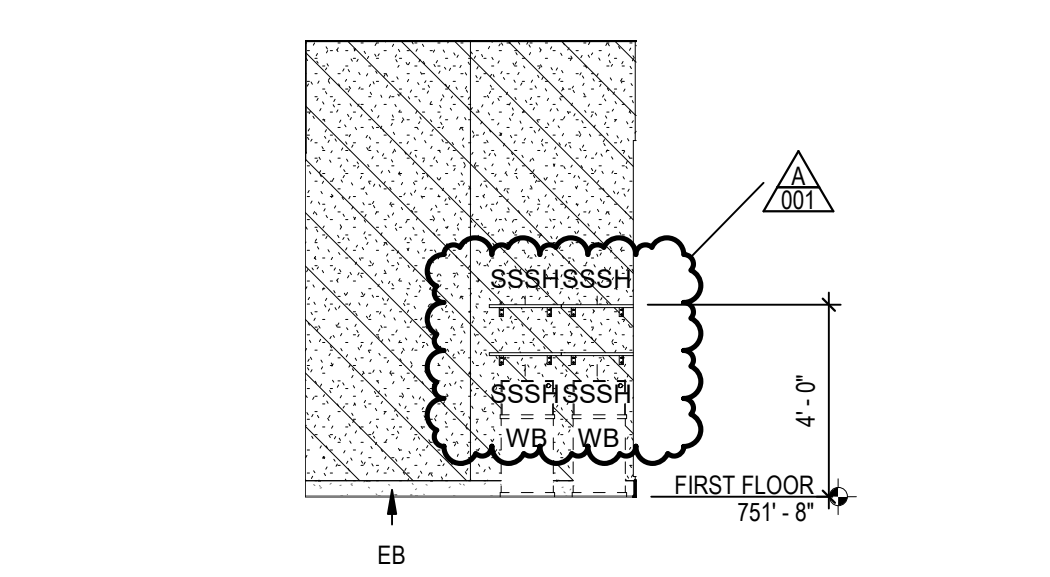
10 ANTE ROOM - EAST
 SCALE: 1/4" = 1'-0"



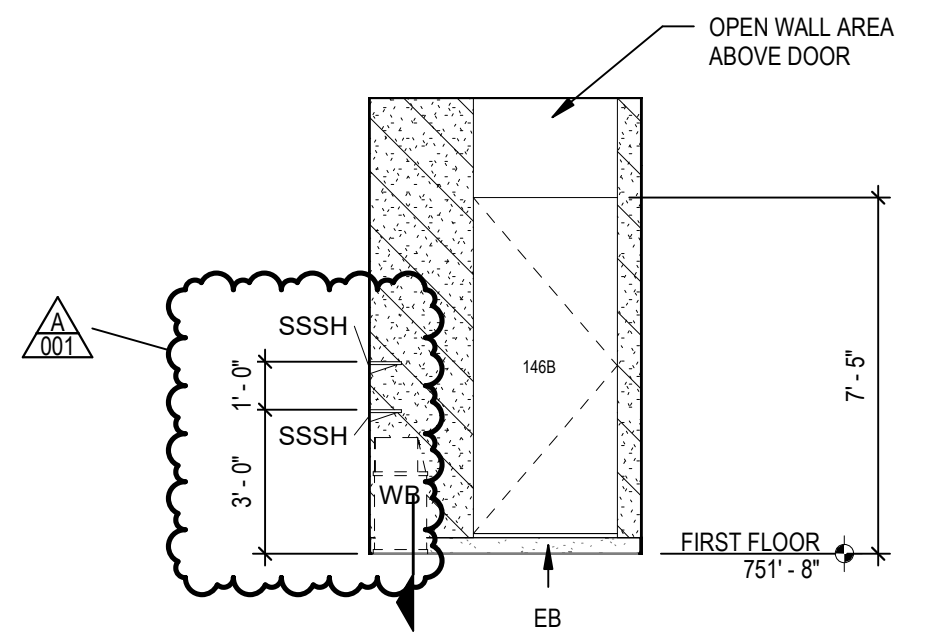
11 DIRTY CHANGE - NORTH
 SCALE: 1/4" = 1'-0"



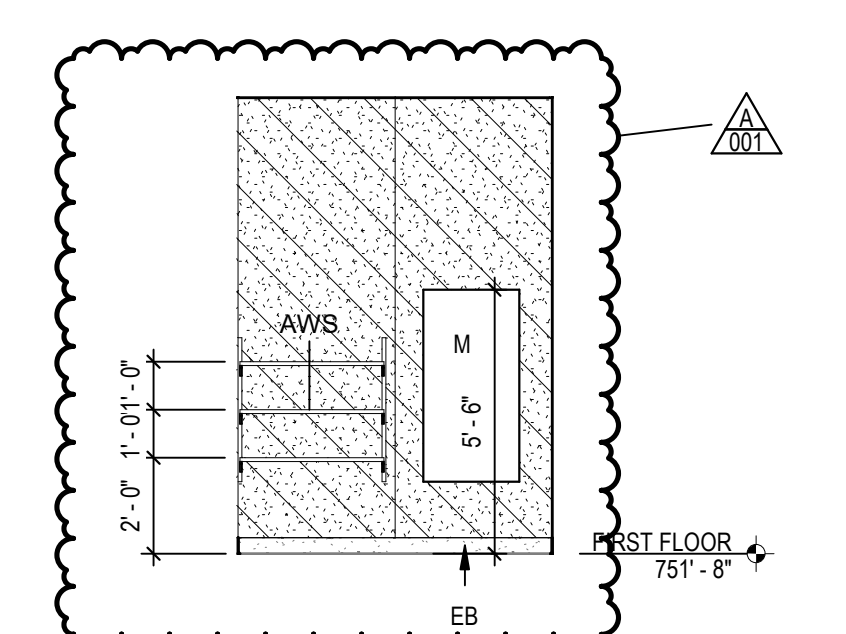
12 DIRTY CHANGE - EAST
 SCALE: 1/4" = 1'-0"



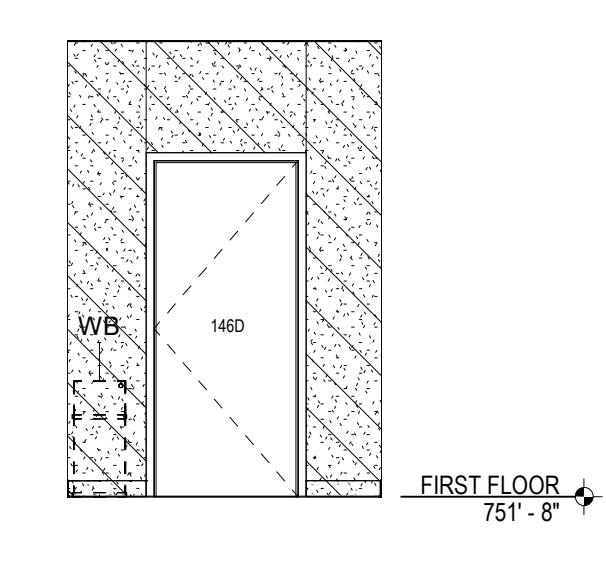
13 DIRTY CHANGE - SOUTH
 SCALE: 1/4" = 1'-0"



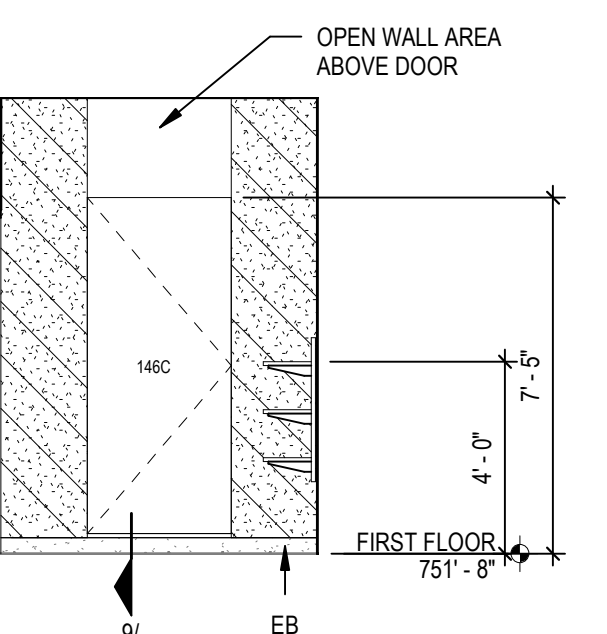
14 DIRTY CHANGE - WEST
 SCALE: 1/4" = 1'-0"



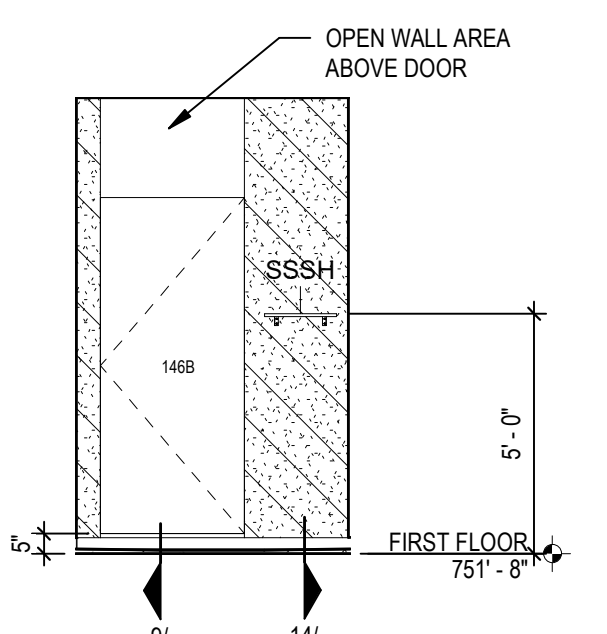
15 CLEAN CHANGE - WEST
 SCALE: 1/4" = 1'-0"



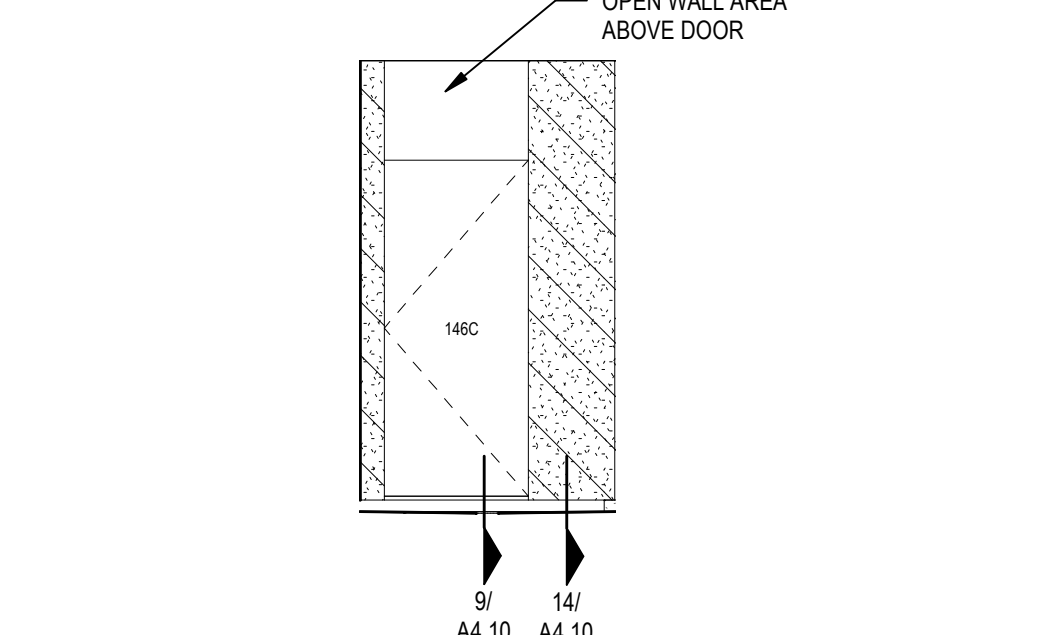
16 CLEAN CHANGE - EAST
 SCALE: 1/4" = 1'-0"



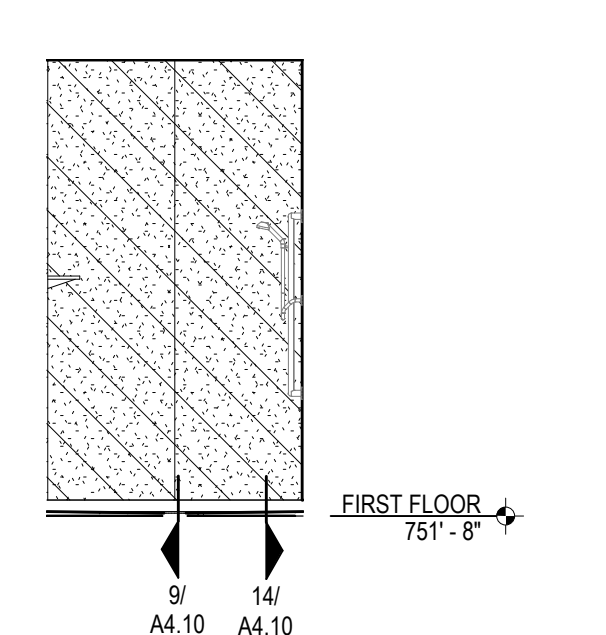
17 CLEAN CHANGE - SOUTH
 SCALE: 1/4" = 1'-0"



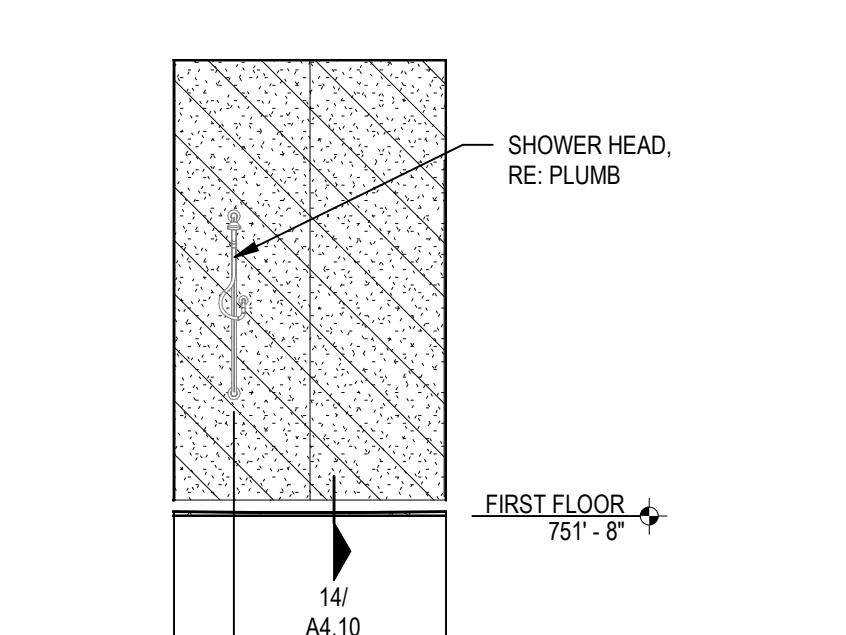
18 SHOWER - EAST
 SCALE: 1/4" = 1'-0"



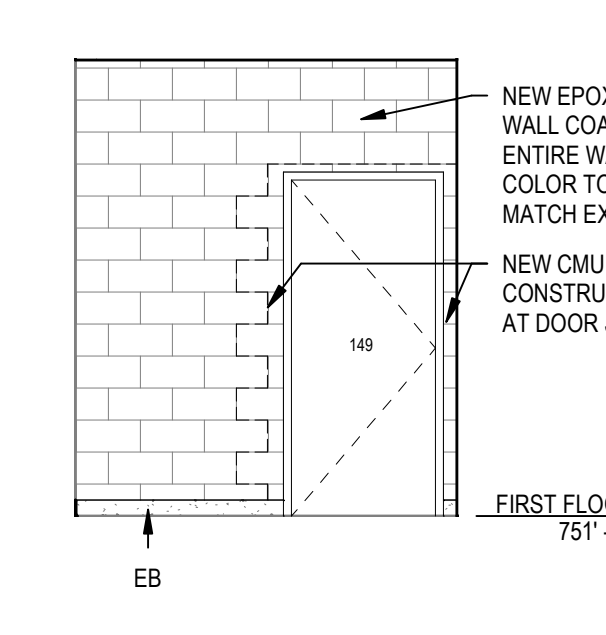
19 SHOWER - NORTH
 SCALE: 1/4" = 1'-0"



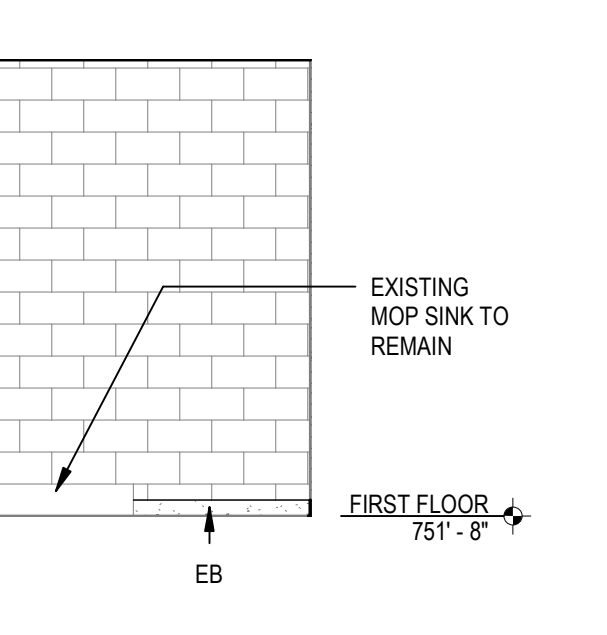
20 SHOWER - SOUTH
 SCALE: 1/4" = 1'-0"



21 SHOWER - WEST
 SCALE: 1/4" = 1'-0"



22 JAN - EAST
 SCALE: 1/4" = 1'-0"



23 JAN - NORTH
 SCALE: 1/4" = 1'-0"

Contract Documents

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December 18, 2023

Enlarged Plan & Elevations

LF1.00

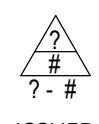
EXISTING PANELBOARD 'EP21' SCHEDULE																
MAIN BUS: 125A										LOCATION: MAIN ELEC. RM 006						
VOLTAGE: 208Y/120 VOLTS, 3 PHASE, 4 WIRE										MOUNTING: RECESSED						
MINIMUM A.C. EXISTING																
PANEL TYPE	LOAD (VA)	LOAD (VA)		LOAD (VA)		LOAD (VA)		LOAD (VA)		P	A	C				
C	A	P	LOAD SERVED	LTG	RECP	MECH	SPARE	PHASE	LTG	RECP	MECH	SPARE				
1	20	1	POWER: FACP					A					3	20	2	
3	20	1	POWER: LIGHTING CONTROL					B					-	-	4	
5	25	1	POWER: LIGHTING INVERTER					C					-	-	6	
7	20	1	RCPT: EDS-1 FILTER & PUMPS			750		A					POWER: VALVE CONTROL	1	20	8
9	20	1	RCPT: EDS COMPUTER WRKSTION			600		B			1350		RCPT: HYDRAULIC VEHICLE GATE	2	20	10
11	30	1	MECH: CRU-2			1176		C			1350		-	-	12	2
13			SPACE					A					SPACE			14
15			SPACE					B					SPACE			16
17			SPACE					C					SPACE			18
19			SPACE					A					SPACE			20
21			SPACE					B					SPACE			22
23			SPACE					C					SPACE			24
25			SPACE					A			600		RCPT: NORTH VEHICLE GATE	1	20	26
27			SPACE					B			1920		MECH: 005B DEHUMIDIFIER	1	20	28
29			SPACE					C			600		MECH: FCU-001	1	20	30
31			SPACE					A					SPACE			32
33			SPACE					B					SPACE			34
35			SPACE					C					SPACE			36
37			SPACE					A					SPACE			38
39			SPACE					B					SPACE			40
41			SPACE					C					SPACE			42
CONNECTED LOAD				2526		-		3300		2520		-		CONNECTED LOAD		
% OF				100		100		80		50		-		N/A		
EMD				2526		-		3300		2520		-		EMD		
EMD X 1.25 =				3158		-		4125		3150		-		EMD		
SYS. VOLT.				208 X 1.73 =		370		27		Amps		-		MAIN BREAKER SIZE: 10A		

EXISTING PANELBOARD 'EPP22A' SCHEDULE																
MAIN BUS: 225A										LOCATION: RM 129						
VOLTAGE: 208Y/120 VOLTS, 3 PHASE, 4 WIRE										MOUNTING: RECESSED						
MINIMUM A.C. EXISTING																
PANEL TYPE	LOAD (VA)	LOAD (VA)		LOAD (VA)		LOAD (VA)		LOAD (VA)		P	A	C				
C	A	P	LOAD SERVED	LTG	RECP	MECH	SPARE	PHASE	LTG	RECP	MECH	SPARE				
1	20	1	RECEPT: RM 132					A					RECEPT: RM 130 FREEZER	1	15	2
3	20	1	RECEPT: RM 132					B					-	-	4	
5	20	1	RECEPT: RM 132					C					SPARE	2	15	6
7	20	1	RECEPT: AUTOCLAVE			1500		A					-	-	8	
9	20	1	RECEPT: RM 117, 119					B					RECEPT: RM 131 FREEZER	2	15	10
11	20	1	RECEPT: RM 118					C					-	-	12	
13	20	1	RECEPT: PAPPER CHARGING			1000		A					RECEPT: RM 132 FREEZER	2	15	14
15	20	1	RECEPT: PAPPER CHARGING			1000		B					-	-	16	
17	15	2	RECEPT: RM 139 FREEZER					C					RECEPT: RM 133 FREEZER	2	15	18
19	-	-	-					A					-	-	20	
21	20	1	RECEPT: PAPPER CHARGING			1000		B					RECEPT: RM 133 FREEZER	2	15	22
23	20	1	SPARE					C					-	-	24	
25	15	2	SPARE					A					RECEPT: RM 137 FREEZER	2	15	26
27	-	-	-					B					-	-	28	
29	20	2	MECH: COMPRESSED AIR PANEL			1000		C					POWER: ULTRACENTER	2	15	30
31	-	-	-					A					-	-	32	
33			SPACE					B					RECEPT: RM 138 FREEZER	2	15	34
35			SPACE					C					-	-	36	
37			SPACE					A					RECEPT: RM 138 FREEZER	2	15	38
39			SPACE					B					-	-	40	
41			SPACE					C					RECEPT: ICE MAKER	1	20	42
CONNECTED LOAD				4500		2000		-		-		-		CONNECTED LOAD		
% OF				100		100		80		50		-		N/A		
EMD				4500		2000		-		-		-		EMD		
EMD X 1.25 =				5625		2500		-		-		-		EMD		
SYS. VOLT.				208 X 1.73 =		370		21		Amps		-		MAIN LUG ONLY (M.D.): 225 A		

ELECTRICAL SCHEDULES NOTES	
KEY NOTE	DESCRIPTION
1	EXISTING SPARE CIRCUIT BREAKER TO BE USED FOR NEW LOAD. VERIFY EXISTING BREAKER HAS NO EXISTING LOAD THAT IS TO REMAIN. IF BREAKER HAS EXISTING LOAD TO REMAIN USE ANOTHER SPARE BREAKER OF SAME AMPERAGE AND VOLTAGE IN PANELBOARD. IF NO SPARE BREAKERS EXISTS IN PANELBOARD INDICATED PROVIDE NEW CIRCUIT BREAKER OF SAME AMPERAGE AND VOLTAGE. ANY NEW CIRCUIT BREAKER SHALL BE FULLY COMPATIBLE WITH EXISTING PANELBOARD AND SHALL MAINTAIN THE PANELBOARD'S UL LISTING AND INTERRUPT RATING.
2	IF ADD ALTERNATE #1 IS ACCEPTED, INSTALL A NEW CIRCUIT BREAKER IN EXISTING SPACE WITHIN BRANCH PANELBOARD. THE CIRCUIT BREAKER SHALL BE FULLY COMPATIBLE WITH THE EXISTING PANEL AND SHALL MAINTAIN THE FAULT CURRENT RATING AND UL LISTING OF THE PANEL. PROVIDE AN UPDATED, TYPE-WRITTEN PANEL SCHEDULE TO INDICATE THE NEW CIRCUIT AND LOAD SERVED.
3	IF ADD ALTERNATE #1 IS ACCEPTED, INSTALL A NEW CIRCUIT BREAKER IN EXISTING SPACE WITHIN BRANCH PANELBOARD. THE CIRCUIT BREAKER SHALL BE FULLY COMPATIBLE WITH THE EXISTING PANEL AND SHALL MAINTAIN THE FAULT CURRENT RATING AND UL LISTING OF THE PANEL. PROVIDE AN UPDATED, TYPE-WRITTEN PANEL SCHEDULE TO INDICATE THE NEW CIRCUIT AND LOAD SERVED.
4	PROVIDE NEW CIRCUIT BREAKER OF AMPERAGE AND VOLTAGE INDICATED. ANY NEW CIRCUIT BREAKER SHALL BE FULLY COMPATIBLE WITH EXISTING PANELBOARD, AND SHALL MAINTAIN THE PANELBOARD'S UL LISTING AND INTERRUPT RATING.

LIGHTING FIXTURE SCHEDULE									
Fixture Type	Manufacturers	Catalog Numbers	Description	No. of Lamps	Lamp Type	Volt	VA	Mounting	Remarks
A	KENALL NEW STAR KURTZON	CSE8024-4SLD-40K8-DIM1-DV-SF-SH-SYM-HJ SC-S-24HS-IB-L2-40-1C-G-UN-DM KL-S-3-2X4-2-LEDR-840-UNV-P12	1' X 4' LED LENSED, GASKETED TROFFER	NA	LED, 4000K	UNV	46	SURFACE	INSTALL FIXTURE IN A MANNER THAT PROVIDES A COMPLETELY SEALED INSTALLATION. FIXTURE MUST BE SUITABLE FOR BSL3 ENVIRONMENTS. PROVIDE FIXTURE WITH INTEGRAL BATTERY.
B	KENALL NEW STAR KURTZON	CSE8022_1L40K8-DIM1-DV-SF-SH-SYM SC-S-22HS-IB-2000L-40-1C-G-UN-DM KL-S-3-2X2-2-LEDR-840-UNV-P12-W	2' X 2' LED LENSED, GASKETED TROFFER	NA	LED, 4000K	UNV	29	SURFACE	INSTALL FIXTURE IN A MANNER THAT PROVIDES A COMPLETELY SEALED INSTALLATION. FIXTURE MUST BE SUITABLE FOR BSL3 ENVIRONMENTS. COORDINATE WITH MANUFACTURER TO PROVIDE A 2,000 LUMEN FIXTURE. PROVIDE FIXTURE WITH INTEGRAL BATTERY.
EXIT BSL	KENALL NEW STAR	SF-G-DT-NT-EL ESC-G-HW-OS-SF-LED-UN-RW-EM	LED BSL EXIT FIXTURE	NA	PROVIDED WITH FIXTURE	UNV	5	RECESSED	FIXTURE SHALL BE RECESSED IN WALL. UNLESS OTHERWISE INDICATED MOUNT AT 7'-6" AFF OR IF ABOVE DOOR SO THAT BOTTOM OF EXIT SIGN IS 6" ABOVE TOP OF DOOR FRAMES. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. PROVIDE SELF-DIAGNOSTICS AND INTEGRAL BATTERY PACK.
EXIT	HUBBELL MULE LIGHTING EXITRONIX	EVE-U-G-W-I MX-B-G-U-SD GVEX-U-IB-WB-WJ-LG2 LITHONIA LGM-S-W-3-R-150777-EL-N-SD	LED EXIT FIXTURE-THERMOPLASTIC	NA	PROVIDED WITH FIXTURE	UNV	3	UNIVERSAL	PROVIDE SINGLE OR DUAL-FACED SIGNS, MOUNTING AND DIRECTIONAL ARROWS AS INDICATED ON PLANS. UNLESS OTHERWISE INDICATED MOUNT AT 7'-6" AFF OR IF ABOVE DOOR SO THAT BOTTOM OF EXIT SIGN IS 6" ABOVE TOP OF DOOR FRAMES. PROVIDE SELF-DIAGNOSTICS AND INTEGRAL BATTERY PACK.

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:
 FIXTURES WITH EMERGENCY BATTERY BACKUP OR INVERTER BACKUP SHALL BE PROVIDED WITH TEST SWITCH AS REQUIRED BY CODE. TEST SWITCH SHALL EITHER BE FIXTURE MOUNTED OR LOCATED IN NEARBY ACCESSIBLE LOCATION. FINAL LOCATION SHALL BE COORDINATED WITH
 1. OWNER, ARCHITECT AND ENGINEER.
 EMERGENCY BATTERY BACKUP SHALL BE PROVIDED FOR ENTIRE FIXTURE SHOWN AS EMERGENCY UNLESS OTHERWISE NOTED. MULTIPLE BATTERY PACKS SHALL BE PROVIDED AS NECESSARY TO POWER THE ENTIRE FIXTURE. PROVIDE ALL PARTS NECESSARY FOR A
 2. COMPLETE AND CODE COMPLIANT INSTALLATION.
 FIXTURES WITH EMERGENCY BATTERY BACKUP SHALL BE CAPABLE OF BEING LOCALLY SWITCHED OFF. BATTERY SHALL ENERGIZE FIXTURE ONLY IN A POWER LOSS SITUATION. NOT A SWITCHING EVENT.
 3.
 4. CONTRACTOR SHALL VERIFY MOUNTING HEIGHTS OF ALL FIXTURES PRIOR TO INSTALLATION.

 SHEET HISTORY:
 ISSUED 12/18/23 Contract Documents
 A - 001 1/29/2024 Addendum #01

Contract Documents

LIDR Renovate West Animal Holding, Rms 144-149

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UM No.: CP220692

December 18, 2023