

Q4. The demo sheets call out to demo gyp walls and assemblies which have corner guards that will be removed, typically spec section, 102600. There is not a spec section in the specs for this project, please advise.

A4. Corner guards will not be provided as part of this project.

Q5. The door schedule shows hardware group 5 and 6 on multiple doors. There is not group 5 and 6 in the door spec 087100, please advise.

A5. Updated Hardware schedule included in the Addendum.

Q6. Door 163 (janitor) appears to be an interior door and has hardware group 3 specified, please advise.

A6. Updated Hardware schedule include in this Addendum

Q7. The hardware spec shows groups 2 and 4, are these used somewhere, please advise.

A7. Updated Hardwar schedule is included in this Addendum.

General

2. A copy of the attendance sheet(s) from the pre-bid conference held on November 29, 2022 is attached for reference.

Changes to Specifications

3. Replace Table of Contents with revised.
4. Add Section 04 2000 in its entirety.
5. Replace Section 06 4100 in its entirety.
6. Add Section 06 7000 in its entirety.
7. Section 08 7100 – insert revised Hardware Schedule.
8. Refer to Section 09 9000:
 - a. Paragraph 2.03.E.: Add paragraph as follows; “4. Semi Gloss: Two coats of latex-acrylic enamel; B31W02651 ProMar 200 Zero VOC Interior Latex, Semi-Gloss.”
9. Add Section 10 2113.19 in its entirety.
10. Add Section 10 2800 in its entirety.
11. Add Section 22 0100 in its entirety.
12. Add Section 22 0719 in its entirety.
13. Add Section 22 1005 in its entirety.
14. Add Section 22 1006 in its entirety.
15. Add Section 23 2113 in its entirety.
16. Add Section 23 3700 in its entirety.

Product Approvals

No materials or equipment will be allowed to be used unless it either 1) meets specified criteria and/or manufacturer or 2) has received prior approval as documented in an addendum. This includes all equipment furnished by subcontractors.

SECTION / PARAGRAPH NO.	SPECIFIED PRODUCT	PROPOSED SUBSTITUTION / MODEL
None		

Changes to Drawings

17. Replace Sheet AD101 in its entirety.
18. Replace Sheet A101 in its entirety.
19. Replace Sheet A412 in its entirety.
20. Replace Sheet A611 in its entirety.
21. Replace Sheet A701 in its entirety.
22. Replace Sheet A702 in its entirety.
23. Replace Sheet PD100 in its entirety.
24. Replace Sheet PD101 in its entirety.
25. Replace Sheet PD102 in its entirety.
26. Replace Sheet P110 in its entirety.
27. Replace Sheet P111 in its entirety.
28. Replace Sheet P112 in its entirety.
29. Replace Sheet P121 in its entirety.
30. Replace Sheet P122 in its entirety.
31. Replace Sheet MD101 in its entirety.
32. Replace Sheet MD101A in its entirety.
33. Replace Sheet M101A in its entirety.
34. Replace Sheet M101B in its entirety.
35. Replace Sheet M102 in its entirety.
36. Replace Sheet EP101 in its entirety.
37. Replace Sheet EL121 in its entirety.

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SECTION 04 2000
UNIT MASONRY (ISSUED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete block.
- B. Mortar.

1.02 REFERENCE STANDARDS

- A. ASTM C91/C91M - Standard Specification for Masonry Cement; 2018.
- B. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2017.
- C. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2018.
- D. ASTM C150/C150M - Standard Specification for Portland Cement; 2020.
- E. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2019.
- F. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2018.
- G. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for masonry units, mortar, and masonry accessories.

1.04 QUALITY ASSURANCE

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.
- B. Designer Qualifications: Perform design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.
- C. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section with minimum three years of documented experience.
- D. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depths as indicated on drawings for specific locations.
 - 2. Non-Loadbearing Units: ASTM C129.
 - a. Hollow block, as indicated.
 - b. Lightweight.

2.02 MORTAR MATERIALS

- A. Masonry Cement: ASTM C91/C91M, Type N.
- B. Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample.
- C. Mortar Aggregate: ASTM C144.
- D. Grout Aggregate: ASTM C404.

2.03 MORTAR MIXING

- A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
 - 1. Interior, non-loadbearing masonry: Type N.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that related items provided under other sections are properly sized and located.
- C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

3.03 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
 - 1. Bond: Running.
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.

3.04 PLACING AND BONDING

- A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
- B. Remove excess mortar and mortar smears as work progresses.
- C. Cut mortar joints flush where wall tile is scheduled or resilient base is scheduled.

3.05 LINTELS

- A. Install reinforced unit masonry lintels over openings where steel or precast concrete lintels are not scheduled.
 - 1. Openings to 42 inches: Place two, No. 3 reinforcing bars 1 inch from bottom web.
 - 2. Openings from 42 inches to 78 inches: Place two, No. 5 reinforcing bars 1 inch from bottom web.
 - 3. Do not splice reinforcing bars.
 - 4. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.
 - 5. Allow masonry lintels to attain specified strength before removing temporary supports.

3.06 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.

3.07 PROTECTION

- A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

END OF SECTION

SECTION 06 4100

ARCHITECTURAL WOOD CASEWORK (REVISED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Specially fabricated cabinet units.
- B. Countertops.
- C. Hardware.
- D. Preparation for installing utilities.

1.02 RELATED REQUIREMENTS

- A. Section 06 6100 - Cast Polymer Fabrications: Cast plastic countertops.

1.03 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2014, with Errata (2018).
- B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards, U.S. Version 3.1; 2017, with Errata (2019).
- C. BHMA A156.9 - American National Standard for Cabinet Hardware; 2015.
- D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
 - 1. Scale of Drawings: 1-1/2 inch to 1 foot, minimum.
 - 2. Include certification program label.
- C. Product Data: Provide data for hardware accessories.
- D. Verification sample: Submit one 4" x 6" actual sample of each plastic laminate specified.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.07 FIELD CONDITIONS

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.01 CABINETS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Cabinets:
 - 1. Finish - Exposed Exterior Surfaces: Decorative laminate.
 - 2. Finish - Exposed Interior Surfaces: Decorative laminate.
 - 3. Finish - Semi-Exposed Surfaces: Decorative laminate
 - 4. Finish - Concealed Surfaces: Manufacturer's option.
 - 5. Door and Drawer Front Edge Profiles: Square edge with thin applied band.
 - 6. Casework Construction Type: Type A - Frameless.
 - 7. Interface Style for Cabinet and Door: Style 1 - Overlay; reveal overlay.

8. Adjustable Shelf Loading: 40 psf.
9. Drawer Construction Technique: Dovetail joints.

2.02 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

2.03 LAMINATE MATERIALS

- A. Manufacturers:
 1. Formica Corporation; Standard HPL: www.formica.com/#sle.
 2. Panolam Industries International, Inc; Nevamar Standard HPL: www.panolam.com/#sle.
 3. Panolam Industries International, Inc; Pionite Standard HPL: www.panolam.com/#sle.
 4. Wilsonart LLC; Standard HPL: www.wilsonart.com/#sle.
 5. Substitutions: See Section 01 6000 - Product Requirements.
- B. Thermally Fused Laminate (TFL): Melamine resin, NEMA LD 3, Type VGL laminate panels.
- C. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.
- D. Provide specific types as indicated.
 1. Vertical Surfaces: VGS, 0.028 inch nominal thickness, through color, colors as indicated, finish as indicated.
 2. Post-Formed Horizontal Surfaces: HGP, 0.039 inch nominal thickness, colors as indicated, finish as indicated.
 3. Post-Formed Vertical Surfaces: VGP, 0.028 inch nominal thickness, colors as indicated, finish as indicated.
 4. Cabinet Liner: CLS, 0.020 inch nominal thickness, through color, white color, finish as indicated.
 5. Laminate Backer: BKL, 0.020 inch nominal thickness, undecorated; for application to concealed backside of panels faced with high pressure decorative laminate.

2.04 COUNTERTOPS

- A. Plastic Laminate Countertops: Medium density fiberboard substrate covered with HPDL, conventionally fabricated and self-edge banded.
- B. Solid Surface Countertops: Specified in Section 06 6110; used at sink locations, or as indicated in drawings.

2.05 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
- B. Plastic Edge Banding: Extruded PVC, convex shaped; smooth finish; self locking serrated tongue; of width to match component thickness.
 1. Color: As selected by Architect from manufacturer's standard range.
 2. Use at all exposed plywood edges.
 3. Use at all exposed shelf edges.
 4. Use at all exposed door edges.
- C. Vinyl Countertop Edge: PVC anchor type tee-molding edging in width to match thickness of countertop, color as indicated, used at locations as indicated.
- D. Fasteners: Size and type to suit application.
- E. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.
- F. Grommets: Standard painted metal or rubber grommets for cut-outs, in color to match adjacent surface.

2.06 HARDWARE

- A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.

- B. Adjustable Shelf Supports: Standard side-mounted system using multiple holes for pin supports and coordinated self rests, polished chrome finish, for nominal 1 inch spacing adjustments.
- C. Drawer and Door Pulls: "U" shaped wire pull, steel with chrome finish, 4 inch centers.
- D. Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, steel with chrome finish.
- E. Cabinet Catches and Latches:
 - 1. Type: Friction catch.
- F. Drawer Slides:
 - 1. Type: Full extension with overtravel.
 - 2. Static Load Capacity: Heavy Duty grade.
 - 3. Mounting: Side mounted.
 - 4. Stops: Integral type.
 - 5. Features: Provide self closing/stay closed type.
 - 6. Manufacturers:
 - a. Accuride International, Inc; Heavy-Duty Drawer Slides: www accuride.com/#sle.
 - b. Knappe & Vogt Manufacturing Company; Heavy-Duty Drawer Slides: www.knappeandvogt.com/#sle.
 - c. Substitutions: See Section 01 6000 - Product Requirements.
- G. Hinges: European style concealed self-closing type, steel with nickel-plated finish.

2.07 FABRICATION

- A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
- B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
- D. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Locate counter butt joints minimum 2 feet from sink cut-outs.
 - 1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
- E. Provide cutouts for plumbing fixtures. Verify locations of cutouts from on-site dimensions. Prime paint cut edges.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

3.02 INSTALLATION

- A. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- B. Use fixture attachments in concealed locations for wall mounted components.
- C. Use concealed joint fasteners to align and secure adjoining cabinet units.
- D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- E. Secure cabinets to floor using appropriate angles and anchorages.
- F. Cut countertop for field installed grommets above power/data outlets underneath.

3.03 ADJUSTING

- A. Adjust installed work.

B. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

HARDWARE GROUPS

GROUP 1 - SINGLE INTERIOR OFFICE FUNCTION

3 EA HINGES
1 EA OFFICE LOCK
1 EA MORTISE CYLINDER
1 EA WALL STOP

GROUP 2 – NOT USED

GROUP 3 – SINGLE STOREROOM FUNCTION

3 EA HINGES
1 EA STOREROOM LOCK
1 EA MORTISE CYLINDER
1 EA KICK PLATE
1 EA WALL STOP

GROUP 4 – SINGLE ALUMINUM INTERIOR ENTRY FUNCTION

3 EA HINGES
1 EA PUSH BAR/OFFSET PULL
1 EA CLOSER
1 EA WALL STOP
1 EA THRESHOLD
ELECTRIC STRIKE UNDER SEPARATE CONTRACT – COORDINATE WITH OWNER

WEATHER STRIPPING TO BE SUPPLIED BY ALUMINUM DOOR AND FRAME SUPPLIER
DOOR CONTACT BY DIVISION 28

GROUP 5 - SINGLE INTERIOR PASSAGE FUNCTION

3 EA HINGES
1 EA PUSH PLATE
1 EA PULL PLATE
1 EA CLOSER
1 EA KICK PLATE
1 EA WALL STOP

GROUP 6 – SINGLE PRIVACY FUNCTION WITH OCCUPIED INDICATOR

3 EA HINGES
1 EA PRIVACY LATCH WITH OCCUPIED/UNOCCUPIED INDICATOR
1 EA CLOSER
1 EA WALL STOP

END OF SECTION

SECTION 09 6700
FLUID-APPLIED FLOORING (ISSUED ADDENDUM NO.01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fluid-applied flooring and base.

1.02 RELATED REQUIREMENTS

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

1.03 REFERENCE STANDARDS

- A. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2019, with Editorial Revision (2020).
- B. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2016a.
- C. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available .
- C. Samples: Submit two samples, 4 by 4 inch in size illustrating color and pattern for each floor material for each color specified.
- D. Manufacturer's Installation Instructions: Indicate special procedures.
- E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, procedures for stain removal, repairing surface, and suggested schedule for cleaning.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing work of this section with minimum 5 years experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store resin materials in a dry, secure area.
- B. Store materials for three days prior to installation in area of installation to achieve temperature stability.

1.07 FIELD CONDITIONS

- A. Maintain minimum temperature in storage area of 55 degrees F.
- B. Store materials in area of installation for minimum period of 24 hours prior to installation.
- C. Maintain ambient temperature required by manufacturer 72 hours prior to, during, and 24 hours after installation of materials.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Fluid-Applied Flooring Type FAF1: Decorative, two-component epoxy, fluid-applied slip-resistant coating; 100% solids that consists of epoxy resin and embedded colored vinyl flakes, seal coated with a two-component, 100% solids urethane (ASTM D 2369).
 - 1. System:
 - a. Primer: As recommended by manufacturer, 10 mils.
 - b. Base Coat: Single broadcast system, vinyl flakes, 16 mils.
 - c. Top Coat: Urethane, 12 mils.

2. Total Thickness: 1/8 inch, minimal, when dry.
3. Texture: Slip resistant (scatter silica).
4. Sheen: Matte.
5. Vinyl Flakes: Blended 1/4 inch colored flakes manufactured by Torginol (www.torginol.com).
6. Color: Refer to drawings.
7. Products:
 - a. Sherwin-Williams Company; Deco Flake System: industrial.sherwin-williams.com.
 - b. Sika Corporation; Sikafloor DecoFlake System: www.sikafloorusa.com/#sle.
 - c. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ACCESSORIES

- A. Control Joint Strips: Match divider strips; 1/2 inch nominal width, 1/8 inch wide neoprene filler strip between side strips, with anchoring features, strip height to suit flooring thickness.
- B. Base Caps, and Separator Strips: Match divider strips, with projecting base of 1/8 inch.
- C. Subfloor Filler: White premix latex; type recommended by flooring material manufacturer.
- D. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive flooring.
- C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of materials to sub-floor surfaces.
- D. Cementitious Subfloor Surfaces: Verify that substrates are ready for fluid-applied flooring installation by testing for moisture and alkalinity (pH).
 1. Test as Follows, per manufacturers recommendations:
 - a. Alkalinity (pH): ASTM F710.
 - b. Internal Relative Humidity: ASTM F2170.
 - c. Moisture Vapor Emission: ASTM F1869.
 2. Obtain instructions if test results are not within limits recommended by fluid-applied flooring manufacturer.
- E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with sub-floor filler.
- B. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.
- C. Establish the height of the wall cove base, level across all walls, 5"H nominal.
- D. Vacuum clean substrate.
- E. Apply primer to surfaces required by flooring manufacturer.

3.03 INSTALLATION - STRIPS

- A. Install terminating cap strip at top of base; attach securely to wall substrate.

3.04 INSTALLATION - FLOORING

- A. Apply in accordance with manufacturer's instructions.
- B. Apply each coat to minimum thickness indicated.
- C. Finish to smooth level surface.

D. Cove at vertical surfaces. Top of cove base to be level with the walls.

3.05 PROTECTION

A. Prohibit traffic on floor finish for 48 hours after installation.

B. Barricade area to protect flooring until cured.

3.06 SCHEDULE

A. Refer to drawings.

END OF SECTION

SECTION 10 2113.19

PLASTIC TOILET COMPARTMENTS (ISSUED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Solid plastic toilet compartments.
- B. Urinal and vestibule screens.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Blocking and supports.
- B. Section 10 2800 - Toilet Accessories.

1.03 REFERENCE STANDARDS

- A. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.
- B. ASTM B86 - Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings; 2018, e1 2021.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
- D. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2019.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate the work with placement of support framing and anchors in walls and ceilings.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on panel construction, hardware, and accessories.
- C. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall supports, door swings.
- D. Samples: Submit one sample of partition panels, 4 by 4 inch in size illustrating panel finish, color, and sheen.
- E. Manufacturer's Installation Instructions: Indicate special procedures.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.

1.07 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.08 WARRANTY

- A. Limited Warranty: Provide manufacturer's warranty for plastic material against breakage, corrosion, and delamination under normal conditions for 25 years.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Solid Plastic Toilet Compartments:
 - 1. ASI Accurate Partitions; Solid Plastic (HDPE): www.asi-accuratepartitions.com/#sle.
 - 2. Bradley Corporation; Bradmar Solid Plastic Partitions (from Mills): www.bradleycorp.com.
 - 3. Scranton Products; Hiny Hiders Partitions: www.scrantonproducts.com/#sle.

4. Substitutions: Section 01 6000 - Product Requirements.

2.02 MATERIAL

- A. Plastic Panels: High density polyethylene (HDPE) suitable for exposed applications, waterproof, non-absorbent, and graffiti-resistant textured surface.
 - 1. Minimum Recycled Content: 25 percent, Post Industrial.
- B. Zinc Aluminum Magnesium and Copper Alloy (Zamac): ASTM B86.
- C. Stainless Steel Castings: ASTM A167, Type 304.
- D. Aluminum: ASTM 6463-T5 alloy.

2.03 PLASTIC TOILET COMPARTMENTS

- A. General: Fire Resistance, Class A, when tested in accordance with ASTM E84.
- B. Solid Plastic Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid molded high density polyethylene (HDPE), tested in accordance with NFPA 286; floor-mounted headrail-braced.
 - 1. Color and Texture: Refer to drawings.
 - 2. Doors:
 - a. Thickness: 1 inch.
 - b. Width: 24 inch.
 - c. Width for Handicapped Use: 36 inch, out-swinging.
 - d. Height: 55 inch.
 - 3. Panels:
 - a. Thickness: 1 inch.
 - b. Height: 55 inch.
 - c. Depth: As indicated on drawings.
 - 4. Pilasters:
 - a. Thickness: 1 inch.
 - b. Width: As required to fit space; minimum 3 inch.
 - 5. Screens: Without doors; to match compartments; mounted to wall with two panel brackets.
 - a. Thickness: 1 inch.
 - b. Width: 24 inch.
 - c. Height: 55 inch.

2.04 ACCESSORIES

- A. Pilaster Shoes: Stainless steel, satin finish, 3 inches high; concealing floor fastenings.
 - 1. Provide adjustment for floor variations with screw jack through steel saddles integral with pilaster.
 - 2. Provide ceiling attachment using two adjustable hanging studs, attached to above-ceiling framing.
- B. Head Rails: Extruded aluminum, anti-grip profile (6463-T5).
 - 1. Size: Manufacturer's standard size.
 - 2. Headrail Brackets: 20 gauge stainless steel with satin finish. Secured to the wall with stainless steel tamper resistant Torx head screw
- C. Wall and Pilaster Brackets: Stainless steel; manufacturer's standard type for conditions indicated on drawings.
- D. Attachments, Screws, and Bolts: Stainless steel, tamper proof type.
 - 1. For attaching panels and pilasters to brackets: Through-bolts and nuts; tamper proof.
- E. Hinges: Stainless steel, manufacturer's standard finish.
 - 1. Pivot hinges, gravity type, adjustable for door close positioning; two per door.
 - 2. Continuous-type hinge, self closing.
- F. Door Hardware: Stainless steel, manufacturer's standard finish.

1. Door Latch: Slide type with exterior emergency access feature.
 2. Door Strike and Keeper with Rubber Bumper: Mount on pilaster in alignment with door latch.
 3. Provide door pull and door stop for outswinging doors.
- G. Coat Hook: One per compartment, mounted on door.
1. Provide rubber bumper on end of coat hook.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify correct spacing of and between plumbing fixtures.
- C. Verify correct location of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

- A. Install partitions secure, rigid, plumb, and level in accordance with manufacturer's instructions.
- B. Maintain 3/8 inch to 1/2 inch space between wall and panels and between wall and end pilasters.
- C. Clearance at vertical edges of doors shall be uniform top to bottom and shall not exceed 3/8 inch.
- D. Attach panel brackets securely to walls using anchor devices.
- E. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines.
- F. No evidence of cutting, drilling, and/or patching shall be visible on the finished work. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.
- G.

3.03 TOLERANCES

- A. Maximum Variation From True Position: 1/4 inch.
- B. Maximum Variation From Plumb: 1/8 inch.

3.04 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch.
- B. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position.
- C. Adjust adjacent components for consistency of line or plane.

3.05 CLEANING

- A. Finished surfaces shall be cleaned after installation and be left free of imperfections.

3.06 PROTECTION

- A. Protect installed products until completion of project.
- B. Replace damaged products before Substantial Completion.

END OF SECTION

SECTION 10 2813

TOILET ACCESSORIES (ISSUED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Toilet Room Accessories.
- B. Miscellaneous Room Accessories.

1.02 REFERENCES

- A. ASTM A 554 - Standard Specification for Welded Stainless Steel Mechanical Tubing; 2003.
- B. ASTM F 446 - Standard Consumer Safety Specification for Grab Bars and Accessories Installed in the Bathing Area; 1985 (Reapproved 2004).

1.03 SUBMITTALS

- A. See Section 01 3000 - Submittals.
- B. Product Data: Manufacturer's product data for products specified, indicating selected options and accessories.
- C. Shop Drawings:
 - 1. Plans: Locate each specified unit in project.
 - 2. Elevations: Indicate mounting height of each specified unit in project.
 - 3. Details: Indicate anchoring and fastening details, required locations and types of anchors and reinforcement, and materials required for correct installation of specified products not supplied by manufacturer of products of this section.
- D. Closeout Submittals: Warranty documents, issued and executed by manufacturer of products of this section, and countersigned by Contractor.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum five (5) years of documented experience producing products of the types specified in this section.
- B. Regulatory Requirements: Conform to ADAAG requirements.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Factory-apply strippable protective vinyl coating to sight-exposed surfaces after finishing of products; ship products in manufacturer's standard protective packaging.
- B. Storage and Protection: Store products in manufacturer's protective packaging until installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS - TOILET AND UTILITY ACCESSORIES

- A. Manufacturer Basis of Design: Bradley Corp., 800 Bradley, P.O. Box 309, Menominee Falls, WI 53052; www.bradleycorp.com.
 - 1. Bobrick Washroom Equipment, Inc.; 200 Commerce Drive, Clifton Park, New York 12065-1350; Telephone (518) 877-7444; www.bobrick.com.
 - 2. ASI Specialties, Inc. (ASI); 441 Saw Mill River Road, Yonkers NY 10701-9986; Telephone (914) 476-9000; www.americanspecialties.com.
 - 3. Substitutions: Section 01 6000 - Product Requirements.
 - 4. Supply all accessory products of this section from a single manufacturer.

2.02 MATERIALS

- A. Stainless Steel Sheet: ASTM A 240/A 240M, Type 304, 18-8 alloy.

2.03 TOILET AND UTILITY ACCESSORIES

- A. Toilet Paper Dispenser (TPD): Bradley, Model 5426-1195.

- B. Paper Towel Dispenser (PTD): Bradley, Model 2499
- C. Sanitary Napkin Disposal (SND): Bradley, Model 4781-11.
- D. Soap Dispenser : Bradley, Model 6A00-11.
- E. Towel Bar: Bradley, Model 9054 (24").
- F. Towel Hook: Wall mounted, Bradley, Model 9314.
- G. Framed Mirror: Bradley, Model 780 Series, with 1/4" tempered glass.
- H. Grab Bars (GB): Series 812.
- I. Shower Curtain Rod (CR) : Bradley, Model 9539.
- J. Shower Curtain : Bradley, Model 9537, with Bradley, Model 9536 hooks.
- K. Shower Seat : Bradley, Model 9562.

2.04 GRAB BARS

- A. Grab Bars - Basic Requirements: Fabricated to comply with ASTM F 446 and to withstand a 900 pound force, from ASTM A 554 stainless steel tubing, 0.050 inch, Type 304, 18-8 alloy; formed 1-1/2 inch radius return to wall at each end; each end heliarc-welded to minimum 11 gage stainless steel circular flange; welds finished to match tube finish.
- B. Grab Bars: Series 812.
 - 1. Standard Finish.
 - 2. Sizes and configurations: As indicated on drawings.
- C. Grab Bar Concealed Mounting Flanges: Stainless steel, 3 inch diameter by 1/2 inch deep, with 0.0897 inch steel tenon plate for concealed attachment, using three set screws.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions:
 - 1. Prepared openings are sized and located in accordance with shop drawings.
 - 2. Reinforcement and anchoring devices are correct type and are located in accordance with shop drawings.

3.02 INSTALLATION

- A. Install toilet accessories plumb and level in accordance with shop drawings and manufacturer's printed installation instructions.
- B. Locate toilet accessories at heights specified by Americans with Disabilities Act (ADA).

3.03 CLEANING

- A. Remove manufacturer's protective vinyl coating from sight-exposed surfaces 24 hours before final inspection.
- B. Clean surfaces in accordance with manufacturer's recommendations.

3.04 PROTECTION OF INSTALLED PRODUCTS

- A. Protect products from damage caused by subsequent construction activities.
- B. Field repair of damaged product finishes is prohibited; replace products having damaged finishes caused by subsequent construction activities.

3.05 SCHEDULE

- A. Refer to Interior Elevations for locations and Standard Mounting Heights in drawings.
- B. 105 and 216 Men's Toilet:
 - 1. Mirror: At lavatory, size as indicated on drawings.
 - 2. Soap Dispenser: Wall-mounted at lavatory.
 - 3. Paper Towel Dispenser: Accessible height.
 - 4. Toilet Tissue Dispenser: At water closet.

- 5. Grab Bars: Configuration as indicated on drawings.
- C. 106 and 213 Women's Toilet:
 - 1. Mirror: At lavatory, size as indicated on drawings.
 - 2. Soap Dispenser: Wall-mounted at lavatory.
 - 3. Paper Towel Dispenser: Accessible height.
 - 4. Toilet Tissue Dispenser.
 - 5. Napkin Disposal.
 - 6. Grab Bars: Configuration as indicated on drawings.
- D. 117 Lactation:
 - 1. Paper Towel Dispenser: Accessible height.
- E. 118 and 161A Women's Shower:
 - 1. (2) Robe Hooks: One at accessible height.
 - 2. Towel Bar.
 - 3. Shower Curtain Rod.
 - 4. Shower Curtain.
- F. 119 and 161 Women's Toilet:
 - 1. Mirrors: At each lavatory, size as indicated on drawings.
 - 2. Soap Dispensers: At each lavatory, wall-mounted.
 - 3. Paper Towel Dispenser: Accessible height.
 - 4. Toilet Tissue Dispensers: At each toilet compartment.
 - 5. Napkin Disposals: At each toilet compartment.
 - 6. Grab Bars: Configuration as indicated on drawings.
- G. 120 and 157 Men's Toilet:
 - 1. Mirrors: At each lavatory, size as indicated on drawings.
 - 2. Soap Dispensers: Between each lavatory, wall-mounted.
 - 3. Paper Towel Dispensers: One at an Accessible height.
 - 4. Toilet Tissue Dispensers: At each toilet compartment.
 - 5. Grab Bars: Configuration as indicated on drawings.
- H. 122 and 156 Men's Shower:
 - 1. (2) Robe Hooks: One at accessible height.
 - 2. Towel Bar.
 - 3. Shower Curtain Rod.
 - 4. Shower Curtain.
- I. 127 and 159 Lounge:
 - 1. Soap Dispenser: Above sink at Accessible height.
 - 2. Paper Towel Dispenser: Above sink at Accessible height.

END OF SECTION

SECTION 22 0100

PLUMBING GENERAL PROVISIONS (ISSUED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 CONDITIONS OF THE CONTRACT

- A. The Conditions of the Construction Contract and applicable provisions of Division I - General Requirements, as well as these General Provisions, shall apply to all Sections of Division 22.

1.02 SCOPE

- A. The work to be done under this Division of the Specifications shall include the furnishing of all labor, materials, equipment and services necessary for the proper completion of all of the Plumbing work as shown on the drawings and herein specified.
- B. In general, this shall include the furnishing and installing of all plumbing systems, complete with auxiliaries, as may be required to make a complete and properly operating installation.
- C. Only such items as are hereinafter specified or indicated on the drawings to be furnished by others, shall be considered to be furnished by others. All other items are to be considered as a part of this Contract, and shall be so bid.
- D. The omission of specific reference to any parts necessary to, or reasonably incidental to, a complete installation shall not be construed as releasing the Contractor from furnishing and installing same.
- E. Applicable provisions of the following sections shall apply to all sections for Plumbing Work.

1.03 DEFINITIONS

- A. Provide: Under this Contract, Contractor shall furnish and install item or items specified. Contractor shall perform all labor and furnish all materials and equipment necessary to that specified item or system will be complete and operational in every respect.
- B. Furnish: Under this Contract, Contractor shall deliver to the site item(s) specified, as well as additional specialized materials and/or accessories necessary for the use and operation of item or items specified.
- C. Install: Under this Contract, Contractor shall set in position, connect (including sub-assemblies furnished), and adjust for use. Contractor shall furnish miscellaneous specialty items such as hangers, valves, unions, piping, sheet metal, etc., as obviously necessary for a complete and operating installation.

1.04 DRAWINGS

- A. In general, the drawings of the Plumbing Systems and Equipment are to scale, however, to determine exact locations of walls and partitions, the Contractor shall consult the Architectural and/or Structural Drawings. Drawings shall not take precedence over field measurements. Plans of piping and ductwork, although shown on scale drawings, are diagrammatic only. They are intended to indicate the size and/or capacity where stipulated, approximate location and/or direction, and approximate general arrangement of one phase of work to another, but not the exact detail or exact arrangement of construction.
- B. If it is found before installation of any or all construction phases, that a more convenient, suitable or workable arrangement of any or all phases of the project would result by varying or altering the arrangement indicated on the drawings, the Architect may require any or all Contractors to change the location or arrangement of their work without additional cost to the Owner. Such rearrangement shall be in accordance with directions from the Architect.
- C. Where discrepancies are discovered after certain portions or phases of any Contract have been installed, the Architect reserves the right to have any or all Contractors make minor changes in pipe, duct, fixture or equipment locations or arrangements to avoid conflict with other work at no additional cost to the Owner.
- D. Because the drawings are to a relatively small scale to show as large a portion as is practical, the fact that only certain features of the system are indicated does not mean that other similar or

different features or details will not be required. Contractor shall furnish all incidental labor, materials, or equipment for the systems under his control, so that each system is a complete and operating one unless otherwise specifically stipulated in the detailed body of the Specifications.

- E. The Contractor shall be responsible for determining all field measurements before commencing construction, giving due consideration to building design and other equipment to be installed. Plumbing equipment not dimensioned on the drawings shall be field located, giving due consideration to the work of other trades. The Contractor shall verify all dimensions before proceeding with the work.
- F. Dimensions shall not be scaled from the drawings. If the Contractor discovers any discrepancy between actual measurements and those shown on the drawings which prevents good practice, good arrangement, or which is contrary to the intent of the drawings and specifications, he shall notify the Architect before proceeding with the work.

1.05 SITE INSPECTION

- A. Before submitting a proposal for the work contemplated in these specifications and accompanying drawings, each bidder shall examine the site and familiarize themselves with all the existing conditions and limitations, including the extent of demolition, cutting and patching to be done by the Contractor for Plumbing Work. No extras will be allowed because of the Contractor's misunderstanding as to the amount of work involved, or his lack of knowledge of any condition in connection with the work.

1.06 CODES AND STANDARDS

- A. The entire project shall comply with any and all OSHA, Federal, State and local codes, including, but not limited to State Building Code, State Plumbing Code, National Electrical Code, and the State Energy Code.
- B. Code requirements shall supersede details shown on the drawings or described in these specifications. Size of all pipe must conform to the requirements of all Codes except where larger sizes are shown on the drawings.

1.07 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

- A. Refer to Division 1 for substitution product request procedure.
- B. The cost of any changes of other trades as a result of use of the substitution material or equipment must be borne by the Contractor submitting such material or equipment.
- C. Approval to submit substitutions prior to submission of Bids is not required. Unless otherwise specifically provided in this Contract, reference to any equipment, material, article, or patented process by trade name, make or catalog number, shall be regarded as establishing a standard of quality, performance, style, and configuration and shall not be construed as limiting competition. The Contractor may, at his option, substitute any equipment, material, article, or process, which in the judgment of the Architect (at the time of submittal for approval), is equal to that named. There will not be a listing of approved substitutions prior to the bid.

1.08 EQUIPMENT

- A. All equipment shall be new and in first-class condition. Equipment shall not be used for purposes other than intended by the manufacturer.
- B. Manufacturer's nameplate, name or trademark shall be permanently affixed to all equipment and material furnished under this Specification. Nameplate of Subcontractor or distributor will not be acceptable. Nameplate shall be masked prior to any painting. Remove masking after completion.
- C. Equipment specified and furnished shall be of a type and manufacturer that has a local representative and a local replacement and service outlet to give complete coverage on parts and service at all times.

1.09 WARRANTY

- A. The Contractor shall be held responsible for any and all defects in equipment and workmanship which appear for one (1) full year after the date of Substantial Completion. All such defects must be repaired or defective equipment promptly replaced by the Contractor at no expense to the Owner.

1.10 INSPECTIONS AND FEES

- A. The Contractor shall obtain all permits and licenses required in connection with the work under Division 22. Cost for such shall be paid by the Contractor.

1.11 SUBMITTALS

- A. Cost Breakdown:
 - 1. Before submittal of the first Request for Payment, the Contractor shall submit to the Architect, an itemized cost breakdown, including separation of labor and material, for work under Division 22. The breakdown shall be divided in such detail as requested to aid in approval of Payment Requests based on work completed. Breakdown shall at a minimum include the following with separate lines for material and labor for each scope:
 - a. Special Plumbing Conditions (Bonds, Mobilization, etc.)
 - b. Plumbing Insulation
 - c. Plumbing Piping
 - d. Plumbing Fixtures
 - e. Plumbing Equipment
 - f. Gas Piping
- B. Shop Drawings:
 - 1. See Division 1 for submittals procedures. This section supplements the requirements of Division 1. In case of differences, the greater requirement applies.
 - 2. Shop drawings shall be submitted for all major equipment, fixtures, and accessories under each Section of this Specification.
 - 3. Shop drawings must first be checked by the Contractor for capacities and space conformance, and so stamped prior to submittal to the Architect.
- C. Operating and Maintenance Manuals:
 - 1. See Division 1 for submittals procedures. This section supplements the requirements of Division 1. In case of differences, the greater requirement applies.
 - 2. Manuals shall be clean electronic PDF's provided by the manufacturer. Each PDF must be fully readable.
 - 3. Instructions shall include the following information:
 - a. Include full instructions on lubrication, servicing and maintenance scheduling.
 - b. Include operating instructions including start up, emergency shut down and start-up, seasonal servicing and start up, etc.
 - c. Include owner's manuals for each item of equipment.
 - d. Include all equipment wiring diagrams.
 - e. Include full parts lists and exploded schematic diagrams.
 - f. Include backflow prevention device certification and yearly certification requirements per local code.
 - g. Include full warranty information.
 - h. Include full names, addresses, phone numbers, suppliers, service companies, contract numbers and other points of contact/information relative to the job.
 - 4. Where indicated in the Specifications, the Contractor shall provide the services of a factory trained representative to instruct the Owner's authorized personnel in the operation, control and maintenance of equipment.
- D. Record Drawings:
 - 1. The Contractor shall keep a complete set of all Plumbing drawings in the job site office for purposes of showing "As-Built" installation of Plumbing systems and equipment.

2. This set of drawings shall be used for no other purpose. Where any material, equipment or system components are installed different from that shown on the Drawings, such differences shall be clearly and neatly shown on this set of drawings using ink, or indelible pencil. The change notations shall be kept up-to-date on a daily basis. At the completion of the project, the set of drawings shall be turned over to the Architect for approval and delivery to the Owner.

PART 2 - PRODUCTS - NOT USED.

PART 3 - EXECUTION

3.01 WORKMANSHIP

- A. Workmanship shall be first-class in every respect. Standard accepted practice in the various trades shall be considered as minimum. The Architect reserves the right to reject any workmanship not in accordance with the specifications, either before or after installation of equipment.

3.02 COORDINATION

- A. The Contractor shall coordinate locations and arrangements of his equipment with other Contractors and subcontractors working on the project. Before starting work, the Contractor shall examine the Architectural, Structural and Electrical drawings and specifications, as well as shop and vendor drawings, for all divisions, to ascertain locations, levels, arrangements and dimensions of other work and shall confer and cooperate with all other Contractors or subcontractors to avoid all interferences. He shall also provide Contractors for other trades with information regarding locations, arrangements and dimensions of his equipment.
- B. In cases of interferences between various items of equipment or between equipment and building members, if simplified construction is made possible by the relocation of certain equipment, changes in arrangements may be made only if authorized by the A/E.
- C. Interferences between the work of different divisions which cannot be resolved by the parties involved shall be submitted to the Architect who shall decide upon final location and arrangement without respect to which work was installed first.

3.03 DEMOLITION AND REMODELING

- A. Where cutting and patching is required, each Contractor shall be responsible for his own work.
- B. Relocation of existing equipment and piping systems, which of necessity must provide continuous uninterrupted service, shall be accomplished in the least possible time. Work shall be scheduled so as to minimize down time for the respective systems involved. This will require for existing services being revamped and/or relocated, that all interconnecting portions of these systems shall be installed as complete as practicable prior to actual shutdown for final connections.
- C. Locate existing piping and make connection where required and/or where shown on the drawings. Do not cut into existing services without first ascertaining that the pipe involved is the desired service. In any area where work performed under Division 22 is the only work involved, restore the area to its original condition upon completion of the work.
- D. All existing services and equipment shall be maintained unless otherwise indicated on the drawings.
- E. The Owner shall be fully informed in advance of any shut-off which will occur and which will be affected for a specific period of time. Only after the Owner is fully informed and has agreed to the schedule of cut-offs, can the work then proceed accordingly.
- F. Provide temporary bracing, shoring, underpinning and support during demolition, cutting, remodeling and related new construction as necessary for the execution of the Work and the protection of persons and property.
- G. Provide protective coverings and enclosures necessary to prevent damage to existing work to remain. Protect temporary openings in exterior walls and roofs so as to prevent damage from water and the elements and prevent excessive heat loss from the existing building.

- H. Demolish and remove existing construction to be removed. Where new work is to be installed in or adjacent to existing construction or existing work is to be replaced, remove or cut the existing construction to the extent necessary to install or join the new work to the existing construction as necessary to complete the Work of the Project.
- I. Clean demolition areas and remove debris, waste and rubbish from the building at the conclusion of each day's work. Transport debris and rubbish in such a manner as to prevent the spread of dust. Remove debris, waste and rubbish promptly from the site. Do not burn debris, waste and rubbish on the site.
- J. Owner shall have first rights to salvage existing equipment not indicated to be reused. All existing materials not designated to be reused or to remain the property of the Owner, shall become the property of the Contractor and shall be removed from the site.
- K. Existing materials indicated on the drawings to be reused shall be stored on the site and protected until reuse.
- L. Patch existing construction to match. All painting shall comply with the specifications laid out in the General Contractor's portion of the specifications. Examine existing surfaces where existing surfaces are to be patched before proceeding with the work. Report all conditions where existing materials, colors, and finishes cannot be matched to the Architect, and do not proceed until the Architect has issued instructions. Existing construction that has been damaged as a result of the work shall be repaired to an extent and as required to match adjacent undamaged construction.
- M. Where existing piping, indicated to remain, penetrates new fire rated partitions, Contractor shall fire seal these penetrations same as for new piping.
- N. Where duct and/or piping is removed from existing partitions which are to remain, it is this Contractor's responsibility to patch voids to match existing construction.

3.04 TRAINING

- A. Contractor shall instruct the Owner's personnel in the operation and maintenance procedures of all equipment and systems. Contractor shall confirm in writing prior to the final inspection that Owner has been instructed to his satisfaction in the operation of all systems. Coordinate with the Owner.

END OF SECTION

SECTION 22 0719

PLUMBING PIPING INSULATION (ISSUED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Piping insulation.

1.02 REFERENCE STANDARDS

- A. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus; 2013.
- B. ASTM C195 - Standard Specification for Mineral Fiber Thermal Insulating Cement; 2007 (Reapproved 2013).
- C. ASTM C449 - Standard Specification for Mineral Fiber Hydraulic-Setting Thermal Insulating and Finishing Cement; 2007 (Reapproved 2013).
- D. ASTM C547 - Standard Specification for Mineral Fiber Pipe Insulation; 2015.
- E. ASTM C795 - Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel; 2008 (Reapproved 2013).
- F. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
- G. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2016.
- H. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site, labeled with manufacturer's identification, product density, and thickness.

1.04 FIELD CONDITIONS

- A. Maintain ambient conditions required by manufacturers of each product.
- B. Maintain temperature before, during, and after installation for minimum of 24 hours.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

2.02 GLASS FIBER

- A. Manufacturers:
 - 1. Knauf Insulation: www.knaufusa.com.
 - 2. Johns Manville Corporation: www.jm.com.
 - 3. Owens Corning Corp: www.owenscorning.com.
 - 4. CertainTeed Corporation: www.certainteed.com.
 - 5. Substitutions: See Section 01 6000 - Product Requirements.
- B. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible.
 - 1. 'K' Value: ASTM C177, 0.24 at 75 degrees F.
 - 2. Maximum Service Temperature: 850 degrees F.
 - 3. Maximum Moisture Absorption: 0.2 percent by volume.
- C. Vapor Barrier Jacket: White Kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E96/E96M of 0.02 perm-inches.
- D. Tie Wire: 0.048 inch stainless steel with twisted ends on maximum 12 inch centers.
- E. Vapor Barrier Lap Adhesive: Compatible with insulation.

1. Compatible with insulation.
- F. Insulating Cement/Mastic: ASTM C195; hydraulic setting on mineral wool.
 1. ASTM C195; hydraulic setting on mineral wool.
- G. Fibrous Glass Fabric:
 1. Cloth: Untreated; 9 oz/sq yd weight.
 2. Blanket: 1.0 lb/cu ft density.
 3. Weave: 5 by 5.
- H. Indoor Vapor Barrier Finish:
 1. Cloth: Untreated; 9 oz/sq yd weight.
 2. Vinyl emulsion type acrylic, compatible with insulation, white color.
- I. Insulating Cement: ASTM C449.
 1. ASTM C449/C449M.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that piping has been tested before applying insulation materials.
- B. Verify that surfaces are clean and dry, with foreign material removed.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with North American Insulation Manufacturers Association (NAIMA) National Insulation Standards.
- C. Exposed Piping: Locate insulation and cover seams in least visible locations.
- D. Glass fiber insulated pipes conveying fluids below ambient temperature:
 1. Provide vapor barrier jackets, factory-applied or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure sensitive adhesive. Secure with outward clinch expanding staples and vapor barrier mastic.
 2. Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe. Finish with glass cloth and vapor barrier adhesive or PVC fitting covers.
- E. Glass fiber insulated pipes conveying fluids above ambient temperature:
 1. Provide standard jackets, with or without vapor barrier, factory-applied or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure sensitive adhesive. Secure with outward clinch expanding staples.
 2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe. Finish with glass cloth and adhesive or PVC fitting covers.
- F. Inserts and Shields:
 1. Application: Piping 2 inches diameter or larger.
 2. Shields: Galvanized steel between pipe hangers or pipe hanger rolls and inserts.
 3. Insert Location: Between support shield and piping and under the finish jacket.
 4. Insert Configuration: Minimum 6 inches long, of same thickness and contour as adjoining insulation; may be factory fabricated.
 5. Insert Material: Hydrous calcium silicate insulation or other heavy density insulating material suitable for the planned temperature range.
- G. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations. Finish at supports, protrusions, and interruptions. At fire separations, refer to Section 07 8400.

3.03 SCHEDULES

- A. Plumbing Systems:
 1. Domestic Hot Water Supply:
 - a. Glass Fiber Insulation:
 - 1) Pipe Size Range: Less than 1-1/2 inch.
 - (a) Thickness: 1 inch.

- 2) Pipe Size Range: Larger than 1-1/4 inch.
 - (a) Thickness: 1-1/2 inch.
- 2. Domestic Hot Water Recirculation:
 - a. Same requirements as Domestic Hot Water Supply.
- 3. Domestic Cold Water:
 - a. Glass Fiber Insulation:
 - 1) Pipe Size Range: Less than 1-1/2 inch.
 - (a) Thickness: 1/2 inch.
 - 2) Pipe Size Range: Larger than 1-1/4 inch.
 - (a) Thickness: 1 inch.

END OF SECTION

SECTION 22 1005
PLUMBING PIPING (ISSUED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pipe, pipe fittings, specialties, and connections for piping systems.
 - 1. Sanitary sewer.
 - 2. Domestic water.
 - 3. Flanges, unions, and couplings.
 - 4. Pipe hangers and supports.
 - 5. Ball valves.
 - 6. Valves.

1.02 REFERENCE STANDARDS

- A. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 2018.
- B. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2013.
- C. ASME B31.9 - Building Services Piping; 2017.
- D. ASTM B32 - Standard Specification for Solder Metal; 2008 (Reapproved 2014).
- E. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2014.
- F. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric); 2013.
- G. ASTM D2564 - Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems; 2012 (Reapproved 2018).
- H. ASTM D2665 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings; 2014.
- I. ASTM D2855 - Standard Practice for the Two-Step (Primer & Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets; 2015.
- J. ASTM D3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2016.
- K. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
- L. AWWA C651 - Disinfecting Water Mains; 2014.
- M. CISPI 301 - Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications; 2017 (Revised 2018).
- N. CISPI 310 - Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications; 2012 (Revised 2018).
- O. ICC-ES AC01 - Acceptance Criteria for Expansion Anchors in Masonry Elements; 2012.
- P. ICC-ES AC106 - Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in Masonry Elements; 2012.
- Q. ICC-ES AC193 - Acceptance Criteria for Mechanical Anchors in Concrete Elements; 2013.
- R. ICC-ES AC308 - Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements; 2013.
- S. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2018.
- T. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; 2010.
- U. NSF 61 - Drinking Water System Components - Health Effects; 2019.

- V. NSF 372 - Drinking Water System Components - Lead Content; 2016.
- W. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Project Record Documents: Record actual locations of underslab piping.

1.04 REGULATORY REQUIREMENTS

- A. Perform Work in accordance with State of Minnesota Plumbing Code.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- B. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.
- B. Plenum-Installed Acid Waste Piping: Flame-spread index equal or below 25 and smoke-spread index equal or below 50 according to ASTM E84 or UL 723 tests.

2.02 SANITARY SEWER PIPING, BURIED WITHIN 5 FEET OF BUILDING

- A. Cast Iron Pipe: CISPI 301, hubless.
 - 1. Fittings: Cast iron, CISPI.
 - 2. Joints: CISPI 310, neoprene gasket and stainless steel clamp and shield assemblies.
- B. PVC Pipe: ASTM D2665.
 - 1. Fittings: PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.03 SANITARY SEWER PIPING, ABOVE GRADE

- A. Cast Iron Pipe: CISPI 301, hubless, service weight.
 - 1. Fittings: Cast iron, CISPI marked.
 - 2. Joints: CISPI 310, neoprene gaskets and stainless steel clamp-and-shield assemblies.
- B. PVC Pipe: ASTM D2665.
 - 1. Fittings: PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.04 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), Drawn (H).
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
 - 2. Joints:
 - a. Soldered, ASTM B 32, alloy Sn95 solder.
 - b. Press-fit. Copper press fittings conforming to ASME b16.18 or 16.22. O-rings shall be EPDM. Installation shall conform to IAPMO standard PS117-2002.

2.05 FLANGES, UNIONS, AND COUPLINGS

- A. Unions for Pipe Sizes 3 Inches and Under:
 - 1. Ferrous pipe: Class 150 malleable iron threaded unions.
 - 2. Copper tube and pipe: Class 150 bronze unions with soldered joints.
- B. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

2.06 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
 - 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
 - 2. Overhead Supports: Individual steel rod hangers attached to structure or to trapeze hangers.
 - 3. Trapeze Hangers: Welded steel channel frames attached to structure.
 - 4. Vertical Pipe Support: Steel riser clamp.
- B. Plumbing Piping - Drain, Waste, and Vent:
 - 1. Conform to ASME B31.9.
 - 2. Hangers for Pipe Sizes 1/2 Inch to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
 - 3. Hangers for Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
 - 4. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
 - 5. Wall Support for Pipe Sizes 4 Inches and Over: Welded steel bracket and wrought steel clamp.
 - 6. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
- C. Plumbing Piping - Water:
 - 1. Conform to ASME B31.9.
 - 2. Hangers for Pipe Sizes 1/2 Inch to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
 - 3. Hangers for Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
 - 4. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
 - 5. Wall Support for Pipe Sizes 4 Inches and Over: Welded steel bracket and wrought steel clamp.
 - 6. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
- D. Hanger Fasteners: Attach hangers to structure using appropriate fasteners, as follows:
 - 1. Concrete Wedge Expansion Anchors: Complying with ICC-ES AC193.
 - 2. Masonry Wedge Expansion Anchors: Complying with ICC-ES AC01.
 - 3. Concrete Screw Type Anchors: Complying with ICC-ES AC193.
 - 4. Masonry Screw Type Anchors: Complying with ICC-ES AC106.
 - 5. Concrete Adhesive Type Anchors: Complying with ICC-ES AC308.

2.07 BALL VALVES

- A. Construction, 4 inch and Smaller: MSS SP-110, Class 150, 400 psi CWP, bronze or ductile iron body, 304 stainless steel or chrome plated brass ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle with balancing stops, threaded or grooved ends with union.
- B. Construction, 4 Inches and Smaller: MSS SP-110, Class 150, 400 psi CWP, bronze, two piece body, chrome plated brass ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle, threaded ends with union.

PART 3 EXECUTION

3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.

- C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- D. Install piping to maintain headroom, conserve space, and not interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
- G. Penetrations through full height walls shall be caulked completely through the penetration with an acoustical sealant.
- H. Install valves with stems upright or horizontal, not inverted.
- I. PVC Pipe: Make solvent-welded joints in accordance with ASTM D 2855 and MN Code.

3.03 APPLICATION

- A. Use grooved mechanical couplings and fasteners only in accessible locations.
- B. Install unions downstream of valves and at equipment or apparatus connections.
- C. Install ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.

3.04 TOLERANCES

- A. Drainage Piping: Establish invert elevations within 1/2 inch vertically of location indicated and slope to drain at minimum of 1/8 inch per foot slope, or as indicated on the plans.
- B. Water Piping: Slope at minimum of 1/32 inch per foot and arrange to drain at low points.

3.05 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. Prior to starting work, verify system is complete, flushed and clean.
- B. Ensure acidity (pH) of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).
- C. Inject disinfectant, free chlorine in liquid, powder, tablet or gas form, throughout system to obtain 50 to 80 mg/L residual.
- D. Bleed water from outlets to ensure distribution and test for disinfectant residual at minimum 15 percent of outlets.
- E. Maintain disinfectant in system for 24 hours.
- F. If final disinfectant residual tests less than 25 mg/L, repeat treatment.
- G. Flush disinfectant from system until residual equal to that of incoming water or 1.0 mg/L.
- H. Take samples no sooner than 24 hours after flushing, from 10 percent of outlets and from water entry, and analyze in accordance with AWWA C651.

END OF SECTION

SECTION 22 1006

PLUMBING PIPING SPECIALTIES (ISSUED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Floor drains.
- B. Cleanouts.
- C. Water hammer arrestors.
- D. Thermostatic mixing valves.

1.02 REFERENCE STANDARDS

- A. ASME A112.6.3 - Floor and Trench Drains; 2019.
- B. ASSE 1019 - Performance Requirements for Wall Hydrant with Backflow Protection and Freeze Resistance; 2011 (Reaffirmed 2016).
- C. NSF 61 - Drinking Water System Components - Health Effects; 2019.
- D. NSF 372 - Drinking Water System Components - Lead Content; 2016.
- E. PDI-WH 201 - Water Hammer Arresters; 2017.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate dimensions, weights, and placement of openings and holes.
- C. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Accept specialties on site in original factory packaging. Inspect for damage.

1.05 EXTRA MATERIALS

- A. Supply for Owner's use in maintenance of project:
 - 1. Two loose keys for outside wall hydrants.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Specialties in Potable Water Supply Systems: Provide products that comply with NSF 61 and NSF 372 for maximum lead content.

2.02 DRAINS

- A. Manufacturers:
 - 1. Josam Company: www.josam.com.
 - 2. Jay R. Smith Manufacturing Company: www.jayrsmith.com.
 - 3. Zurn Industries, LLC: www.zurn.com.
 - 4. Watts: www.watts.com.
- B. Floor Drain:
 - 1. ASME A112.6.3; lacquered cast iron or stainless steel, two piece body with double drainage flange, weep holes, reversible clamping collar, and 5 inch round adjustable cast nickel-bronze strainer.

2.03 CLEANOUTS

- A. Cleanouts at Interior Finished Floor Areas:
 - 1. Lacquered cast iron body with anchor flange, reversible clamping collar, threaded top assembly, and round gasketed scored nickel bronze cover.
- B. Cleanouts at Interior Finished Wall Areas:
 - 1. Line type with lacquered cast iron body and round epoxy coated gasketed cover, and round stainless steel access cover secured with machine screw.

2.04 WALL HYDRANTS

- A. Wall Hydrants:
 - 1. ASSE 1019; freeze resistant, quarter turn, self-draining type with polished bronze lockable recessed box, hose thread spout, lockshield and removable key, and integral vacuum breaker.

2.05 WATER HAMMER ARRESTORS

- A. Water Hammer Arrestors:
 - 1. Stainless steel construction, bellows type sized in accordance with PDI-WH 201, precharged suitable for operation in temperature range minus 100 to 300 degrees F and maximum 250 psi working pressure.

2.06 MIXING VALVES

- A. Thermostatic Mixing Valves (at lavatories):
 - 1. Manufacturers:
 - a. Lawler: www.temperedwater.com.
 - b. Leonard Valve Company: www.leonardvalve.com.
 - c. Speakman: www.speakman.com.
 - d. Powers: www.watts.com.
 - e. Watts; Model LFUSG-B-M2: www.watts.com.
 - 2. Valve: Cast brass body, compression connections, stainless steel or copper alloy bellows, integral temperature adjustment.
 - 3. Conforms with ASSE 1070 for single fixture applications.
 - 4. Accessories:
 - a. Check valves on inlets.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system.
- C. Install floor cleanouts at elevation to accommodate finished floor.
- D. Install water hammer arrestors complete with accessible isolation valve on hot and cold water supply piping .

END OF SECTION

SECTION 23 2113
HYDRONIC PIPING (ISSUED ADDENDUM NO. 01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hydronic system requirements.
- B. Heating water and glycol piping, above grade.
- C. Valves:
 - 1. Ball valves.

1.02 REFERENCE STANDARDS

- A. ASME B16.3 - Malleable Iron Threaded Fittings; The American Society of Mechanical Engineers; 1998 (R2006).
- B. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 2018.
- C. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2013.
- D. ASME B31.9 - Building Services Piping; 2017.
- E. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2001 (R2005).
- F. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers; 2008 (ANSI/ASME B31.9).
- G. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.
- H. ASTM A234/A234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service; 2019.
- I. ASTM B32 - Standard Specification for Solder Metal; 2008 (Reapproved 2014).
- J. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2014.
- K. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric); 2013.
- L. ASTM F708 - Standard Practice for Design and Installation of Rigid Pipe Hangers; 1992, with Editorial Revision (2018).
- M. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- N. AWWA C606 - Grooved and Shouldered Joints; 2015.
- O. AWWA C606 - Standard Specification for Grooved and Shouldered Joints; American Water Works Association; 2006.
- P. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2018.

1.03 SYSTEM DESCRIPTION

- A. Where more than one piping system material is specified, ensure system components are compatible and joined to ensure the integrity of the system is not jeopardized. Provide necessary joining fittings. Ensure flanges, union, and couplings for servicing are consistently provided.
- B. Use unions, flanges, and couplings downstream of valves and at equipment or apparatus connections. Do not use direct welded or threaded connections to valves, equipment or other apparatus.
- C. Provide pipe hangers and supports in accordance with ASME B31.9 unless indicated otherwise.
- D. Use ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.
- E. Use 3/4 inch ball valves with cap for drains at main shut-off valves, low points of piping, bases of vertical risers, and at equipment.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Include data on valves and accessories. Provide manufacturers catalogue information. Indicate valve data and ratings.
- C. Project Record Documents: Record actual locations of valves.

1.05 REGULATORY REQUIREMENTS

- A. Conform to ASME B31.9 code for installation of piping system.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Provide temporary protective coating on cast iron and steel valves.
- C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 HYDRONIC SYSTEM REQUIREMENTS

- A. Comply with ASME B31.9 and applicable federal, state, and local regulations.
- B. Piping: Provide piping, fittings, hangers and supports as required, as indicated, and as follows:
 - 1. Where more than one piping system material is specified, provide joining fittings that are compatible with piping materials and ensure that the integrity of the system is not jeopardized.
 - 2. Use non-conducting dielectric connections whenever jointing dissimilar metals.
 - 3. Provide pipe hangers and supports in accordance with ASME B31.9 or MSS SP-58 unless indicated otherwise.
 - 4. Provide pipe hangers and supports in accordance with ASME B31.9 unless indicated otherwise.
- C. Pipe-to-Valve and Pipe-to-Equipment Connections: Use flanges or unions to allow disconnection of components for servicing; do not use direct welded, soldered, or threaded connections.
- D. Valves: Provide valves where indicated.
- E. Drain and store hydronic fluids as required to perform the work. Re-inject the fluids back into the system upon confirming new work is leak free.

2.02 HEATING WATER AND GLYCOL PIPING, ABOVE GRADE

- A. Steel Pipe: ASTM A53/A53M, Schedule 40, black, using one of the following joint types:
 - 1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D1.1/D1.1M welded.
 - 2. Grooved Joints: AWWA C606 grooved pipe, fittings of same material, and mechanical couplings.
 - 3. Fittings: ASTM B 16.3, malleable iron or ASTM A 234/A 234M, wrought steel welding type fittings.
 - 4. Joints: Threaded, or AWS D1.1 welded.
- B. Copper Tube: ASTM B88 (ASTM B88M), Type L (B), drawn, using one of the following joint types:
 - 1. Fittings: ASME B16.18, cast brass, or ASME B16.22, solder wrought copper. press fittings.
 - a. Solder: ASTM B32 lead-free solder, HB alloy (95-5 tin-antimony) or tin and silver.
 - 2. Grooved Joints: AWWA C606 grooved tube, fittings of same material, and copper-tube-dimension mechanical couplings.

3. Mechanical Press Sealed Fittings: Double pressed type complying with ASME B16.22, utilizing EPDM, nontoxic synthetic rubber sealing elements.

2.03 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
- B. Conform to ASME B31.9.
- C. Hangers for Pipe Sizes 1/2 to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
- D. Hangers for Pipe Sizes 2 Inches and Greater: Carbon steel, adjustable, clevis.
- E. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
- F. Hanger Rods: Mild steel threaded both ends, threaded one end, or continuous threaded.
- G. In grooved installations, use rigid couplings with offsetting angle-pattern bolt pads or with wedge shaped grooves in header piping to permit support and hanging in accordance with ASME B31.9.

2.04 UNIONS, FLANGES, MECHANICAL COUPLINGS, AND DIELECTRIC CONNECTIONS

- A. Unions for Pipe 2 Inches and Less:
 1. Ferrous Piping: 150 psig malleable iron, threaded.
 2. Copper Pipe: Bronze, soldered joints.
- B. Flanges for Pipe 2 Inches and Greater:
 1. Ferrous Piping: 150 psig forged steel, slip-on.
 2. Copper Piping: Bronze.
 3. Gaskets: 1/16 inch thick preformed neoprene.
- C. Dielectric Connections:
 1. Waterways:
 - a. Dry insulation barrier able to withstand 600-volt breakdown test.
 - b. Construct of galvanized steel with threaded end connections to match connecting piping.
 - c. Suitable for the required operating pressures and temperatures.
 2. Flanges:
 - a. Dielectric flanges with same pressure ratings as standard flanges.
 - b. Dry insulation barrier able to withstand 600-volt breakdown test.
 - c. Construct of galvanized steel with threaded end connections to match connecting piping.
 - d. Suitable for the required operating pressures and temperatures.

2.05 BALL VALVES

- A. Up To and Including 2 Inches:
 1. Bronze one piece body, chrome plated brass ball, teflon seats and stuffing box ring, lever handle with balancing stops, solder ends with union.
 2. Bronze one piece body, stainless steel ball, teflon seats and stuffing box ring, lever handle, solder ends.
- B. Over 2 Inches:
 1. Cast steel body, chrome plated steel ball, teflon seat and stuffing box seals, lever handle, flanged.

PART 3 EXECUTION

3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt on inside and outside before assembly.
- C. Prepare piping connections to equipment using jointing system specified.

- D. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.
- E. After completion, fill, clean, and treat systems.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Route piping in orderly manner, parallel to building structure, and maintain gradient.
- C. Install piping to conserve building space and to avoid interfere with use of space.
- D. Group piping whenever practical at common elevations.
- E. Sleeve pipe passing through fire and/or smoke rated partitions, walls and floors.
- F. Penetrations through full height walls shall be caulked completely through the penetration with an acoustical sealant.
- G. Slope piping and arrange to drain at low points.
- H. Pipe Hangers and Supports:
 - 1. Install in accordance with ASME B31.9, ASTM F708, or MSS SP-58.
 - 2. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
 - 3. Place hangers within 12 inches of each horizontal elbow.
 - 4. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
- I. Install valves with stems upright or horizontal, not inverted.

END OF SECTION

SECTION 23 3700
AIR OUTLETS AND INLETS (ISSUED ADDENDUM NO.01)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Grilles, Registers, & Diffusers.

1.02 RELATED REQUIREMENTS

- A. Section 09 9123 - Interior Painting: Painting of ducts visible behind outlets and inlets.

1.03 REFERENCE STANDARDS

- A. ADC 1062: GRD - Test Code for Grilles, Registers & Diffusers; Air Diffusion Council; 1984.
- B. AMCA 500-L - Laboratory Methods of Testing Louvers for Rating; 2015.
- C. ASHRAE Std 70 - Method of Testing the Performance of Air Outlets and Inlets; 2006 (Reaffirmed 2021).
- D. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2005.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data for equipment required for this project. Review outlets and inlets as to size, finish, and type of mounting prior to submission. Submit schedule of outlets and inlets showing type, size, location, application, static pressure drop, and noise level.
- C. Project Record Documents: Record actual locations of air outlets and inlets.

PART 2 PRODUCTS

2.01 GRILLES, REGISTERS, & DIFFUSERS

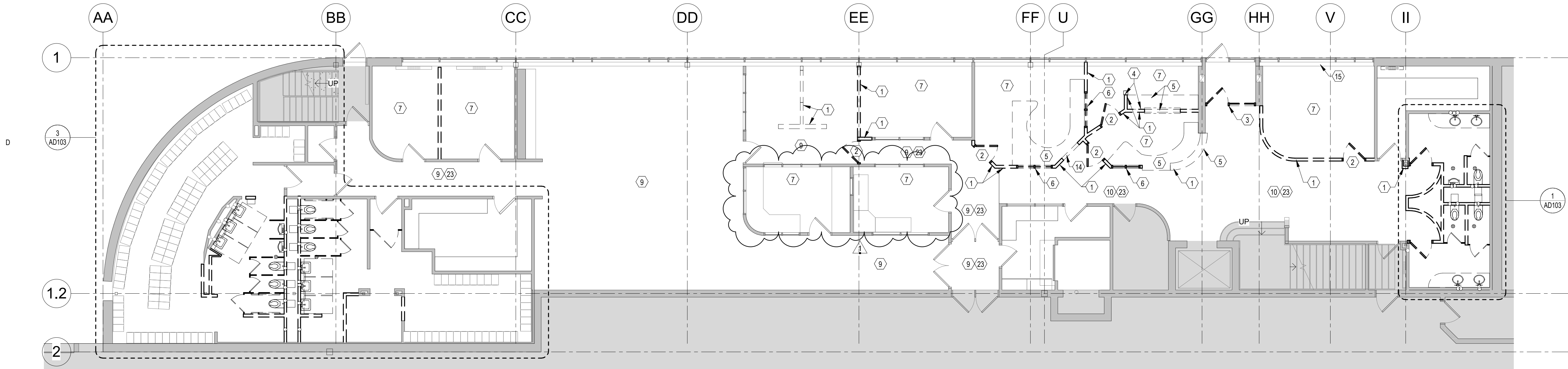
- A. Manufacturers
 - 1. Krueger: www.krueger-hvac.com.
 - 2. Metal Aire.
 - 3. Tuttle & Bailey.
 - 4. Price Industries: www.price-hvac.com.
 - 5. Titus:
- B. Substitutions: See Section 01 6000 - Product Requirements.
- C. Provide grilles, registers, and diffusers of equivalent style, mounting, material, color, performance, and accessories as product listed on drawing schedules.

PART 3 EXECUTION

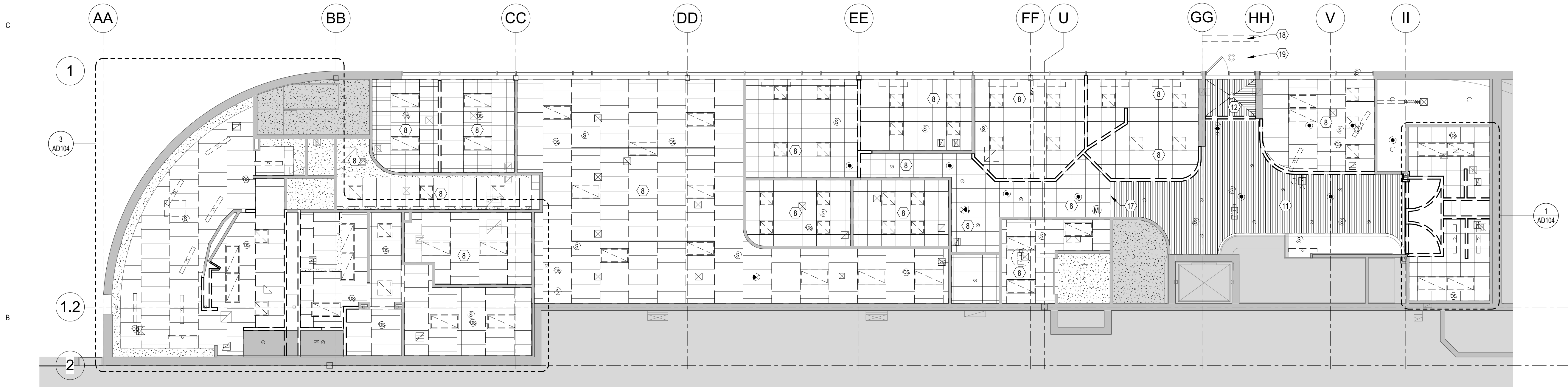
3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Check location of outlets and inlets and make necessary adjustments in position to conform with architectural features, symmetry, and lighting arrangement.
- C. Install diffusers to ductwork with air tight connection.
- D. Provide balancing dampers on duct take-off to diffusers, and grilles and registers.
- E. Paint ductwork visible behind air outlets and inlets matte black. Refer to Section 09 9123.

END OF SECTION



1 LEVEL 1 DEMOLITION FLOOR PLAN
1/8" = 1'-0"



2 LEVEL 1 DEMOLITION REFLECTED CEILING PLAN
1/8" = 1'-0"

GENERAL DEMOLITION NOTES

- A. THE CONTRACTOR SHALL ACCEPT THE PROJECT AS IT EXISTS. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY CONFLICT AND/OR DISCREPANCIES PRIOR TO COMMENCING WORK.
- B. DEMOLITION DRAWINGS INDICATE GENERAL SCOPE OF WORK ONLY. NOT ALL DEMOLITION WORK IS SPECIFICALLY INDICATED. THE NOTATION "NO WORK" INDICATES THAT SUBSTANTIAL DEMOLITION ACTIVITIES ARE NOT ANTICIPATED IN THE DESIGNATED ROOM OR AREA. INCIDENTAL MODIFICATION OR DEMOLITION SHALL BE AS NEEDED TO ACCOMMODATE THE NEW WORK AS DETAILED.
- C. AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION, CONTRACTOR MUST MAINTAIN DIRECT ACCESS TO BUILDING EGRESS STAIRS AND EXITS AND MAINTAIN REQUIRED EGRESS PATHS FOR ALL BUILDING OCCUPANTS.
- D. ADJACENT AREAS OF THE BUILDING WILL BE OCCUPIED FOR THE DURATION OF CONSTRUCTION. MAINTAIN ACCESS TO THESE AREAS AT ALL TIMES AND COORDINATE SCHEDULING OF DISRUPTIVE WORK WITH OWNER.
- E. ACCESS ITEMS INDICATED FOR DEMOLITION IN MANNER DESIGNED TO MINIMIZE IMPACT ON EXISTING WORK INDICATED TO REMAIN. WHENEVER POSSIBLE PERFORM DEMOLITION ACTIVITIES FROM AREAS TO BE CONCEALED BY NEW WORK.
- F. WHERE AREAS OR ITEMS THAT ARE INDICATED TO BE REMOVED ABUT OR ADJOIN EXISTING CONSTRUCTION INDICATED TO REMAIN, SAWCUT OR OTHERWISE REMOVE TO PROVIDE A CLEAN EDGE.
- G. UNLESS NOTED OTHERWISE, WITHIN LIMITS OF CONSTRUCTION, EXISTING STRUCTURAL ELEMENTS TO REMAIN.
- H. WHERE REQUIRED FOR SCHEDULED WORK, REMOVE ALL EXISTING FLOOR AND BASE FINISHES INCLUDING MASTICS AND/OR BONDING AGENTS, ALL CEILING SYSTEMS INCLUDING TRIM/ACCESSORIES ON WALLS. REMOVE ANY APPLIED FINISHES. PREPARE ALL SURFACES AS REQUIRED FOR NEW CONSTRUCTION AND/OR FINISHES.
- I. WHERE WALLS OR PARTITIONS ARE INDICATED TO BE REMOVED, REMOVE ENTIRE WALL OR PARTITION INCLUDING ALL ELEMENTS IN OR ON THE WALL WHICH MAY NOT BE SPECIFICALLY INDICATED. UNLESS NOTED OTHERWISE, REMOVE ALL FRAMING AND SUPPORT COMPONENTS ABOVE CEILING.
- J. AFTER WALLS, CEILINGS, EQUIPMENT, OR OTHER ELEMENTS ARE REMOVED ALL FLOORS, WALLS, AND CEILINGS ARE TO BE PREPARED TO RECEIVE NEW FINISHES AS REQUIRED IN AREA OF WORK. COORDINATE WITH NEW WORK.
- K. AFTER DEMOLITION ALL RESIDUAL MARKINGS ON EXISTING FLOORING, WALLS AND CEILINGS THAT ARE TO REMAIN SHALL BE REPAIRED TO MATCH ADJACENT SURFACES.
- L. DO NOT DISRUPT UTILITY, SERVICE, SECURITY, FIRE PROTECTION, FIRE ALARM, POWER OR HVAC TO ADJACENT SPACE AND FACILITIES WITHOUT PRIOR APPROVAL BY THE OWNER.
- M. NO WORK IN THE SHADED AREAS.

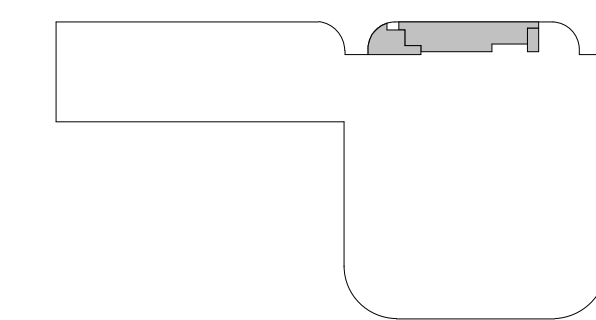
KEYED SHEET NOTES

- 1 REMOVE GYPSUM BOARD WALL.
- 2 REMOVE DOOR AND FRAME.
- 3 REMOVE DOOR, FRAME AND GLAZING.
- 4 REMOVE SOLID WOOD TRIM.
- 5 REMOVE PLASTIC LAMINATE CASEWORK.
- 6 REMOVE HOLLOW METAL WINDOW FRAMES AND GLAZING.
- 7 REMOVE CARPET FLOORING.
- 8 REMOVE ACOUSTIC CEILING SYSTEM.
- 9 REMOVE VCT FLOORING AND MECHANICALLY PREP FOR NEW FLOOR FINISH..
- 10 REMOVE CERAMIC OR CLAY TILE FLOORING AND MECHANICALLY PREP SLAB FOR NEW FLOOR FINISH.
- 11 REMOVE LINEAR CEILING SYSTEM.
- 12 REMOVE DECORATIVE WOOD CEILING SYSTEM.
- 13 REMOVE ALUMINUM STOREFRONT FRAMES AND GLAZING.
- 14 REMOVE COILING SHUTTER AND PLASTIC LAMINATE COUNTER AT SERVICE WINDOW.
- 15 REMOVE WINDOW TREATMENT. REMOVE PLASTIC LAMINATE WINDOW SILL AND RADIATION COVER, AND ALL ASSOCIATED FRAMING AND BLOCKING.
- 16 REMOVE WOOD SHELVING NECESSARY TO BUILD NEW WALL. MODIFY REMAINING SHELVING AT NEWLY EXPOSED ENDS TO MATCH EXISTING CONDITIONS OF SHELVING TO REMAIN AND SUPPORT STRENGTH.
- 17 REMOVE GYPSUM BOARD BULKHEAD AND SUPPORT STRUCTURE.
- 18 REMOVE CONCRETE BEAM.
- 19 REMOVE PORTION OF EXISTING CANTILEVERED CONCRETE ROOF SLAB.
- 20 SAWCUT EXISTING CONCRETE ROOF SLAB AT FACE OF BUILDING. ALLOW ROOM TO PATCH EXTERIOR COATING.
- 21 REMOVE FURNITURE SYSTEM.
- 22 REMOVE GYPSUM BOARD CEILING, SOFFITS AND SUPPORT STRUCTURE.
- 23 REMOVE WALLCOVERING ON WALLS TO REMAIN AND PREP FOR NEW PAINTED FINISH.
- 24 REMOVE CEILING TILE FOR REPLACEMENT. EXISTING GRID TO REMAIN.
- 25 REMOVE DAMAGED GYPSUM BOARD WITH WALLCOVERING IN FULL PANELS TO WOOD TRIM HEIGHT AND WIDTH AS INDICATED ON PLAN.



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CLIENT:
**DULUTH TRANSIT
AUTHORITY (DTA)**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806



KEYPLAN

THIS SQUARE APPEARS 1/2"x1/2"
ON FULL SIZE SHEETS

NO	DATE	ISSUED FOR
1	10/24/2022	100% DOCUMENTS

NO	DATE	REVISION
1	12/15/2022	ADDENDUM 01

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Signature: *Brandee Ness Lian*

Typed or Printed Name: BRANDEE NESS LIAN

Date: 10/24/2022 Reg. No.: 42859

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PROJECT NAME:

**OPS CENTER OFFICE
AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

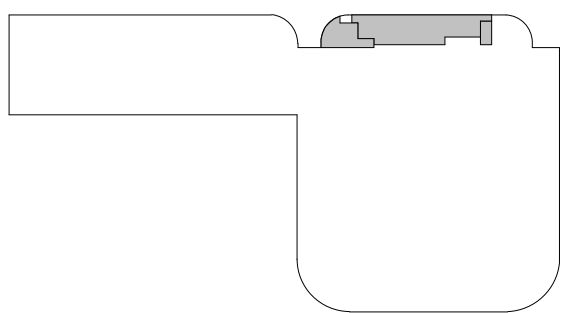
DRAWING TITLE:

**OFFICE DEMOLITION
PLANS**

DRAWN BY: CMK
CHECKED BY: BNL
PROJ. NO: 190559
DRAWING NO:

AD101

CLIENT:
**DULUTH TRANSIT
AUTHORITY (DTA)**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806



KEYPLAN

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10/24/2022	100% DOCUMENTS
NO	DATE ISSUED FOR

1	12/15/2022	ADDENDUM 01
NO	DATE	REVISION

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Typed or Printed Name: **BRANDEE NESS LIAN**
Date: 10/24/2022 Reg. No.: 42859

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PROJECT NAME:

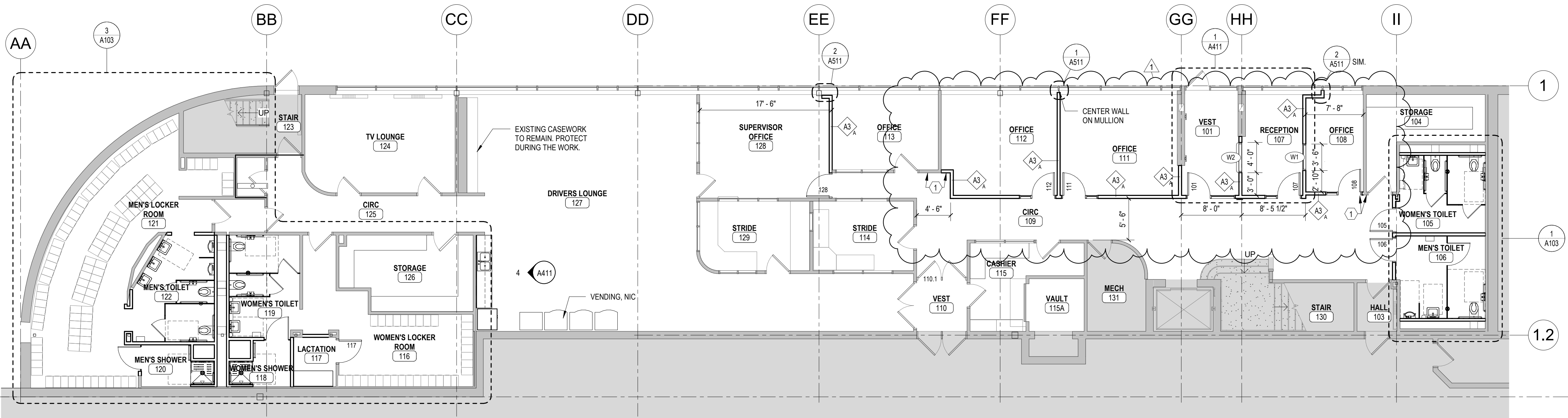
**OPS CENTER OFFICE
AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:

**OFFICE FLOOR PLANS
AND REFLECTED
CEILING PLANS**

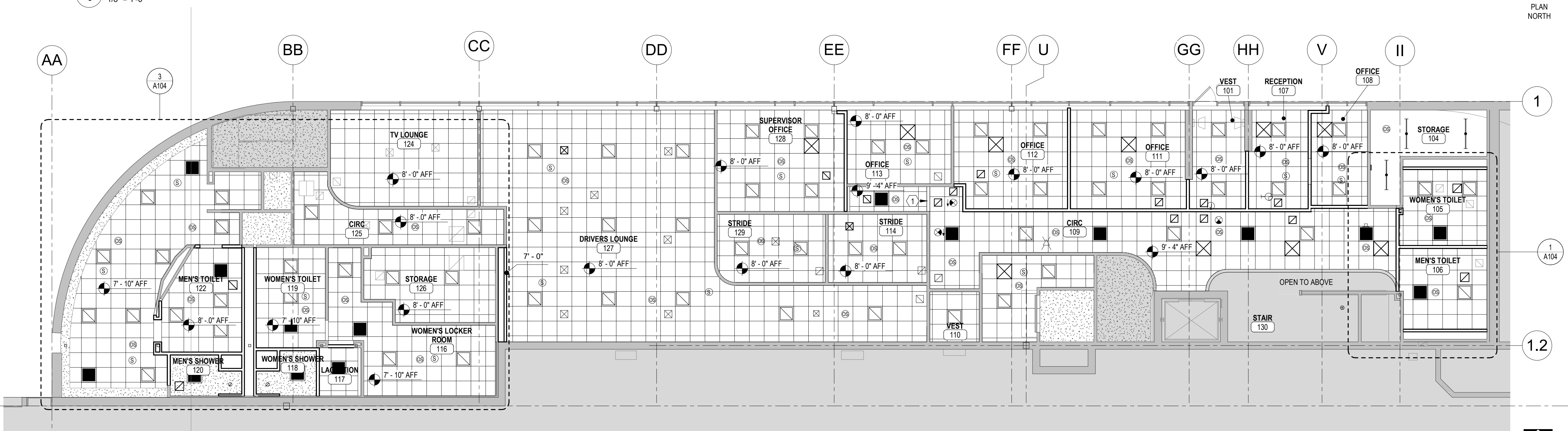
DRAWN BY: CMK
CHECKED BY: BNL
PROJ. NO.: 190559
DRAWING NO:

A101



1 LEVEL 1 - OFFICE FLOOR PLAN
1/8" = 1'-0"

PLAN
NORTH



2 LEVEL 1 - REFLECTED CEILING PLAN
1/8" = 1'-0"

PLAN
NORTH

GENERAL SHEET NOTES

- GENERAL NOTES APPLY TO ALL DRAWING SHEETS.
- COORDINATE THIS ARCHITECTURAL PLAN WITH PLANS BY ALL OTHER DISCIPLINES IN THE DOCUMENTS, SUCH AS MECHANICAL, PLUMBING, ELECTRICAL, FIRE PROTECTION PLANS, AND OTHERS AS NECESSARY. NOTE: SYMBOLS USED IN PLANS BY OTHER DISCIPLINES MAY DIFFER FROM ARCHITECTURAL SYMBOLS.
- ALL OPENINGS CUT, PENETRATIONS MADE, OR EQUIPMENT INSTALLED IN FIRE RATED ASSEMBLIES SUCH AS WALLS, PARTITIONS, FLOORS, CEILINGS, ETC. SHALL BE RESTORED, SEALED, FIRESTOPPED, OR OTHERWISE CONSTRUCTED TO MAINTAIN THE INTEGRITY AND FIRE RATING OF THE ASSEMBLY TO THE FULL SATISFACTION OF THE ARCHITECT, ENGINEER, BUILDING OFFICIAL AND OWNER. THE GENERAL CONTRACTOR SHALL COORDINATE AND BE RESPONSIBLE FOR THIS WORK.
- TYPICAL INTERIOR PARTITION IS A3 WALL TYPE UNLESS NOTED OTHERWISE. REFER TO WALL TYPES ON SHEET **A511**
- TYPICAL INTERIOR FURRING PARTITION IS F3 UNLESS NOTED OTHERWISE. REFER TO WALL TYPES ON SHEET **A511**
- DIMENSIONS OF INTERIOR WALLS ARE TO FACE OF STUD, FACE OF CMU, FACE OF CONCRETE, OR FACE OF EXISTING WALL UNLESS NOTED OTHERWISE.
- DIMENSIONS OF EXTERIOR WALLS ARE TO EXTERIOR FACE OF SHEATHING, OR EXTERIOR FACE OF CMU OR CONCRETE UNLESS NOTED OTHERWISE.
- AT "ALIGN" NOTE, FINISH FACE OF WALLS TO ALIGN
- INSTALL ACOUSTIC BATT INSULATION IN ALL RESTROOM WALLS AND WALLS CONTAINING PLUMBING PIPES.
- REFER TO ENLARGED PLANS, WHEN PROVIDED, FOR ADDITIONAL INFORMATION TO SUPPLEMENT THE FLOOR PLANS.
- SEE ROOM FINISH SCHEDULE FOR ROOMS WHERE WINDOW TREATMENTS ARE TO BE INSTALLED
- PROVIDE METAL AND/OR FIRE-RESISTANT WOOD BLOCKING AT ALL WALL MOUNTED FIXTURES, FURNITURE, EQUIPMENT, ACCESSORIES, AND OTHER SPECIALTIES.
- OWNER SUPPLIED FURNITURE AND EQUIPMENT SHOWN ON FURNITURE REFERENCE PLAN. NOT IN CONTRACT UNLESS NOTED OTHERWISE.
- ALL EXPOSED PIPES, VENTS, AND CONDUIT PENETRATING WALLS, FLOORS, OR CEILINGS SHALL HAVE FINISHED TRIM RINGS (ESCUTCHEONS).
- FIRESTOP AROUND MECHANICAL AND ELECTRICAL EQUIPMENT, ETC. WITH UL APPROVED FIRESTOPPING MATERIAL PER CODE AT ALL PENETRATIONS IN NEW AND EXISTING FIRE RATED WALLS OR FLOORS.
- ALL NEW AND EXISTING GYPSUM BOARD SURFACES WITHIN THE CONSTRUCTION LIMITS TO RECEIVE PAINT UNLESS NOTED OTHERWISE.
- EXTERIOR LANDINGS, STOOPS, BALCONIES, AND PORCHES SHALL BE LEVEL ACROSS DOORWAYS AND SHALL SLOPE AWAY FROM THE BUILDING AT 1/4" PER FOOT.
- EXISTING STRUCTURE LOCATIONS ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY THE OWNER. FIELD VERIFY AS REQUIRED.
- NO WORK IN SHADED AREAS.

FLOOR PLAN KEYED NOTES

- ALIGN
- TRANSACATION WINDOW
- SOLID SURFACE TRANSACATION SHELF.
- NEW GYP BD PANEL WHERE DAMAGED PANEL WAS REMOVED. PROVIDE CLEAN TRANSITION TO EXISTING WALLCOVERING AT WINDOW FRAME. PRIME NEW WORK AND THEN PAINT ENTIRE WALL, INCLUDING OVER EXISTING WALLCOVERING TO REMAIN.

RCP GENERAL SHEET NOTES

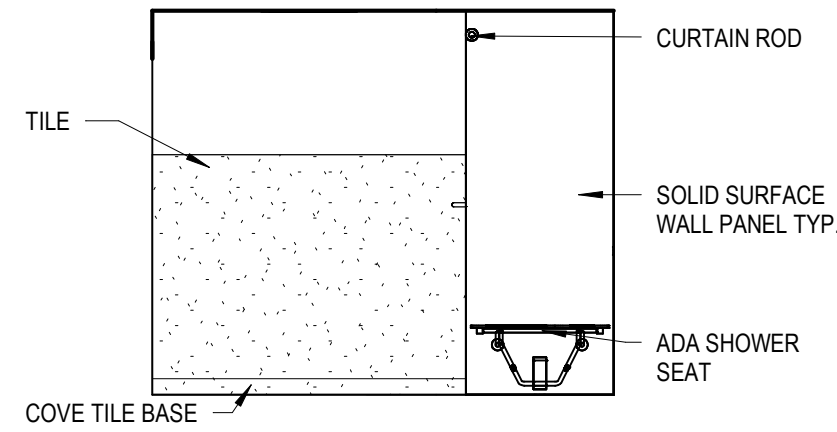
- MECHANICAL AND ELECTRICAL INFORMATION SHOWN IS INTENDED ONLY TO COMMUNICATE DESIGN INTENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILED INFORMATION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES NOTED PRIOR TO COMMENCEMENT OF WORK.
- COORDINATE ALL CEILING MOUNTED EQUIPMENT SUPPORTS, DEVICE LOCATIONS, CLEARANCES, ETC. WITH EQUIPMENT INSTALLERS AND SUPPLIERS PRIOR TO INSTALLATION.
- ACOUSTICAL PANEL CEILING GRIDS OR PANELS SHALL BE CENTERED IN ROOMS UNLESS OTHERWISE NOTED OR DIMENSIONED.
- ALL CEILING MOUNTED ITEMS (LIGHT FIXTURES, SPRINKLER HEADS, SPEAKERS, ETC.) SHALL BE CENTERED IN ACOUSTICAL CEILING PANELS OR GYPSUM BOARD SOFFITS UNLESS OTHERWISE NOTED OR DIMENSIONED.
- SPACE LIGHT FIXTURES EVENLY IN ROOMS, BAYS, SPACES, ETC. AND CENTER BETWEEN EXPOSED STRUCTURAL ELEMENTS WHERE APPROPRIATE.
- DIMENSIONS TO CEILING-INSTALLED ITEMS ARE TO CENTERLINE OF FIXTURE OR EQUIPMENT UNLESS NOTED OTHERWISE.
- PAINT ALL CONDUITS, DUCTWORK, SUPPORTS, HANGERS, ETC. THAT WILL REMAIN EXPOSED TO VIEW. MATCH COLOR INDICATED FOR STRUCTURE UNLESS NOTED OTHERWISE.

RCP KEYED SHEET NOTES

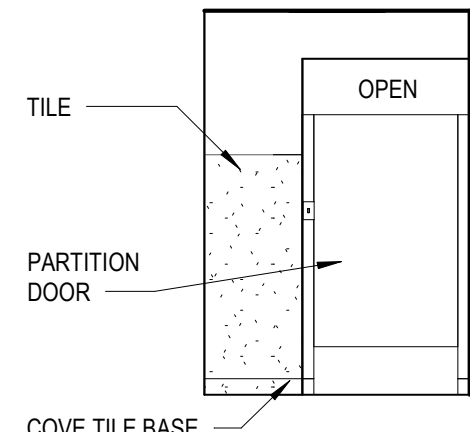
- BULKHEAD PER DETAIL 9 / A512 AT 9'-4" TO MATCH HEIGHT OF EXISTING BULKHEAD - SIMILAR AT LOBBY
- GYP BD SOFFIT PER DETAIL - / --- AT 9'-4" TO MATCH HEIGHT OF EXISTING BULKHEAD
- OPEN TO STRUCTURE
- CANOPY

BM 360/200066 DTA Toilet Room Remodel/200066 DTA Ops Ctr Restrooms A20.v4
12/14/2022 2:54:12 PM

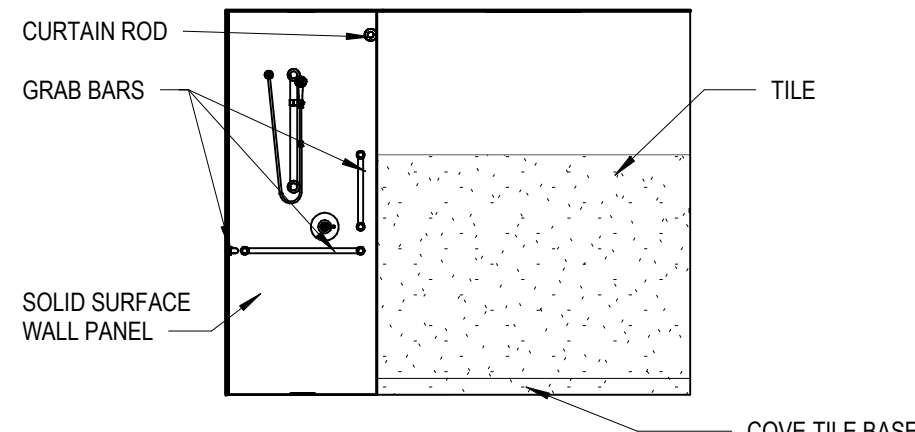
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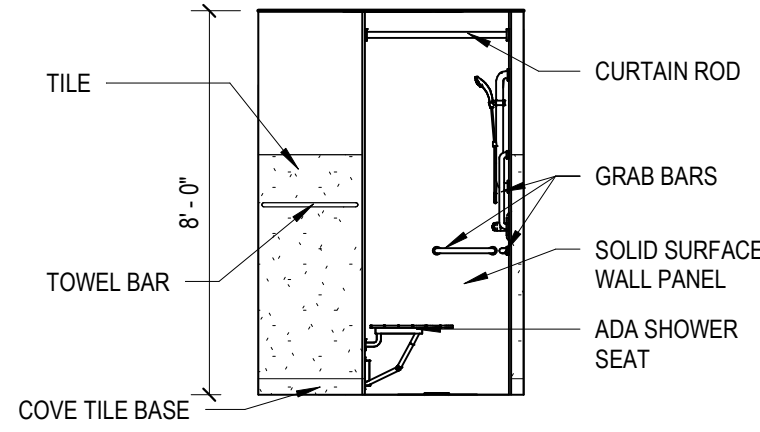
29 122 MEN'S SHOWER NORTH ELEVATION
1/4" = 1'-0"



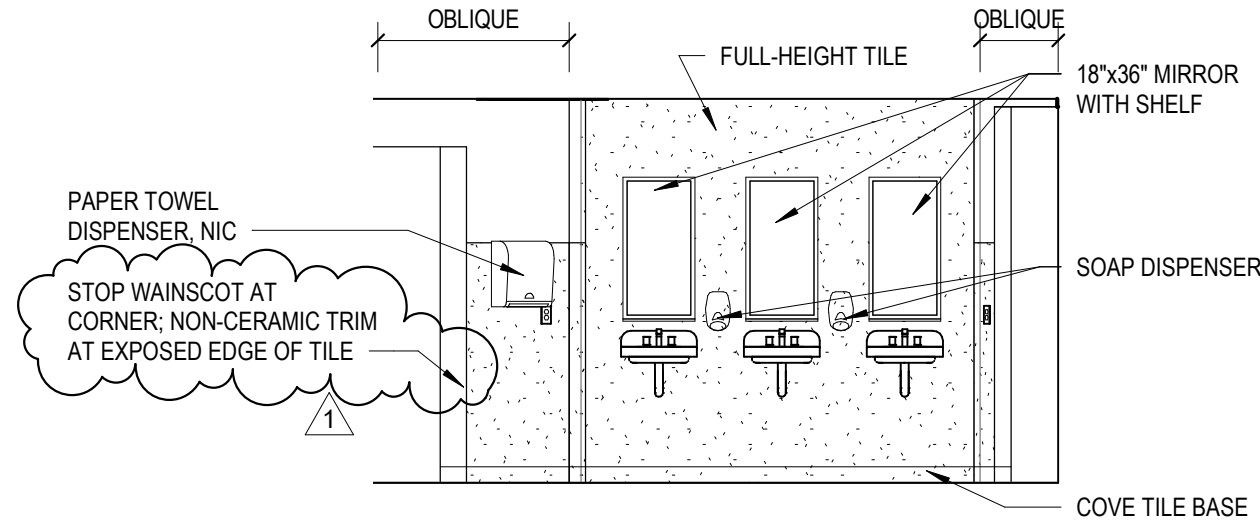
28 122 MEN'S SHOWER WEST ELEVATION
1/4" = 1'-0"



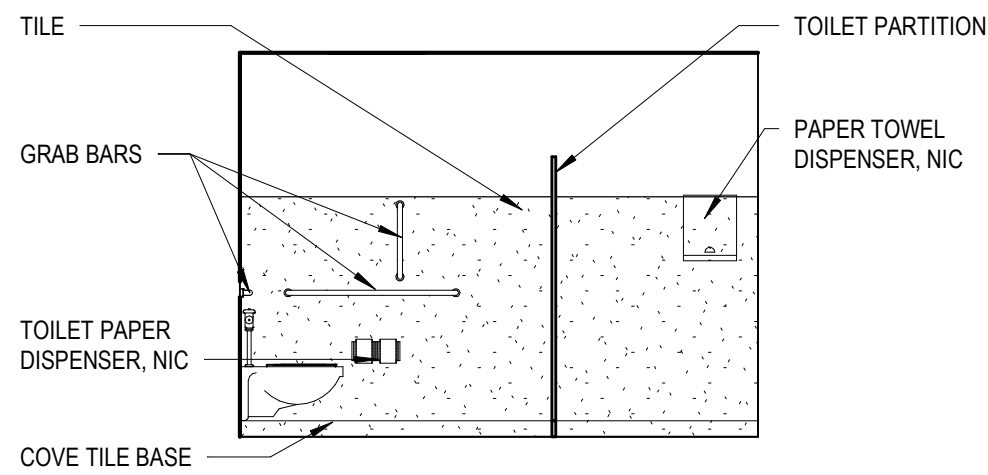
27 122 MEN'S SHOWER SOUTH ELEVATION
1/4" = 1'-0"



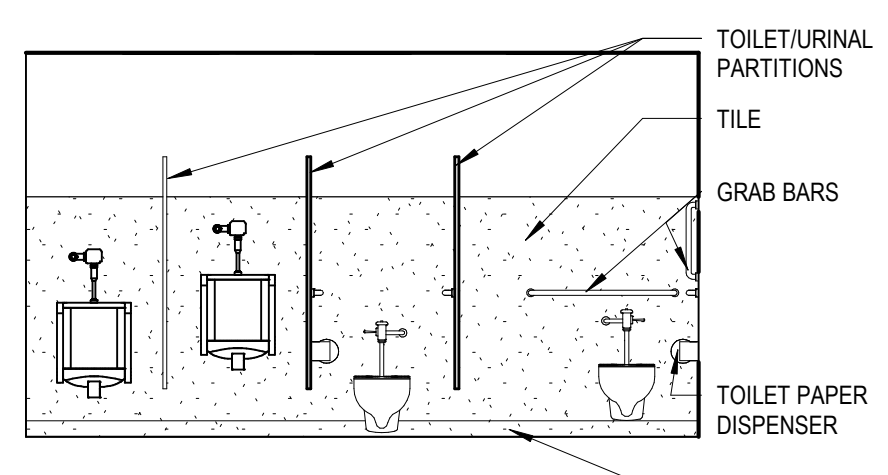
26 122 MEN'S SHOWER EAST ELEVATION
1/4" = 1'-0"



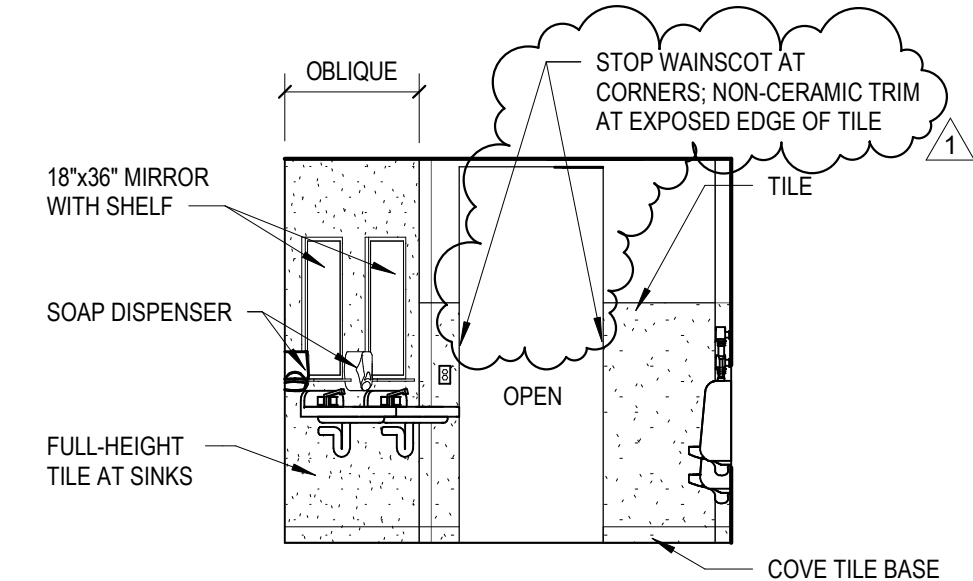
25 120 MEN'S TOILET WEST ELEVATION
1/4" = 1'-0"



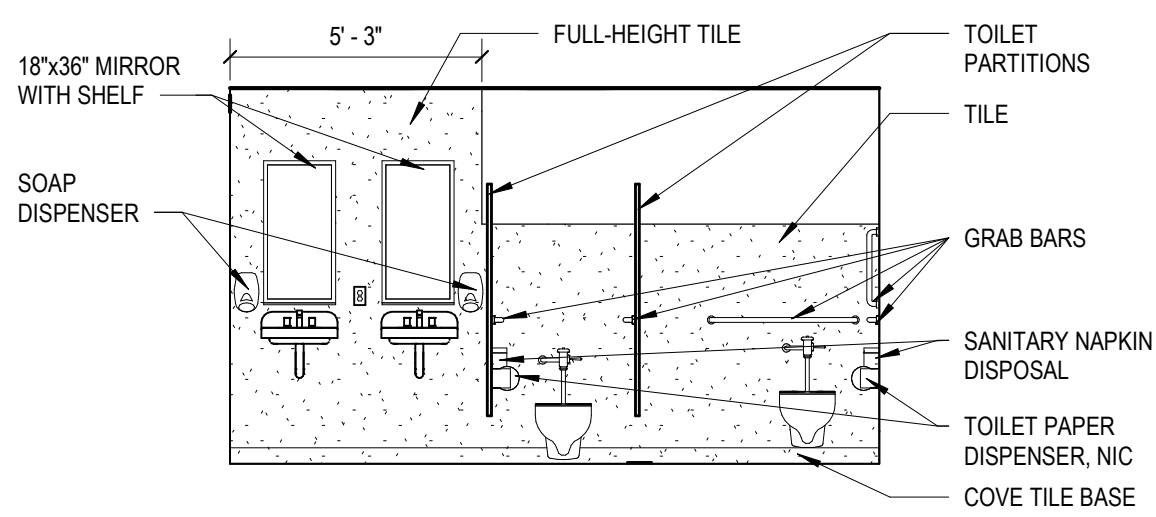
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1/4" = 1'-0"



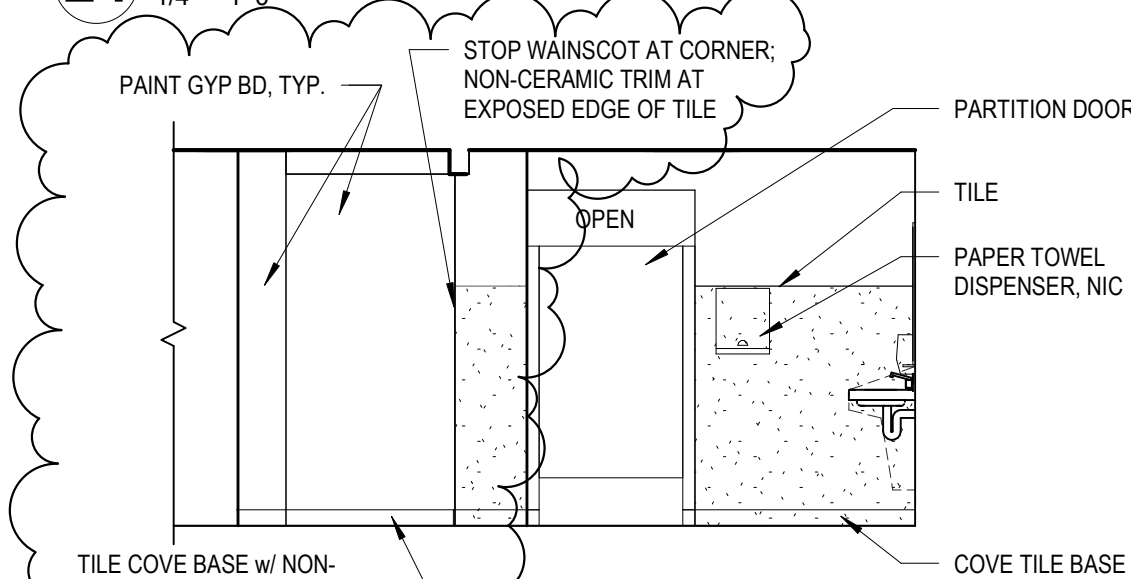
23 120 MEN'S TOILET EAST ELEVATION
1/4" = 1'-0"



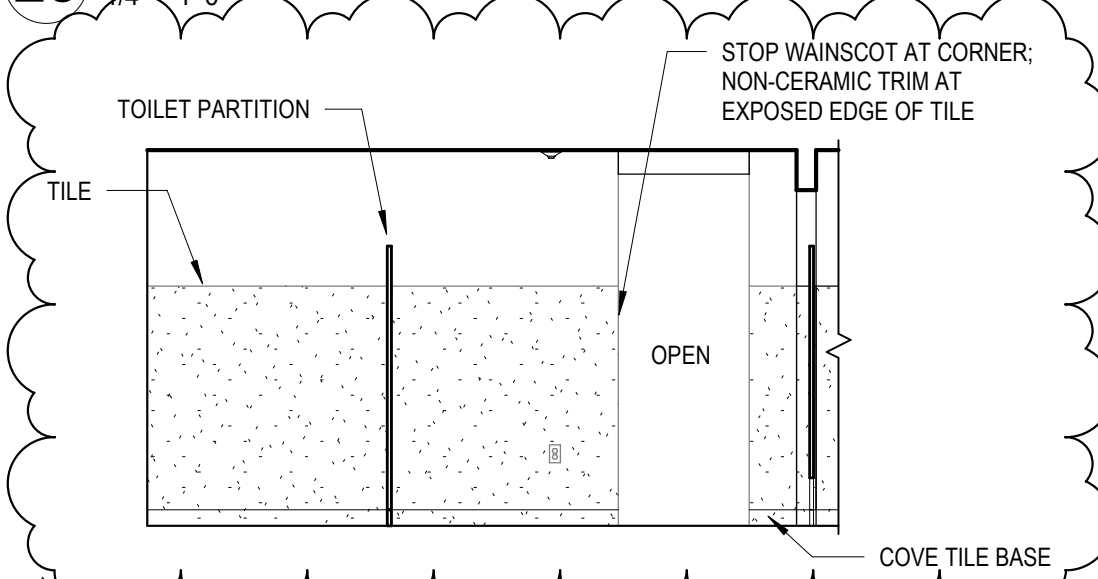
22 120 MEN'S TOILET NORTH ELEVATION
1/4" = 1'-0"



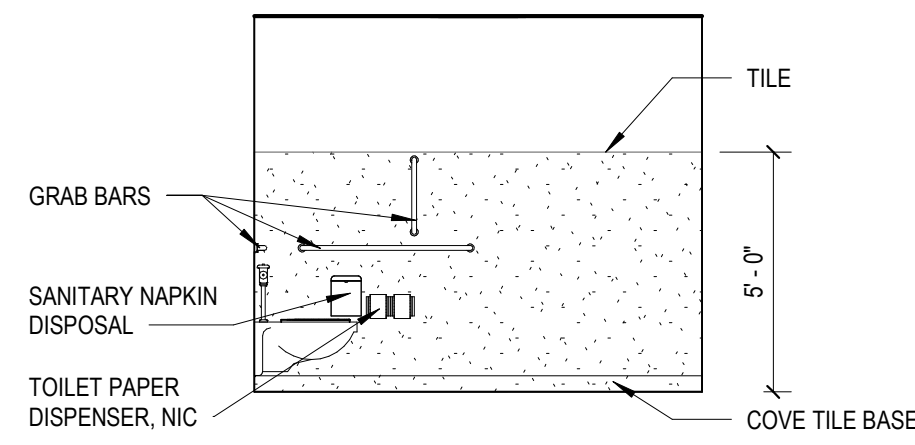
20 119 WOMEN'S TOILET WEST ELEVATION
1/4" = 1'-0"



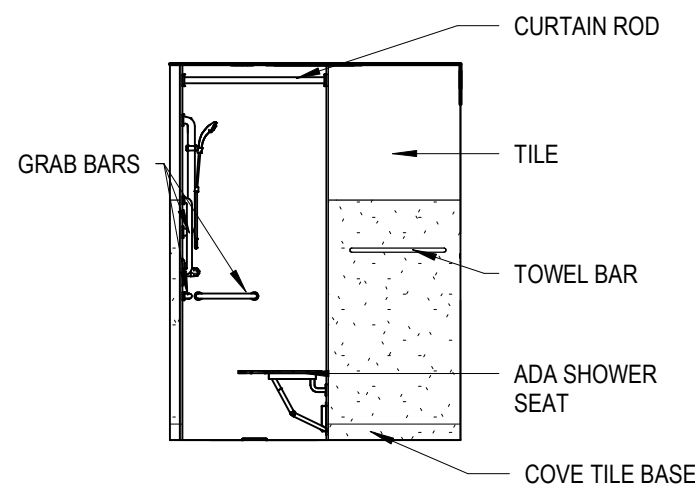
19 119 WOMEN'S TOILET SOUTH ELEVATION
1/4" = 1'-0"



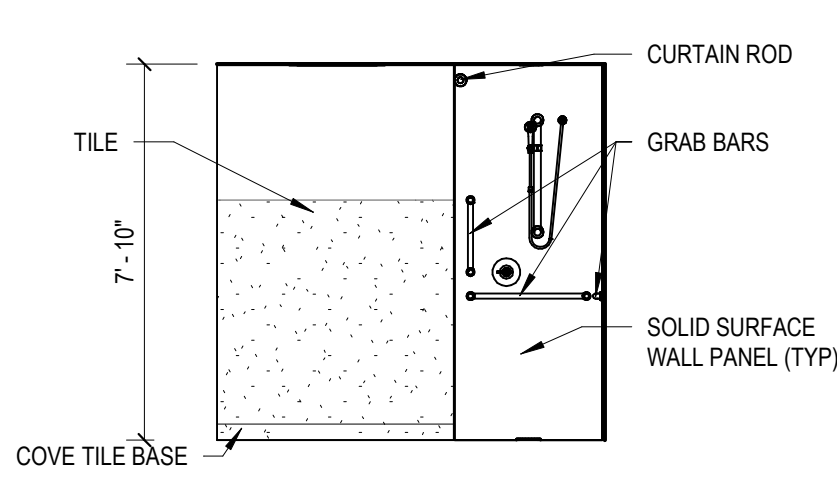
18 119 WOMEN'S TOILET EAST ELEVATION
1/4" = 1'-0"



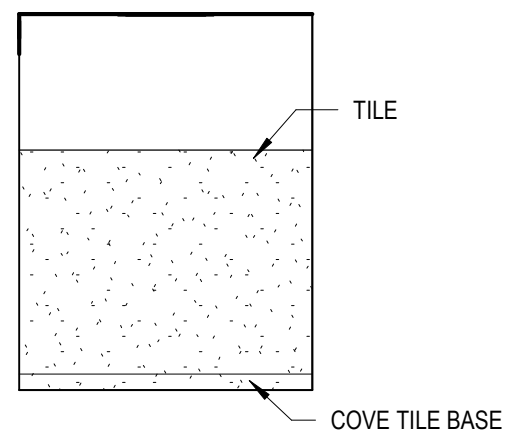
17 119 WOMEN'S TOILET NORTH ELEV.
1/4" = 1'-0"



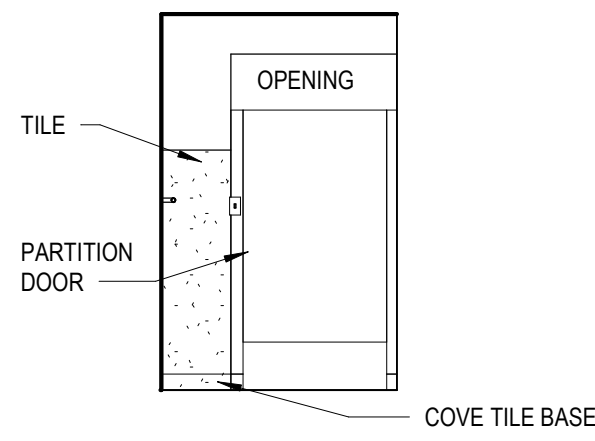
16 118 WOMEN'S SHOWER WEST ELEV.
1/4" = 1'-0"



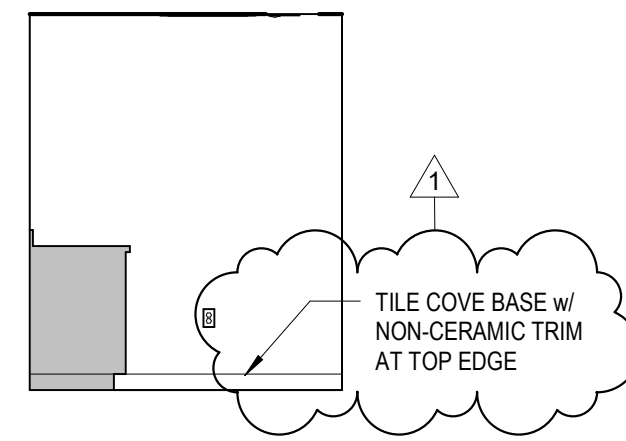
15 118 WOMEN'S SHOWER SOUTH ELEV.
1/4" = 1'-0"



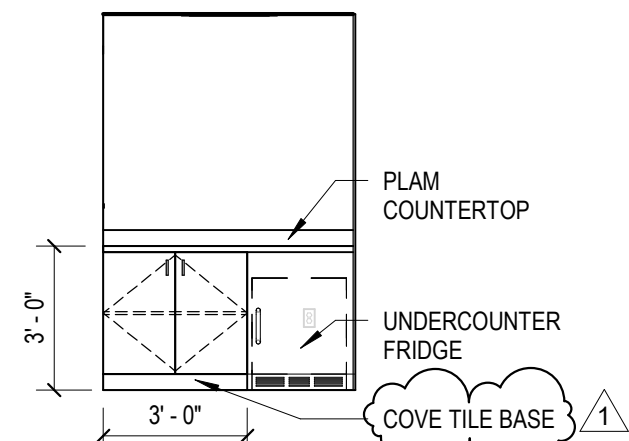
14 118 WOMEN'S SHOWER EAST ELEV.
1/4" = 1'-0"



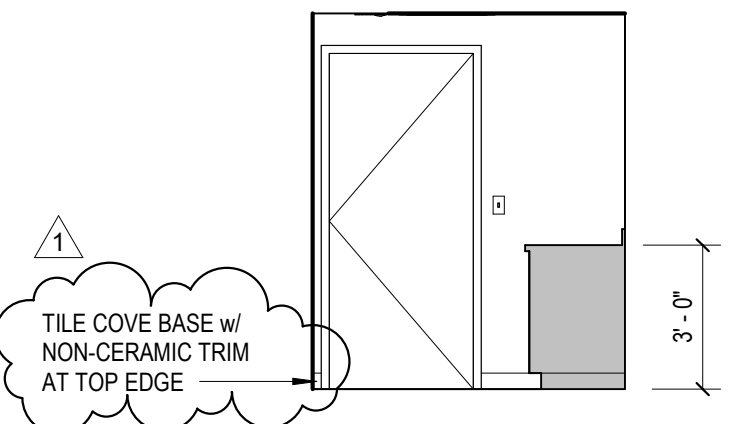
13 118 WOMEN'S SHOWER NORTH ELEV.
1/4" = 1'-0"



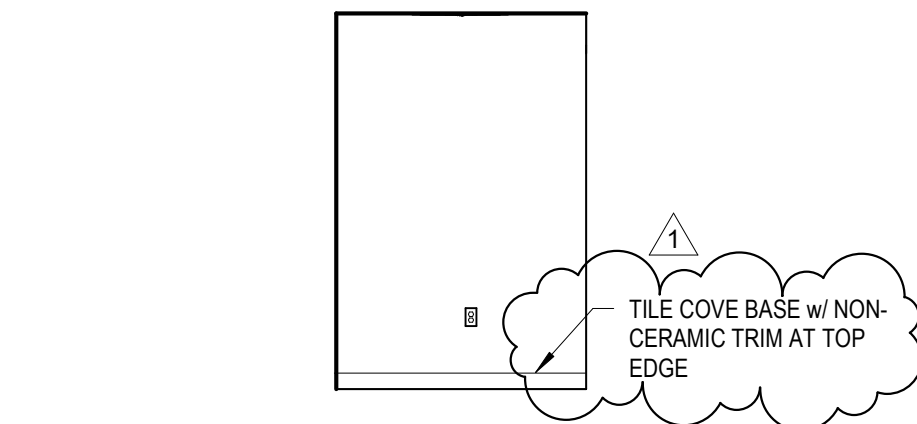
12 117 LACTATION WEST ELEV.
1/4" = 1'-0"



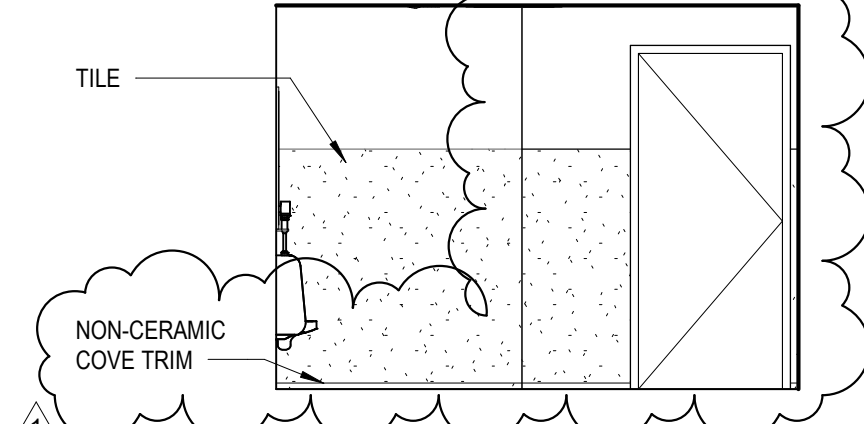
11 117 LACTATION SOUTH ELEV.
1/4" = 1'-0"



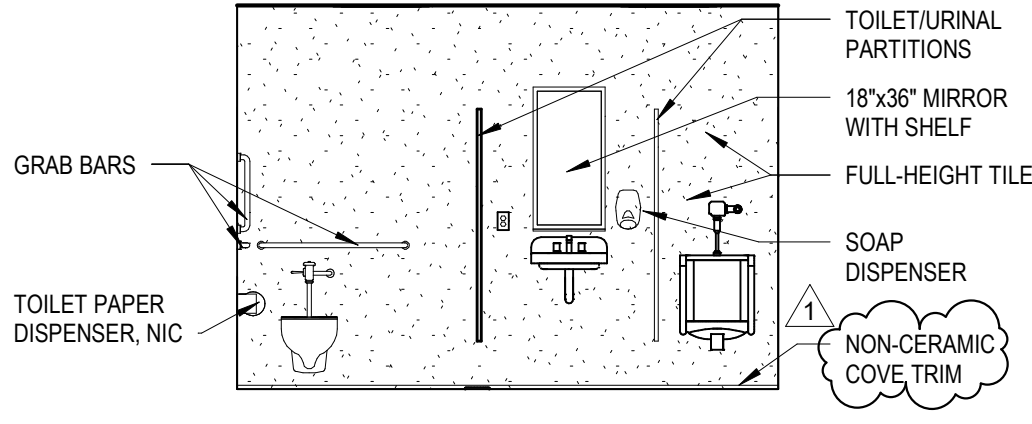
10 117 LACTATION EAST ELEVATION
1/4" = 1'-0"



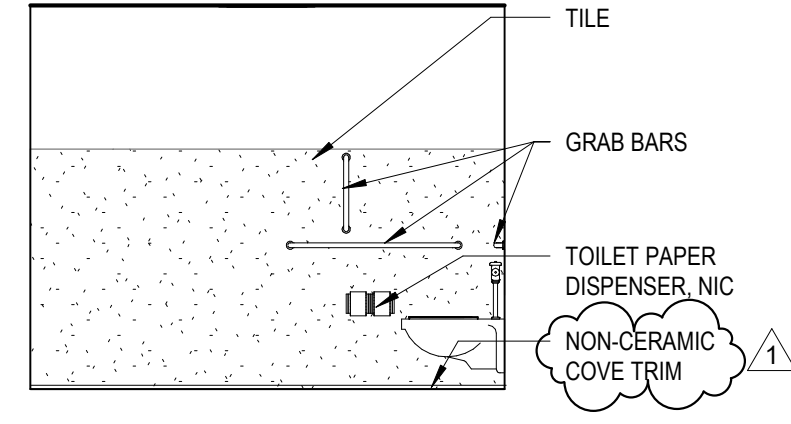
9 117 LACATION NORTH ELEVATION
1/4" = 1'-0"



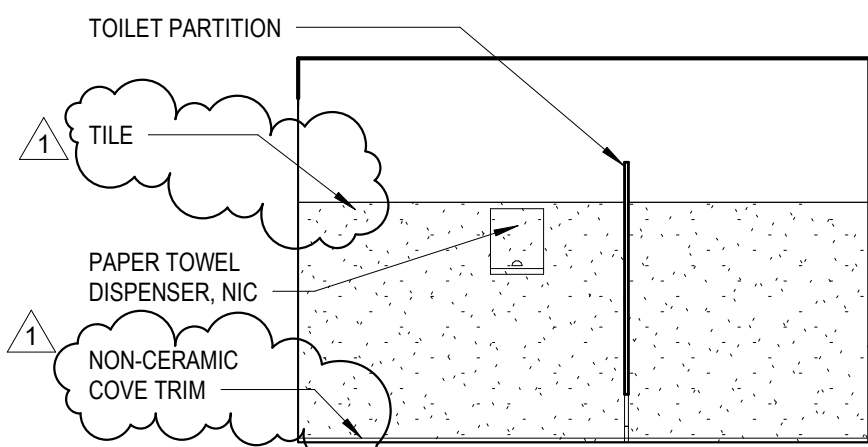
8 106 MEN'S TOILET WEST ELEVATION
1/4" = 1'-0"



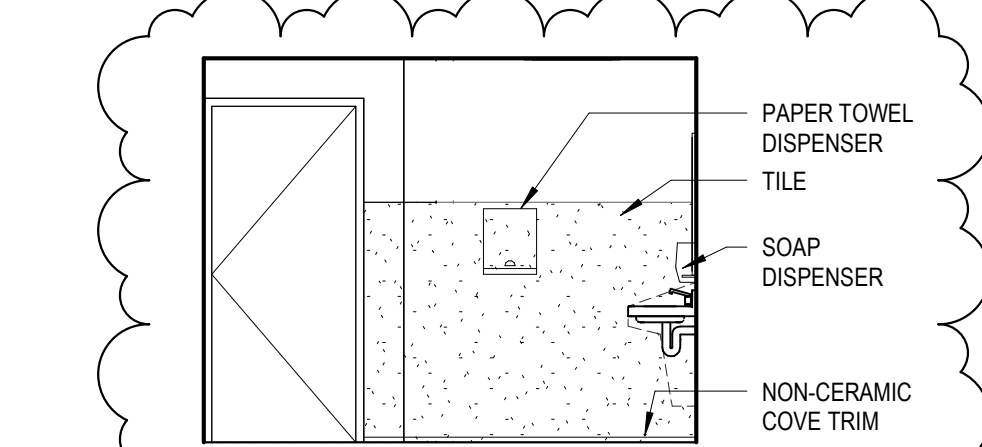
7 106 MEN'S TOILET SOUTH ELEVATION
1/4" = 1'-0"



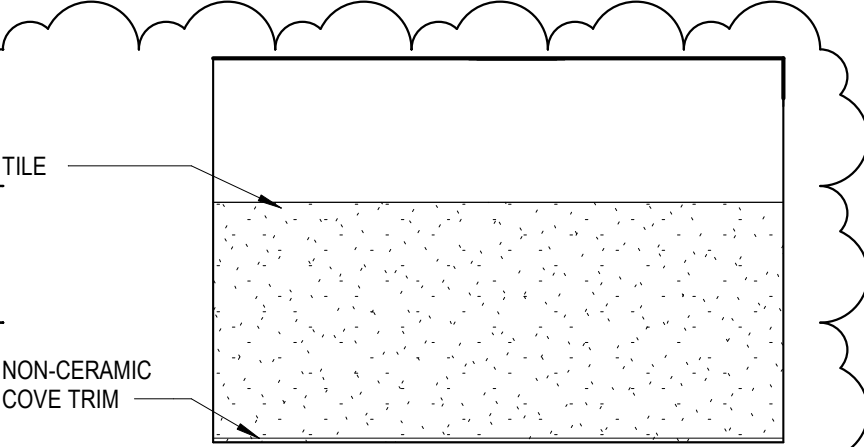
6 106 MEN'S TOILET EAST ELEVATION
1/4" = 1'-0"



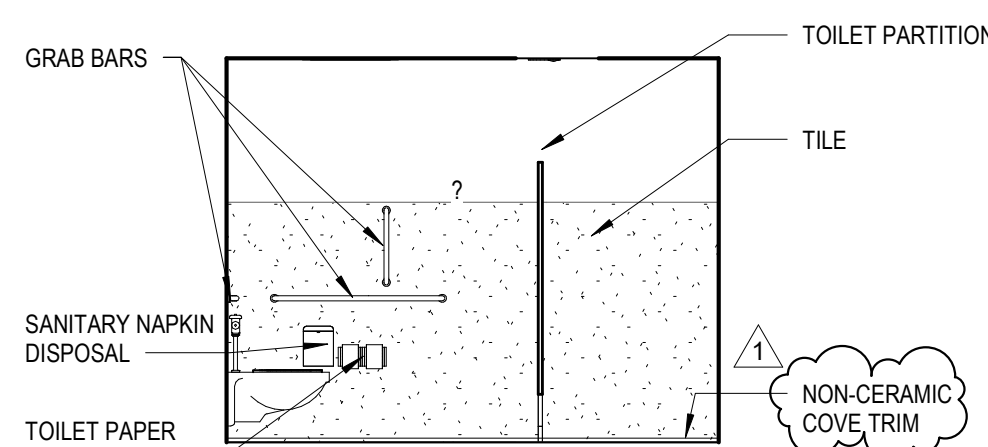
5 106 MEN'S TOILET NORTH ELEVATION
1/4" = 1'-0"



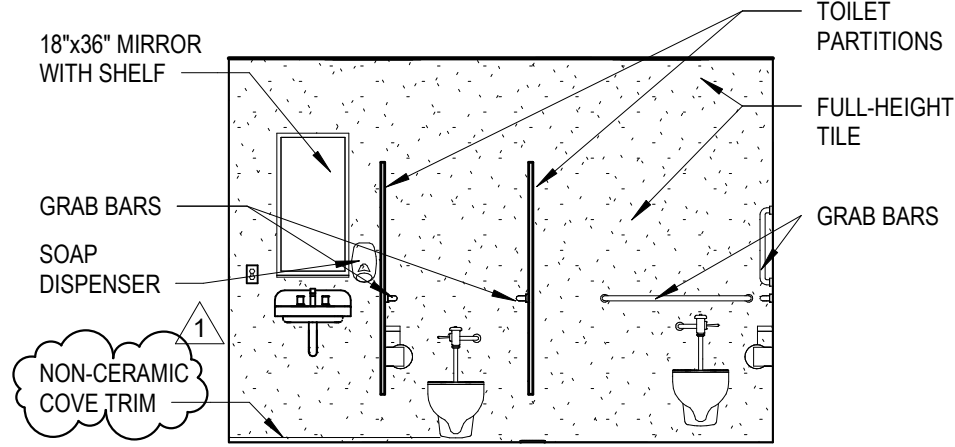
4 105 WOMEN'S TOILET WEST ELEVATION
1/4" = 1'-0"



3 105 WOMEN'S TOILET SOUTH ELEVATION
1/4" = 1'-0"



2 105 WOMEN'S TOILET EAST ELEVATION
1/4" = 1'-0"



1 105 WOMEN'S TOILET NORTH ELEVATION
1/4" = 1'-0"



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NO	DATE	ISSUED FOR
1	12/15/2022	ADDENDUM 01
		REVISION

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Signature: *Brande Ness Lian*
Typed or Printed Name: **BRANDEE NESS LIAN**
Date: 10/24/2022 Reg. No.: 42859

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PROJECT NAME:
**OPS CENTER OFFICE
AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:
**INTERIOR
ELEVATIONS**

DRAWN BY: CMK/KJS
CHECKED BY: BNL
PROJ. NO: 200066
DRAWING NO:

A412

D

C

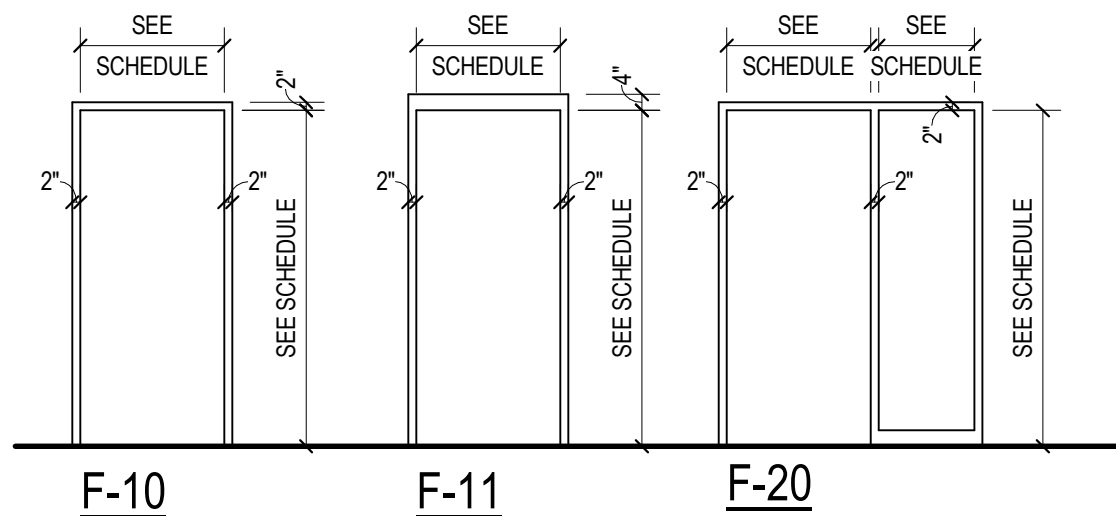
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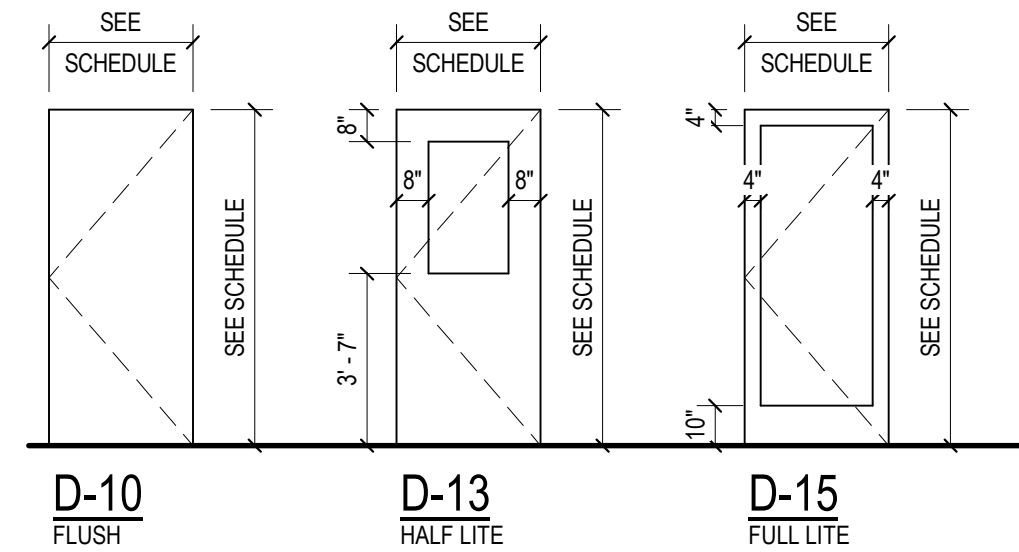
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DOOR AND FRAME SCHEDULE

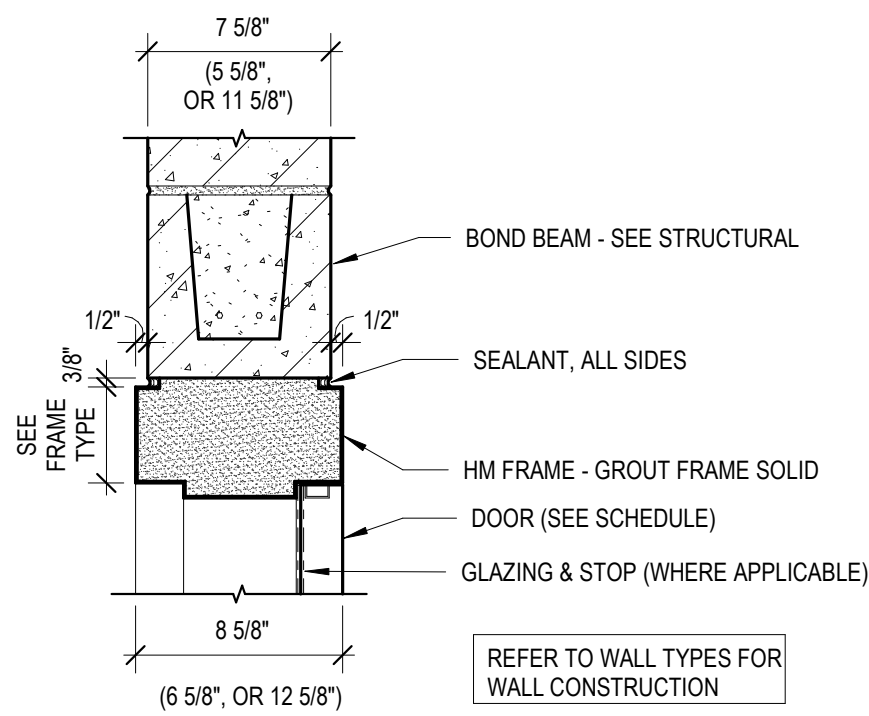
ROOM NAME	DOOR NUMBER	LEAF QTY	WIDTH	DOOR			Door Type	FRAME		HEAD	DETAIL			GLAZING	FIRE RATING	HDWR GROUP	COMMENTS
				HEIGHT	MATL			MATL	TYPE		JAMB	SILL					
Level 1																	
CIRC	101	1	3'-0"	7'-0"	ALUM	D15	ALUM	F20	3/A611	3/A611		1/4" TEMP		4		3'-0" SIDELIGHT	
WOMEN'S TOILET	105	1	3'-0"	7'-0"	HM	D10	HM	F10	4/A611	4/A611				5			
MEN'S TOILET	106	1	3'-0"	7'-0"	HM	D10	HM	F10	4/A611	4/A611				5			
RECEPTION	107	1	3'-0"	7'-0"	WD	D10	HM	F20	4/A611	4/A611	--	1/4" TEMP	--	1		1'-4" SIDELIGHT	
OFFICE	108	1	3'-0"	7'-0"	WD	D10	HM	F20	4/A611	4/A611	--	1/4" TEMP	--	1		1'-4" SIDELIGHT	
VEST	110.1	1	3'-1"	7'-0"	HM	D10	HM	F10	-	-	-	-	-	-		ADD CARD READER	
OFFICE	111	1	3'-0"	7'-0"	WD	D10	HM	F20	4/A611	4/A611	--	1/4" TEMP	--	1		1'-4" SIDELIGHT	
OFFICE	112	1	3'-0"	7'-0"	WD	D10	HM	F20	4/A611	4/A611	--	1/4" TEMP	--	1		1'-4" SIDELIGHT	
LACTATION	117	1	3'-0"	7'-0"	HM	D10	HM	F10	4/A611	4/A611				6			
SUPERVISOR OFFICE	128	1	3'-0"	7'-0"	WD	D13	HM	F10	4/A611	4/A611	--	1/4" TEMP	--	1			
CIRC	154A	1	3'-0"	7'-0"	EX	D10	EX	F10	-	-	-	-	-	-		ADD AUTO DOOR OPENER	
MEN LOCKERS	158	1	3'-0"	7'-0"	HM	D10	HM	F11	5/A611	5/A611	-	-	-	-	5		
LOCKER ROOM	161	1	3'-0"	7'-0"	HM	D10	HM	F11	5/A611	5/A611	-	-	-	-	5		
WOMEN TOILET	162	1	3'-0"	7'-0"	HM	D10	HM	F11	5/A611	5/A611	-	-	-	-	5		
JANITOR	163	1	3'-0"	7'-0"	HM	D10	HM	F11	5/A611	5/A611	-	-	-	-	3		
Level 2																	
WOMEN'S TOILET	213	1	3'-0"	7'-0"	HM	D10	HM	F10	4/A611	4/A611	-	-	-	-	5		
MEN'S TOILET	216	1	3'-0"	7'-0"	HM	D10	HM	F10	4/A611	4/A611	-	-	-	-	5		



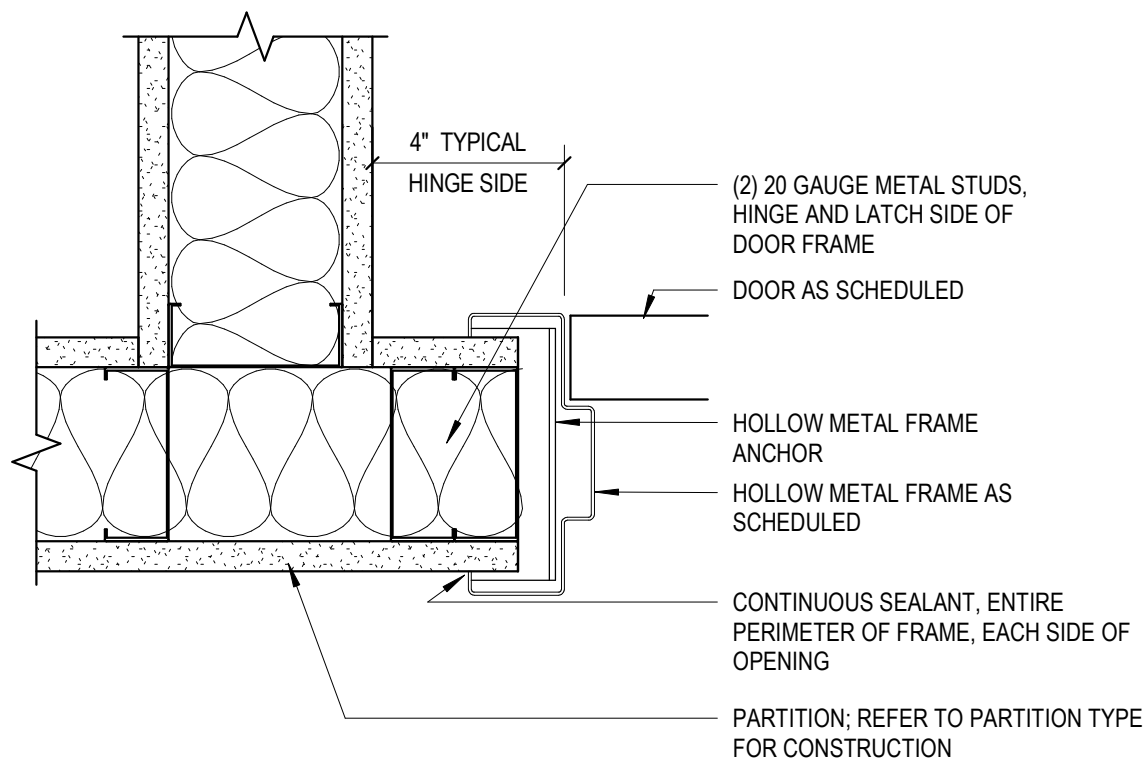
16 FRAME TYPES
1/4" = 1'-0"



6 DOOR TYPES
1/4" = 1'-0"

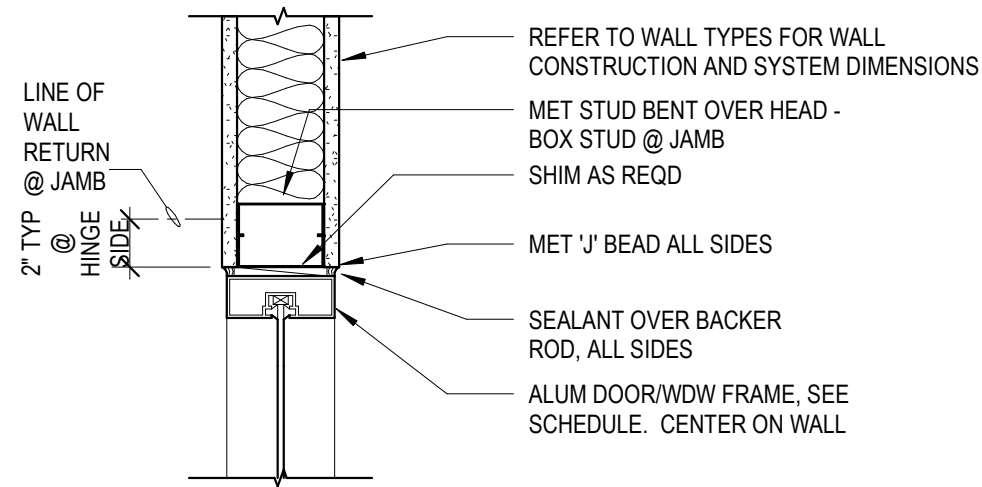


5 HM DOOR FRAME HEAD DETAIL - CMU
1 1/2" = 1'-0"



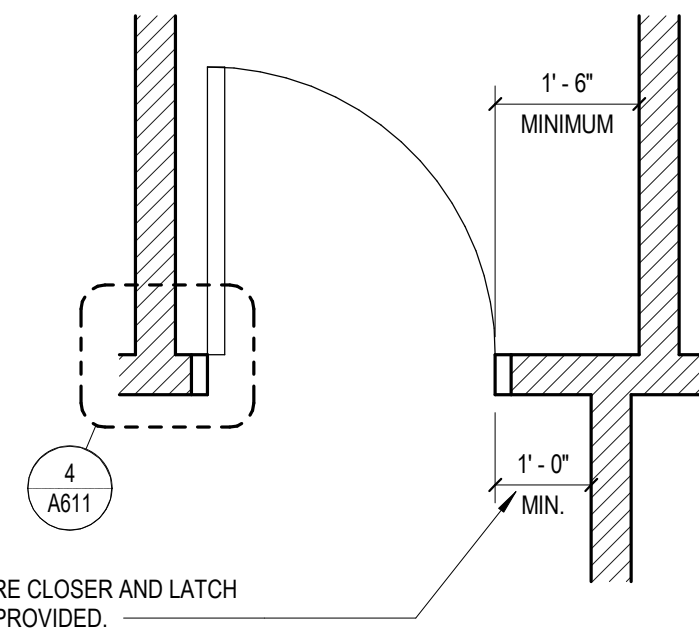
4 HM DOOR FRAME JAMB DETAIL - METAL STUD
3" = 1'-0"

HEAD SIM.

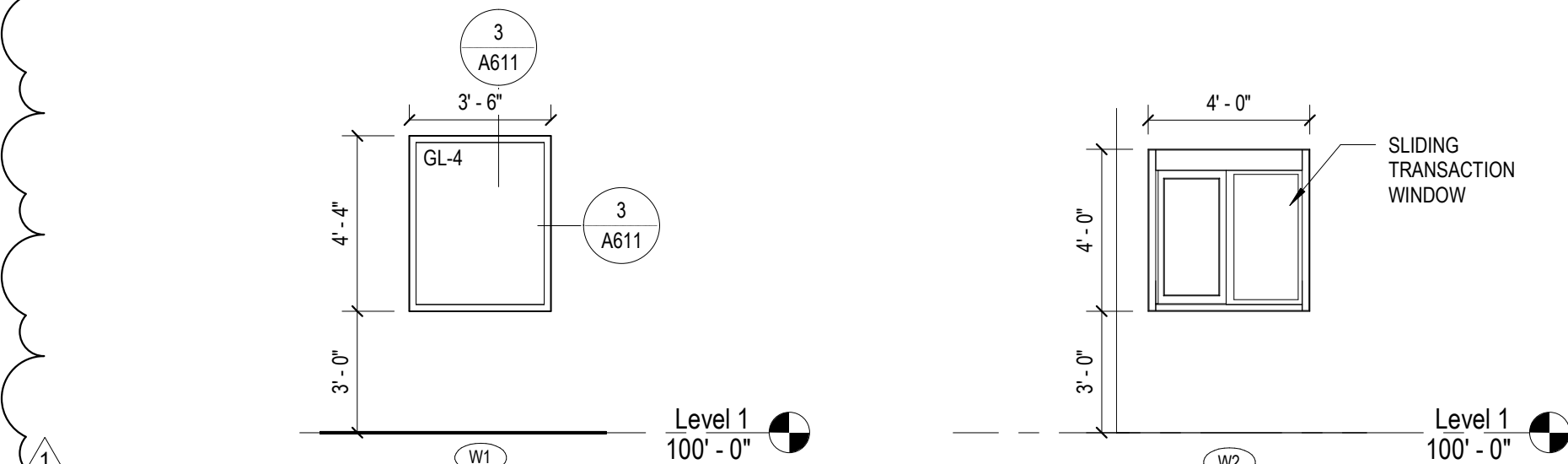


3 ALUM FRAME IN METAL STUD WALL DETAIL
1 1/2" = 1'-0"

HEAD AND JAMB SIM.



2 DOOR SWING DETAIL
1/2" = 1'-0"



1 WINDOW ELEVATIONS
1/4" = 1'-0"



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CLIENT:

DULUTH TRANSIT
AUTHORITY (DTA)
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DULUTH, MINNESOTA 55806

THIS SQUARE APPEARS 1/2"x1/2"
ON FULL SIZE SHEETS

10/24/2022 100% DOCUMENTS
NO DATE ISSUED FOR

1 12/15/2022 ADDENDUM 01
NO DATE REVISION

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Signature: *Brandee Ness Lian*
Typed or Printed Name: BRANDEE NESS LIAN
Date: 10/24/2022 Reg. No.: 42859

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PROJECT NAME:

OPS CENTER OFFICE
AND TOILET REMODEL
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:

DOOR SCHEDULE,
DOOR/HM FRAME
TYPES AND DETAILS

DRAWN BY: CMK
CHECKED BY: BNL
PROJ. NO: 190559
DRAWING NO:

A611

FINISH MATERIALS

06 4100 - ARCHITECTURAL WOOD CASEWORK

PL1 PLASTIC LAMINATE 1
MFG: PIONITE (PANOLAM)
FINISH: TEXTURED / SUEDE (SD)
STYLE: HPL
COLOR: AG415 OLD FRIEND
LOC: COUNTERTOP

PL2 PLASTIC LAMINATE 2
MFG: NEVAMAR (PANOLAM)
FINISH: TEXTURED (T)
STYLE: HPL
COLOR: S20861 JUTE
LOC: RADIATION COVERS
(TO MATCH EXIST)

06 6100 - SOLID POLYMER FABRICATIONS

SSF1 SOLID SURFACE 1
MFG: CORIAN
FINISH: MATTE
STYLE: CARBON AGGREGATE
LOC: TRANSACTION SHELF
(RECEPTION), KITCHENETTE
(DRIVERS LOUNGE)

08 1416 - FLUSH WOOD DOORS

DR1 WOOD VENEER DOOR 1
MFG: VT INDUSTRIES
FINISH: FACTORY
STYLE: MAPLE (CUT TO MATCH EXISTING)
COLOR: SE18 SERENGETI
LOC: INTERIOR

09 3000 - TILING

CT1 CERAMIC TILE 1
MFG: CAESAR CERAMICS USA
TYPE: PORCELAIN TILE, RECTIFIED
STYLE: STONEWAYS
SIZE: 12X24 INCH
THICK: 5/16 INCH (9mm)
COLOR: VELVET
GROUT: TBD

CT2 CERAMIC TILE 2
MFG: CAESAR CERAMICS USA
TYPE: PORCELAIN TILE, RECTIFIED
STYLE: STONEWAYS
SIZE: 3"x24" BULLNOSE
THICK: 5/16 INCH (9mm)
COLOR: VELVET
GROUT: TBD

09 5100 - SUSPENDED ACOUSTICAL CEILINGS

ACT1 ACOUSTIC CEILING TILE 1
MFG: USG
STYLE: MARS ACOUSTICAL PANEL #86785
EDGE: REGULAR (SLT)
SIZE: 24" x 24"
COLOR: WHITE
GRID: DONN DX/DXL 15/16"

ACT2 ACOUSTIC CEILING TILE 3
MFG: USG
STYLE: MARS HEALTHCARE
ACOUSTICAL PANEL #86684
EDGE: REGULAR (SLT)
SIZE: 24 x 24 INCH
COLOR: WHITE
GRID: DONN DX/DXL 15/16"

09 6500 - RESILIENT FLOORING

RB1 RESILIENT BASE 1
MFG: JOHNSONITE
STYLE: BASEWORKS THERMOSET
RUBBER (TS)
TYPE: TYPE B, COVE
SIZE: 4 INCH
COLOR: 48 GREY

LVT1 LUXURY VINYL TILE 1
MFG: SHAW CONTRACT
COLLECTION: TERASU
STYLE: TERRACE LVT #4216V
SIZE: 12" x 24" NOMINAL
THICKNESS: 5.0 mm
COLOR: 08765 BRUSHWOOD

09 6700 - FLUID APPLIED FLOORING

FAF1 FLUID APPLIED FLOORING 1
MFG: SHERWIN-WILLIAMS
COLLECT: DECO FLAKE SYSTEMS
FLAKES: TORGINOL
FLAKE SIZE: 1/4 INCH
COLOR: FB-708 STONEWASH

09 6831 - TILE CARPETING

CPT1 CARPET TILE 1
MFG: MANNINGTON
COLLECT: SPIN
STYLE: CHANNEL
SIZE: 12" x 48"
COLOR: 34828 DELTA BLUES
METHOD: BRICK

09 9000 - PAINTS AND COATING

PT1 PAINT 1 (EGGSHELL)
PRIMARY INTERIOR WALLS (OFF WHITE)
COLOR: SHERWIN-WILLIAMS
SW6070 HERON PLUM

PT2 PAINT 2 (FLAT)
GYP BD CEILINGS & BULKHEADS (WHITE)
COLOR: SHERWIN-WILLIAMS
SW7757 HIGH REFLECTIVE WHITE

PT3 PAINT 3 (SEMI-GLOSS)
HOLLOW METAL FRAMES (WARM GREY)
COLOR: BENJAMIN MOORE
AC-27 GALVESTON GRAY

PT4 PAINT 4 (EGGSHELL)
ACCENT WALL PAINT (DEEP BLUE)
COLOR: SHERWIN-WILLIAMS
SW6524 COMMODORE

PT5 PAINT 5 (EGGSHELL)
ACCENT WALL PAINT (WARM NEUTRAL)
COLOR: SHERWIN-WILLIAMS
SW7503 STICKS & STONES

12 2400 - WINDOW SHADES

WT1 WINDOW TREATMENT 1
MFG: TBD
PRODUCT: MANUAL ROLLER SHADE
FABRIC: TO MATCH EXISTING
STYLE: TO MATCH EXISTING
OPEN: TO MATCH EXISTING
COLOR: TO MATCH EXISTING

10 4813 - ENTRANCE FLOOR MATS AND FRAMES

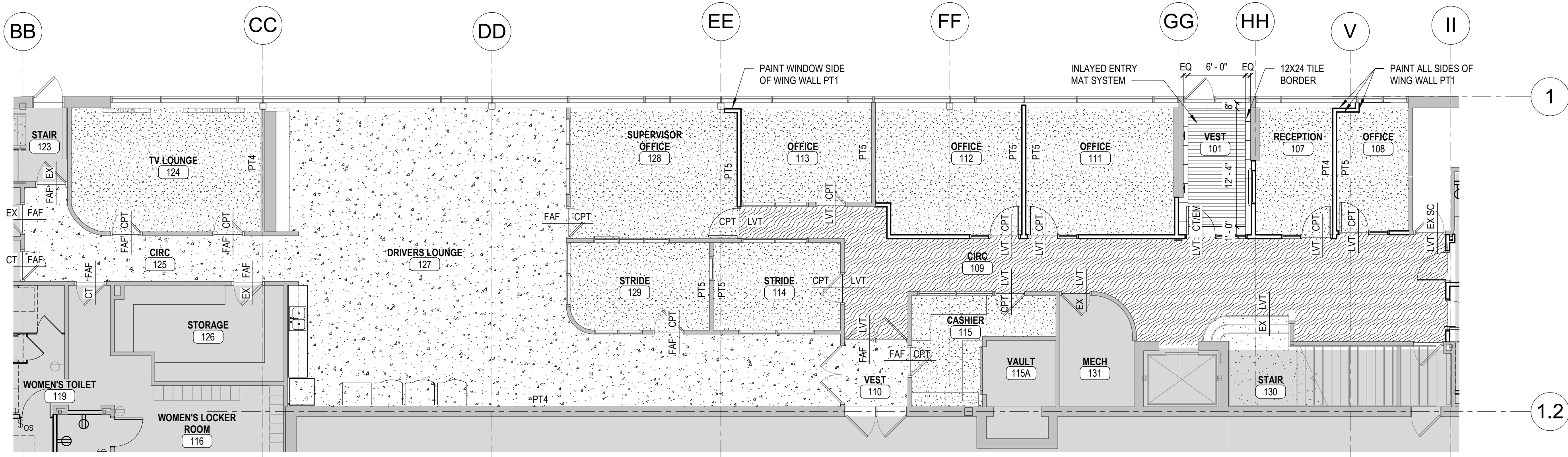
EM1 ENTRANCE MAT 1
MFG: CONSTRUCTION SPECIALTIES
PRODUCT: ALUMIMUM HINGED MAT
MODEL: PEDIMAT ALL ALUMINUM M2
ENTRY MAT
DEPTH: 7/16"
TREADS: HEAVY-DUTY EXTERIOR CARPET
COLOR: 7325 WROUGHT IRON

ROOM FINISH SCHEDULE - OFFICES

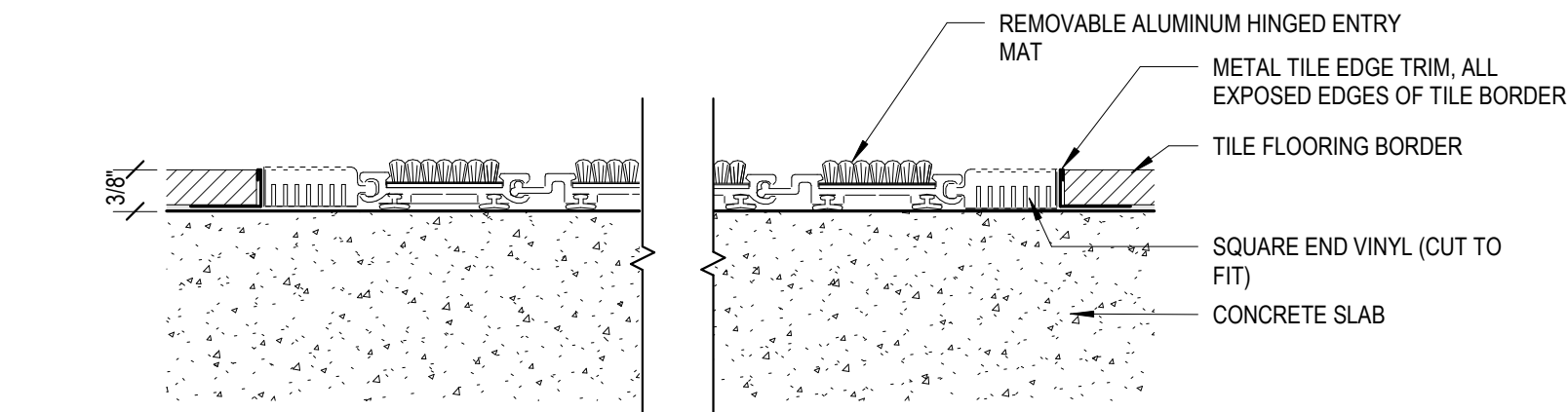
ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH				CEILING MATL	CEILING FINISH	WINDOW TREAT	KEY NOTES
				NORTH	EAST	SOUTH	WEST				
101	VEST	CT1/EM1	CT2	PT1	PT1	PT1	PT1	ACT	ACT2	-	8
107	RECEPTION	CPT1	RB1	PT1	PT1	PT1	PT1	ACT	ACT1	WT1	4
108	OFFICE	CPT1	RB1	PT1	PT1	PT1	PT5	ACT	ACT1	WT1	4
109	CIRC	LVT1	RB1	PT1	PT1	PT1	PT1	ACT/GYP BD	ACT1/PT2	NA	
110	VEST	FAF1	RB1	PT1	PT1	PT1	PT1	ACT	ACT1	-	
111	OFFICE	CPT1	RB1	PT1	PT1	PT1	PT5	ACT	ACT1	EXIST	
112	OFFICE	CPT1	RB1	PT1	PT5	PT1	PT1	ACT	ACT1	EXIST	6
113	OFFICE	CPT1	RB1	PT1	PT5	PT1	PT1	ACT	ACT1	EXIST	2 4 6
114	STRIDE	CPT1	RB1	PT1	PT1	PT1	PT5	ACT	ACT1	-	2 6
115	CASHIER	CPT1	RB1	PT1	PT1	PT1	PT1	ACT	ACT1	NA	2
115A	VAULT	EXIST	EXIST	PT1	PT1	PT1	PT1	EX CONC	PT2	NA	
124	TV LOUNGE	CPT1	RB1	PT1	PT4	PT1	PT1	ACT	ACT1	EXIST	6
125	CIRC	FAF1	RB1	PT1	PT1	PT1	PT1	ACT	ACT1	NA	
126	STORAGE	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST	ACT	ACT1	NA	
127	DRIVERS LOUNGE	FAF1	RB1	PT1	PT1	PT4	PT1	ACT	ACT1	EXIST	3 5 6
128	SUPERVISOR OFFICE	CPT1	RB1	PT1	PT5	PT1	PT1	ACT	ACT1	EXIST	2 4 6
129	STRIDE	CPT1	RB1	PT1	PT5	PT1	PT1	ACT	ACT1	-	2 6 7
130	STAIR	EXIST	EXIST	PT1	EXIST	EXIST	EXIST	EXIST	EXIST	NA	6 7
153	CIRC	SC1	RB1	PT1	NA	NA	PT1	ACT	ACT1	NA	
154	CIRC	SC1	RB1	PT1	PT1	PT1	PT1	ACT	ACT1	NA	
159	LOUNGE	FAF1	RB1	PT1	PT4	PT1	PT1	ACT	ACT1	NA	3
164	OFFICE	SC1	RB1	PT1	PT1	PT1	PT5	ACT	ACT1	NA	
165	OFFICE	SC1	RB1	PT1	PT5	PT1	PT1	ACT	ACT1	NA	
166	WORK	SC1	RB1	PT1	PT1	PT1	PT1	ACT	ACT1	NA	
167	OFFICE	SC1	RB1	PT1	PT1	PT5	PT1	ACT	ACT1	EXIST	
168	STORAGE	SC1	RB1	PT1	PT1	PT1	PT1	ACT	ACT1	NA	
202	BOARD ROOM	CPT2	RB1	PT1	PT1	PT5	PT1	ACT/GYP BD	ACT1/PT2	EXIST	6

ROOM FINISH SCHEDULE KEY NOTES

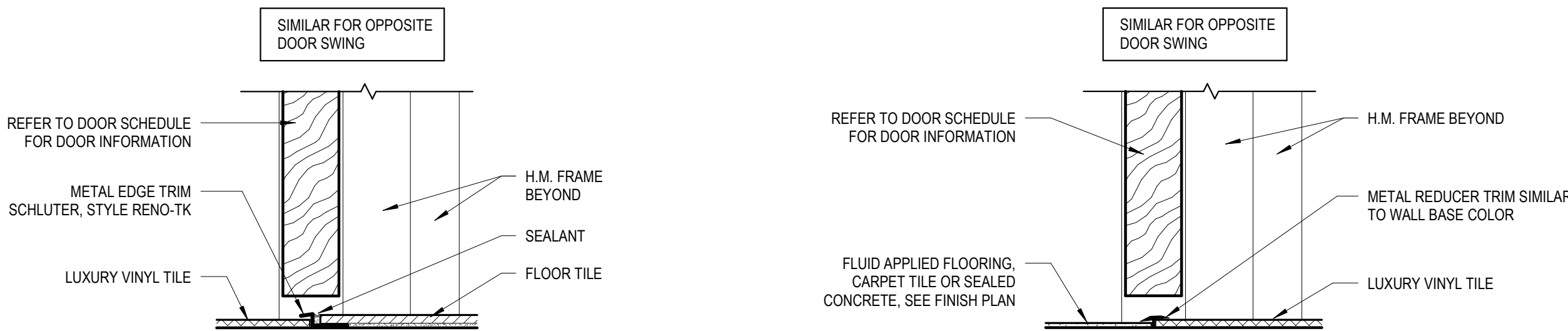
- RECEPTION TRANSACTION SHELF SOLID SURFACE SSF1.
- PAINT EXISTING INTERIOR HOLLOW METAL WINDOW FRAMES COLOR PT3.
- PLASTIC LAMINATE CABINETS PL1 WITH SOLID SURFACE COUNTERTOP SSF1.
- PAINT WING WALL AT WINDOW AS INDICATED ON FINISH PLAN 4/A701.
- EXISTING CARPET WALL PROTECTION AND WOOD TRIM TO REMAIN. PROTECT DURING CONSTRUCTION.
- PAINT OVER EXISTING PAINTED WALL COVERING. PATCH WHERE INDICATED.
- PAINT NEW AND EXISTING BULKHEAD AT STAIR OPENING PRIMARY WALL COLOR PT1.
- TOUCH UP PAINT ON EXTERIOR DOOR AND FRAME.



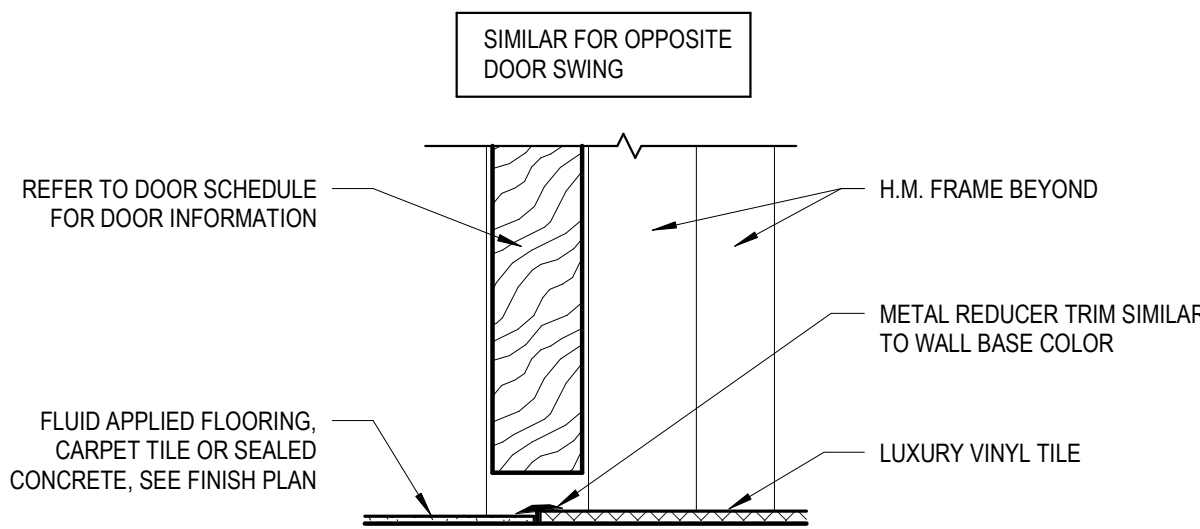
4 LEVEL 1 - FINISH PLAN
1/8" = 1'-0"



3 LAY-IN ENTRY MAT DETAIL
6" = 1'-0"



2 FLOORING TRANSITION - LVT & TILE
3" = 1'-0"



1 FLOORING TRANSITION - FAF/CPT/SC & LVT
3" = 1'-0"



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CLIENT:
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THIS SQUARE APPEARS 1/2"x1/2"
ON FULL SIZE SHEETS

10/24/2022 100% DOCUMENTS
NO DATE ISSUED FOR

1 12/15/2022 ADDENDUM 01
NO DATE REVISION

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Signature: *Brandee Ness Lian*
Typed or Printed Name: BRANDEE NESS LIAN
Date: 10/24/2022 Reg. No.: 42859

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PROJECT NAME:

**OPS CENTER OFFICE
AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:

**OFFICE ROOM FINISH
SCHEDULE, FINISH
PLAN AND DETAILS**

DRAWN BY: KJS
CHECKED BY: BNL
PROJ. NO: 190559
DRAWING NO:

A701

FINISH MATERIALS

06 8100 - SOLID POLYMER FABRICATIONS

SSF2 SOLID SURFACE 2
MFG: CORIAN
FINISH: MATTE
STYLE: GLACIER WHITE
THICKNESS: 1/4 INCH
LOC: SHOWER WALL PANELS

08 1416 - FLUSH WOOD DOORS

DR1 WOOD VENEER DOOR 1
MFG: VT INDUSTRIES
FINISH: FACTORY
STYLE: MAPLE (CUT TO MATCH EXISTING)
COLOR: SE18 SERENGETI
LOC: INTERIOR

09 3000 - TILING

CT1 CERAMIC TILE 1
MFG: CAESAR CERAMICS USA
TYPE: PORCELAIN TILE, RECTIFIED
STYLE: STONEWAYS
SIZE: 12x24 INCH
THICK: 5/16 INCH (9mm)
COLOR: VELVET
GROUT: TBD
LOC: **1** TILE @ VEST & OFFICE TLTS (SEE A701)

CT2 CERAMIC TILE 2
MFG: CAESAR CERAMICS USA
TYPE: PORCELAIN TILE COVE BASE
STYLE: STONEWAYS
SIZE: 3x24 INCH BULLNOSE
THICK: 5/16 INCH (9mm)
COLOR: VELVET
GROUT: TBD
LOC: **1** WALL BASE TILE @ VEST (SEE A701)

CT3 CERAMIC TILE 3
MFG: LANDMARK CERAMICS
TYPE: PORCELAIN TILE, RECTIFIED
STYLE: ATTITUDE
SIZE: 12x24 INCH
THICK: 5/16 INCH (9mm)
COLOR: WARM SAND
GROUT: TBD
LOC: FLOOR TILE @ LOCKER RMS

CT4 CERAMIC TILE 4
MFG: LANDMARK CERAMICS
TYPE: PORCELAIN TILE, RECTIFIED
STYLE: ATTITUDE COVE BASE
SIZE: 6 X 12 INCH
THICK: 5/16 INCH (9mm)
COLOR: WARM SAND
GROUT: TBD
LOC: COVE BASE TILE w/ CT3

CT5 CERAMIC TILE 5
MFG: LANDMARK CERAMICS
TYPE: PORCELAIN TILE, RECTIFIED
STYLE: ATTITUDE
SIZE: 12x24 INCH
THICK: 5/16 INCH (9mm)
COLOR: SIMPLY GREY
GROUT: TBD
LOC: WALL TILE @ LOCKER RMS

CT6 CERAMIC TILE 6
MFG: LANDMARK CERAMICS
TYPE: PORCELAIN TILE, RECTIFIED
STYLE: ATTITUDE
SIZE: 3 X 24 INCH BULLNOSE
THICK: 5/16 INCH (9mm)
COLOR: WARM SAND
GROUT: TBD
LOC: TRIM TILE @ LOCKER RMS

09 5100 - SUSPENDED ACOUSTICAL CEILINGS

ACT1 ACOUSTIC CEILING TILE 1
MFG: USG
STYLE: MARS ACOUSTICAL PANEL #86785
EDGE: TEGULAR (SLT)
SIZE: 24 x 24 INCH
COLOR: WHITE
GRID: DONN DX/DXL 15/16"

ACT2 ACOUSTIC CEILING TILE 3
MFG: USG
STYLE: MARS HEALTHCARE ACOUSTICAL PANEL #86684
EDGE: TEGULAR (SLT)
SIZE: 24 x 24 INCH
COLOR: WHITE
GRID: DONN DX/DXL 15/16"

09 9000 - PAINTS AND COATINGS

PT1 PAINT 1 (EGGSHELL)
PRIMARY INTERIOR WALLS (OFF WHITE)
COLOR: SHERWIN-WILLIAMS
SW6070 HERON PLUM

PT2 PAINT 2 (FLAT)
GYP BD CEILINGS & BULKHEADS (WHITE)
COLOR: SHERWIN-WILLIAMS
SW7577 HIGH REFLECTIVE WHITE

PT3 PAINT 3 (SEMI-GLOSS)
HOLLOW METAL FRAMES (WARM GREY)
COLOR: BENJAMIN MOORE
AC-27 GALVESTON GRAY

PT4 PAINT 4 (EGGSHELL)
ACCENT WALL PAINT (DEEP BLUE)
COLOR: SHERWIN-WILLIAMS
SW6524 COMMODORE

PT5 PAINT 5 (EGGSHELL)
ACCENT WALL PAINT (WARM NEUTRAL)
COLOR: SHERWIN-WILLIAMS
SW7503 STICKS & STONES

PT6 PAINT 6 (SEMI-GLOSS)
TOILET ROOM WALL PAINT (OFF WHITE)
COLOR: SHERWIN-WILLIAMS
SW6070 HERON PLUM

09 9600 - HIGH PERFORMANCE COATINGS

PT7 PAINT 7 (HIGH PERFORMANCE)
SHOWER CEILINGS (CEILING WHITE)

10 2113.19 - PLASTIC TOILET COMPARTMENTS

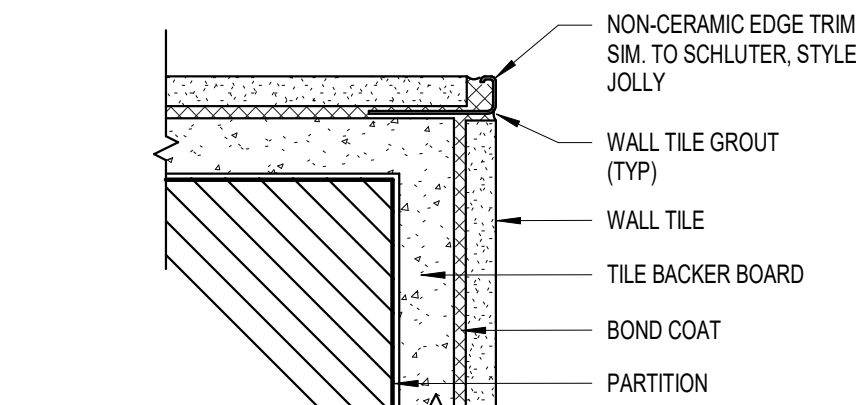
TP1 TOILET PARTITIONS 1
MFG: SCRANTON PRODUCTS
PRODUCT: HINY HIDERS HPDE PARTITIONS
COLOR: NICKEL
FINISH: HAMMERED (H)

ROOM FINISH SCHEDULE - TOILETS AND LOCKERS

ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH				CEILING MATL	CEILING FINISH	COMMENTS
				NORTH	EAST	SOUTH	WEST			
105	WOMEN'S TOILET	CT1	ALUM TRIM	CT1/PT6	CT1/PT6	CT1/PT6	CT1/PT6	ACT	ACT2	(2, 5)
106	MENS TOILET	CT1	ALUM TRIM	CT1/PT6	CT1/PT6	CT1	CT1/PT6	ACT	ACT2	(2, 5)
116	WOMEN'S LOCKER ROOM	CT3	CT4	EXP/PT6	EXP/PT6	EXP/PT6	EXP/PT6	ACT	ACT1	(2, 7)
117	LACTATION	CT3	CT6	PT6	PT6	PT6	PT6	ACT	ACT1	2
118	WOMEN'S SHOWER	CT3	CT4	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	GYP BD	PT7	2, 3, 6
119	WOMEN'S TOILET	CT3	CT4	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	ACT	ACT2	2, 6
120	MENS TOILET	CT3	CT4	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	ACT	ACT2	2, 6
121	MENS LOCKER ROOM	CT3	CT4	PT6	PT6	PT6	PT6	ACT	ACT2	(2, 7)
122	MENS SHOWER	CT3	CT4	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	GYP BD	PT7	2, 3, 6
154A	HALL	SC1	RB1	EX	EX	EX	PT6	ACT	ACT1	
156	MENS SHOWER	CT3	CT4	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	GYP BD	(1) PT7	2, 3, 6
157	MENS TOILET	CT3	CT4	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	ACT	ACT2	2, 6
158	MENS LOCKERS	CT3	CT4	PT6	PT6	CT5/CT6/PT6	CT5/CT6/PT6	ACT	ACT2	2, 6, 7
161	WOMEN'S LOCKER ROOM	CT3	CT4	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	ACT	ACT2	2, 6
161A	SHOWER	CT3	CT4	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	CT5/CT6/PT6	GYP BD	PT7	2, 3, 6
162	LOCKERS	CT3	CT4	PT6	PT6	PT6	PT6	ACT	ACT1	(2, 7)
163	JANITOR	EX	EX/RB	PT6/EX	EX	EX	EX	EXP	EX	
213	WOMEN'S TOILET	CT1	ALUM TRIM	CT1/PT6	CT1/PT6	CT1/PT6	CT1/PT6	ACT	ACT2	(2, 5)
216	MENS TOILET	CT1	ALUM TRIM	CT1/PT6	CT1/PT6	CT1/PT6	CT1/PT6	ACT	ACT2	(2, 5)

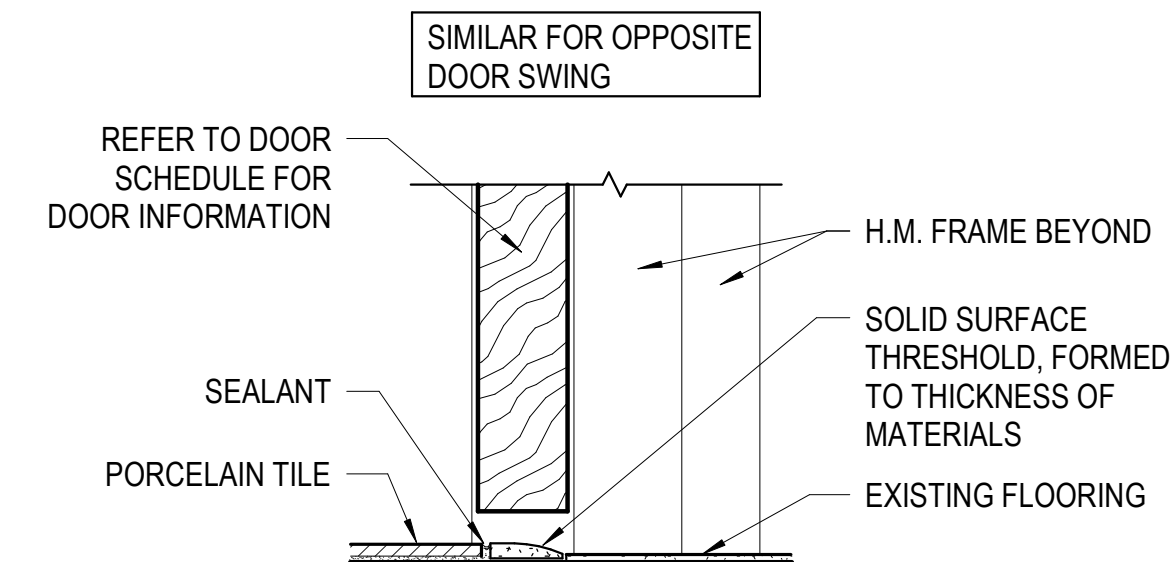
ROOM FINISH SCHEDULE KEY NOTES

- 1** NOT USED.
- FLOOR TILE PATTERN PER FINISH DETAIL 1/A702.
- SOLID SURFACE SSF2 AS WALL PANELS IN SHOWER UNIT; SEE FINISH DETAIL 5/A702.
- SEE SHEET A701 FOR OTHER FINISH WORK.
- WALL TILE WAINSCOT PATTERN PER FINISH DETAIL 3/A702.
- WALL TILE WAINSCOT PATTERN PER FINISH DETAIL 3/A702 WHERE INDICATED; FULL HEIGHT TILE PER FINISH DETAIL 4/A702 BEHIND SINKS AS INDICATED ON ELEVATIONS.
- USE NON-CERAMIC TRIM AT EXPOSED TOP EDGE OF COVE BASE TILE CT4 ON WALLS WITHOUT TILE WAINSCOT.



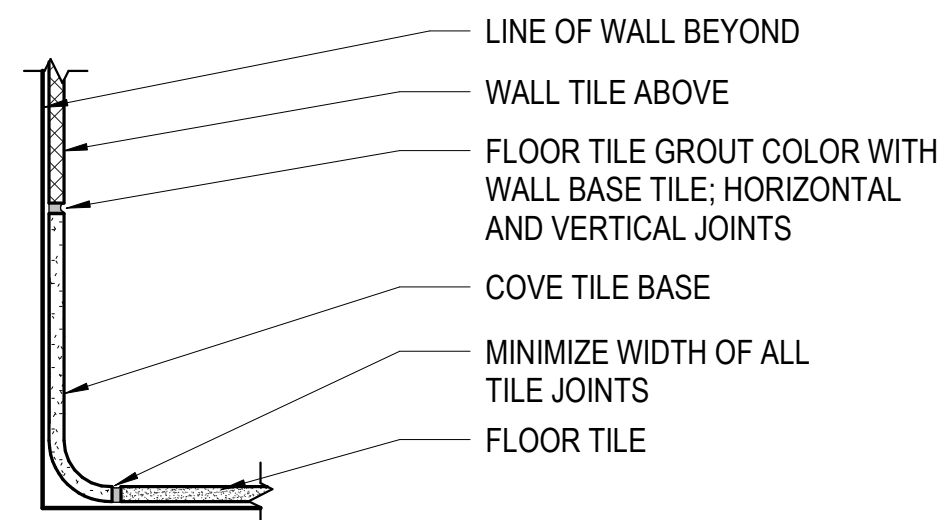
8 FINISH DETAIL - TILE CORNERS

6" = 1'-0"



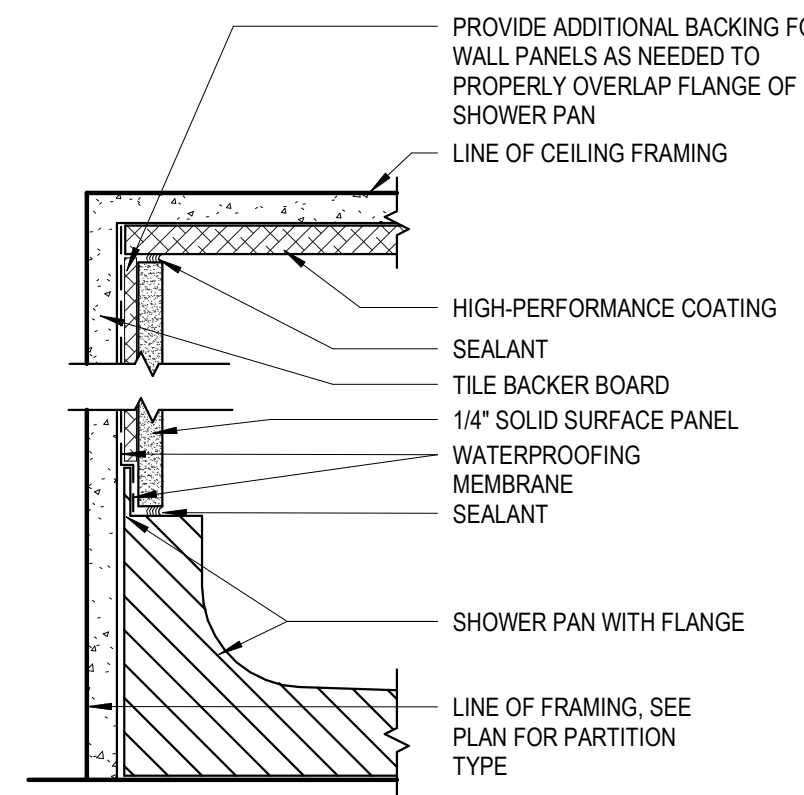
7 FLOORING TRANSITION - TILE & EXISTING

3" = 1'-0"



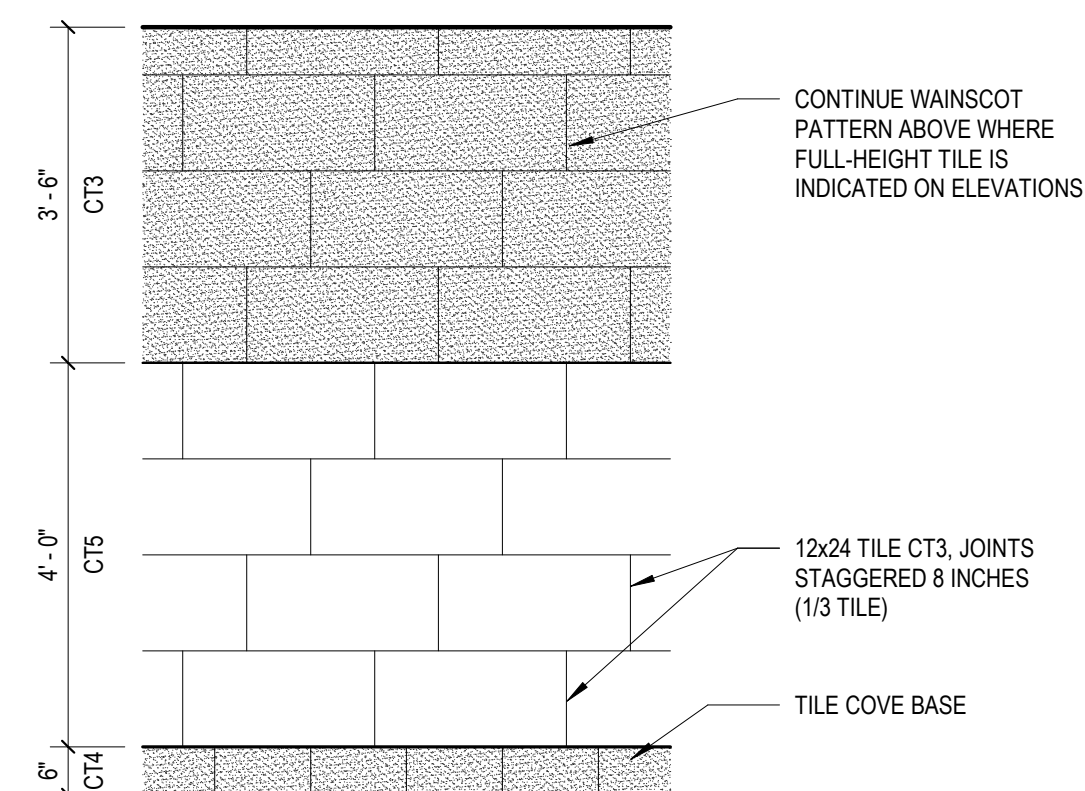
6 TILE COVE BASE DETAIL

3" = 1'-0"



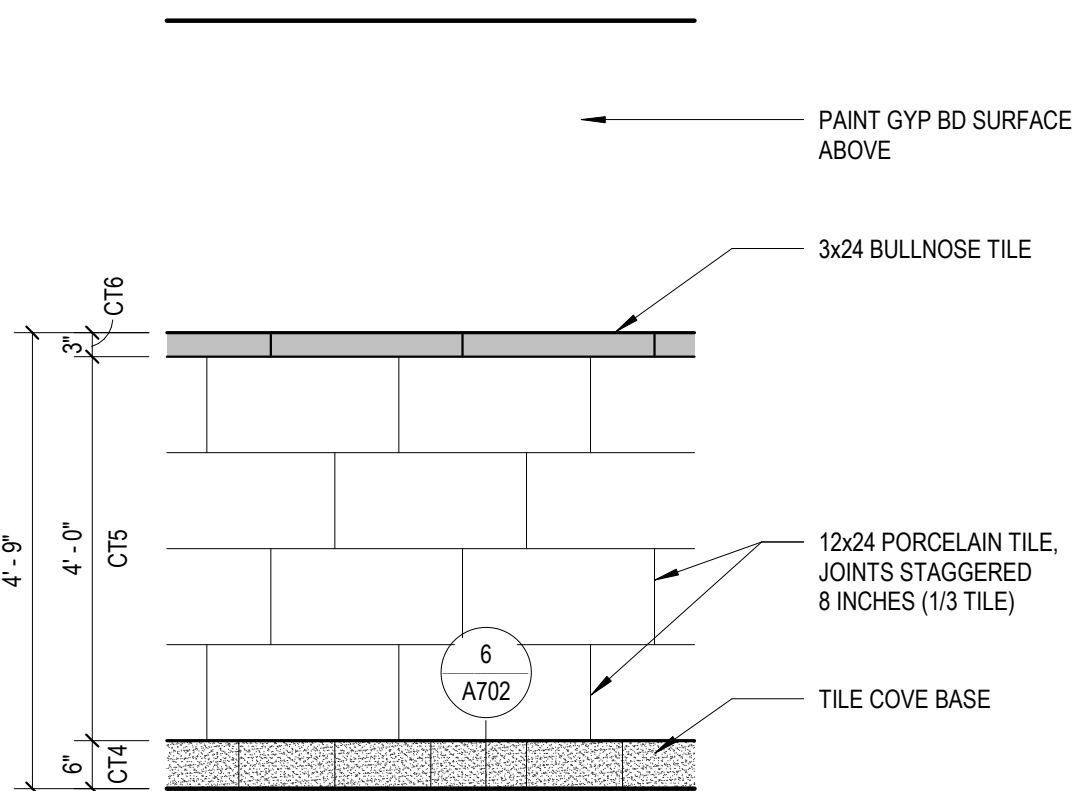
5 SHOWER DETAIL AT WALLS

3" = 1'-0"



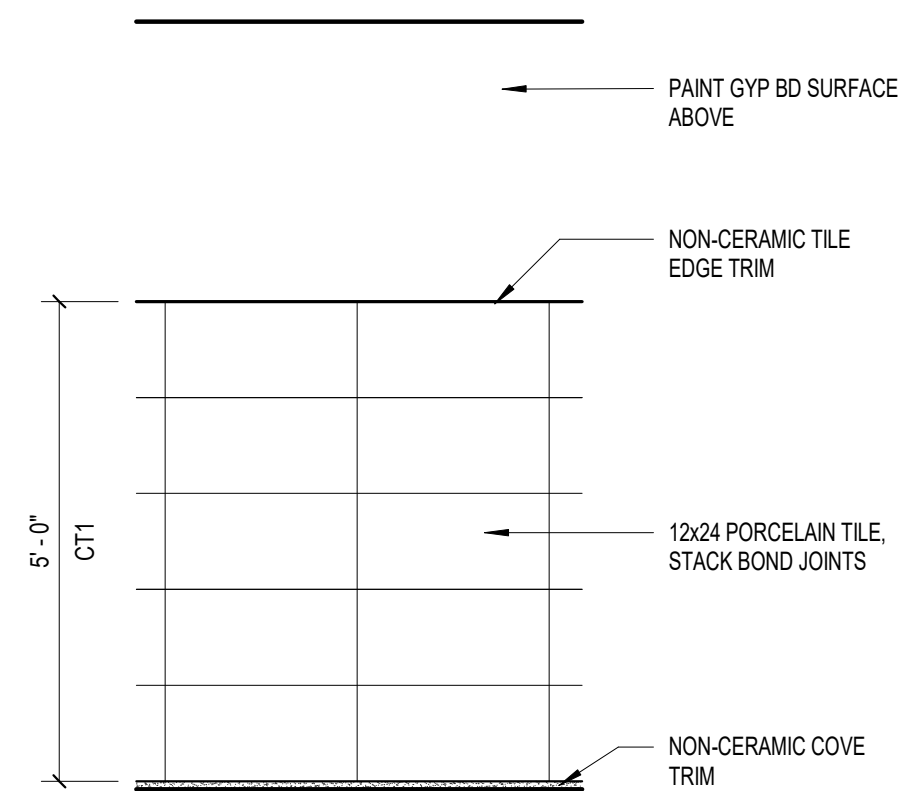
4 FULL-HEIGHT WALL TILE PATTERN (LOCKERS)

1/2" = 1'-0"



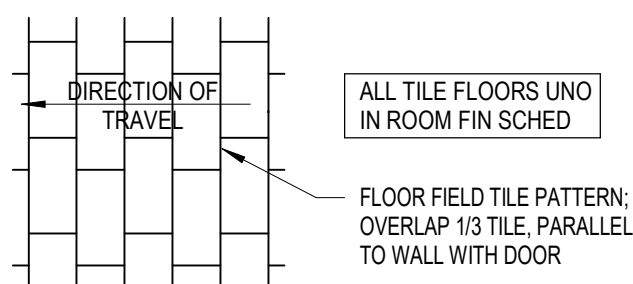
3 WALL WAINSCOT TILE PATTERN (LOCKERS)

1/2" = 1'-0"



2 WALL TILE WAINSCOT PATTERN (OFFICE)

1/2" = 1'-0"



1 FLOOR TILE PATTERN

1/4" = 1'-0"

GENERAL FINISH NOTES

- SEE SPECIFICATIONS MANUAL FOR TECHNICAL SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
- SEE ADDITIONAL NOTES ON OTHER SHEETS.
- ALL PAINTED STEEL STRUCTURE ON WALLS, METAL GRILLS, LOUVERS, ETC., AND ALL EXPOSED DUCTWORK, TO BE FINISHED TO MATCH THE SURFACE ON WHICH THEY ARE INSTALLED, OR THE CEILING, UNO.
- PAINTING AND CONTRACTORS APPLICATION OF WALL AND FLOOR FINISH CONSTITUTES ACCEPTANCE OF WALL CONDITIONS AND RESPONSIBILITY FOR IMPERFECTION CORRECTION.
- CEILING AND SOFFIT HEIGHTS SHOWN ON REFLECTED CEILING PLAN.
- ALL WALL PAINT IN TOILET, SHOWER AND LOCKER ROOM AREAS TO BE SEMI-GLOSS FINISH, UNO.
- ALL INTERIOR HM DOORS AND DOOR FRAMES TO BE PAINTED COLOR PT3.
- ALL EXPOSED SURFACES OF GYP BD CEILINGS, SOFFITS AND BULKHEADS TO BE PAINTED COLOR PT7. USE PT6 AT OPENINGS.
- TRANSITION ALL FLOORING MATERIALS OR COLORS UNDER CENTER OF DOORS SIM. DETAIL 7 / A702, UNO.
- SIGN LOCATIONS PER DETAIL XXX AND PER SECTION 10 1400.
- ALL OUTSIDE CORNERS OF WALL TILE TO HAVE METAL TRIM PER DETAIL 8 / A702. EXPOSED EDGES OF WALL TILE SIMILAR.
- SHOWER WALL TO BE FULL SHEET OF SOLID SURFACE MATERIAL SSF2 PER DETAIL 5 / A702. USE MILDEW-RESISTANT SEALANT IN ALL CORNER JOINTS AND EDGES OF PANELS. WATERPROOFING MEMBRANE BEHIND SSF PANELS AND UNDER SHOWER PAN (PAN BY MECH).
- TILE COVE BASE PER DETAIL 6 / A702 WHERE INDICATED.



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1 12/15/2022 ADDENDUM 01
NO DATE REVISION

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Signature: *Brandee Ness Lian*
Typed or Printed Name: BRANDEE NESS LIAN
Date: 10/24/2022 Reg. No.: 42859

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PROJECT NAME:
**OPS CENTER OFFICE
AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
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DRAWING TITLE:
**TOILET AND LOCKER
ROOM FINISH
SCHEDULE AND
FINISH DETAILS**

DRAWN BY: KJS
CHECKED BY: BNL
PROJ. NO: 200066
DRAWING NO:

A702

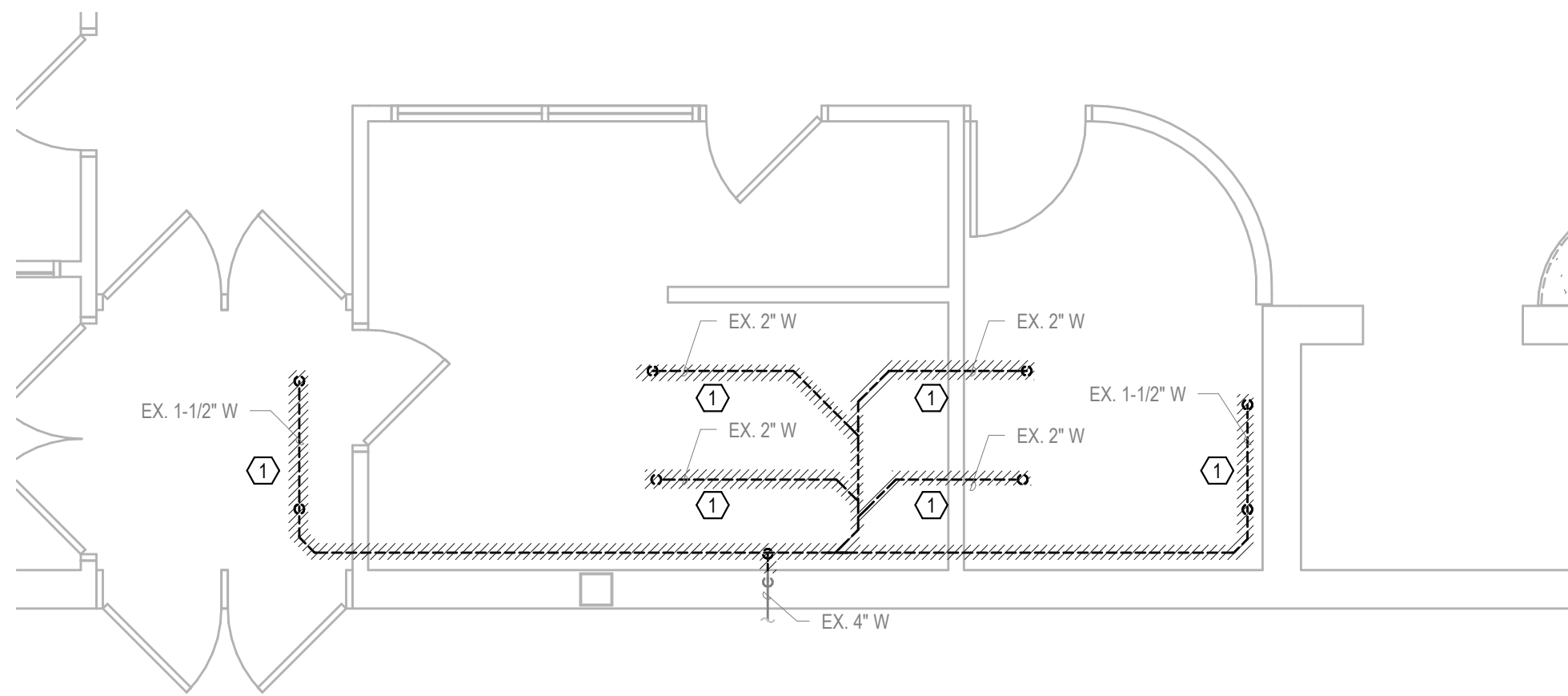
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12/15/2022 1:23:53 PM

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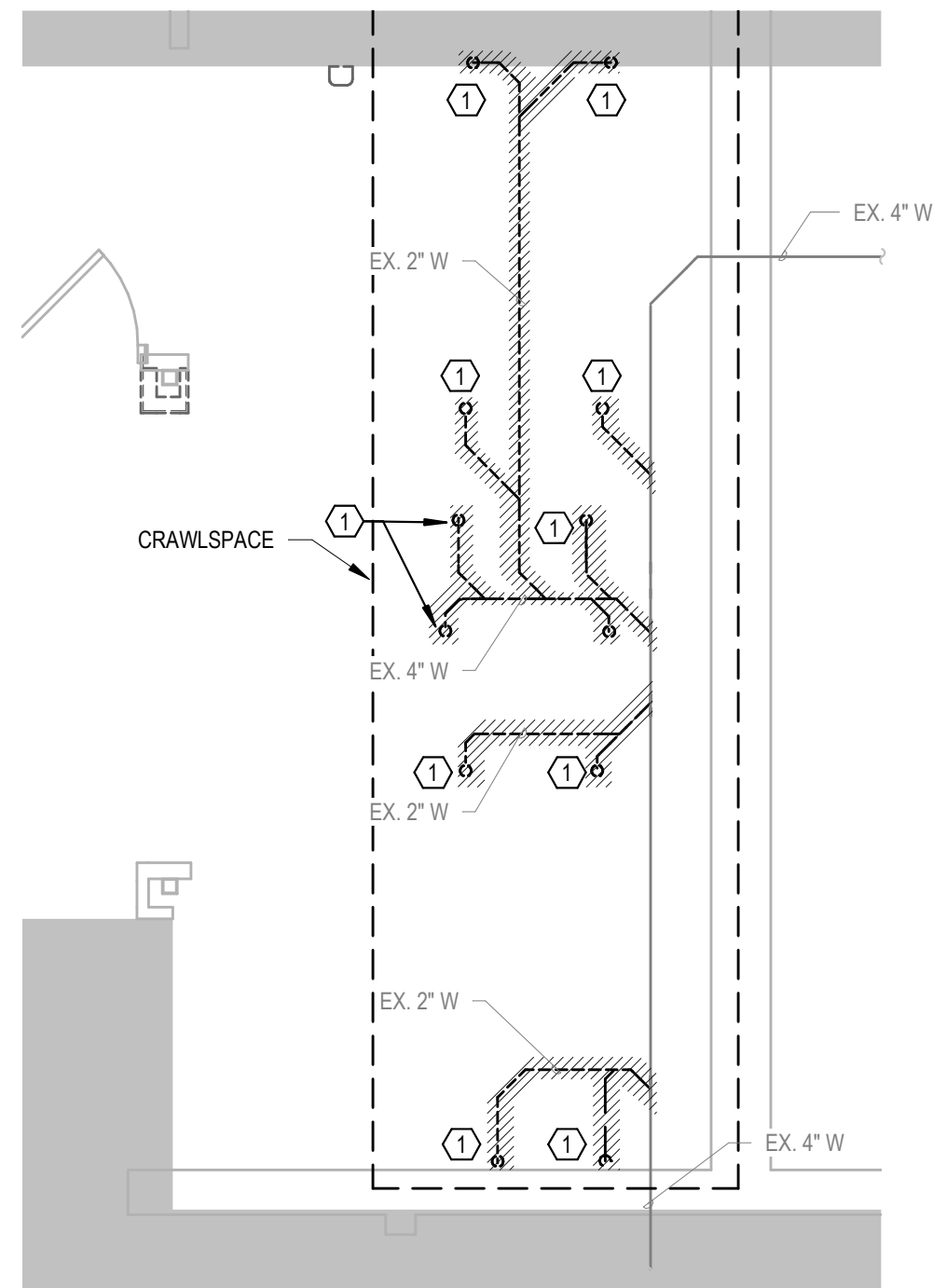
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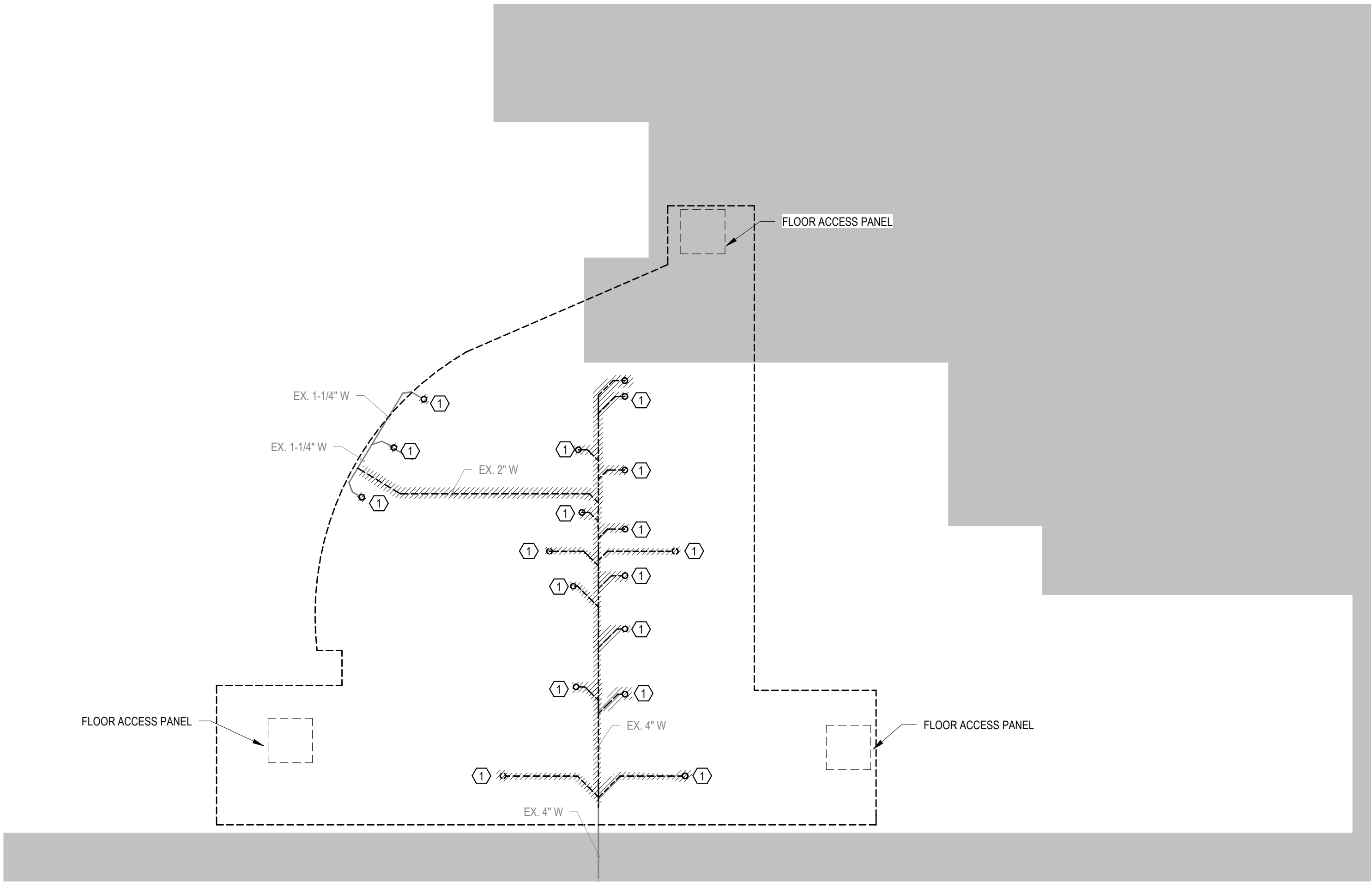
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2 LEVEL 1 ADMIN TOILETS PLUMBING DEMOLITION PLAN
1/4" = 1'-0"



1 LEVEL 0 ADMIN TOILETS PLUMBING DEMOLITION PLAN
1/4" = 1'-0"



3 LEVEL 0 DRIVERS LOCKER ROOMS PLUMBING DEMOLITION PLAN
1/4" = 1'-0"

KEYED SHEET NOTES

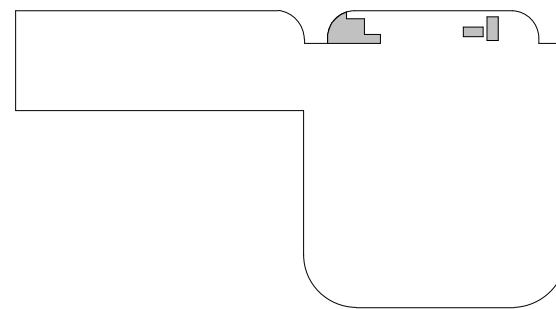
① DEMOLISH WASTE PIPING IN HATCHED REGION SHOWN.
CAP BACK AT MAIN.



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Signature: 

Typed or Printed Name: STEWART CRAN

Date: 10/24/2022 Reg. No.: 21202

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PROJECT NAME:

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AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:

**LEVEL 0 & 1 PLUMBING
DEMOLITION PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 200066
DRAWING NO:



PD100

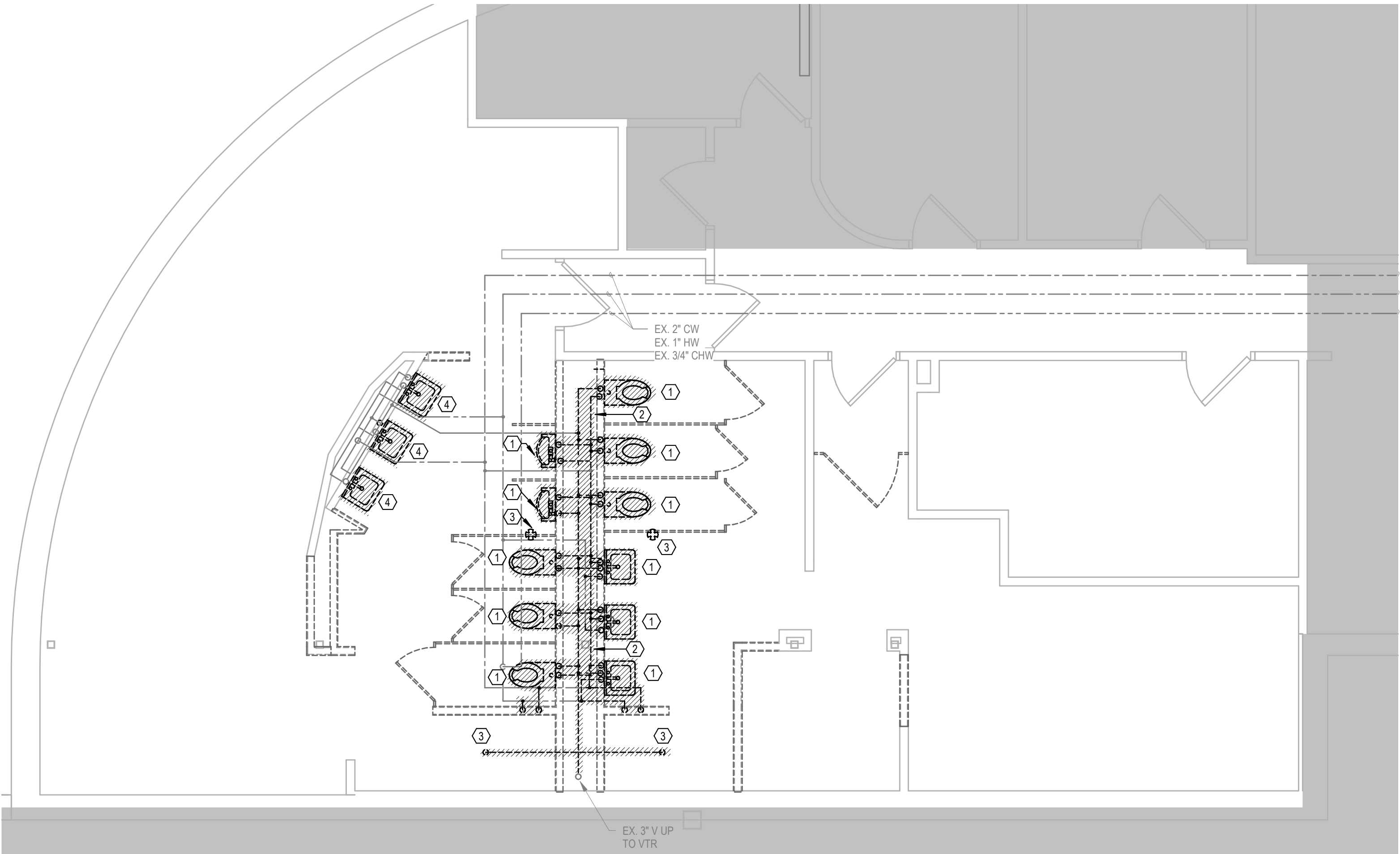
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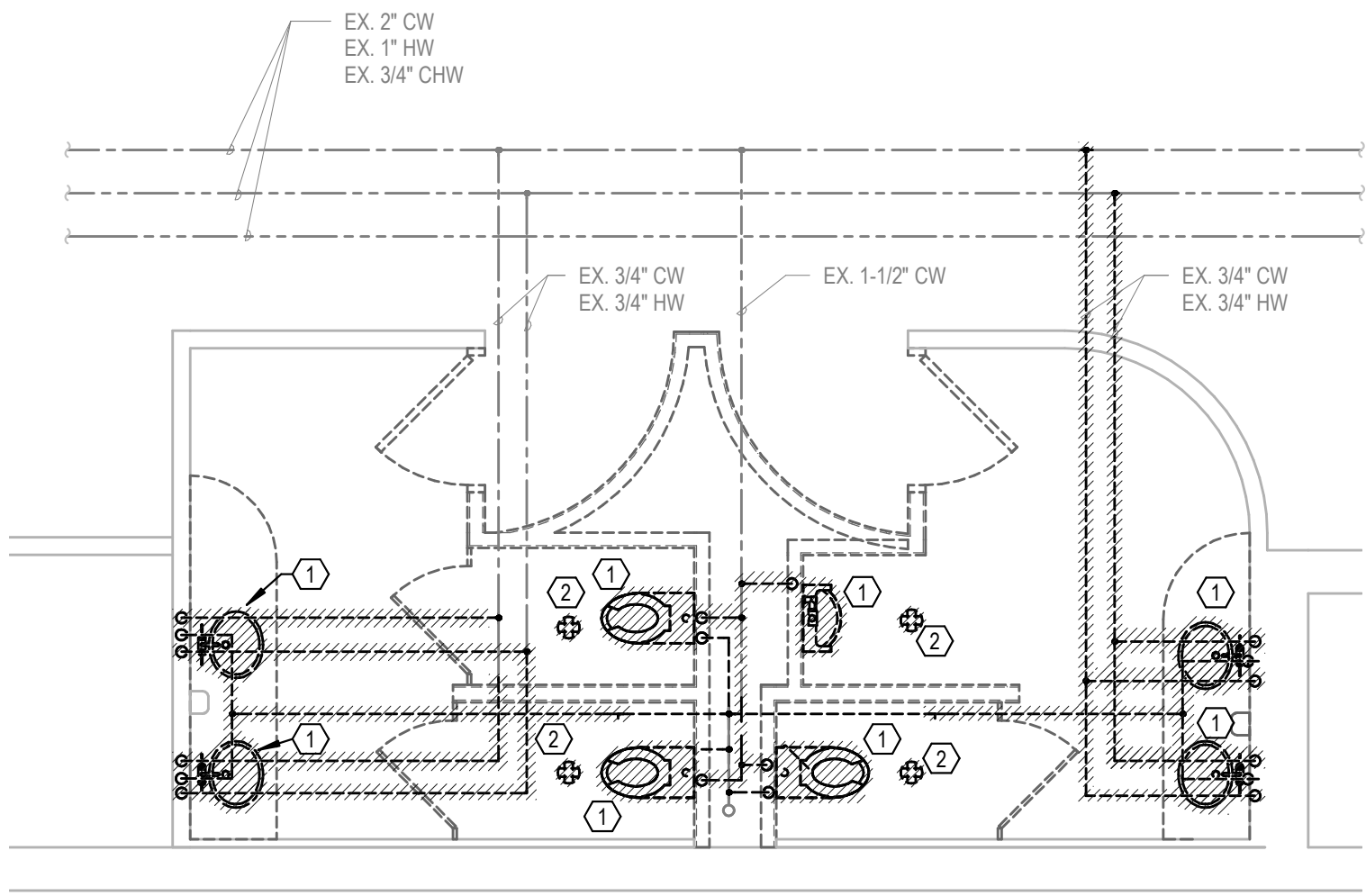
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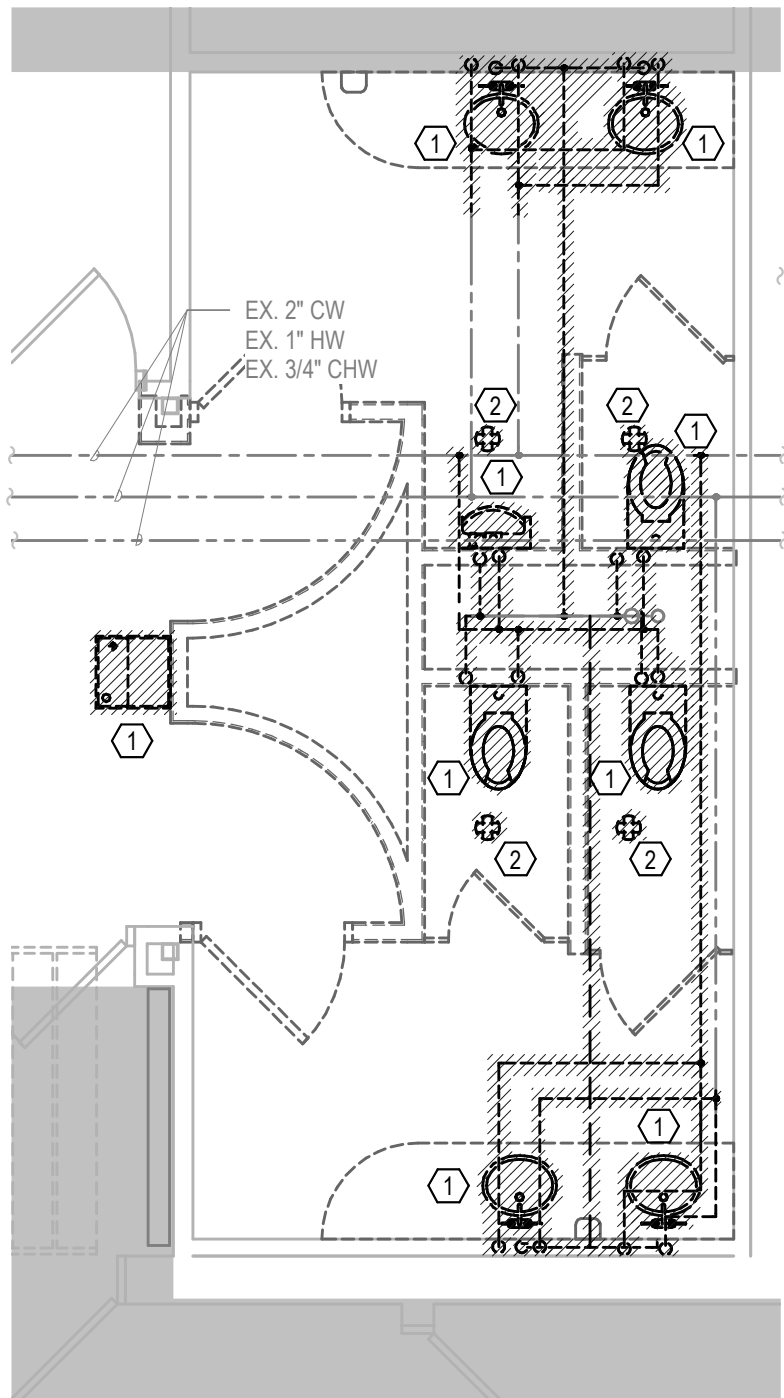
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3 LEVEL 1 DRIVERS LOCKER ROOMS PLUMBING DEMOLITION PLAN
1/4" = 1'-0"



2 LEVEL 2 ADMIN TOILETS DEMOLITION PLAN
1/4" = 1'-0"



1 LEVEL 1 ADMIN TOILETS PLUMBING DEMOLITION PLAN
1/4" = 1'-0"

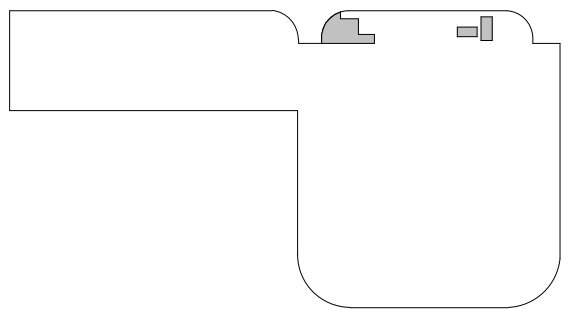
KEYED SHEET NOTES

- ① DEMOLISH PLUMBING FIXTURE AND ALL ASSOCIATED PIPING IN HATCHED REGION SHOWN.
- ② DEMOLISH ALL PIPING IN CHASE FROM FLOOR TO 48" AFF.
- ③ DEMOLISH FLOOR DRAIN AND ALL ASSOCIATED PIPING IN HATCHED REGION SHOWN.
- ④ REMOVE LAVATORY. PIPING IN CHASE AND WALL SHALL REMAIN AS IS.



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NO	DATE	REVISION

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Signature:

Typed or Printed Name: STEWART CRAN

Date: 10/24/2022 Reg. No.: 21202

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PROJECT NAME:
**OPS CENTER OFFICE
AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:
**LEVEL 1 & 2 PLUMBING
DEMOLITION PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 200066
DRAWING NO:



PD101

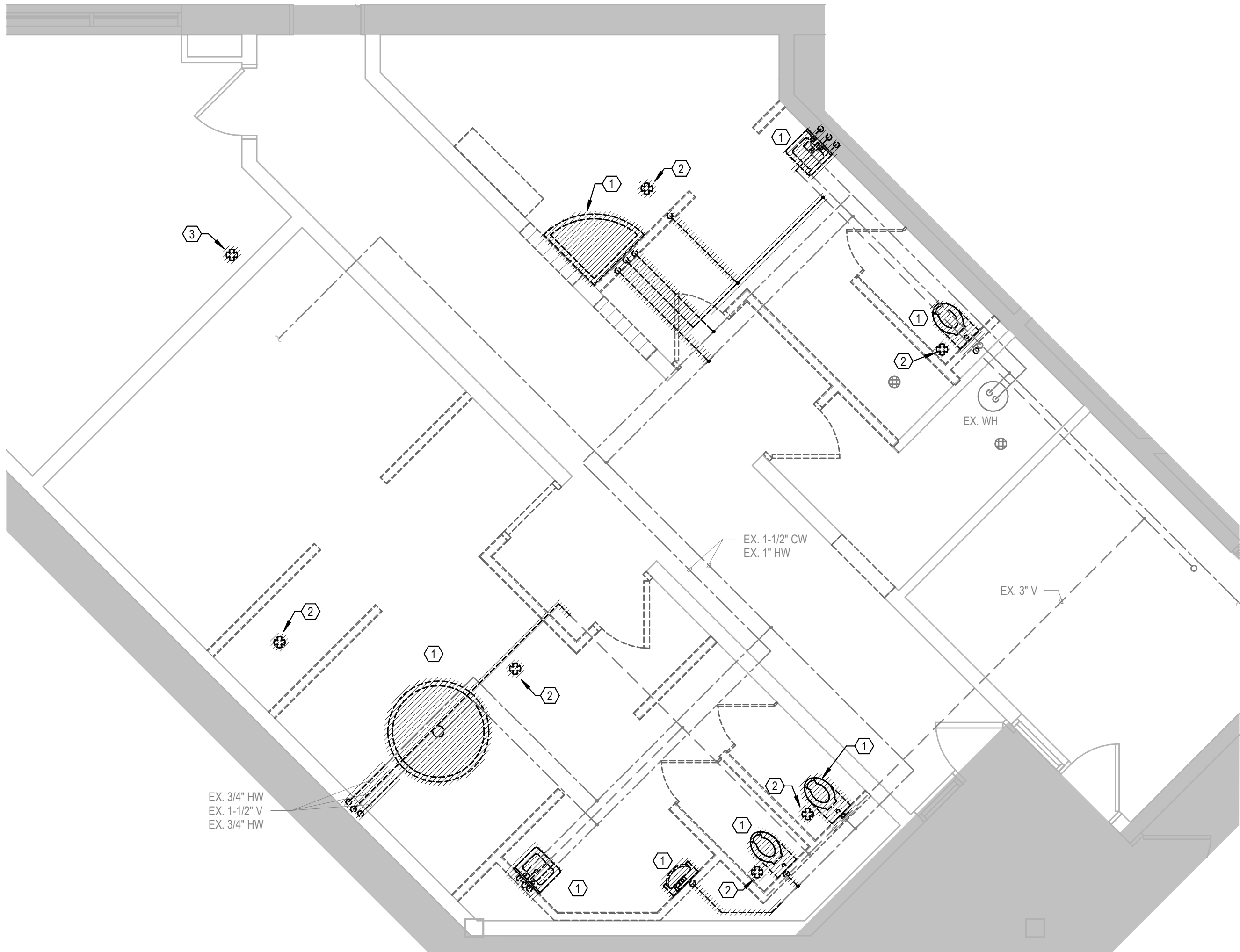
BM 360/200066 DTA Toilet Room Remodel/200066 DTA Ops Ctr Restrooms MEP20.rvt
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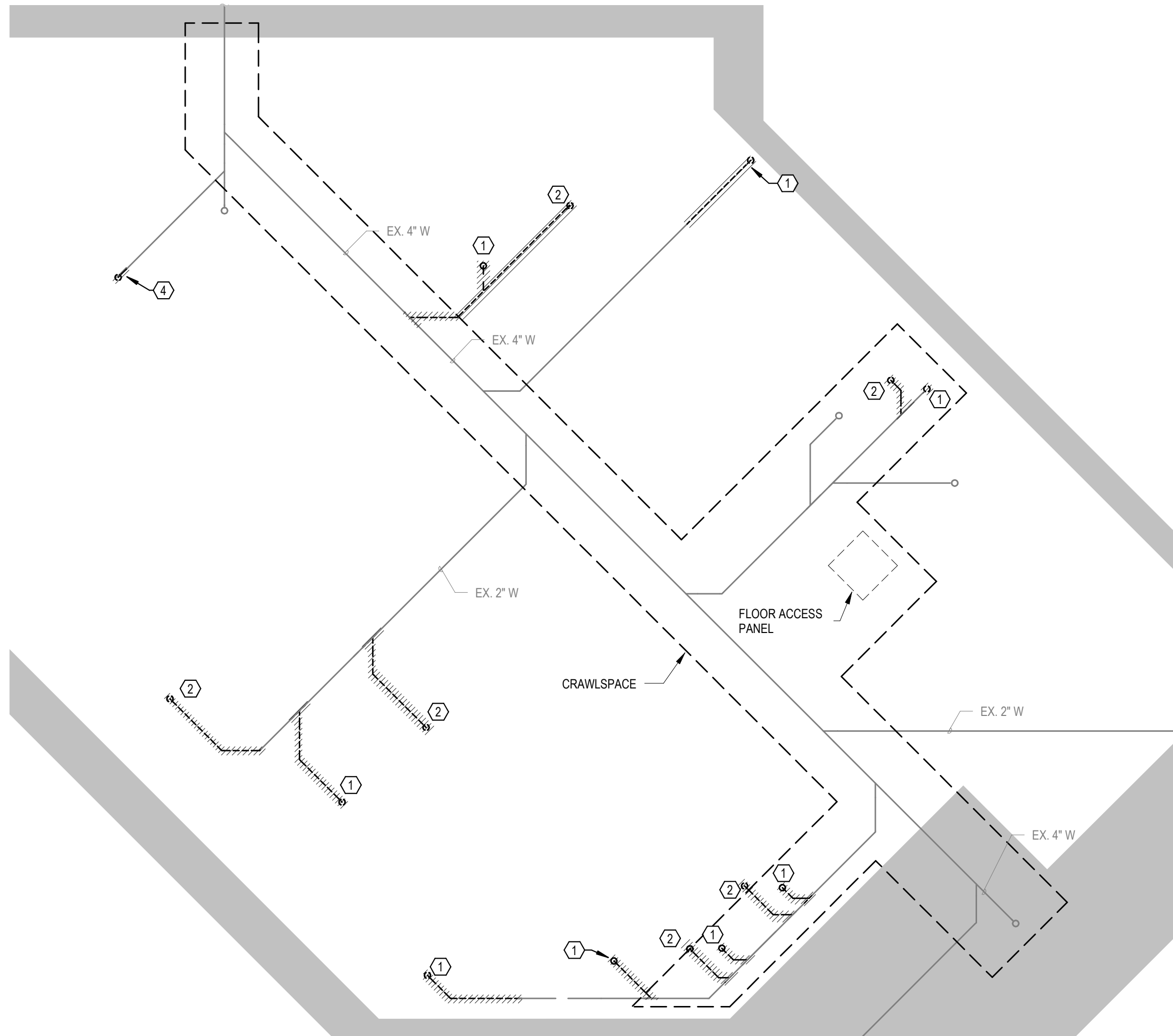
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A



2 LEVEL 1 MAINTENANCE LOCKER ROOMS PLUMBING DEMOLITION PLAN
1/4" = 1'-0"

2



1 LEVEL 0 MAINTENANCE LOCKER ROOMS PLUMBING DEMOLITION PLAN
1/4" = 1'-0"

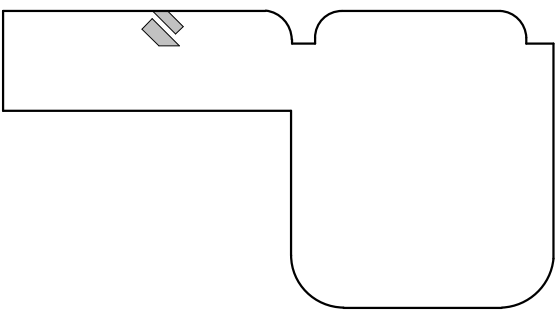
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KEYED SHEET NOTES	
①	DEMOLISH PLUMBING FIXTURE AND ALL ASSOCIATED PIPING IN HATCHED REGION SHOWN.
②	DEMOLISH FLOOR DRAIN AND ALL ASSOCIATED PIPING IN HATCHED REGION SHOWN.
③	REMOVE FLOOR DRAIN. PREPARE WASTE PIPE FOR NEW SINK CONNECTION.
④	REMOVE WASTE PIPING IN HATCHED REGION SHOWN. PREPARE WASTE FOR NEW SINK CONNECTION.



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NO	DATE	REVISION

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PROJECT NAME:
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AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:
**LEVEL 0 & 1
MAINTENANCE
LOCKER ROOMS
PLUMBING
DEMOLITION PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO.: 200066
DRAWING NO:

PD102



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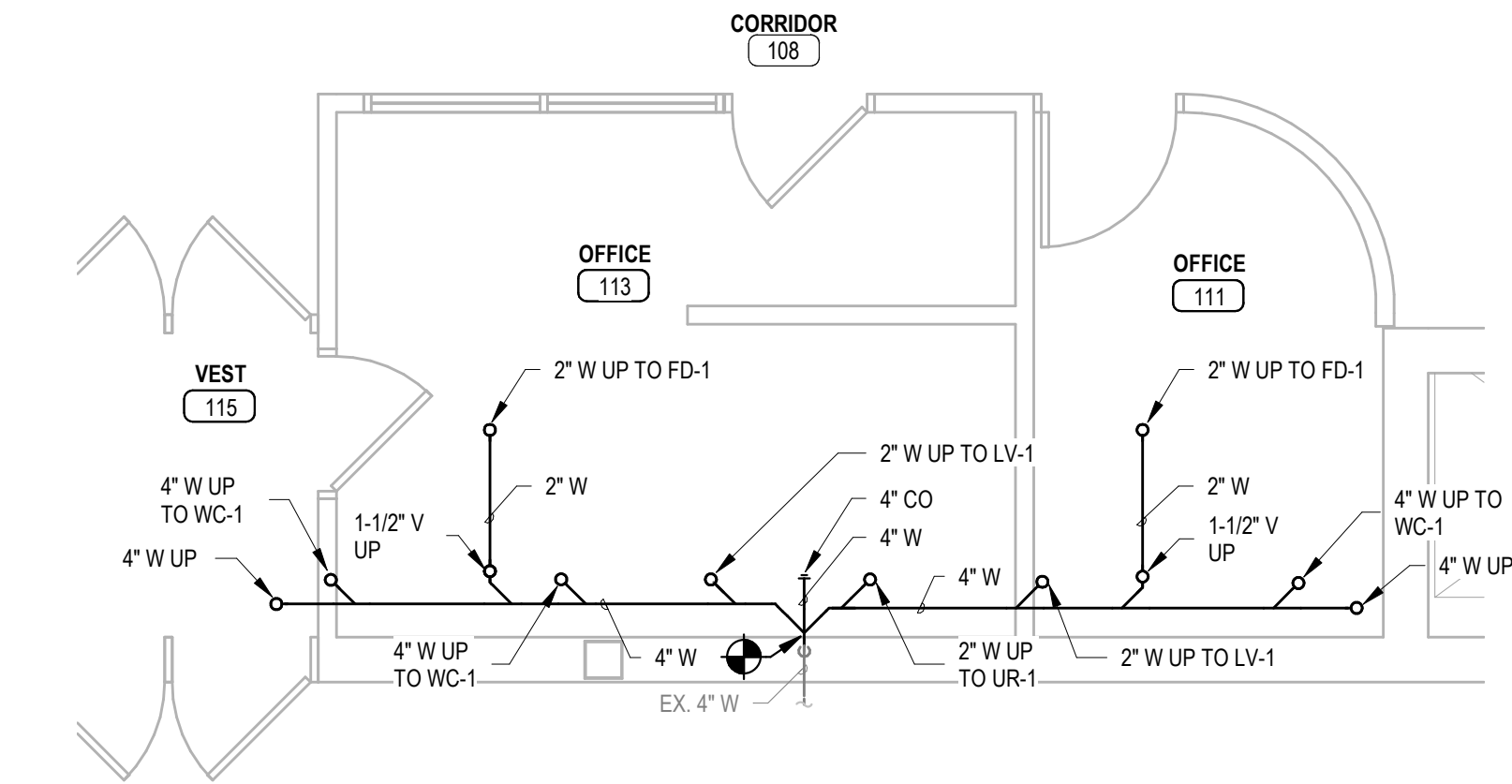
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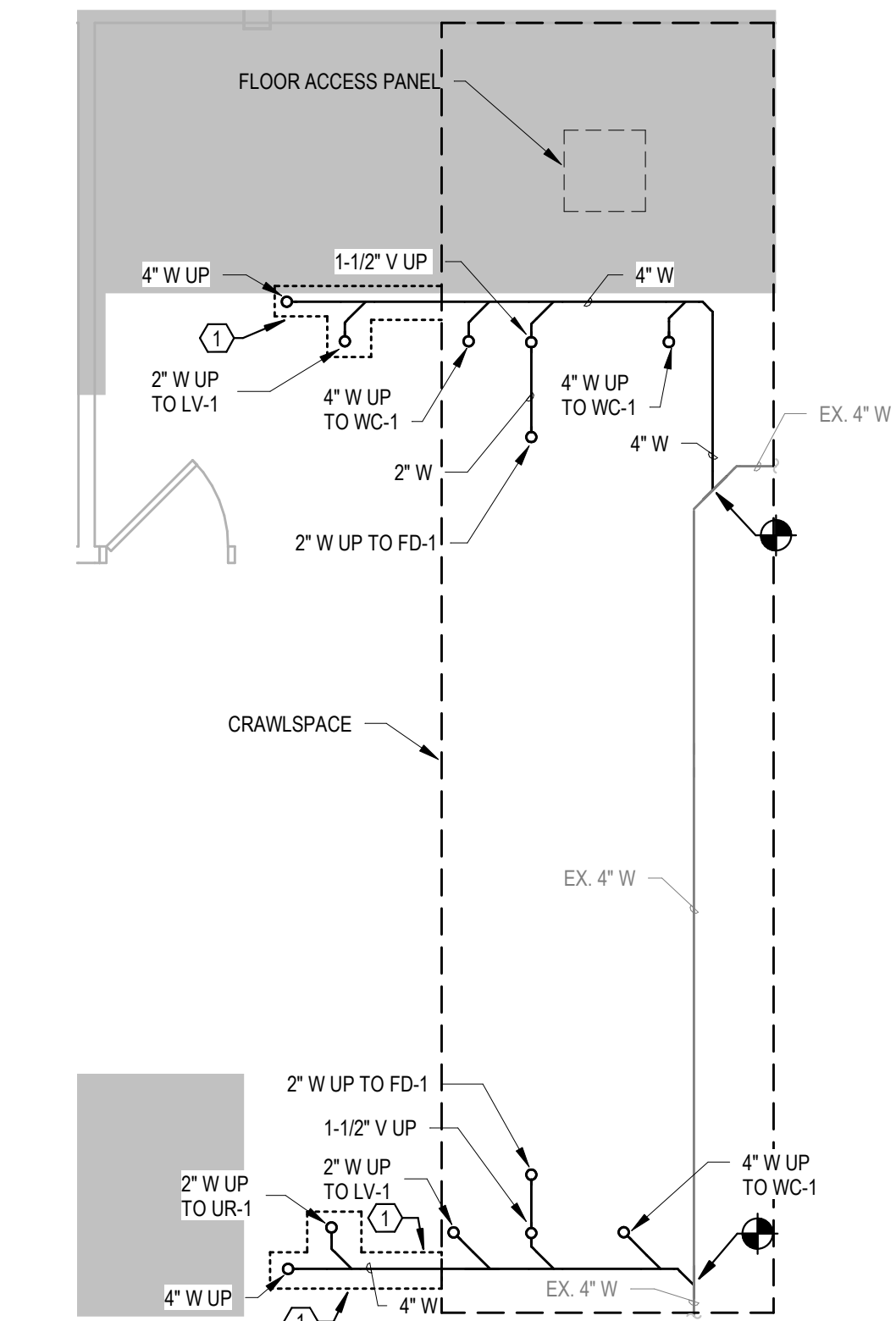
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3 LEVEL 0 DRIVER LOCKER ROOMS SANITARY PLAN
1/4" = 1'-0"



2 LEVEL 1 ADMIN TOILET ROOM SANITARY PLAN
1/4" = 1'-0"



1 LEVEL 0 ADMIN TOILET ROOM SANITARY PLAN
1/4" = 1'-0"

KEYED SHEET NOTES

①

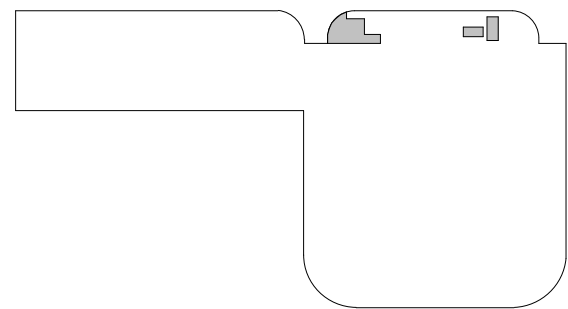
SAWCUT EXISTING SLAB AS REQUIRED FOR NEW PIPING INSTALLATION. PATCH FLOOR TO MATCH EXISTING.



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PROJECT NAME:

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DRAWING TITLE:

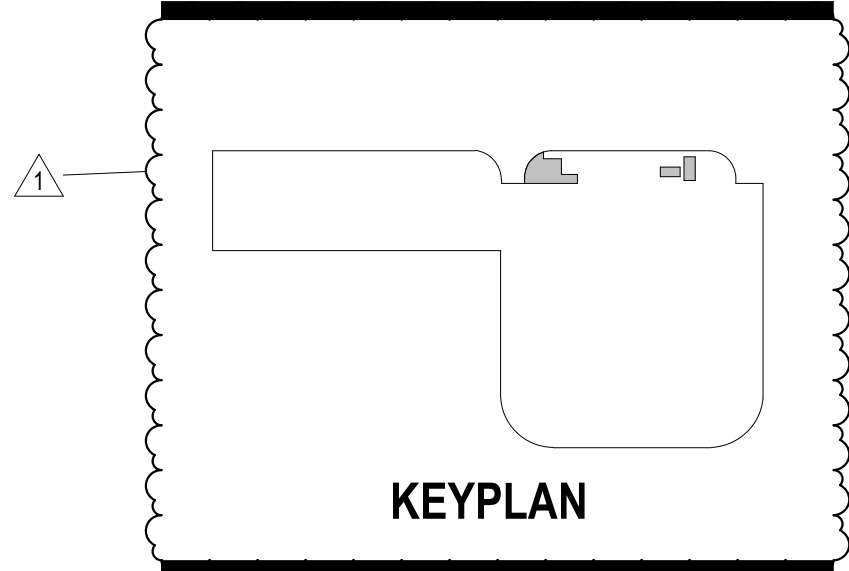
**LEVEL 0 & 1 SANITARY
PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 200066
DRAWING NO:



P110

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NO	DATE	REVISION

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Signature: *Stewart Cran*

Typed or Printed Name: STEWART CRAN

Date: 10/24/2022 Reg. No.: 21202

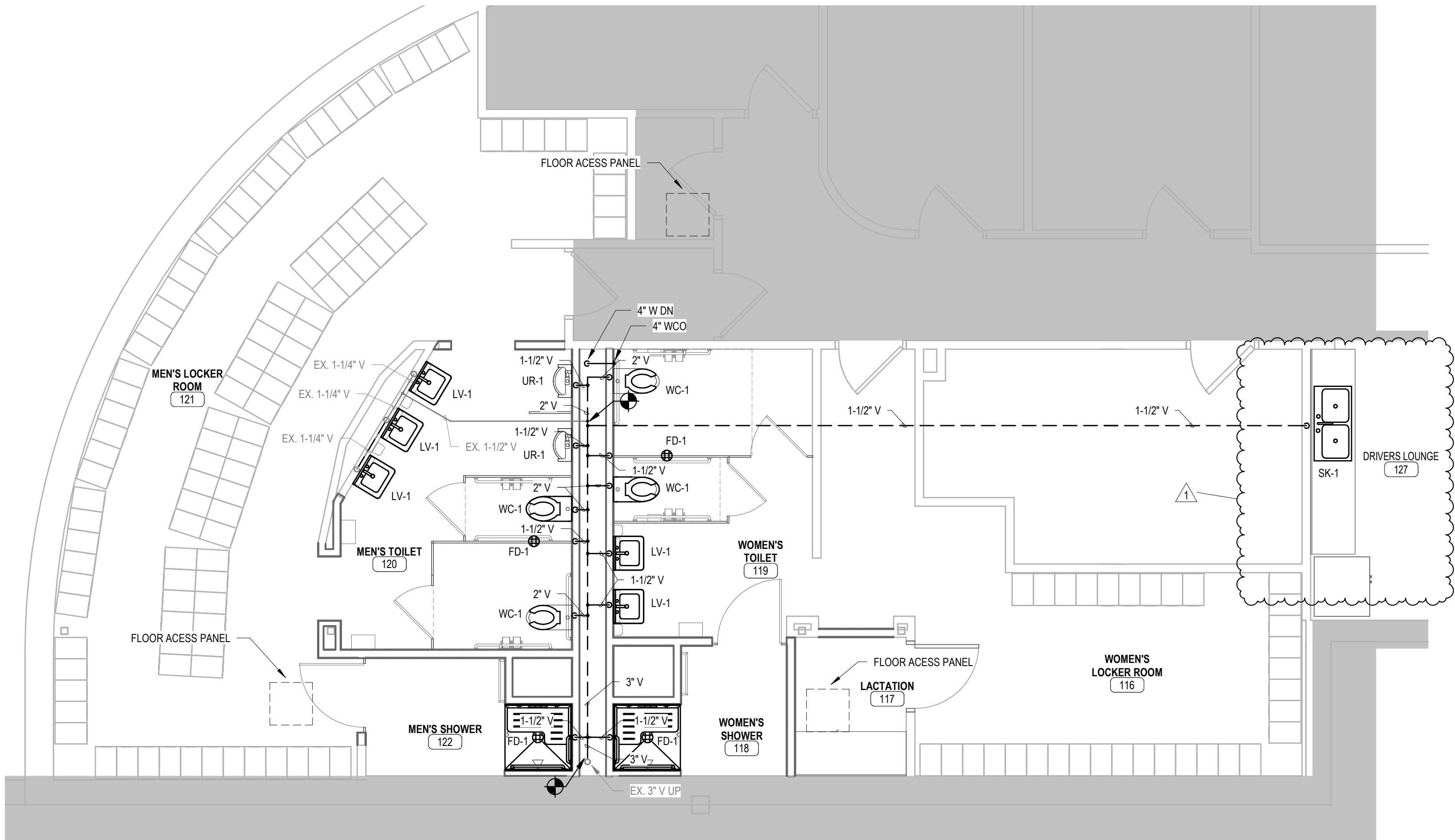
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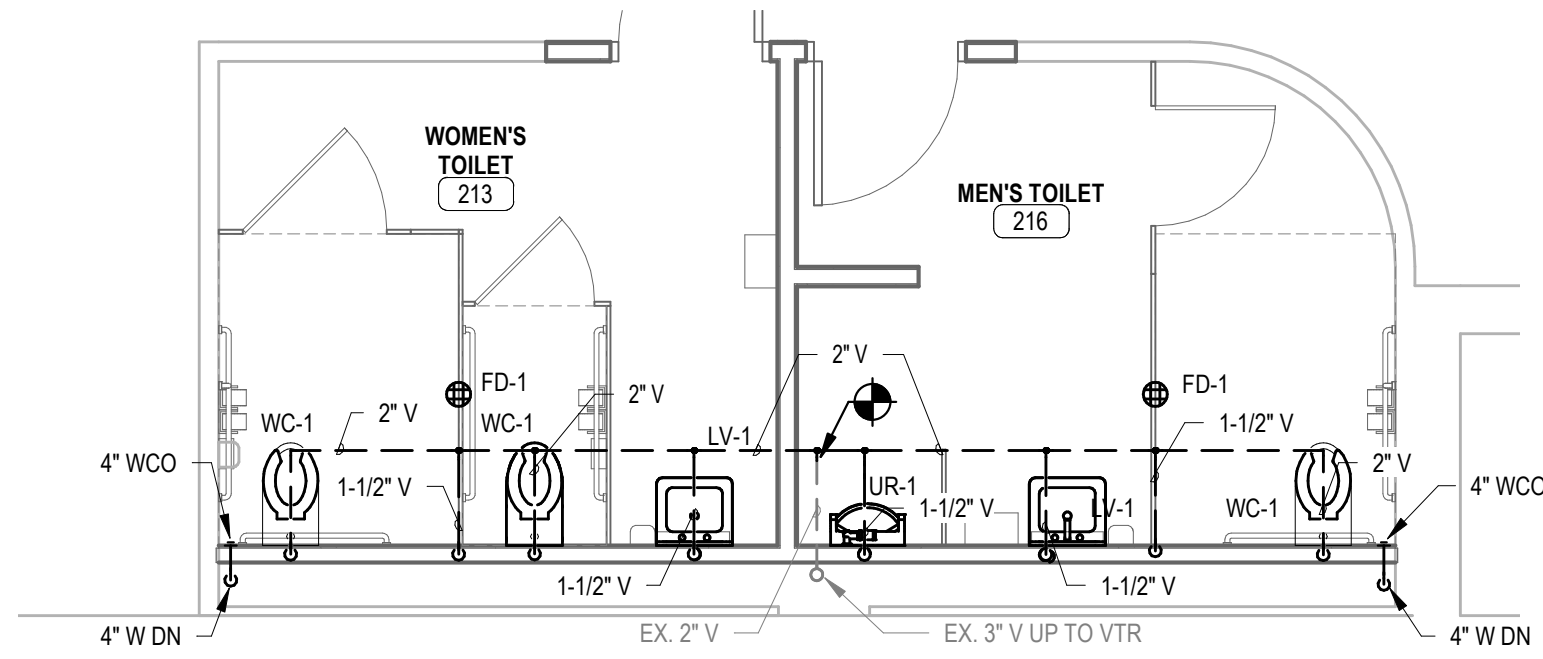
DRAWING TITLE:
**LEVEL 1 & 2 SANITARY
PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 200066
DRAWING NO:

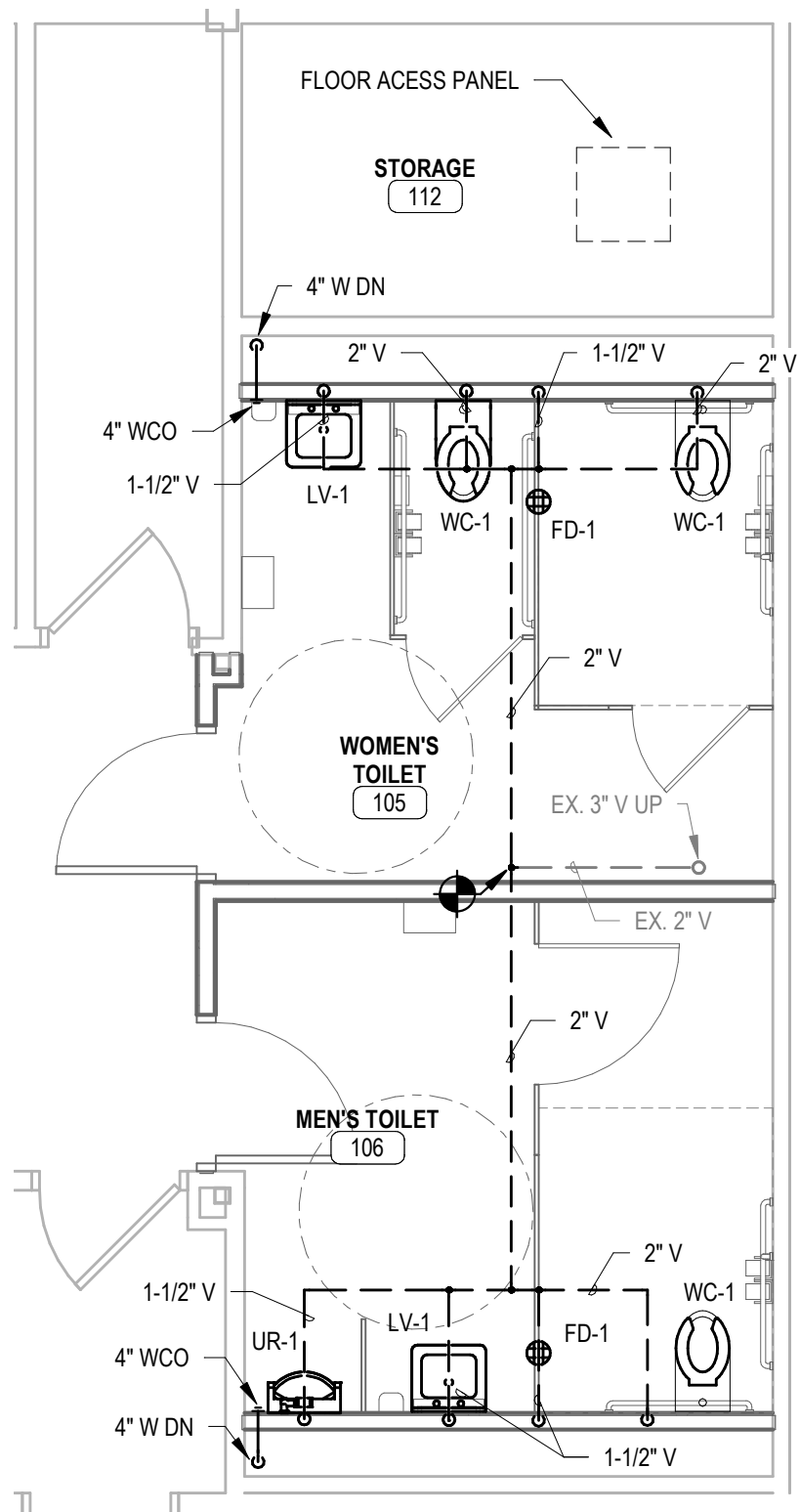
P111



3 LEVEL 1 DRIVER LOCKER ROOMS SANITARY PLAN
1/4" = 1'-0"



2 LEVEL 2 ADMIN TOILET ROOM SANITARY PLAN
1/4" = 1'-0"



1 LEVEL 1 ADMIN TOILET ROOM SANITARY PLAN
1/4" = 1'-0"

BM 360/200066 DTA Toilet Room Remodel/200066 DTA Ops Ctr Restrooms MEP20.rvt
12/15/2022 8:06:50 AM

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
C

B

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2 LEVEL 0 MAINTENANCE LOCKER ROOMS SANITARY PLAN
1/4" = 1'-0"

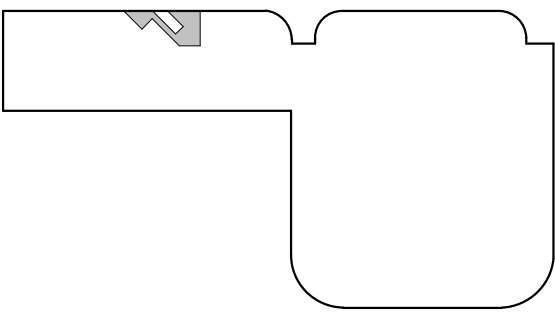
1 LEVEL 1 MAINTENANCE LOCKER ROOMS SANITARY PLAN
1/4" = 1'-0"

KEYED SHEET NOTES	
	SAWCUT EXISTING SLAB AS REQUIRED FOR NEW PIPING INSTALLATION. PATCH FLOOR TO MATCH EXISTING.



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Signature: 

Typed or Printed Name: STEWART CRAN

Date: 10/24/2022 Reg. No.: 21202

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PROJECT NAME:
**OPS CENTER OFFICE
AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:
**LEVEL 0 & 1
MAINTENANCE
LOCKER ROOMS
SANITARY PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 200066
DRAWING NO:



P112

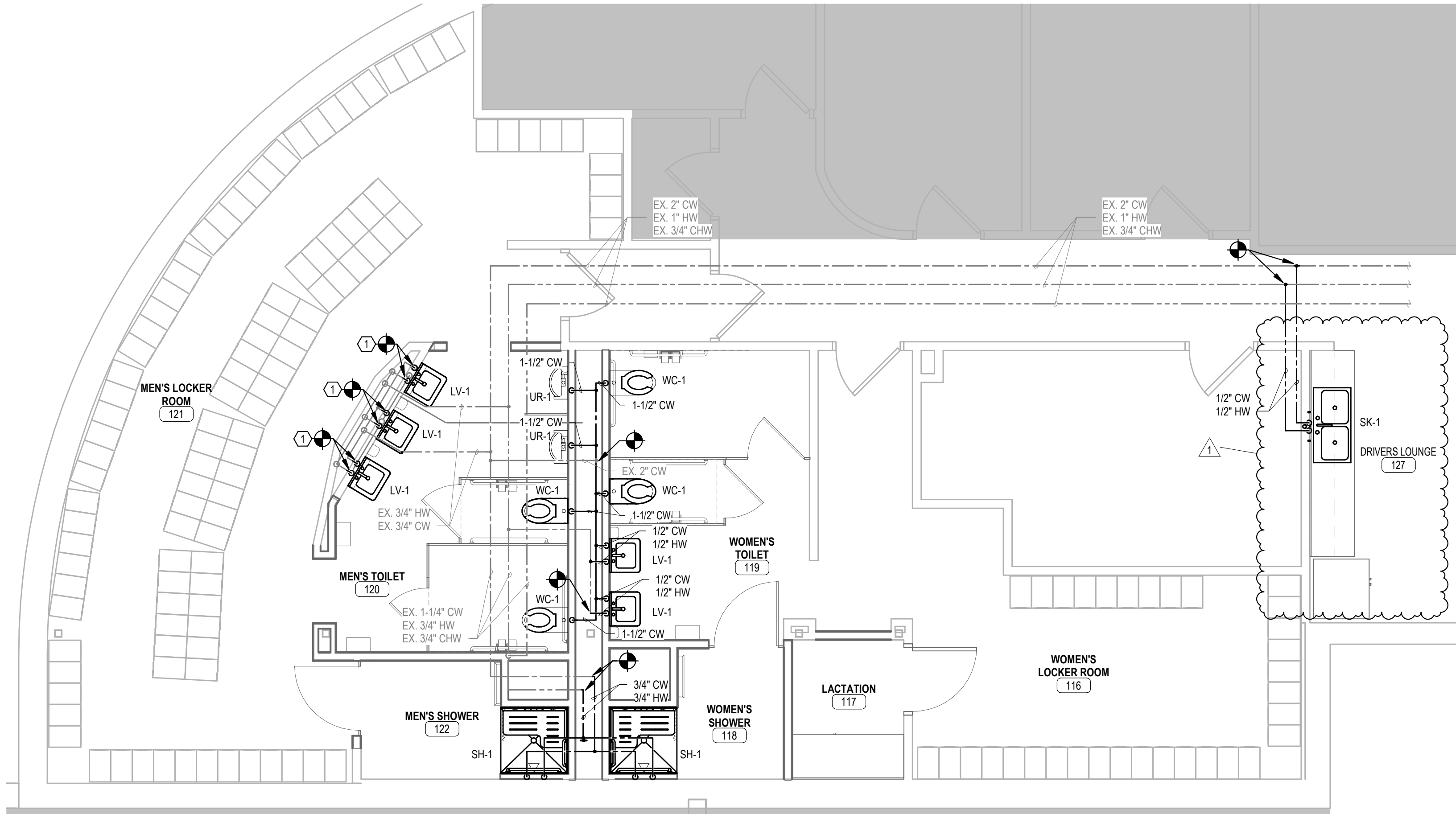
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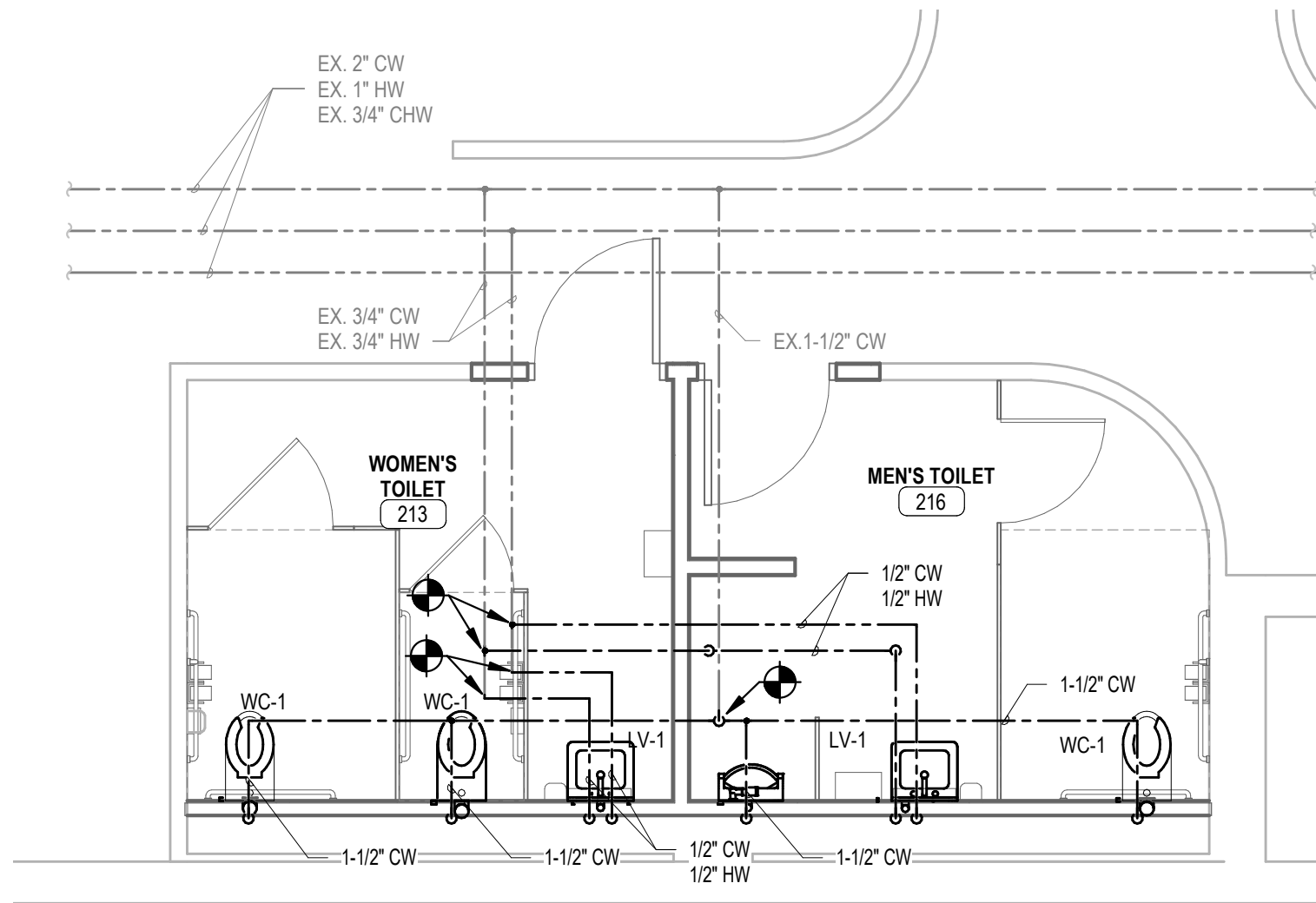
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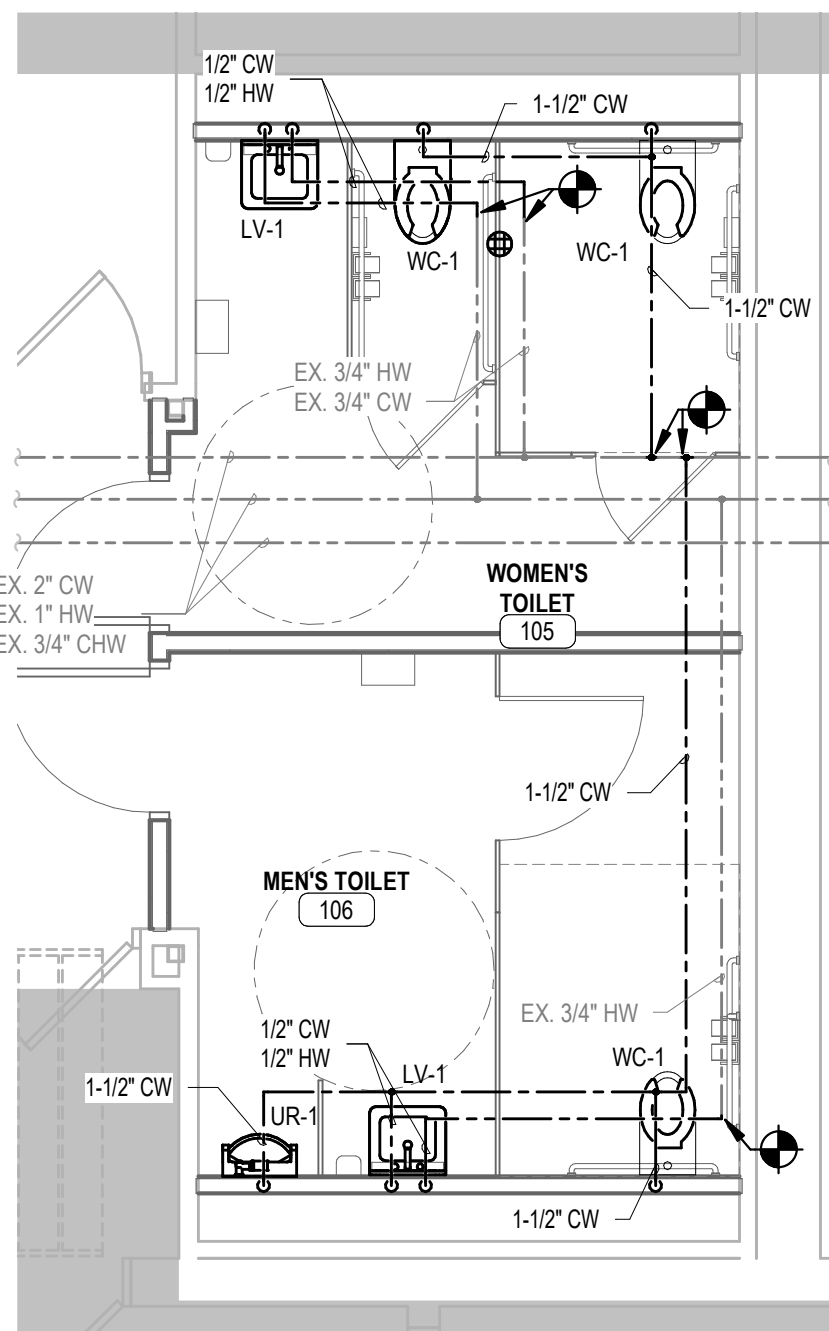
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3 LEVEL 1 DRIVER LOCKER ROOMS DOMESTIC WATER PLAN
1/4" = 1'-0"



2 LEVEL 2 ADMIN TOILET ROOM DOMESTIC WATER PLAN
1/4" = 1'-0"



1 LEVEL 1 ADMIN TOILET ROOM DOMESTIC WATER PLAN
1/4" = 1'-0"

KEYED SHEET NOTES

①

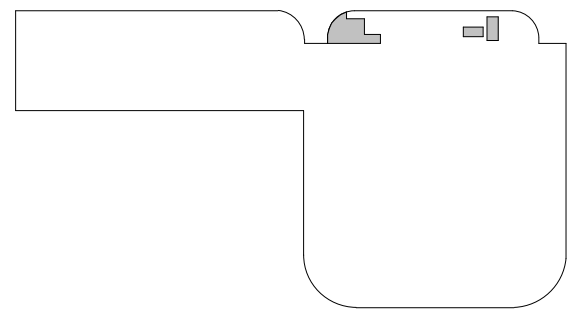
1/2" DOMESTIC COLD WATER AND 1/2" DOMESTIC HOT WATER DOWN AT LOCATION SHOWN.



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Signature: *Stewart Cran*

Typed or Printed Name: STEWART CRAN

Date: 10/24/2022 Reg. No.: 21202

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PROJECT NAME:

**OPS CENTER OFFICE
AND TOILET REMODEL**
2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:

**LEVEL 1 & 2 DOMESTIC
WATER PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 200066
DRAWING NO:

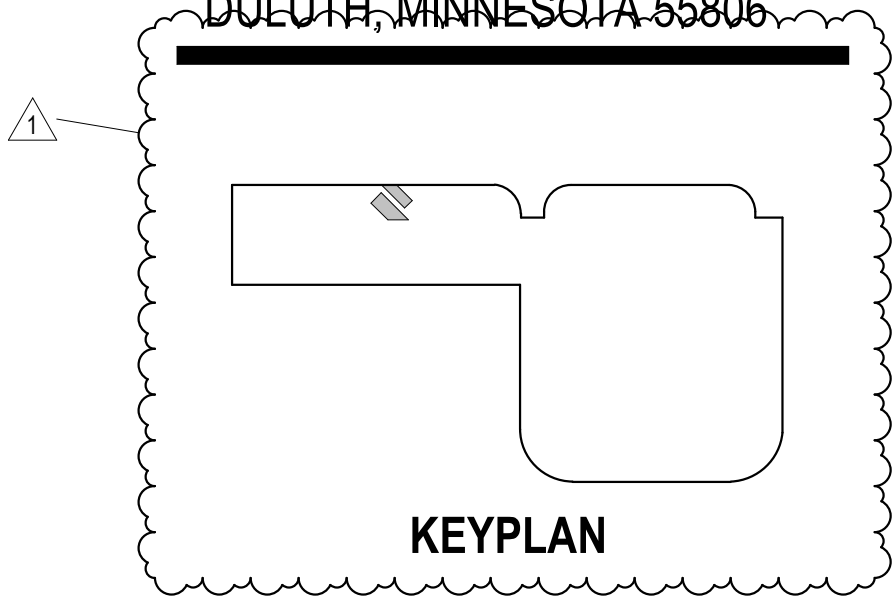


P121



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1	12/15/2022	ADDENDUM 01
NO	DATE	REVISION

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Signature: 

Typed or Printed Name: STEWART CRAN

Date: 10/24/2022 Reg. No.: 21202

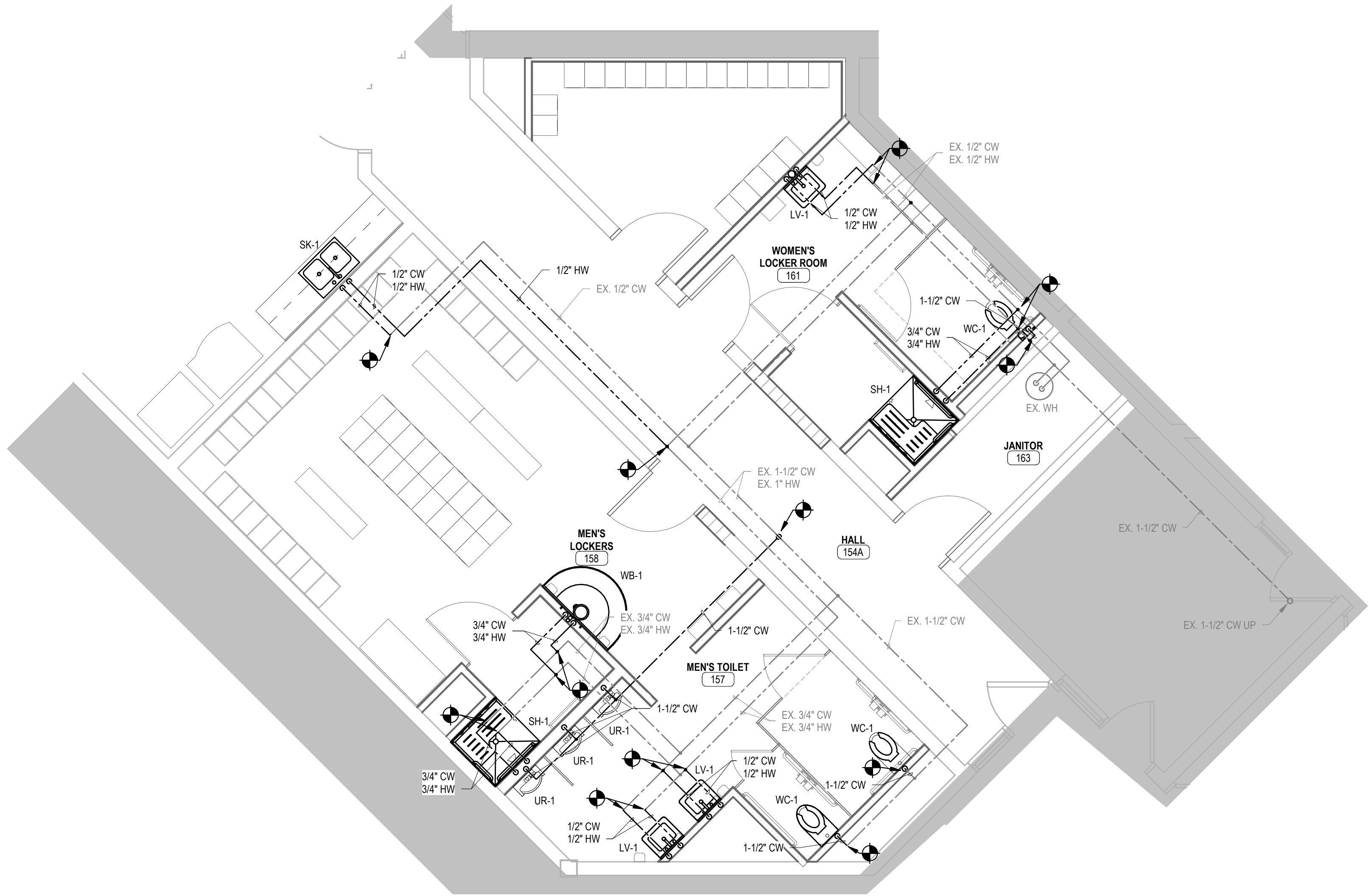
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PROJECT NAME:
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2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:
LEVEL 1
MAINTENANCE
LOCKER ROOMS
DOMESTIC WATER
PLAN

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO.: 200066
DRAWING NO:

P122



1 LEVEL 1 MAINTENANCE LOCKER ROOMS DOMESTIC WATER PLAN
1/4" = 1'-0"

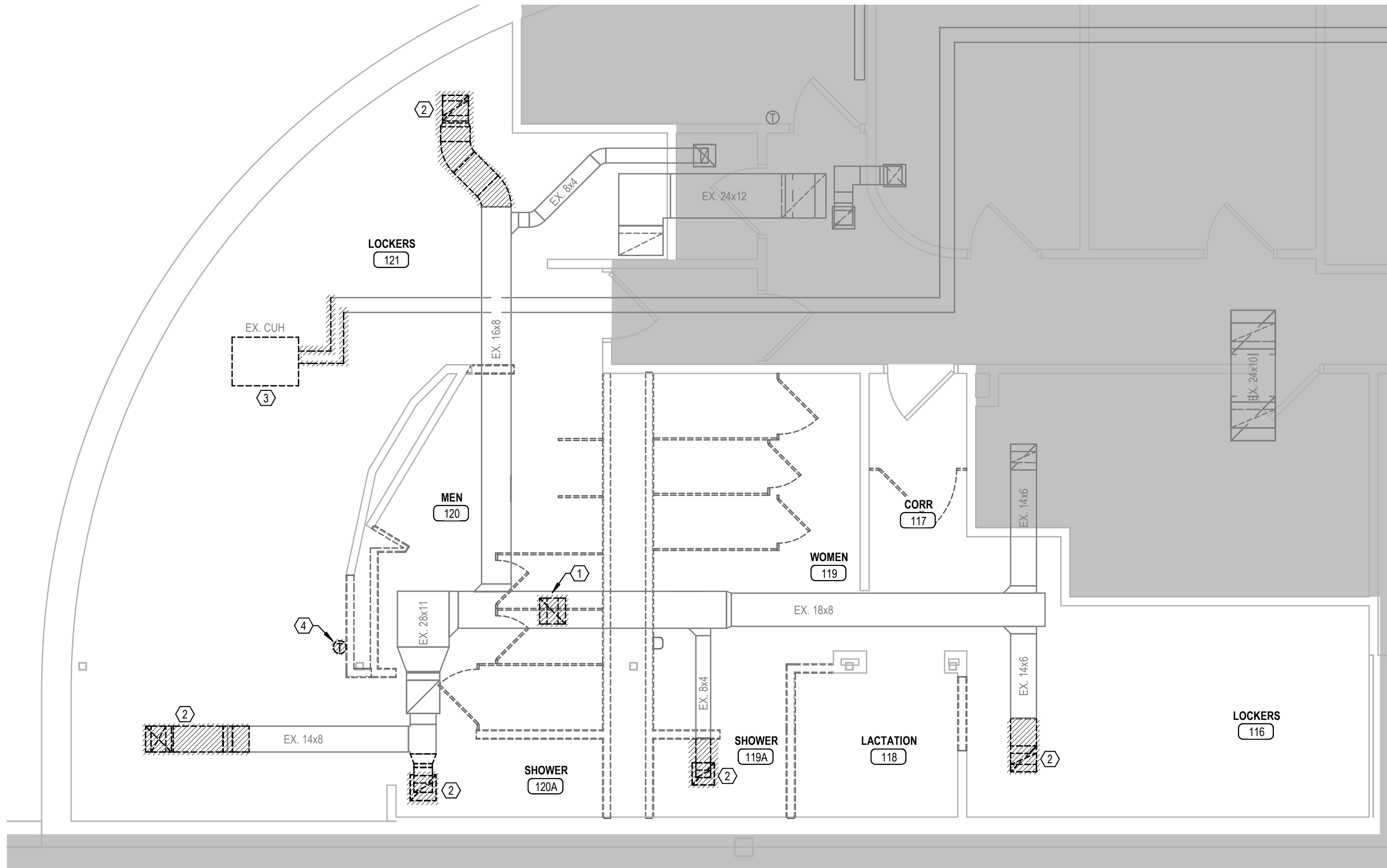
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12/15/2022 1:23:53 PM

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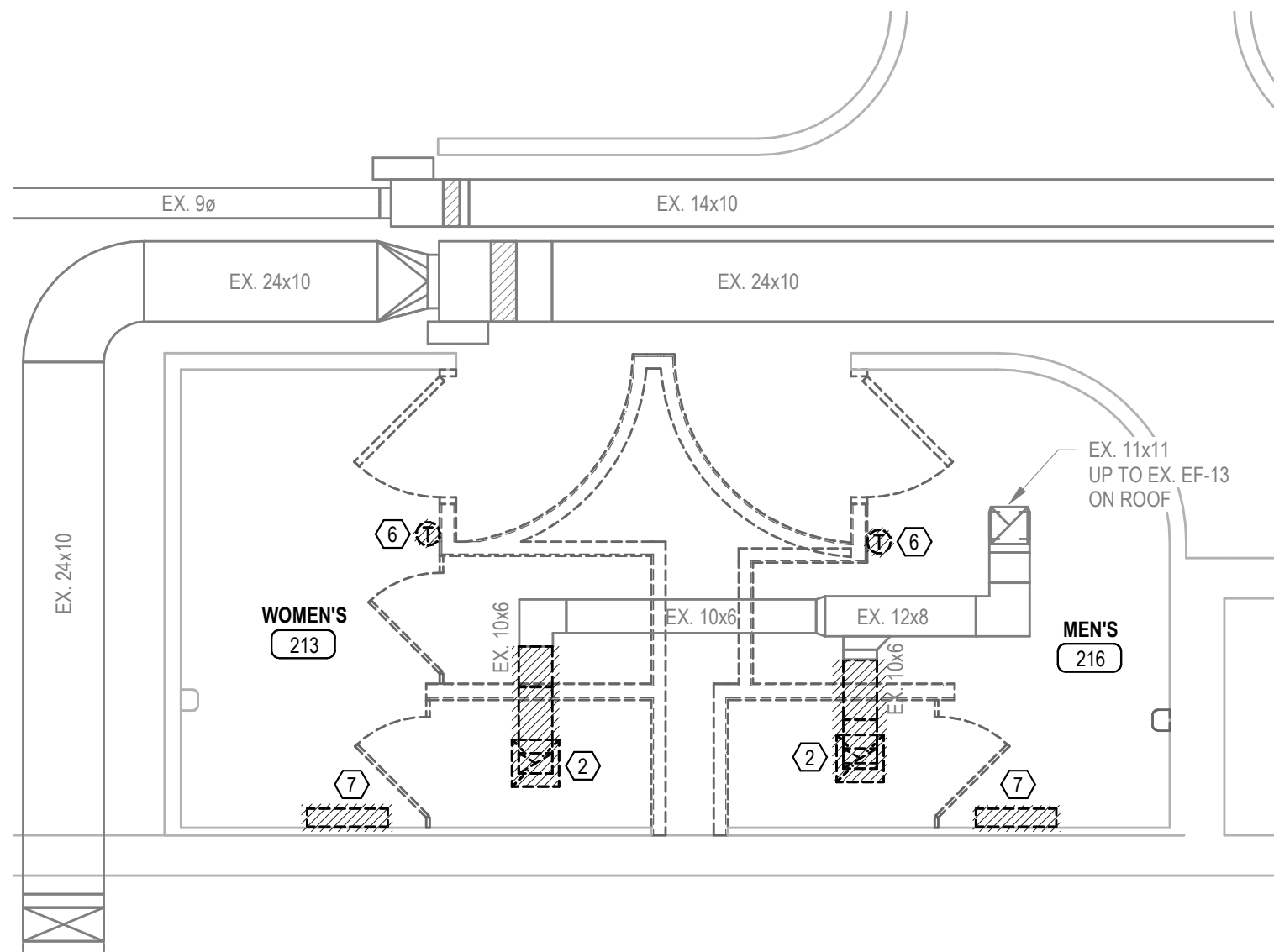
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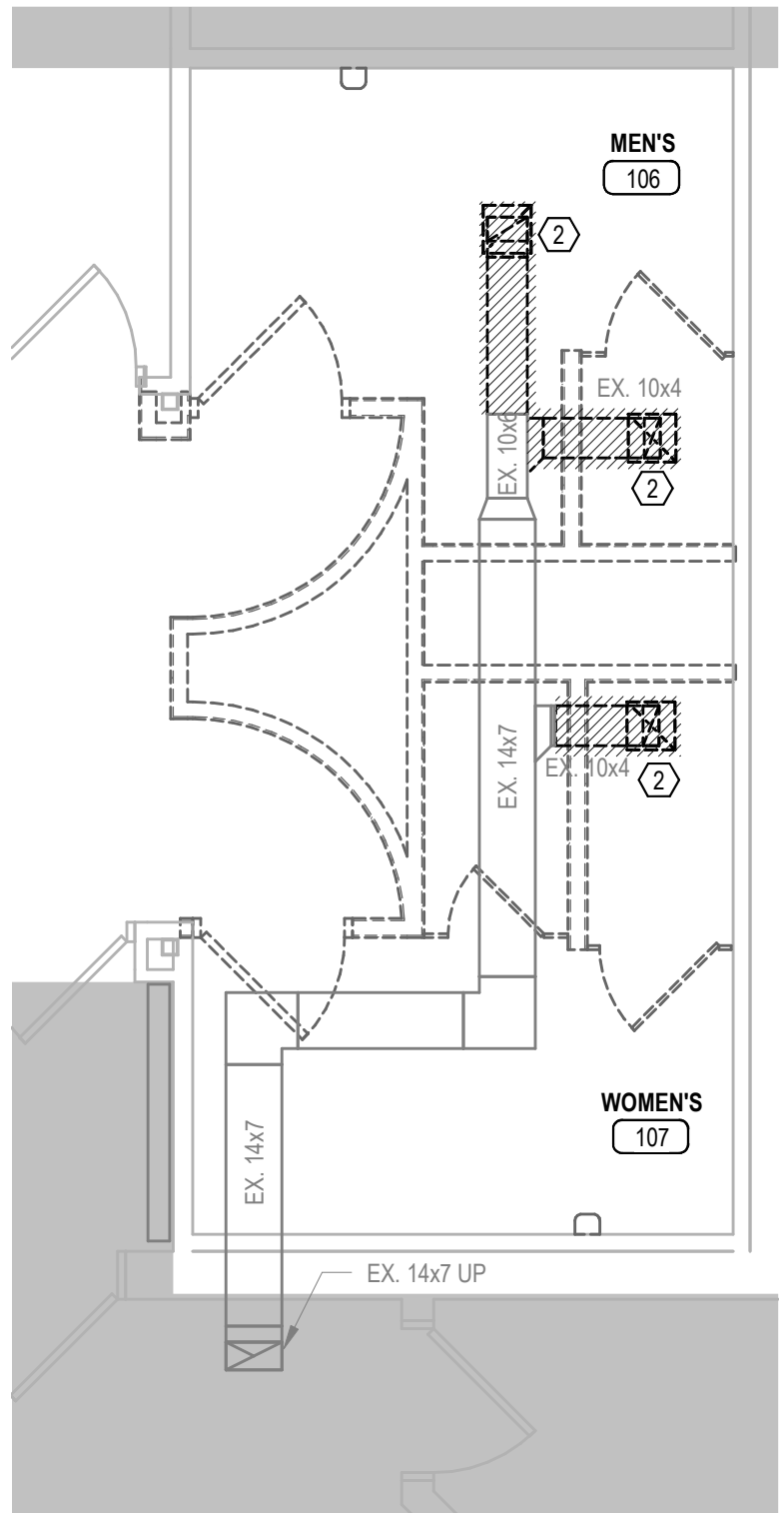
A



3 LEVEL 1 DRIVERS LOCKER ROOMS DEMOLITION PLAN - HVAC
1/4" = 1'-0"



2 LEVEL 2 ADMIN TOILET ROOM MECHANICAL DEMOLITION PLAN
1/4" = 1'-0"



1 LEVEL 1 ADMIN TOILET ROOM MECHANICAL DEMOLITION PLAN
1/4" = 1'-0"

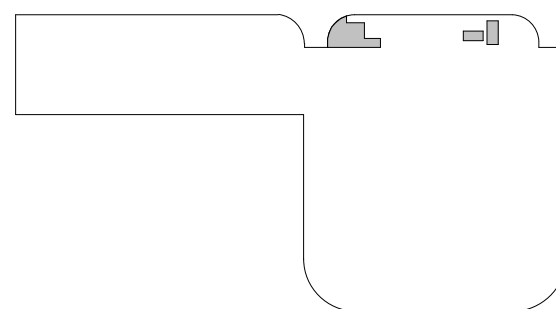
KEYED SHEET NOTES

- 1 DEMOLISH GRILLE IN HATCHED REGION. PATCH DUCTWORK AS REQUIRED.
- 2 DEMOLISH GRILLES IN HATCHED REGION SHOWN. PREPARE DUCT FOR NEW GRILLE CONNECTION.
- 3 REMOVE AND SALVAGE CABINET UNIT HEATER. DISCONNECT HOT WATER SUPPLY AND RETURN PIPING AND PREPARE FOR REINSTALLATION.
- 4 REMOVE AND SALVAGE THERMOSTAT AT LOCATION SHOWN. PREPARE FOR REINSTALLATION.
- 5 DEMOLISH EXHAUST GRILLE AND DUCTWORK IN HATCHED REGION. PATCH DUCTWORK AS REQUIRED.
- 6 REMOVE THERMOSTAT AT LOCATION SHOWN.
- 7 REMOVE AND SALVAGE FINNED TUBE RADIATION IN HATCHED REGION. DISCONNECT HOT WATER SUPPLY AND RETURN PIPING AND PREPARE FOR REINSTALLATION.



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KEYPLAN

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NO	DATE	REVISION
1	12/15/2022	ADDENDUM 01

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Signature: *Stewart Cran*

Typed or Printed Name: STEWART CRAN

Date: 10/24/2022 Reg. No.: 21202

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PROJECT NAME:

**OPS CENTER OFFICE
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2402 WEST MICHIGAN ST.
DULUTH, MINNESOTA 55806

DRAWING TITLE:

**LEVEL 1& 2 MECHANICAL
DEMOLITION PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO.: 200066
DRAWING NO:



MD101

- ① DEMOLISH GRILLES, AND DUCTWORK IN HATCHED REGION. PATCH DUCTWORK AS REQUIRED.
- ② REMOVE THROUGH WALL AC UNIT AND HAND OVER TO OWNER.
- ③ DEMOLISH DUCTWORK AND RETURN GRILLE IN HATCHED REGION SHOWN. PREPARE FOR NEW RETURN GRILLE.
- ④ CEILING GRILLE, REGISTERS, AND DIFFUSERS SHALL BE SALVAGED FOR REUSE. PLACE SALVAGED GRD'S INTO NEW CEILING IN GENERALLY THE SAME LOCATION AS EXISTING. PROVIDE DUCT MODIFICATIONS AS NECESSARY TO ACCOMMODATE NEW GRID LAYOUT.

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DRAWING TITLE:

**LEVEL 1 & 2
MAINTENANCE LOCKER
ROOMS MECHANICAL
DEMOLITION PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 200066
DRAWING NO: **MD101A**



1 LEVEL 1 MAINTENANCE LOCKER ROOMS MECHANICAL DEMOLITION PLAN
1/4" = 1'-0"

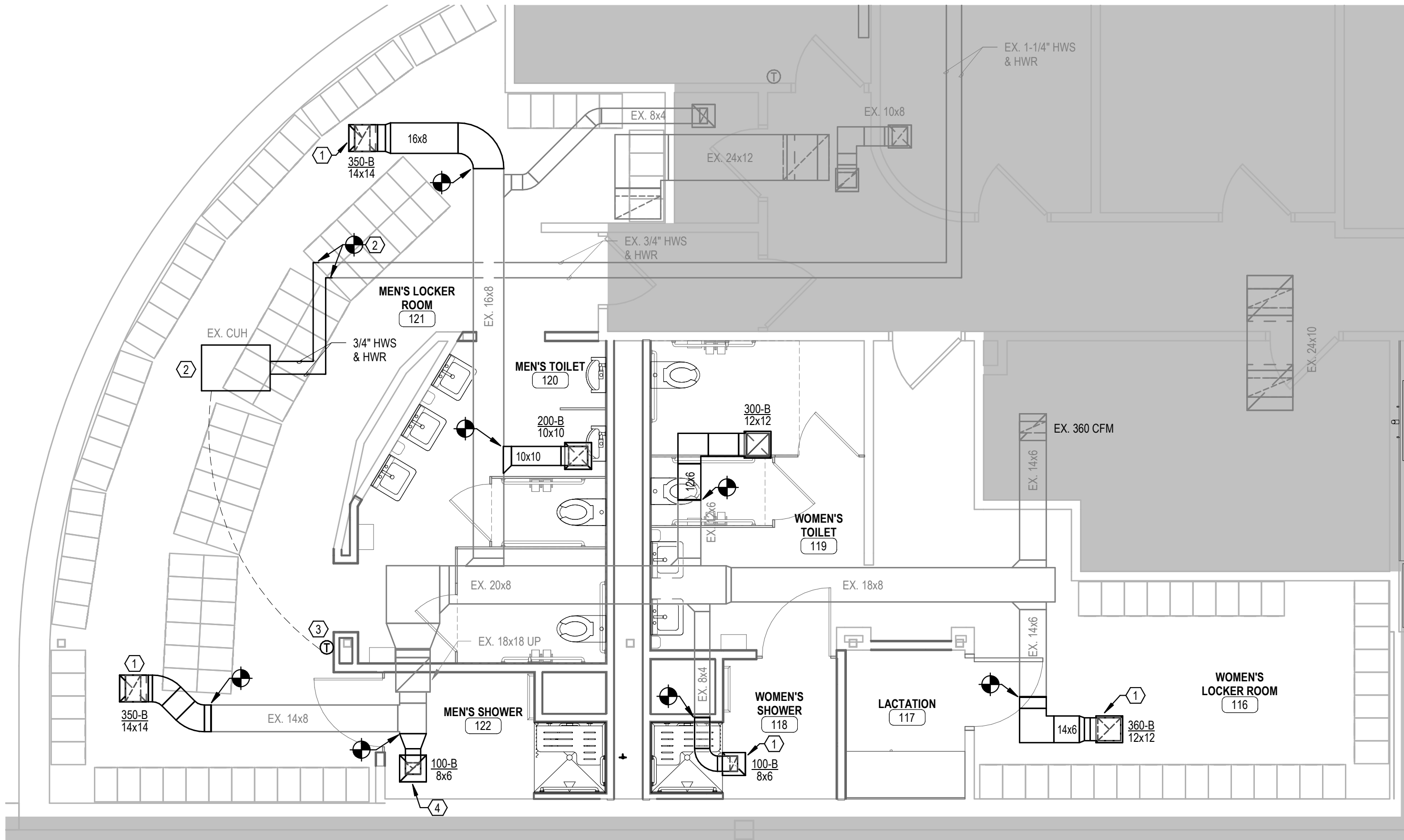
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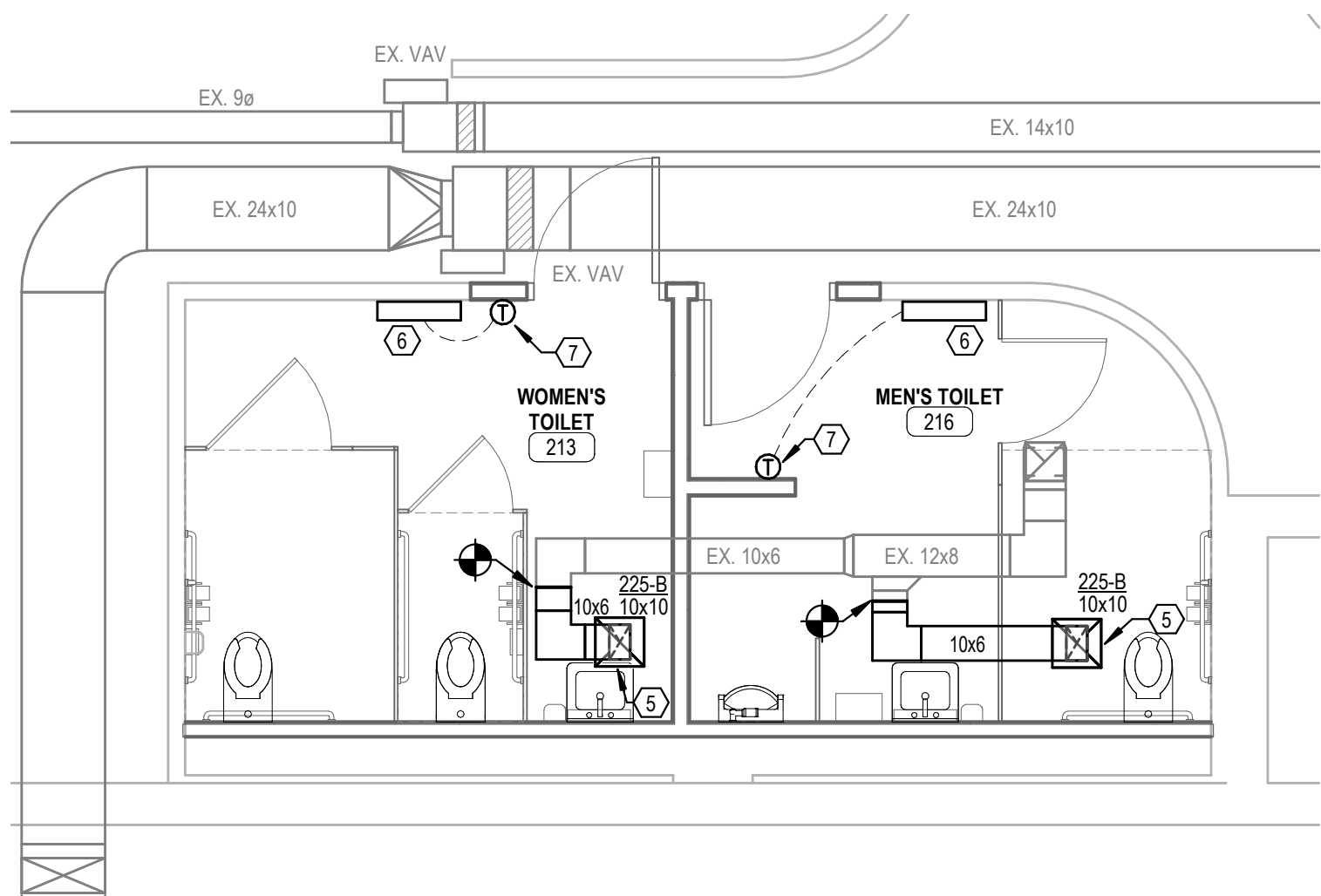
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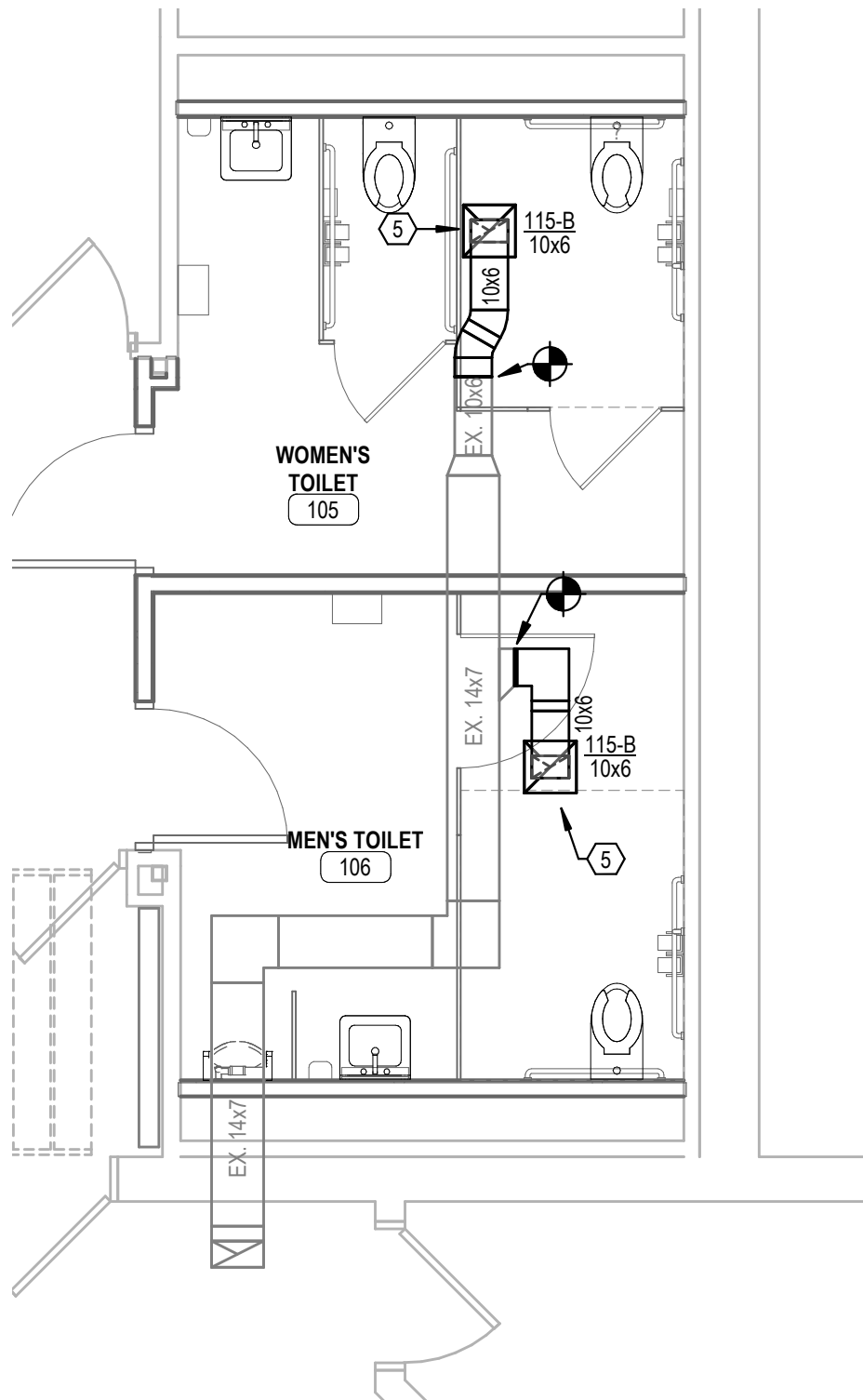
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3 LEVEL 1 DRIVER LOCKER ROOMS MECHANICAL PLAN
 1/4" = 1'-0"



2 LEVEL 2 ADMIN TOILET ROOM MECHANICAL PLAN
 1/4" = 1'-0"



1 LEVEL 1 ADMIN TOILET ROOM MECHANICAL PLAN
 1/4" = 1'-0"

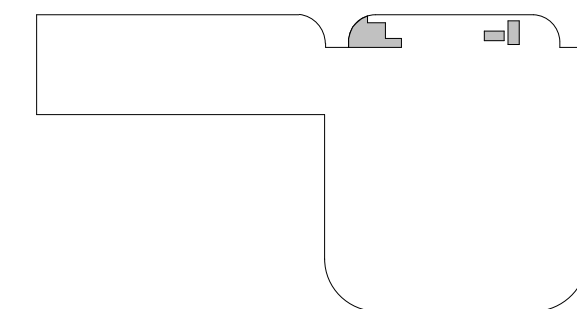
KEYED SHEET NOTES

- ① NEW EXHAUST GRILLES AT LOCATION SHOWN. MODIFY DUCTWORK AS NECESSARY TO ACCOMMODATE NEW CEILING GRID LAYOUT.
 ② RELOCATED CABINET UNIT HEATER AT LOCATION SHOWN. MODIFY AND RECONNECT HOT WATER SUPPLY AND RETURN PIPING AS SHOWN.
 ③ RELOCATED THERMOSTAT AT LOCATION SHOWN.
 ④ PROVIDE NEW EXHAUST GRILLE AT LOCATION SHOWN.
 ⑤ NEW EXHAUST GRILLE AT LOCATION SHOWN. MODIFY DUCTWORK AS REQUIRED TO ACCOMMODATE NEW CEILING GRID LAYOUT. BALANCE TO 140 CFM.
 ⑥ RELOCATED FINNED TUBE AT LOCATION SHOWN. MODIFY HOT WATER SUPPLY AND RETURN PIPING AS NECESSARY.
 ⑦ RELOCATED THERMOSTAT AT LOCATION SHOWN.



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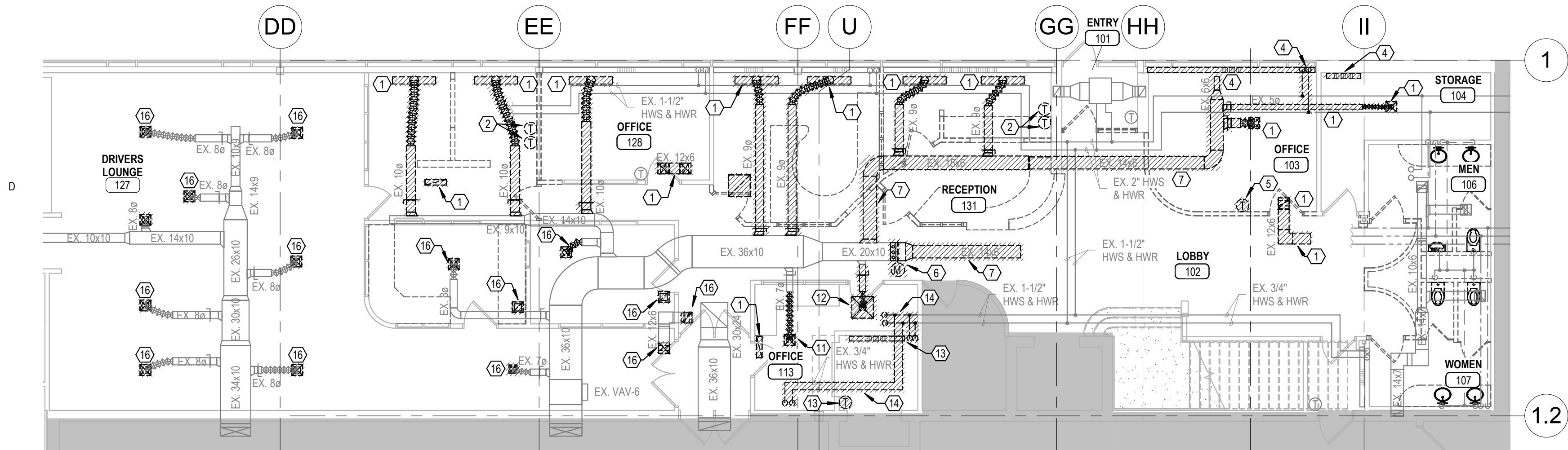
DRAWING TITLE:
**LEVEL 1 MECHANICAL
 PLANS**

DRAWN BY: MSR
 CHECKED BY: SDC
 PROJ. NO: 200066
 DRAWING NO:

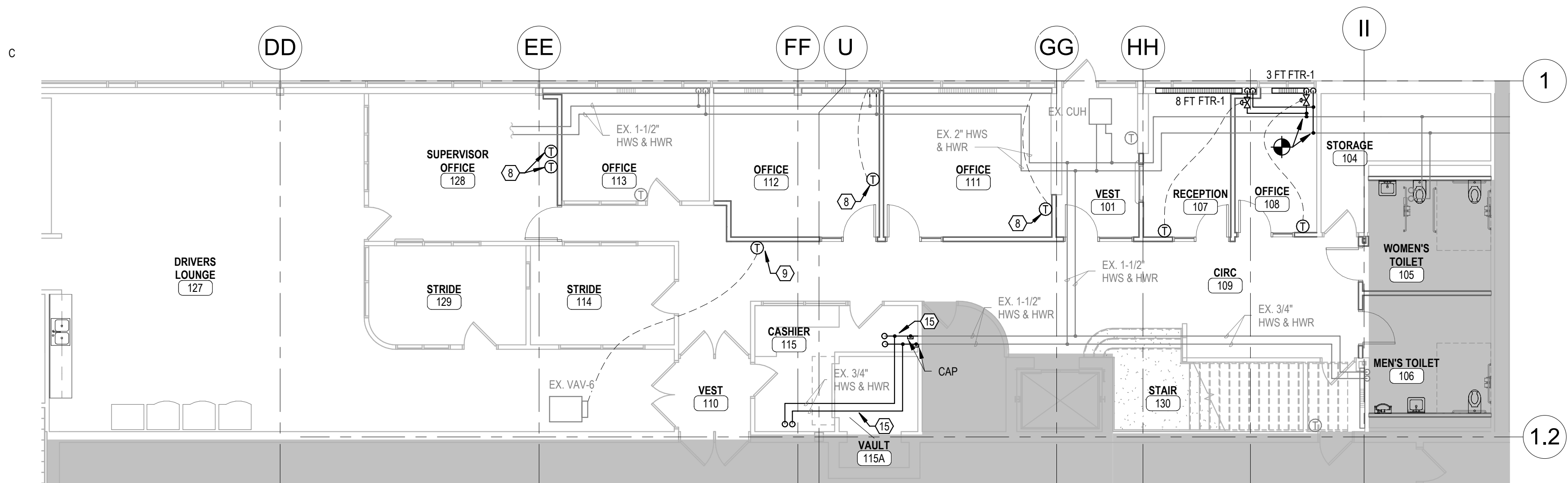


M101A

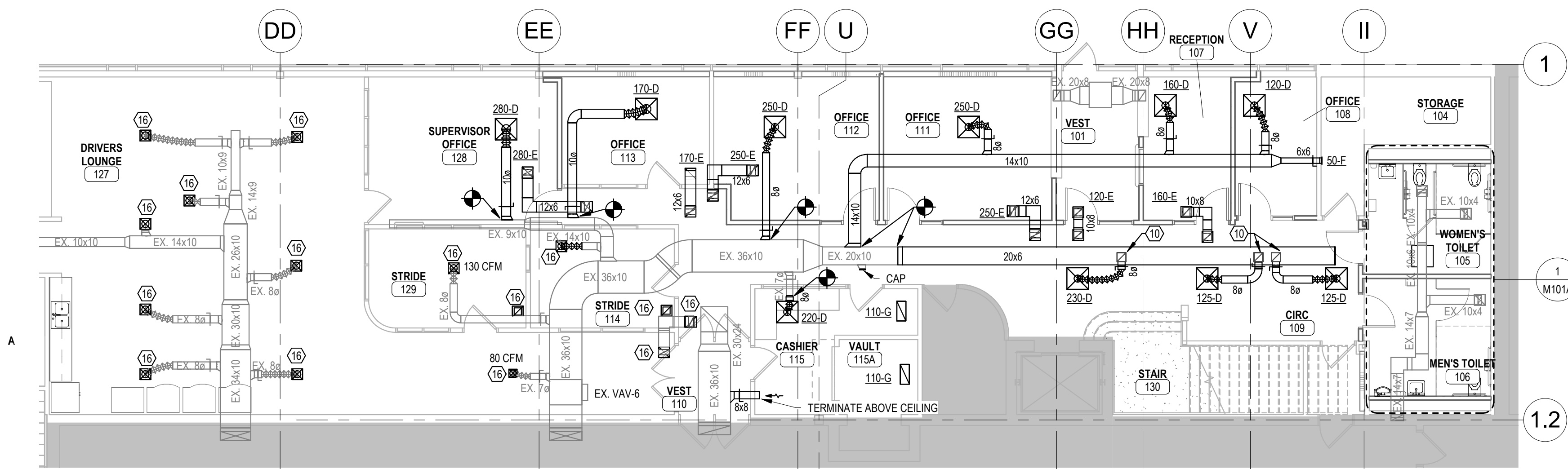
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12/15/2022 12:53 PM



1 LEVEL 1 MECHANICAL DEMOLITION PLAN
1/8" = 1'-0"



2 LEVEL 1 HYDRONIC PLAN
1/8" = 1'-0"



3 LEVEL 1 VENTILATION PLAN
1/8" = 1'-0"

FIRE PROTECTION NOTES

- REPLACE EXISTING SPRINKLER HEADS AND ESCUTCHEONS AT ALL NEW CEILING AREAS. REFER TO ARCHITECTURAL PLANS.
- REVISE HEAD LAYOUT AND INSTALL ADDITIONAL HEADS AS REQUIRED TO CONFORM TO NEW ROOM CONDITIONS AND MOST CURRENT NFPA 13.
- SPRINKLER HEAD LOCATIONS AND QUANTITIES TO BE IN ACCORDANCE WITH THE FOLLOWING:
 - ALL SPRINKLERS SHALL BE OF SEMI - RECESSED PENDANT TYPE UNLESS NOTED OTHERWISE.
 - SPRINKLER HEADS WITHIN 30" OF A SUPPLY DIFFUSER SHALL BE INTERMEDIATE TEMPERATURE HEADS.
 - ALL SPRINKLER HEADS SHALL BE CENTERED IN CEILING TILES.
 - SPRINKLER HEAD ALIGNMENT SHALL BE PERPENDICULAR AND/OR PARALLEL TO OTHER ELEMENTS SUCH AS SOFFITS, CEILING TILES, WALLS, ETC. UNLESS NOTED OTHERWISE.
 - MAKE SURE SOFFITS, TEAR DROP LIGHT FIXTURES, ETC. DO NOT INTERFERE WITH SPRINKLER HEAD DISCHARGE PATTERNS.
 - REMOVE AND REINSTALL ACOUSTICAL TILE AS REQUIRED TO PERFORM NECESSARY WORK.

HVAC NOTES

- REMOVE ALL DEMOLITION MATERIALS OFF SITE AND DISPOSE OF IN ACCORDANCE WITH MPCA REGULATIONS.
- ALL NEW HEATING WATER PIPING SHALL BE COPPER WITH SOLDERED OR PRESS FIT JOINTS.
- ALL NEW AND RELOCATED THERMOSTATS SHALL BE PROVIDED WITH NEW WIRES FROM THERMOSTAT TO CONTROLLED ELEMENT.
- NEW THERMOSTATS WILL INCLUDE ALL THE SAME FUNCTIONS AS THE EXISTING THERMOSTATS. NEW THERMOSTATS SHALL NOT CONTAIN MERCURY.
- HVAC EQUIPMENT SHALL BE EQUIVALENT TO THE EQUIPMENT SCHEDULED AND MEET THE SCHEDULED PERFORMANCES. ALL NEW DUCTWORK SHALL BE A MINIMUM OF 26 GAUGE GALVANIZED SHEETMETAL, FABRICATED TO SMACNA 1 INCH PRESSURE CLASS, AND HAVE ALL LONGITUDINAL AND TRANSVERSE JOINTS SEALED.
- ALL NEW SUPPLY DUCTS SHALL BE INSULATED WITH 2 INCH THICK 1-1/2 LB/CF DENSITY FIBERGLASS WRAP INSULATION.
- FLEX DUCT SHALL BE INSULATED FLEX DUCT AND SHALL NOT EXCEED MORE THAN 5 FEET IN LENGTH.
- GRILLES, REGISTERS, AND DIFFUSERS (GRD's) SHALL BE EQUIVALENT TO SCHEDULED GRD's AND BE OF COMMERCIAL GRADE.
- ALL EXISTING AND NEW AIR TERMINALS ASSOCIATED WITH VAV-6 SHALL BE BALANCED AS CLOSE AS POSSIBLE TO THE CFM's LISTED ON THE PLANS.

KEYED SHEET NOTES

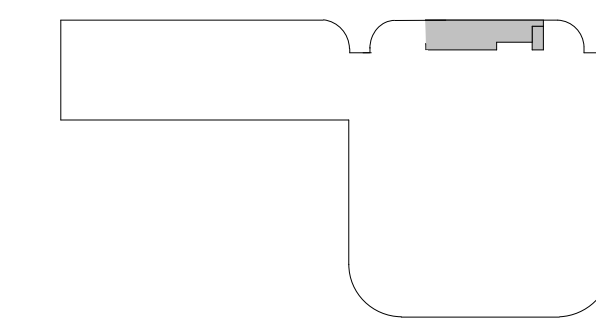
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|--|--|
| 1 DEMOLISH DUCTWORK, DIFFUSER OR GRILLE, DAMPERS AND ALL OTHER ACCESSORIES IN HATCHED AREAS SHOWN. | 10 INSTALL 10x10 BRANCH WITH END CAP ON TOP OF MAIN DUCT. INSTALL 8 INCH TAP WITH DAMPER ON VERTICAL BRANCH AND ROUTE FLEX DUCT THROUGH JOIST SPACE TO DIFFUSER. |
| 2 SALVAGE THERMOSTAT FOR RELOCATION. | 11 REMOVE FLEX DUCT AND DIFFUSER IN HATCHED REGION SHOWN. |
| 3 NOT USED. | 12 REMOVE DIFFUSER AND ASSOCIATED DUCT BRANCH IN HATCHED REGION SHOWN. CAP AT MAIN DUCT. |
| 4 DEMOLISH FINNED TUBE RADIATION AND DISCONNECT ASSOCIATED PIPING AND CONTROLS IN HATCHED AREAS SHOWN. CAP PIPING AT MAIN. | 13 FINNED TUBE RADIATION AND ENCLOSURE SHALL BE REMOVED. ASSOCIATED CONTROLS AND PIPING TO BE REMOVED, CAP PIPING BACK AT MAIN. |
| 5 DEMOLISH THERMOSTAT IN HATCHED AREA SHOWN. | 14 REMOVE INSULATION FROM ALL PIPES IN CEILING PLENUM ABOVE OFFICE 113. PREPARE FOR NEW INSULATION. |
| 6 REMOVE TEST HOLES AND MOTORIZED DAMPER. PREPARE DUCT FOR NEW DUCT CONNECTION. | 15 INSTALL NEW 1-1/2 INCH INSULATION IN CEILING PLENUM ABOVE OFFICE 113. |
| 7 DEMOLISH DUCTWORK IN HATCHED AREA SHOWN. PREPARE MAIN FOR NEW DUCT ROUTING. | 16 CEILING GRILLES, REGISTERS, AND DIFFUSERS SHALL BE SALVAGED FOR REUSE. PLACE SALVAGED GRD's INTO NEW CEILING IN GENERALLY THE SAME LOCATION AS EXISTING. PROVIDE DUCT MODIFICATIONS AS NECESSARY TO ACCOMMODATE NEW GRID LAYOUT." |
| 8 RELOCATED THERMOSTAT AT LOCATION SHOWN. | |
| 9 PROVIDE NEW THERMOSTAT SERVING VAV-6 AT LOCATION SHOWN. | |



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NO	DATE	REVISION

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Signature: 

Typed or Printed Name: STEWART CRAN

Date: 10/24/2022 Reg. No.: 21202

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PROJECT NAME:

**OPS CENTER OFFICE
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2402 WEST MICHIGAN ST.
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DRAWING TITLE:

**LEVEL 1 MECHANICAL
PLANS**

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 190559
DRAWING NO:

M101B



- ① NEW SUPPLY GRILLE AT LOCATION SHOWN. MODIFY DUCTWORK AS NECESSARY TO ACCOMMODATE NEW CEILING GRID LAYOUT.
- ② NEW EXHAUST GRILLE AT LOCATION SHOWN. MODIFY DUCTWORK AS NECESSARY TO ACCOMMODATE NEW CEILING GRID LAYOUT.
- ③ 24x24 RETURN GRILLE WITH 23.8x23.8 BOX WITH 18x8 TAP. HEIGHT FIELD VERIFIED BASED ON HEIGHT OF EXISTING DUCT AND CLEARANCE BETWEEN CEILING AND BOTTOM OF MEZZANINE SLAB.
- ④ CEILING GRILLE, REGISTERS, AND DIFFUSERS SHALL BE SALVAGED FOR REUSE. PLACE SALVAGED GRD'S INTO NEW CEILING IN GENERALLY THE SAME LOCATION AS EXISTING. PROVIDE DUCT MODIFICATIONS AS NECESSARY TO ACCOMMODATE NEW GRID LAYOUT.

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PROJECT NAME

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DRAWING TITLE

LEVEL 1 MAINTENANCE
LOCKER ROOMS
MECHANICAL PLANS

DRAWN BY: MSR
CHECKED BY: SDC
PROJ. NO: 200066
DRAWING NO:

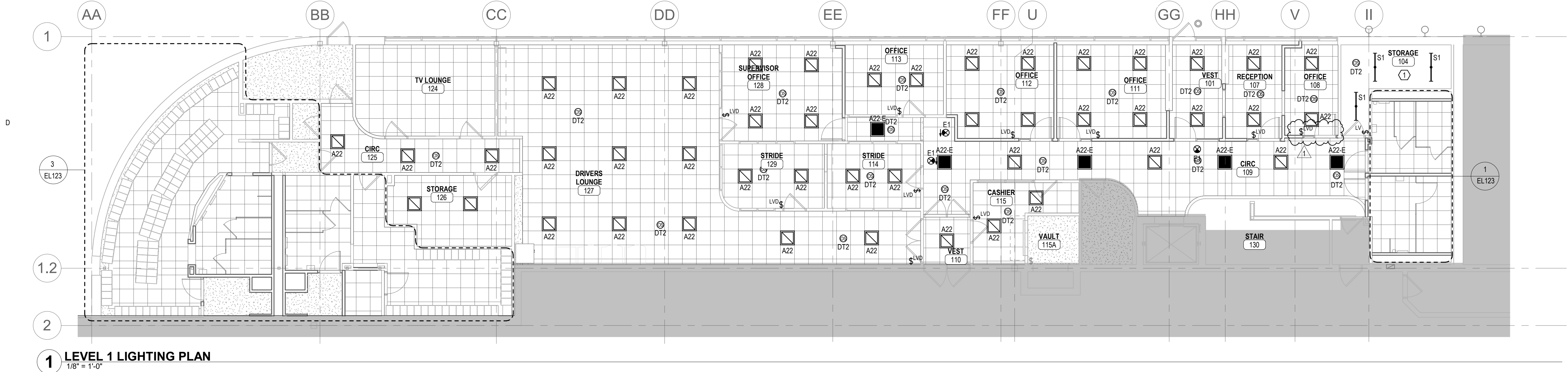
M102



2 LEVEL 2 VENTILATION PLAN

1 LEVEL 1 MAINTENANCE LOCKER ROOMS MECHANICAL PLAN
1/4" = 1'-0"

BM 360/190559 DTA Office Remodel/190559 DTA Ops Cr Office Redesign MEP20.rvt
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GENERAL SHEET NOTES		KEYED SHEET NOTES
A. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LIGHTING FIXTURE LOCATIONS WITHIN CEILING.	I. EMERGENCY EGRESS LIGHT FIXTURES, INDICATED BY SOLID SHADING, SHALL BE CONNECTED TO EXISTING LIGHTING CIRCUITS FROM PANEL E1, SALVAGED DURING DEMOLITION. CONTROL NEW CORRIDOR AND LOBBY EMERGENCY EGRESS LIGHT FIXTURES FROM EXISTING LIGHTING CONTROL PANEL.	1. SUSPEND FIXTURES IN THIS ROOM / AREA AT 9'-0" AFF TO BOTTOM OF FIXTURE.
B. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT BUILDING / WALL-MOUNTED LIGHTING FIXTURE AND CONTROLS LOCATIONS.	J. PROVIDE CONDUIT AND CONDUCTORS TO EXTEND EXISTING EXIT LIGHTING CIRCUIT SERVED FROM PANEL E1 TO NEW EXIT LIGHTS.	
C. REFER TO LIGHTING SCHEDULES FOR SPECIFIC FIXTURE AND CONTROLS INFORMATION.		
D. REFER TO SPECIFICATION SECTION 26 0519 FOR REQUIRED CONDUCTOR SIZE ADJUSTMENTS FOR VOLTAGE DROP.		
E. PROVIDE 6" FLEXIBLE METAL CONDUIT FOR RECESSED LIGHTING FIXTURES INSTALLED IN ACCESSIBLE LAY-IN CEILINGS.		
F. PROVIDE LIGHTING CONTROL DEVICES PER MANUFACTURER'S RECOMMENDATIONS (CATALOG NUMBER, LOCATION AND QUANTITY); REFER TO SPECIFICATION SECTION 26 0943. DEVICES SHOWN ARE FOR GENERAL DESIGN INTENT ONLY.		
G. PROVIDE WALL-MOUNTED LIGHTING SWITCHES / CONTROLS TO ACCOMMODATE NEW DOOR CONFIGURATIONS.		
H. UNLESS NOTED OTHERWISE, CONNECT NEW LIGHT FIXTURES TO EXISTING LIGHTING CIRCUITS FROM PANEL L1, SALVAGED DURING DEMOLITION. CONTROL NEW LIGHT FIXTURES AS INDICATED.		



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1	12/15/2022	ADDENDUM 01
NO	DATE	REVISION

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Signature: 
Typed or Printed Name: MARK J. VINCENT
Date: 10/24/2022 Reg. No.: 52349

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DRAWING TITLE:
**OFFICE LIGHTING
PLAN**

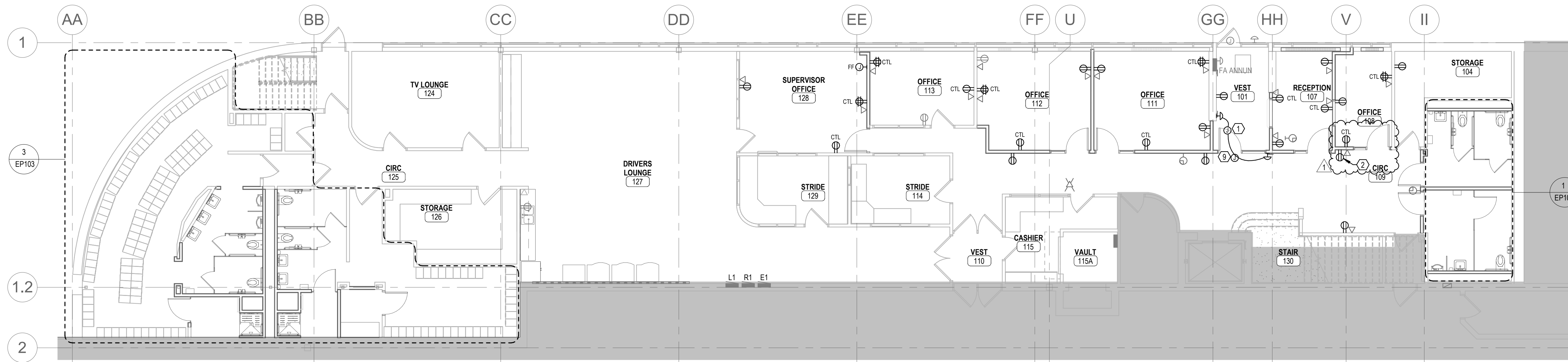
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CHECKED BY: MJV
PROJ. NO: 190559
DRAWING NO:

EL121

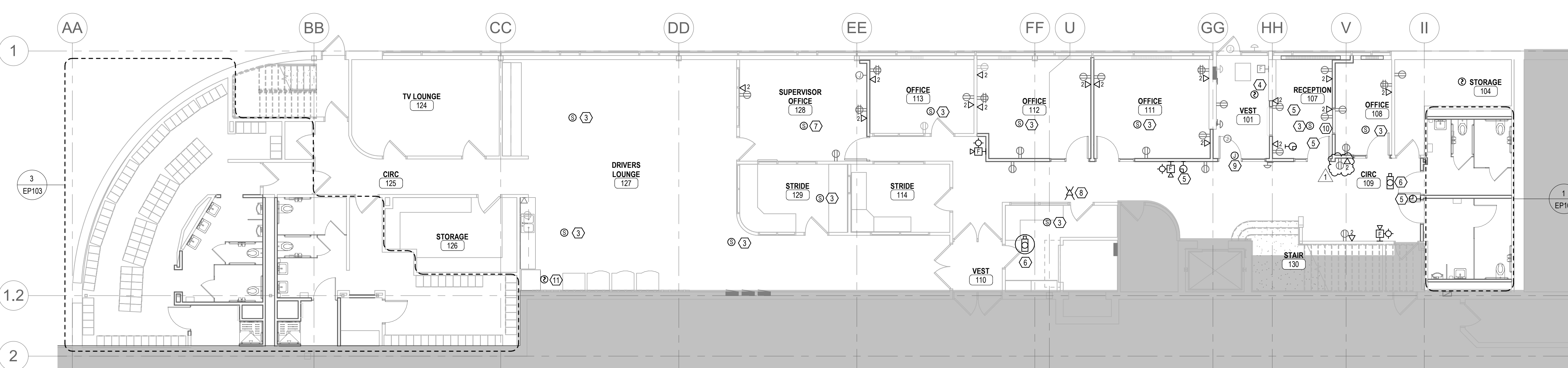


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1 LEVEL 1 POWER PLAN
1/8" = 1'-0"



2 LEVEL 1 TECHNOLOGY PLAN
1/8" = 1'-0"

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1 12/15/2022 ADDENDUM 01
NO DATE REVISION

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Date: 10/24/2022 Reg. No.: 52349

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PROJECT NAME:
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2402 WEST MICHIGAN ST.
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DRAWING TITLE:
**OFFICE POWER AND
TECHNOLOGY PLANS**

DRAWN BY: AML
CHECKED BY: MJV
PROJ. NO.: 190559
DRAWING NO.:

EP101

GENERAL SHEET NOTES

- A. REFER TO "TYPICAL DEVICE MOUNTING DETAIL" FOR DEVICE MOUNTING HEIGHTS AND ADJACENCIES.
- B. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT WALL-MOUNTED DEVICE LOCATIONS.
- C. REFER TO PANEL BOUNDARIES ON PLAN FOR PANEL CIRCUITING INFORMATION.
- D. REFER TO EQUIPMENT SCHEDULES FOR SPECIFIC EQUIPMENT CONNECTION INFORMATION.
- E. PROVIDE ROUGH-IN FOR THE FOLLOWING SYSTEMS TO BE PROVIDED BY THE DIVISION 27 CONTRACTOR:
- TECHNOLOGY CABLING
 - TECHNOLOGY EQUIPMENT ROOM COMPONENTS
- F. PROVIDE ROUGH-IN FOR THE FOLLOWING SYSTEMS TO BE PROVIDED BY THE DIVISION 28 CONTRACTOR:
- FIRE ALARM SYSTEM
 - SECURITY MANAGEMENT SYSTEM
 - ACCESS CONTROL
- G. STUB TECHNOLOGY CONDUIT INTO ACCESSIBLE CEILING SPACE, UNLESS NOTED OTHERWISE.
- H. PROVIDE WORK FOR ALL ALTERNATE ITEMS (IF ANY). REFER TO NOTES ON DRAWINGS AND SPECIFICATIONS FOR ALTERNATE DESCRIPTIONS.
- I. UNLESS NOTED OTHERWISE, CONNECT NEW RECEPTACLES TO EXISTING RECEPTACLE CIRCUITS FROM PANELBOARD R1 THAT WERE SALVAGED DURING DEMOLITION. PROVIDE ADDITIONAL CONDUIT AND CONDUCTORS, AS REQUIRED, TO MAKE FINAL CONNECTIONS TO DEVICES IN NEW LOCATIONS.
- J. ROUTE ALL NEW DATA CABLES TO COMPUTER / SERVER ROOM 206, LOCATED ON THE SECOND FLOOR ABOVE OFFICE 111. PROVIDE (1) NEW 48 PORT PATCH PANEL IN EXISTING RACK TO SERVE PROPOSED DEVICES.

KEYED SHEET NOTES

- PROVIDE SEPARATE CIRCUIT FROM PANEL R1 FOR POWER DOOR OPERATOR, PROVIDED BY OTHERS. RECEIVE ACTUATORS FROM GC AND INSTALL IN LOCATIONS INDICATED. COORDINATE FINAL LOCATIONS WITH OWNER PRIOR TO INSTALLATION. PROVIDE CONDUIT AND CONDUCTORS TO CONNECT ACTUATORS FOR A COMPLETE AND OPERABLE SYSTEM.
- PROVIDE DEDICATED 20A CIRCUIT FOR COPIER.
- RE-INSTALL EXISTING SPEAKER SALVAGED DURING DEMOLITION. PROVIDE SPEAKER CABLE TO RE-CONNECT SPEAKER IN NEW LOCATION WITHIN THE SAME VICINITY.
- RE-INSTALL EXISTING FIRE ALARM ANNUNCIATOR PANEL SALVAGED DURING DEMOLITION. PROVIDE FIRE ALARM CABLE TO RE-CONNECT PANEL IN NEW LOCATION WITHIN THE SAME VICINITY.
- RE-INSTALL EXISTING CLOCK SALVAGED DURING DEMOLITION. PROVIDE CONDUIT AND CONDUCTORS TO EXTEND EXISTING CIRCUIT TO NEW LOCATION WITHIN THE SAME VICINITY.
- RE-INSTALL EXISTING CAMERA SALVAGED DURING DEMOLITION. PROVIDE CONDUIT AND CONDUCTORS TO EXTEND EXISTING CIRCUIT TO NEW LOCATION WITHIN THE SAME VICINITY.
- PROVIDE NEW SPEAKER. PROVIDE SPEAKER CABLE FROM EXISTING PA SYSTEM LOCATED IN COMPUTER / SERVER ROOM 206.
- PROVIDE NEW CAT6A CABLE FROM COMPUTER / SERVER ROOM 206 TO WIRELESS ACCESS POINT LOCATION. TERMINATE CABLE IN FEMALE JACK. PROVIDE 10' SERVICE LOOP NEATLY COILED AND SUPPORTED TO STRUCTURE ABOVE ACCESSIBLE CEILING. WIRELESS ACCESS POINT, MOUNTING HARDWARE AND PATCH CABLE SHALL BE PROVIDED BY OWNER.
- PROVIDE (1) SEPARATE CIRCUIT FROM PANEL R1 TO SERVE (4) SECURE DOOR POWER SUPPLIES PROVIDED BY DIV 08. PROVIDE CONDUIT AND LOW VOLTAGE CONDUCTORS FROM POWER SUPPLY TO SECURITY HARDWARE FOR A COMPLETE AND OPERABLE SYSTEM. REFER TO DOOR HARDWARE, FIRE ALARM, ACCESS CONTROL & INTRUSION DETECTION REQUIREMENTS ON SHEET E601.
- PROVIDE ELECTRONIC RELEASE BUTTON BY RECEPTION DESK TO ALLOW RECEPTIONIST TO RELEASE THE ELECTRIC STRIKES ON DOORS 101.1, 101.2 AND 102. PROVIDE CONDUIT AND CONDUCTORS FOR A COMPLETE AND OPERABLE SYSTEM.
- RE-INSTALL EXISTING SMOKE DETECTOR SALVAGED DURING DEMOLITION. PROVIDE CONDUIT AND CONDUCTORS TO EXTEND EXISTING CIRCUIT TO NEW LOCATION WITHIN THE SAME VICINITY.