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**PROJECT:**  
Willow Lake School Addition

**ADDENDUM NO.:** 2

**OWNER:**  
Willow Lake School District 12-3  
Willow Lake, SD 57278

**DATE OF ISSUANCE:**  
February 16, 2023

**ARCHITECT:**  
CO-OP Architecture  
440 E 8<sup>th</sup> Street, Suite 221  
Sioux Falls, SD 57103

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To all bidders and all others to whom drawings and specifications have been issued by CO-OP Architecture.

Acknowledge receipt of this addendum by listing its number and date in the bidders Form of Proposal. Failure to do so may subject bidder to disqualification. This Addendum forms a part of the Contract Documents.

It modifies them as follows:

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## QUESTIONS AND RESPONSES

### GENERAL ITEMS:

- 1) Table of Contents (updated for added specification sections.)
- 2) Drawing Sheets (updated for added sheet A512)
- 3) Updated Plan Holder's List

### APPROVED SUBSTITUTIONS:

<u>SECTION</u>	<u>PARAGRAPH</u>	<u>REQUESTED SUBSTITUTION/MANUFACTURER</u>
075323	2.01A,1,C	Mule-Hide Products' .060 EPDM roof system
098430	2.01A	Commercial Interior Acoustical Wall Panel

### KEYNOTE UPDATES:

<u>KEYNOTE</u>	<u>DESCRIPTION</u>
12.04	MANUAL ROLLER WINDOW SHADES

### REVISIONS TO SPECIFICATIONS:

- 1) 034113 – PRECAST CONCRETE HOLLOW CORE PLANKS
  - a. Add this section in its entirety.

- 2) 096429 – WOOD STRIP AND PLANK FLOORING
  - a. Add this section in its entirety.
- 3) 101400 – SIGNAGE
  - a. Added section C. Vinyl Lettering
- 4) 102600 – WALL AND DOOR PROTECTION
  - a. Add this section in its entirety.
- 5) 123280 – INSTRUMENT STORAGE
  - a. Add this section in its entirety.

#### **REVISIONS TO DRAWINGS:**

- 1) Sheet S000 – STRUCTURAL NOTES
  - a. See clouded areas for revisions.
- 2) Sheet S100C – FOOTING & FOUNDATION PLAN – AREA ‘C’
  - a. See clouded areas for revisions.
- 3) Sheet S200C – ROOF FRAMING PLAN – AREA ‘C’
  - a. See clouded areas for revisions.
- 4) Sheet S304 – STRUCTURAL DETAILS
  - a. See clouded areas for revisions.
- 5) Sheet A101C – FIRST FLOOR PLAN AREA ‘C’
  - a. Revised keynotes for roller shades to show motorized shades in the commons.
- 6) Sheet A101D – FIRST FLOOR PLAN AREA ‘D’
  - a. Revised keynotes for roller shades to show motorized shades in the commons.
- 7) Sheet A110C – REFLECTED CLG PLAN AREA ‘C’
  - a. Added keynote.
- 8) Sheet A110D – REFLECTED CLG PLAN AREA ‘D’
  - a. Added keynote.
- 9) Sheet A122 – ENLARGED FINISH PLANS – AREA(S) C & E
  - a. Corrected typo on Alternate 2 plan for clarity.
- 10) Sheet A511 – INTERIOR DETAILS
  - a. Revised detail 7 as shown.
- 11) Sheet A512 – INTERIOR SIGNAGE
  - a. Added this sheet in its entirety.

#### **ADDENDA ITEMS – MECHANICAL/ELECTRICAL**

- 1) See attached ME-1 addendum

#### **ADDENDA ITEMS – FOOD SERVICE**

- 2) See attached food service addendum

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#### **END OF ADDENDUM**



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**SECTION 034113  
PRECAST CONCRETE HOLLOW CORE PLANKS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Precast floor planks.
- B. Connection plates with brackets and hangers.
- C. Grouting plank joint keys.

**1.02 RELATED REQUIREMENTS**

- A. Section 033000 - Cast-in-Place Concrete.

**1.03 REFERENCE STANDARDS**

- A. ACI 301 - Specifications for Concrete Construction 2020.
- B. ACI 318 - Building Code Requirements for Structural Concrete 2019 (Reapproved 2022).
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel 2019.
- D. ASTM A416/A416M - Standard Specification for Low-Relaxation, Seven-Wire Steel Strand for Prestressed Concrete 2018.
- E. AWS D1.1/D1.1M - Structural Welding Code - Steel 2020, with Errata (2022).
- F. AWS D1.4/D1.4M - Structural Welding Code - Steel Reinforcing Bars 2018, with Amendment (2020).
- G. IAS AC157 - Accreditation Criteria for Fabricator Inspection Programs for Reinforced and Precast/Prestressed Concrete 2017.
- H. PCI MNL-116 - Manual for Quality Control for Plants and Production of Structural Precast Concrete Products 2021.
- I. PCI MNL-120 - PCI Design Handbook 2017, with Errata (2021).
- J. PCI MNL-123 - Connections Manual: Design and Typical Details of Connections for Precast and Prestressed Concrete 1988.
- K. PCI MNL-124 - Design for Fire Resistance of Precast Prestressed Concrete 2011.
- L. PCI MNL-126 - PCI Manual for the Design of Hollow Core Slabs and Walls 2015.
- M. PCI MNL-135 - Tolerance Manual for Precast and Prestressed Concrete Construction 2000.
- N. PCI (CERT) - PCI Plant Certification Current Edition.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination: Coordinate location of hanger tabs and devices for mechanical and electrical work and cutting of field openings.
- B. Preinstallation Meeting: Convene one week before starting work of this section.
  - 1. Discuss anchor and weld plate locations, sleeve locations, and cautions regarding cutting or core drilling.

**1.05 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Indicate standard component configuration, design loads, deflections, and cambers.
- C. Shop Drawings: Indicate plank locations, unit identification marks, connection details, edge conditions, bearing requirements, support conditions, dimensions, openings, openings intended to be field cut, and relationship to adjacent materials.
  - 1. Submit design calculations.
- D. Welders' Certificates.
- E. Designer's Qualification Statement.

- F. Fabricator's Qualification Statement: Provide documentation showing precast concrete fabricator is accredited under IAS AC157.
- G. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.

#### **1.06 QUALITY ASSURANCE**

- A. Designer Qualifications: Design precast concrete hollow core planks under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of documented experience.
- C. Fabricator Qualifications: Precast concrete fabricator accredited by IAS according to IAS AC157.
- D. Erector Qualifications: Company specializing in performing the type of work specified in this section, with minimum 5 years of documented experience.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Lifting or Handling Devices: Capable of supporting member in positions anticipated during manufacture, storage, transportation, and erection.

### **PART 2 PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Precast Concrete Hollow Core Planks:
  - 1. Any manufacturer with PCI Plant Certification.
  - 2. Substitutions: See Section 016000 - Product Requirements.

#### **2.02 PRECAST UNITS**

- A. Precast Hollow Core Planks: Comply with PCI MNL-120, PCI MNL-126, PCI MNL-124 ACI 318, and ACI 301.
  - 1. Dimensions as indicated on drawings.
  - 2. Design components to withstand dead loads and design loads in the configuration indicated on drawings and as follows:
    - a. Floor Assembly: 85 pounds per square foot dead load.
    - b. Floor Assembly (Light/Heavy): 125/250 pounds per square foot live load.
    - c. Maximum Allowable Deflection of Floor Planks: 1/240 of span (total load) and 1/360 (live load), cambered to achieve flat surface under dead load.
  - 3. Design connections in accordance with PCI MNL-123.
  - 4. Design components to accommodate construction tolerances, deflection of other building structural members and clearances of intended openings.

#### **2.03 MATERIALS**

- A. Concrete Materials: ACI 301.
- B. Tensioning Steel Tendons: ASTM A416/A416M, Grade 250 - 250K psi; seven-wire stranded steel cable; low-relaxation type; full length without splices; weldless; uncoated.
- C. Reinforcing Steel: ASTM A615/A615M, Grade 40 (40,000 psi) deformed steel bars.
- D. Non-Shrink Grout: Non-metallic, minimum compressive strength of 10,000 psi at 28 days.
- E. Cement Grout: Minimum compressive strength of 3,000 psi at 28 days.

#### **2.04 ACCESSORIES**

- A. Connecting and Supporting Devices: Plates, angles, items cast into concrete, items connected to steel framing members, and inserts: ASTM A36/A36M carbon steel; prime painted.
- B. Core Hole End Plugs: Cardboard insert with stiff concrete fill.
- C. Hanger Tabs: Galvanized steel, designed to fit into grouted key joints, capable of supporting 500 lbs dead load, predrilled to receive hanger.

- D. Bearing Pads: High density plastic, 1/8 inch thick, smooth on one side. Vulcanized elastomeric compound molded to size.
- E. Sill Seal: Compressible glass fiber strips.

## **2.05 FABRICATION**

- A. Weld reinforcing in accordance with AWS D1.4/D1.4M.
- B. Embed anchors, inserts, plates, angles, and other items at locations indicated.
- C. Provide openings required by other sections, at locations indicated.
- D. Cut exposed ends flush.
- E. Plant Finish: Finish members to PCI MNL-116 Commercial Grade.
- F. Connecting and Supporting Steel Devices: Do not paint surfaces in contact with concrete or surfaces requiring field welding.

## **2.06 FABRICATION TOLERANCES**

- A. Comply with PCI MNL-116 and PCI MNL-135, except as specifically amended below.
  - 1. Maximum Variation From Nominal Dimensions:
    - a. Width: Plus or minus 1/4 in.
    - b. Length: Plus or minus 1/2 in.
    - c. Depth: Plus or minus 1/4 in.
  - 2. Maximum Variation From Intended Camber: Plus or minus 1/4 inch in 10 feet.
  - 3. Maximum Variation from Plan End Squareness: Plus or minus 1/4 in.
  - 4. Maximum Sweep: Plus or minus 1/4 in.
  - 5. Maximum Misalignment of Anchors, Inserts, Openings: Plus or minus 1/8 inch.
  - 6. Maximum Bowing of Members: Length/360.
  - 7. Maximum Bowing of Members: Plus or minus 1/4 inch in 10 feet to a maximum of 3/8 inch.

## **2.07 SOURCE QUALITY CONTROL**

- A. Produce planks in accordance with requirements of PCI MNL-116. Maintain plant records and quality control program during production of precast planks. Make records available upon request.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that site conditions are ready to receive work and field measurements are as indicated on shop drawings.

### **3.02 PREPARATION**

- A. Prepare support devices for the erection procedure and temporary bracing.

### **3.03 ERECTION**

- A. Erect members without damage to structural capacity, shape, or finish. Replace or repair damaged members.
- B. Install bearing pads and sill seal at bearing ends of planks as indicated.
- C. Align and maintain uniform horizontal and end joints, as erection progresses.
- D. Maintain temporary bracing in place until final connection is made. Protect members from staining.
- E. Adjust differential camber between precast members to tolerance before final attachment and grouting.
- F. Adjust differential elevation between precast members to tolerance before final attachment.
- G. Secure units in place. Perform welding in accordance with AWS D1.1/D1.1M.
- H. Grout longitudinal keys as indicated.

- I. Make plank-to-plank joints smooth using grout, troweled smooth. Transition differential elevation of adjoining planks with grout to a maximum slope of 1:12.

### **3.04 TOLERANCES**

- A. Erect members level and plumb within allowable tolerances. Comply with PCI MNL-135, except as specifically amended below.
  1. Plan Location from Building Grid Datum: Plus or minus 3/4 in.
  2. Top Elevation from Building Elevation Datum at Plank Ends: Plus or minus 1/2 inch.
  3. Maximum Jog in Alignment of Matching Ends: Plus or minus 1/2 inch.
  4. Exposed Joint Dimension: Plus or minus 3/8 inch.
  5. Differential Top Elevation As Erected: Plus or minus 3/8 inch.
  6. Bearing Length in Span Direction: Plus or minus 3/8 inch.
  7. Differential Bottom Elevation of Exposed Planks: Plus or minus 3/16 inch.

### **3.05 PROTECTION**

- A. Protect members from damage caused by field welding or erection operations.

### **3.06 CLEANING**

- A. Clean weld marks, dirt, and blemishes from surface of exposed members.

**END OF SECTION**

**SECTION 096429  
WOOD STRIP AND PLANK FLOORING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Wood strip and plank flooring, nailed.
- B. Secondary subflooring.

**1.02 RELATED REQUIREMENTS**

- A. Section 061000 - Rough Carpentry: Wood subfloor surface.

**1.03 REFERENCE STANDARDS**

- A. MFMA (SPEC) - Guide Specifications for Maple Flooring Systems current edition.
- B. NWFA (IG) - Installation Guidelines Current Edition.

**1.04 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for flooring.
- C. Shop Drawings: Indicate floor joint pattern and termination details.
- D. Manufacturer's Instructions: Indicate standard and special installation procedures.
- E. Samples: Submit two samples 2-1/4 by 12 inch in size illustrating floor finish, color, and sheen.
- F. Maintenance Data: Include maintenance procedures and recommended maintenance materials.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 016000 - Product Requirements, for additional provisions.
  - 2. Extra Flooring Material: 1 square yards matching installed flooring.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least five years of documented experience.

**1.06 FIELD CONDITIONS**

- A. Do not install wood flooring until wet construction work is complete and ambient air at installation space has moisture content stabilized at maximum moisture content of 40 percent.
- B. Provide heat, light, and ventilation prior to installation.
- C. Store materials in area of installation for minimum period of 24 hours prior to installation.
- D. Maintain minimum room temperature of 65 degrees F for a period of two days prior to delivery of materials to installation space, during installation, and after installation.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Hardwood Strip and Plank Flooring:
  - 1. Substitutions: See Section 016000 - Product Requirements

**2.02 MATERIALS**

- A. Wood Strip Flooring - Type WDF-1:
  - 1. Species: Northern hard maple.
  - 2. Grade: No. 2 Common and better.
  - 3. Moisture Content: 7 to 9 percent.
  - 4. Actual Thickness: 25/32 inch.
  - 5. Actual Width: 2-1/4 inches.

- 6. Edge: Tongue and groove.
- 7. Length: Random, minimum of 9 inches.
- B. Flooring Nails: Type recommended by flooring manufacturer.
- C. Secondary Subflooring: 23/32 inch thick plywood, with tongue and groove edges; Exposure 1, sanded, preservative treated.
- D. Sheathing Paper: Plain building paper.

### **2.03 ACCESSORIES**

- A. Transition Strip: Same species and finish as flooring material; profiles indicated.
- B. Floor Stain: To match existing flooring; penetrating type recommended by flooring manufacturer.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify existing conditions before starting this work.
- B. Verify wood subfloor is properly secured, smooth and flat to plus or minus 1/4 inch in 10 feet.
- C. Verify that required floor-mounted utilities are in correct location.

### **3.02 PREPARATION**

- A. Secondary Subflooring: Place plywood subflooring.
  - 1. Lay perpendicular to the sleepers, with end joints over sleepers, and nail at 12 inches on center.
- B. Prepare substrate to receive wood flooring in accordance with manufacturer's and NWFA instructions.
- C. Broom clean substrate.

### **3.03 INSTALLATION**

- A. Sheathing Paper: Place over wood subfloor; lap edges and ends 2 inches, staple in place.
- B. Wood Flooring:
  - 1. Install in accordance with manufacturer's and NWFA instructions; predrill and blind nail to subfloor.
  - 2. Lay flooring parallel to length of room areas. Verify alignment as work progresses.
  - 3. Arrange flooring with end matched grain set flush and tight.
  - 4. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar; provide divider strips and transition strips in accordance with flooring manufacturer's recommendations and as indicated.
  - 5. Install edge strips at unprotected or exposed edges, and where flooring terminates.
  - 6. Secure edge strips before installation of flooring with stainless steel screws.
  - 7. Install flooring tight to floor access covers.
  - 8. Provide 2 inch expansion space at fixed walls and other interruptions.
- C. Install base at floor perimeter to cover expansion space in accordance with manufacturer's instructions. Miter inside and outside corners.
- D. Finishing:
  - 1. Mask off adjacent surfaces before beginning sanding.
  - 2. Sand flooring to smooth even finish with no evidence of sander marks. Take precautions to contain dust. Remove dust by vacuum.
  - 3. Apply first coat, allow to dry, then buff lightly with steel wool to remove irregularities. Vacuum clean and wipe with damp cloth before applying succeeding coat.
  - 4. Lightly buff between coats with steel wool and vacuum clean before applying succeeding coat.
  - 5. Apply last coat of finish.

**3.04 CLEANING**

- A. Clean and polish floor surfaces in accordance with floor finish manufacturer's instructions.

**3.05 PROTECTION**

- A. Prohibit traffic on floor finish for 48 hours after installation.
- B. Place protective coverings over finished floors; do not remove coverings until Date of Substantial Completion.

**END OF SECTION**

## **SECTION 101400 SIGNAGE**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Room and door signs.
- B. Building identification signs.
- C. ***Vinyl lettering.***

#### **1.02 REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines current edition.
- B. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.

#### **1.03 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
- C. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
  - 1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
  - 2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
  - 3. Submit for approval by Owner through Architect prior to fabrication.
- D. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.
- E. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
- F. Manufacturer's Installation Instructions: Include installation templates and attachment devices.
- G. Manufacturer's Qualification Statement.
- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

#### **1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.
- C. Store tape adhesive at normal room temperature.

#### **1.06 FIELD CONDITIONS**

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.



## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Flat Signs: Basis of Design: Inpro corporation Aspen Collection with back plate.
  - 1. Best Sign Systems, Inc: [www.bestsigns.com/#sle](http://www.bestsigns.com/#sle).
  - 2. Cosco Industries (ADA signs): [www.coscoarchitecturalsigns.com/#sle](http://www.coscoarchitecturalsigns.com/#sle).
  - 3. Inpro: [www.inprocorp.com](http://www.inprocorp.com).
  - 4. Substitutions: See Section 016000 - Product Requirements.
- B. Dimensional Letter Signs:
  - 1. A.R.K. Ramos Architectural Signage Systems; Cast Aluminum Letters: [www.arkramos.com/#sle](http://www.arkramos.com/#sle).
  - 2. Cosco Industries; Cast Aluminum: [www.coscoarchitecturalsigns.com/#sle](http://www.coscoarchitecturalsigns.com/#sle).
  - 3. FASTSIGNS: [www.fastsigns.com/#sle](http://www.fastsigns.com/#sle).
  - 4. Inpro: [www.inprocorp.com](http://www.inprocorp.com).
  - 5. Substitutions: See Section 016000 - Product Requirements.

### **2.02 SIGNAGE APPLICATIONS**

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
  - 1. Sign Type: Flat signs with engraved panel media as specified.
  - 2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
  - 3. Character Height: 1 inch.
  - 4. Sign Height: 2 inches, unless otherwise indicated.
  - 5. Office Doors: Identify with room numbers to be determined later, not the numbers indicated on drawings; in addition, provide "window" section for replaceable occupant name.
  - 6. Conference and Meeting Rooms: Identify with room numbers to be determined later, not the numbers shown on the drawings; in addition, provide "window" section with sliding "In Use/Vacant" indicator.
  - 7. Service Rooms: Identify with room names and numbers to be determined later, not those shown on the drawings.
  - 8. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", room numbers to be determined later, and braille.
  - 9. Include Occupant Load on room signage.
- C. Building Identification Signs:
  - 1. Use individual metal letters.
  - 2. Mount on outside wall in location indicated on drawings.
- D. Other Dimensional Letter Signs: Wall-mounted.

### **2.03 SIGN TYPES**

- A. Flat Signs: Signage media in aluminum frame.
  - 1. Corners: Square.
  - 2. Frame Finish: Natural (clear) anodized.
  - 3. Wall Mounting of One-Sided Signs: Tape adhesive.
- B. Color and Font: Unless otherwise indicated:
  - 1. Character Font: Helvetica, Arial, or other sans serif font.
  - 2. Character Case: Upper case only.
  - 3. Background Color: To be selected from manufacturers full range of colors.
  - 4. Character Color: Contrasting color.

## 2.04 TACTILE SIGNAGE MEDIA

- A. Applied Character Panels: Acrylic plastic base, with applied acrylic plastic letters and braille.
  - 1. Total Thickness: 1/8 inch.
  - 2. Letter Thickness: 1/8 inch.
  - 3. Letter Edges: Square.

## 2.05 DIMENSIONAL LETTERS

- A. Metal Letters:
  - 1. Metal: Aluminum channel.
  - 2. Metal Thickness: 1/8 inch minimum.
  - 3. Letter Height: As indicated on drawings.
  - 4. Text and Typeface:
    - a. Character Font: Helvetica, Arial, or other sans serif font.
    - b. Character Case: Upper case only.
  - 5. Mounting: Concealed.
  - 6. Lighting: Halo lit.

## 2.06 VINYL LETTERS

- A. **Exterior Door Identification:**
  - 1. **Application: Glass.**
  - 2. **Material: Vinyl.**
  - 3. **Size: See Drawings.**
  - 4. **Thickness: 4 mil.**
  - 5. **Weight: .065 lbs/sqft.**
  - 6. **Ink: UV fade-resistant.**

## 2.07 ACCESSORIES

- A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.
- B. Tape Adhesive: Double sided tape, permanent adhesive.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.

### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Locate signs where indicated:
  - 1. Room and Door Signs: Locate on wall at latch side of door with centerline of sign at 60 inches above finished floor.
  - 2. If no location is indicated obtain Owner's instructions.
- D. Protect from damage until Substantial Completion; repair or replace damaged items.

**END OF SECTION**

**SECTION 102600  
WALL AND DOOR PROTECTION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Corner guards.

**1.02 RELATED REQUIREMENTS**

- A. Section 061000 - Rough Carpentry: Blocking for wall and corner guard anchors.
- B. Section 092116 - Gypsum Board Assemblies: Placement of supports in stud wall construction.
- C. Section 092216 - Non-Structural Metal Framing: Placement of supports in stud wall construction.

**1.03 REFERENCE STANDARDS**

- A. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- B. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics 2010 (Reapproved 2018).
- C. ASTM D543 - Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents 2021.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2022.
- E. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials 2022.

**1.04 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Indicate physical dimensions, features, and anchorage details.
- C. Shop Drawings: Include plans, elevation, sections, and attachment details.
- D. Samples: Submit samples illustrating component design, configurations, joinery, color and finish.
- E. Manufacturer's Instructions: Indicate special procedures, perimeter conditions requiring special attention.
- F. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project:
  - 1. See Section 016000 - Product Requirements, for additional provisions.
  - 2. Extra Stock Materials: One package(s) of minimum 96 inches long unit of each kind of covers for corner guards.
- H. Maintenance Data: Manufacturer's instructions for care and cleaning of each type of product. Include information about both recommended and potentially detrimental cleaning materials and methods.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver wall and door protection items in original, undamaged protective packaging. Label items to designate installation locations.
- B. Protect work from moisture damage.
- C. Protect work from UV light damage.
- D. Do not deliver products to project site until areas for storage and installation are fully enclosed, and interior temperature and humidity are in conformance with manufacturer's recommendations for each type of item.

- E. Store products in either horizontal or vertical position, in conformance with manufacturer's instructions.

#### **1.06 WARRANTY**

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a one year period after Date of Substantial Completion.
- C. Provide five year manufacturer and installer warranty for metal crash rails.

### **PART 2 PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Corner Guards: Basis of Design: Acrovyn TF Series by Construction Specialties, Inc.
  - 1. Babcock-Davis: [www.babcockdavis.com/#sle](http://www.babcockdavis.com/#sle).
  - 2. Inpro: [www.inprocorp.com/#sle](http://www.inprocorp.com/#sle).
  - 3. Koroseal Interior Products: [www.koroseal.com/#sle](http://www.koroseal.com/#sle).
  - 4. Nystrom, Inc: [www.nystrom.com/#sle](http://www.nystrom.com/#sle).
  - 5. Trim-Tex, Inc: [www.trim-tex.com/#sle](http://www.trim-tex.com/#sle).
  - 6. Substitutions: See Section 016000 - Product Requirements.

#### **2.02 PRODUCT TYPES**

- A. Corner Guards - Surface Mounted:
  - 1. Material: High impact vinyl.
  - 2. Width of Wings: 2 inches.
  - 3. Thickness: .040 inch.
  - 4. Corner: Radiused.
  - 5. Color: As selected from manufacturer's standard colors.
  - 6. Length: One piece.
  - 7. Preformed end caps.

#### **2.03 FABRICATION**

- A. Fabricate components with tight joints, corners and seams.
- B. Pre-drill holes for attachment.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that substrate surfaces for adhered items are clean and smooth.
  - 1. Test painted or wall covering surfaces for adhesion in inconspicuous area, as recommended by manufacturer. Follow adhesive manufacturer's recommendations for remedial measures at locations and/or application conditions where adhesion test's results are unsatisfactory.

#### **3.02 INSTALLATION**

- A. Install components in accordance with manufacturer's instructions, level and plumb, secured rigidly in position to supporting construction.
- B. Position corner guard 4 inches above finished floor to 48 inches high.

#### **3.03 TOLERANCES**

- A. Maximum Variation From Required Height: 1/4 inch.

#### **3.04 CLEANING**

- A. Clean wall and door protection items of excess adhesive, dust, dirt, and other contaminants.

**END OF SECTION**

**SECTION 123280  
INSTRUMENT STORAGE**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Instrument storage cabinets

**1.02 RELATED REQUIREMENTS**

- A. Section 016000 - Product Requirements:
- B. Section 079200 - Joint Sealants: Sealing joints between casework and countertops and adjacent walls, floors, and ceilings.
- C. Section 123600 - Countertops: Additional requirements for countertops.

**1.03 DEFINITIONS**

- A. Exposed: Portions of casework visible when drawers and cabinet doors are closed, including end panels, bottoms of cases more than 42 inches above finished floor, tops of cases less than 72 inches above finished floor and all members visible in open cases or behind glass doors.
- B. Semi-Exposed: Portions of casework and surfaces behind solid doors, tops of cases more than 72 inches above finished floor and bottoms of cabinets more than 30 inches but less than 42 inches above finished floor.
- C. Concealed: Sleepers, web frames, dust panels and other surfaces not generally visible after installation and cabinets less than 30 inches above finished floor.

**1.04 REFERENCE STANDARDS**

- A. ANSI A135.4 - Basic Hardboard 2012 (Reaffirmed 2020).
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2022.
- C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards 2021, with Errata.

**1.05 ADMINISTRATIVE REQUIREMENTS**

- A. Large Components: Ensure that large components can be moved into final position without damage to other construction.

**1.06 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Component dimensions, configurations, construction details, joint details, attachments; manufacturer's catalog literature on hardware, accessories, and service fittings, if any.
- C. Shop Drawings: Casework locations, large scale plans, elevations, cross sections, rough-in and anchor placement dimensions and tolerances, clearances required.
- D. Samples: For each color and finish for each exposed casework component.
- E. Test Reports: From independent laboratory indicating compliance with referenced chemical-resistance standards for cabinet finish and liner materials.
- F. Maintenance Data: Manufacturer's recommendations for care and cleaning.

**1.07 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than five years of documented experience.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Musical Instrument Storage Casework:

1. Basis of Design: UltraStor Cabinets by Wenger Corporation.
2. Substitutions: See Section 016000 - Product Requirements.

## **2.02 MUSICAL INSTRUMENT STORAGE CASEWORK**

- A. Basis of Design: UltraStor Storage Cabinets as manufactured by Wenger Corporation. Modular instrument storage casework with integral bases, adjustable levelers, and through-bolted fastening, enabling owner reconfiguration of unit layout.
- B. General: Provide through-ventilating instrument storage casework meeting requirements in System Description and Performance Requirements Articles
- C. Side Panels and Divider Panels: Particleboard thermoset panel with no urea formaldehyde added, 3/4 inch (19 mm) thick. Side panels machined to accept unit-to-unit through-bolting.
- D. Open Casework: Provide casework without doors.
- E. Shelving: Sized with adequate gap between shelving and casework side panels to allow air movement inside casework.
  1. Up to 27 inches (686 mm) wide: Removable molded polyethylene shelf, with impact-resistant, radiused front edge, mounted to cabinet wall with self-locking clip.
  2. Over 27 inches (686 mm) wide: For large instrument casework: Removable formed polyethylene shelf, ribbed, with high-impact-resistant, radiused front edge, supported by steel tube frame.
- F. Casework Panel Color: As selected by Architect from manufacturer's standard colors.
- G. Filler Panels and Closure: 3/4 inch (19 mm) thick particleboard thermoset panels with no urea formaldehyde in Oyster color. Provide the following, cut to fit field conditions, where indicated:
  1. Wall filler between cabinet side and wall.
  2. Top filler between cabinet top and wall.
  3. Top of cabinet closure panel between cabinet and finished ceiling or soffits.
  4. Finished back panel for exposed cabinet backs.
- H. Panel Connectors: 1/4-20 by 1.77 inch (45 mm) panel connectors, with steel thread inserts, powder coated to match panels.
- I. Cabinet Levelers: Leveling glides with 3/8 inch (9.5 mm) diameter threaded steel rod in steel corner brackets, minimum two each per cabinet side, accessible from within unit, and concealed in completed installation.
- J. Carcass joinery includes lag screws powder coated to match substrate.
- K. Back panel 7/32 inch (5.6 mm) reinforced with 3/4 inch (19 mm) stretchers panels held in a dado groove and lag screwed in place.
- L. Fasteners: Manufacturer-recommended fasteners as required for casework substrate and project performance requirements, consisting of one or more of the following:
  1. Sheet Metal Screws: SAE J78, corrosion-resistant-coated, self-drilling, self-tapping steel drill screws.
  2. Wood Screws: ASME B18.6.1.
  3. Expansion Anchors in Concrete and Concrete Masonry Units: Carbon-steel, zinc plated.
  4. Hardware supplied to anchor the cabinets to the wall and to adjacent casework.

## **2.03 MATERIALS**

- A. Particleboard: ANSI A208.1, minimum 43 lb/cu. ft. (689 kg/cu. m) density, composite products and adhesives, with no urea formaldehyde added.
- B. Particleboard Thermoset Panels: Particleboard finished with thermally-fused polyester surfacing on both sides meeting performance properties of NEMA LD 3 for VGS grade, edge-banded, including the following:
  1. Surface Abrasion Resistance: Taber Wheel, 400 cycles, for solid colors.
- C. Polyethylene Shelves: High-density, one-piece, blow-molded or polyethylene, with radiused front edge, for abuse-resistant shelves. Same color throughout will not show scratches.
- D. PVC Edge Banding: Radiused PVC extrusions, 1/8 inch (3 mm) thick.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify adequacy of support framing and anchors.

### **3.02 INSTALLATION**

- A. Use anchoring devices to suit conditions and substrate materials encountered.
- B. Set casework items plumb and square, securely anchored to building structure.
- C. Align cabinets to adjoining components, install filler panels where necessary to close gaps.
- D. Replace units that are damaged, including those that have damaged finishes.

### **3.03 ADJUSTING**

- A. Adjust operating parts, including doors, drawers, hardware, and fixtures to function smoothly.

### **3.04 CLEANING**

- A. Clean casework surfaces thoroughly.

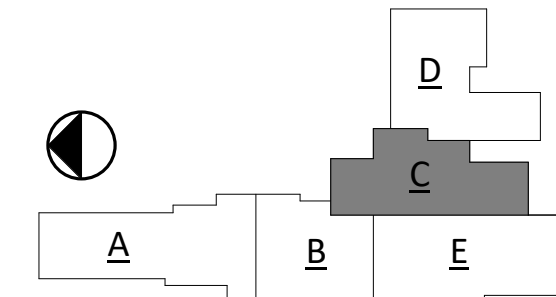
### **3.05 PROTECTION**

- A. Do not permit finished casework to be exposed to continued construction activity.
- B. Repair damage that occurs prior to Date of Substantial Completion, including finishes, using methods prescribed by manufacturer; replace units that cannot be repaired to like-new condition.

**END OF SECTION**







RISE PROJECT NO: 22359



ISSUE:  
01-30-23 100% CONSTRUCTION DOCUMENTS

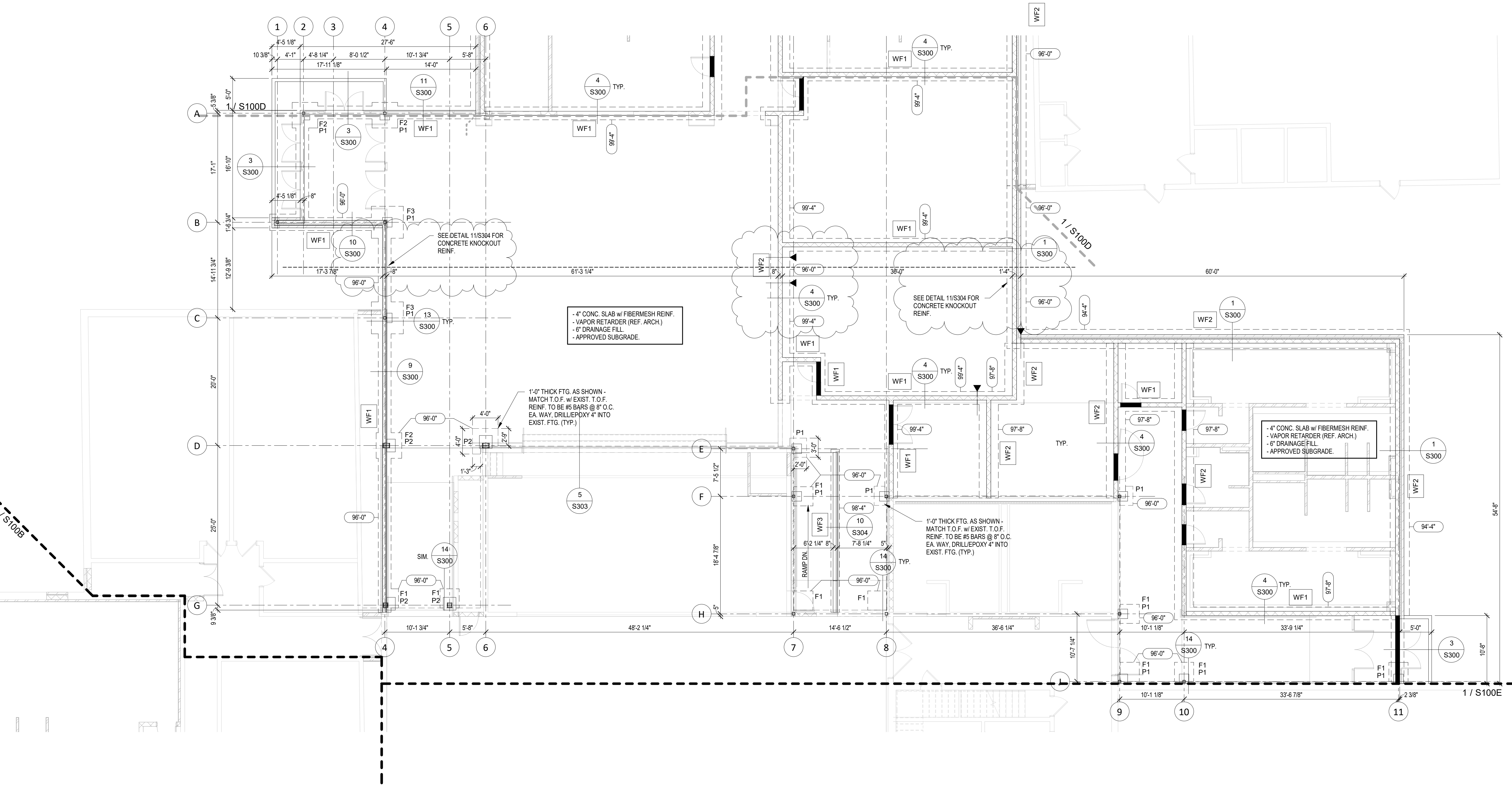
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REV. #	REV. DSC.	REV. DATE
2	ADD02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

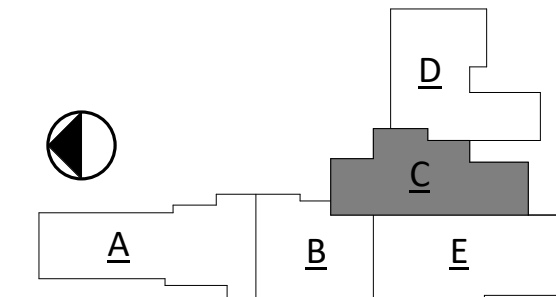
SHEET TITLE:  
FOOTING & FOUNDATION PLAN - AREA C

**S100C**



**1 FOOTING & FOUNDATION PLAN - AREA C**

- 1/8" = 1'-0"
- NOTES:
- CONTRACTOR TO SUBMIT CONTROL JOINT LAYOUT FOR ARCH/ENGINEER APPROVAL
  - SEE STRUCTURAL NOTES FOR SIZE/SPACING LIMITATIONS.
  - SEE 6 & 7 ON SHEET S300 FOR TYPICAL CONTROL JOINT DETAILS.
  - SEE 8/S300 FOR TYPICAL CORNER WALL REINFORCING.



RISE PROJECT NO: 22359



ISSUE:  
01-30-23 100% CONSTRUCTION DOCUMENTS

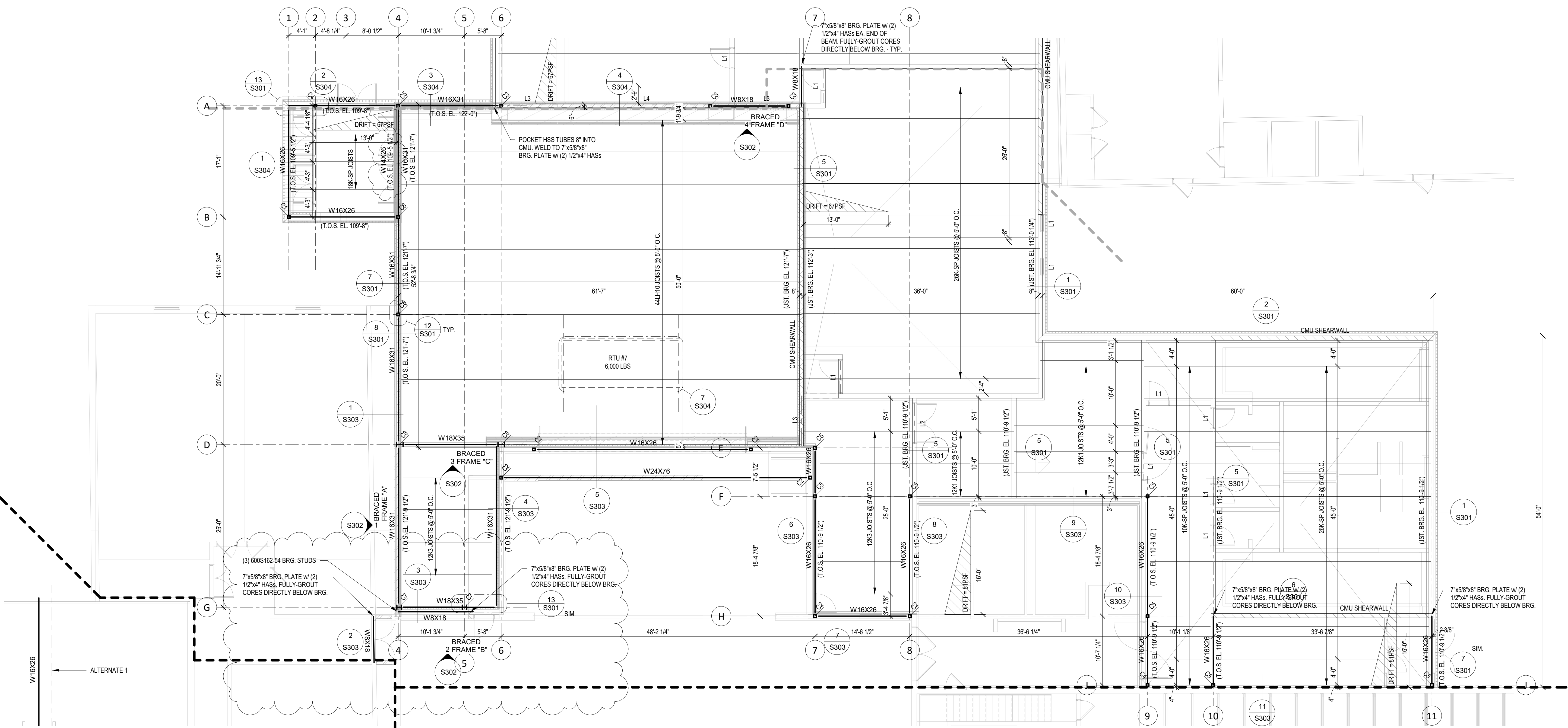
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	ADD 01	02/10/23
2	ADD02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

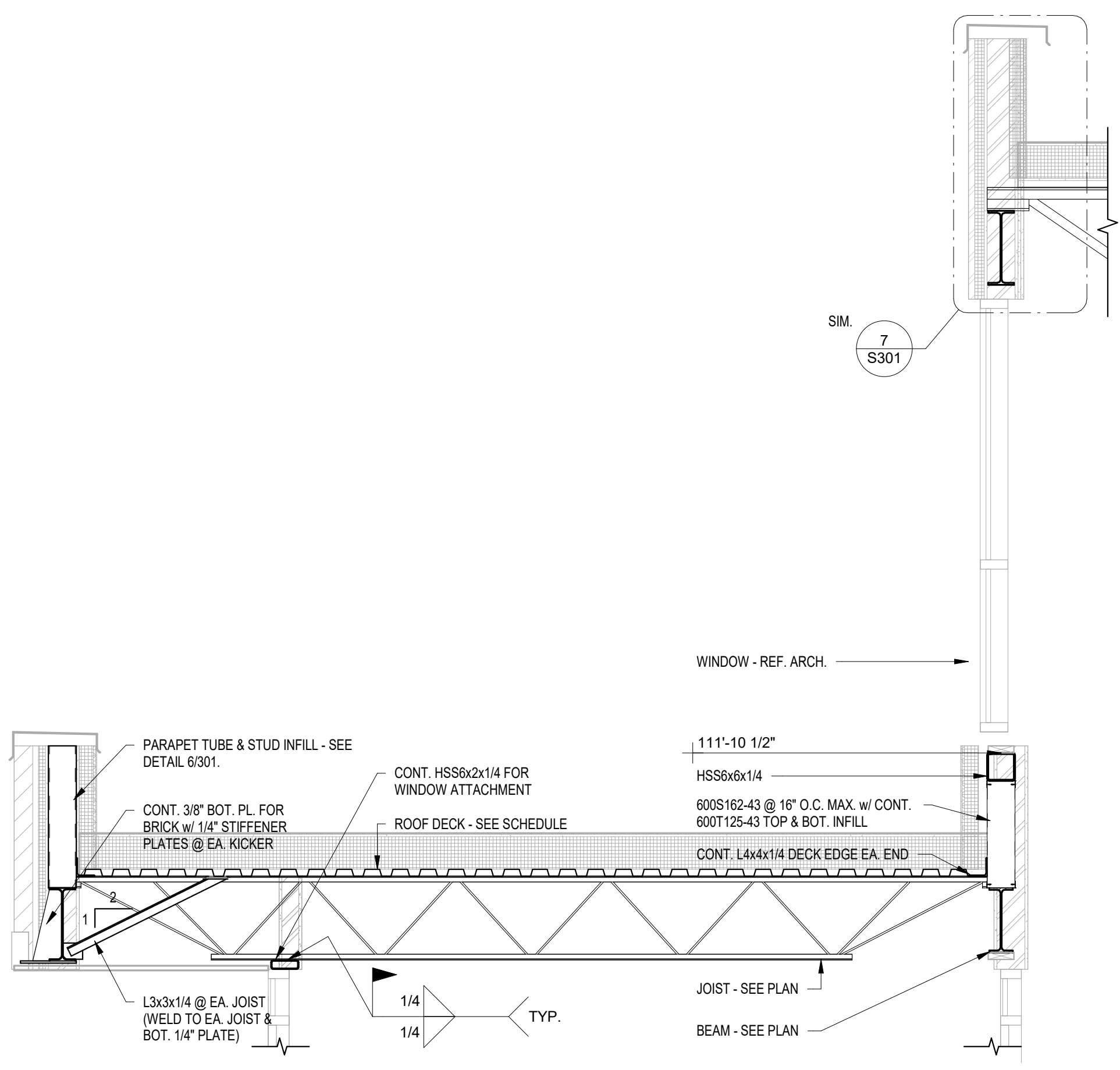
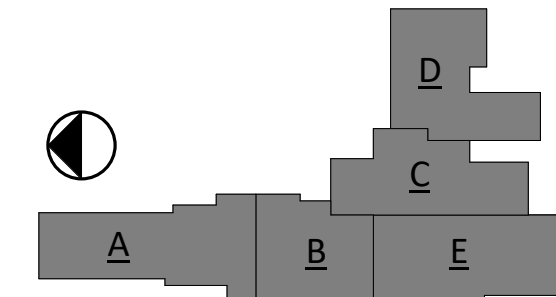
SHEET TITLE:  
ROOF FRAMING PLAN - AREA C

**S200C**

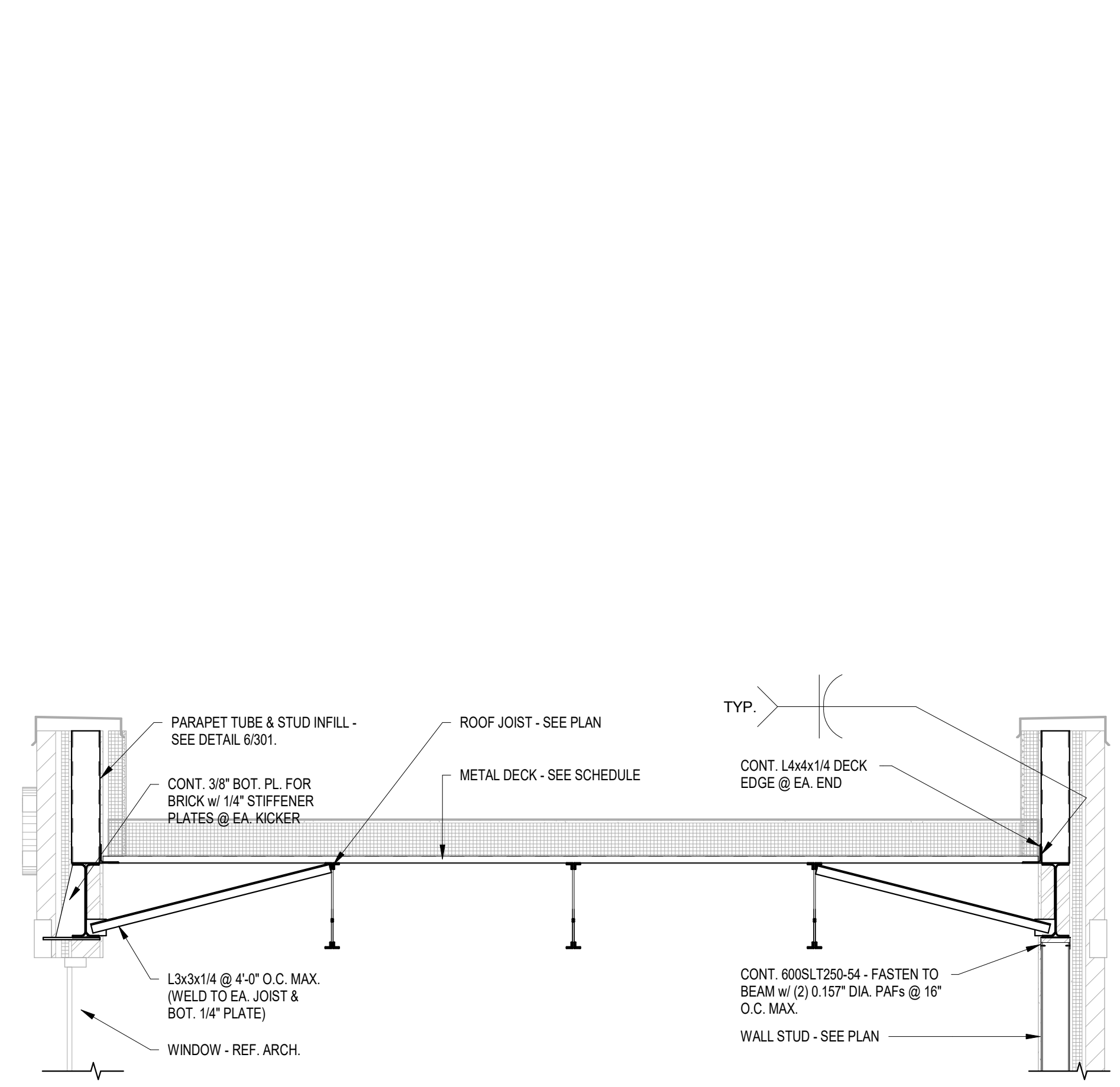


**1 ROOF FRAMING PLAN - AREA C**  
1/8" = 1'-0"

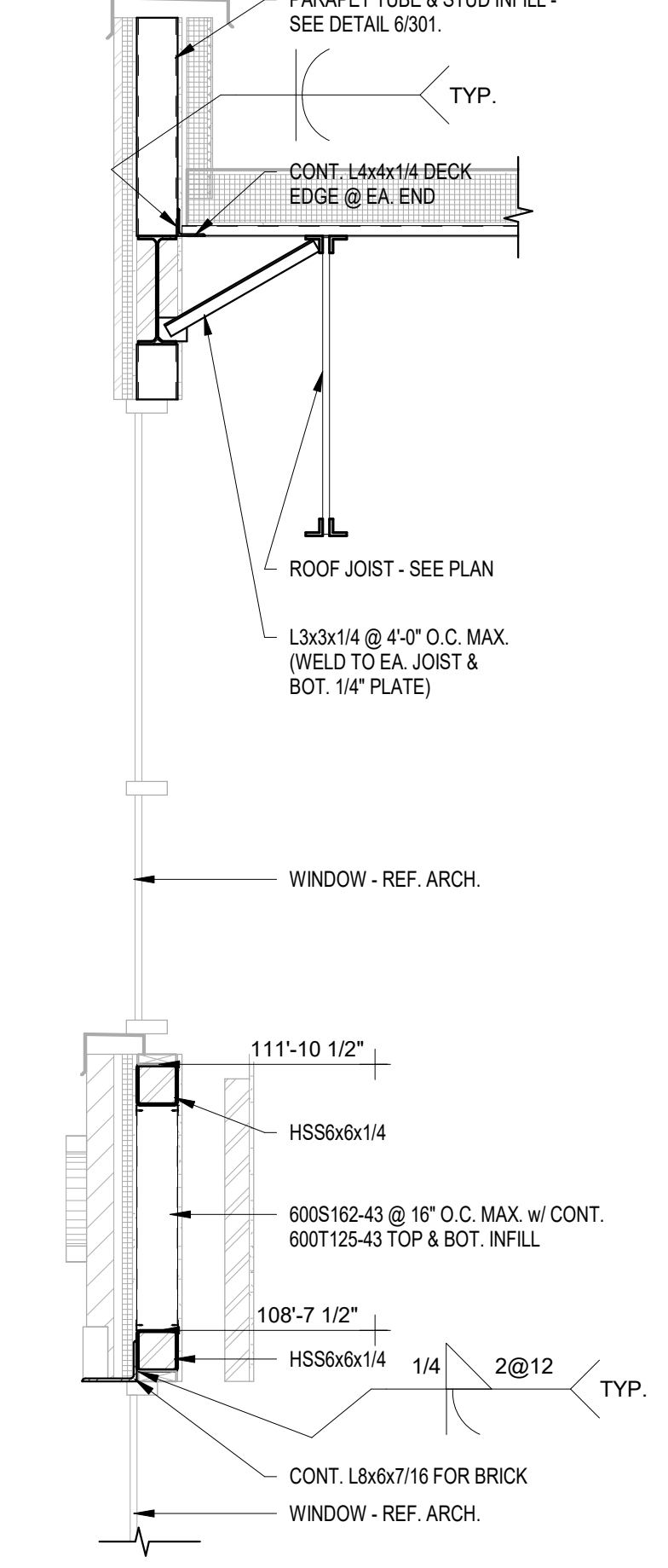
- NOTES:
- ALL EXTERIOR & LOAD-BEARING CMU WALLS TO BE #5 VERTS & GROUT @ 24" O.C. MAX.
  - ALL NON-LOAD BEARING CMU TO HAVE #5 VERTS & GROUT @ 48" O.C. MAX.
  - ALL EXTERIOR LG WALL STUDS TO BE 600S162-54 @ 16" O.C. MAX. (BRIDGE @ 48" O.C. MAX.) - U.N.O.
  - CMU SHEARWALL - #5 VERTS & GROUT @ 24" O.C. MAX. w/ (2) #5 VERTS ON EA. END OF WALL SEGMENT.



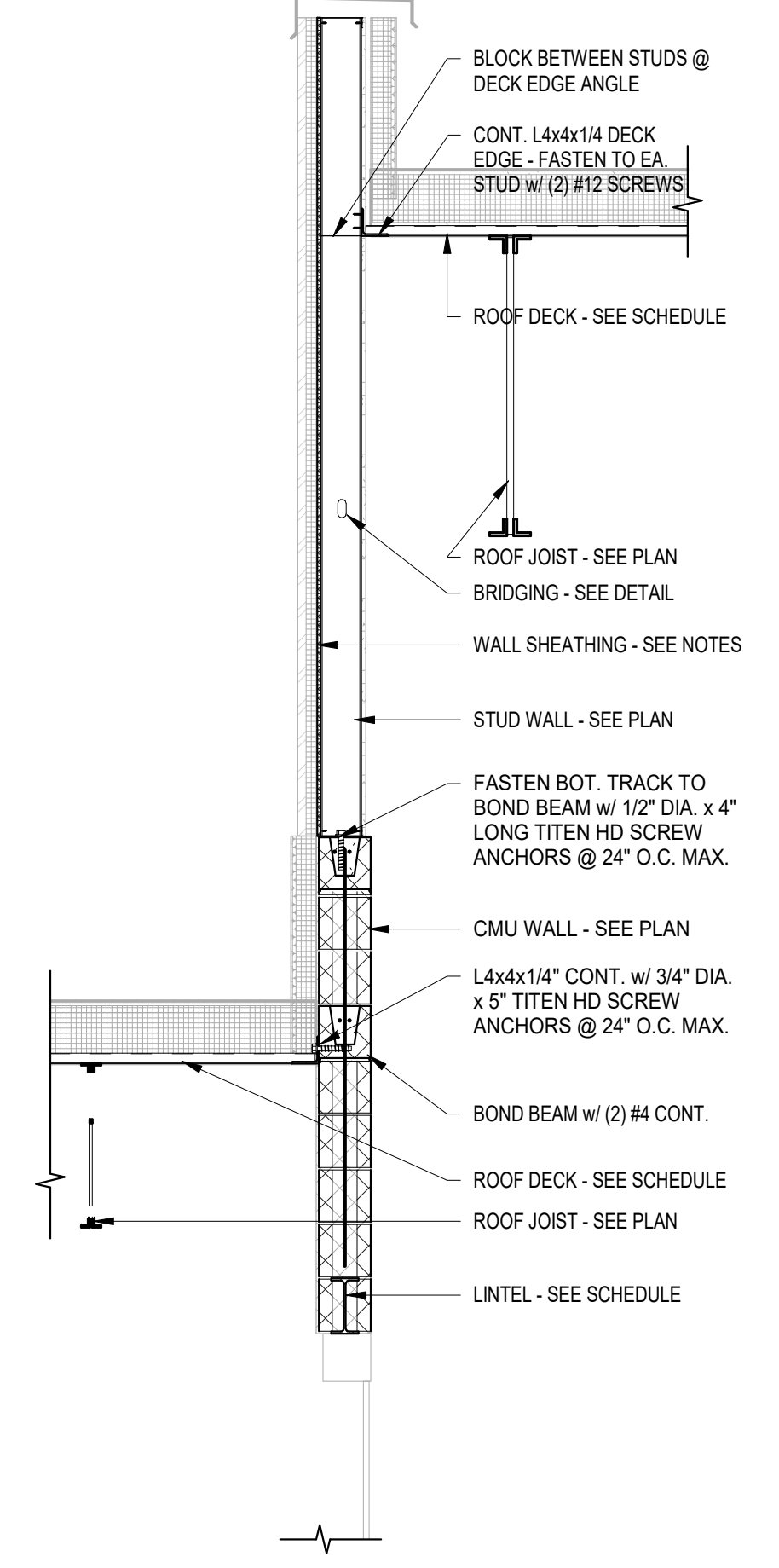
**1 ENTRYWAY FRAMING**  
1/2" = 1'-0"



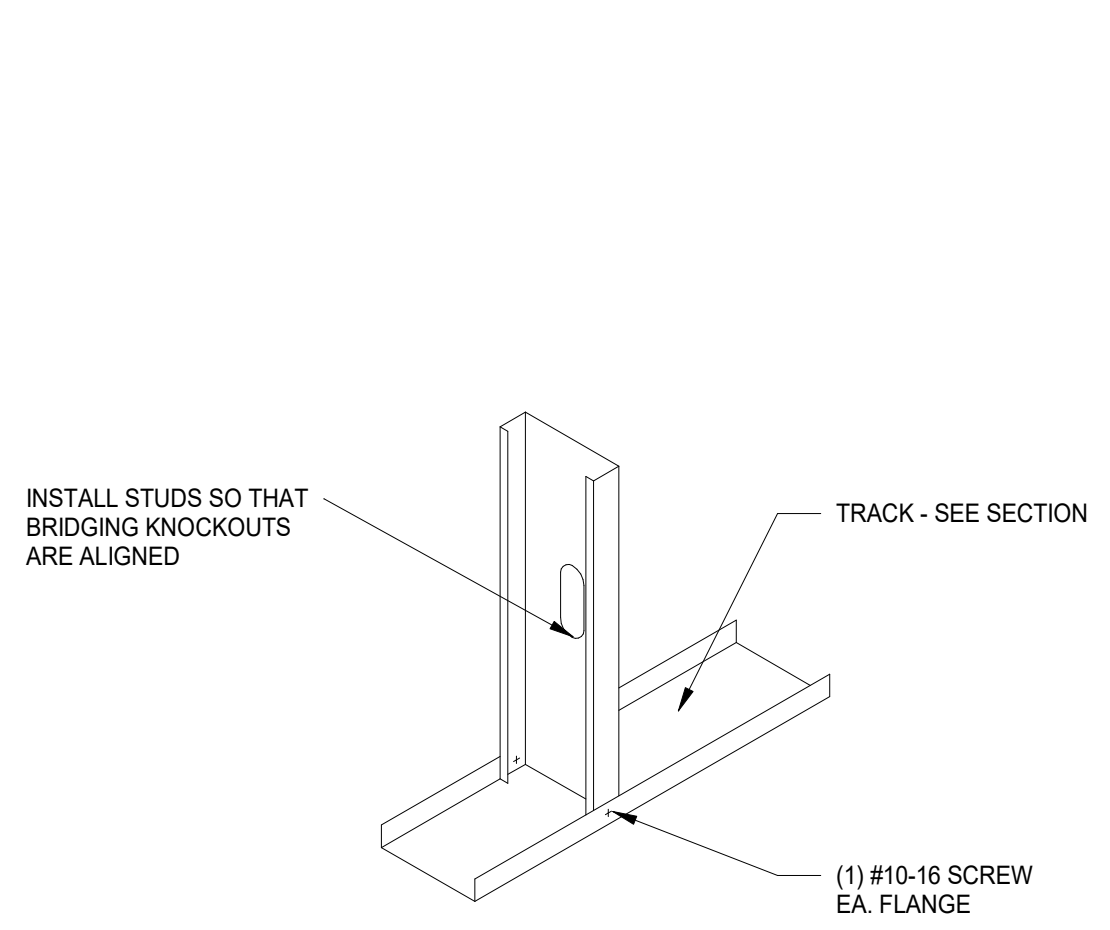
**2 ENTRYWAY FRAMING 2**  
1/2" = 1'-0"



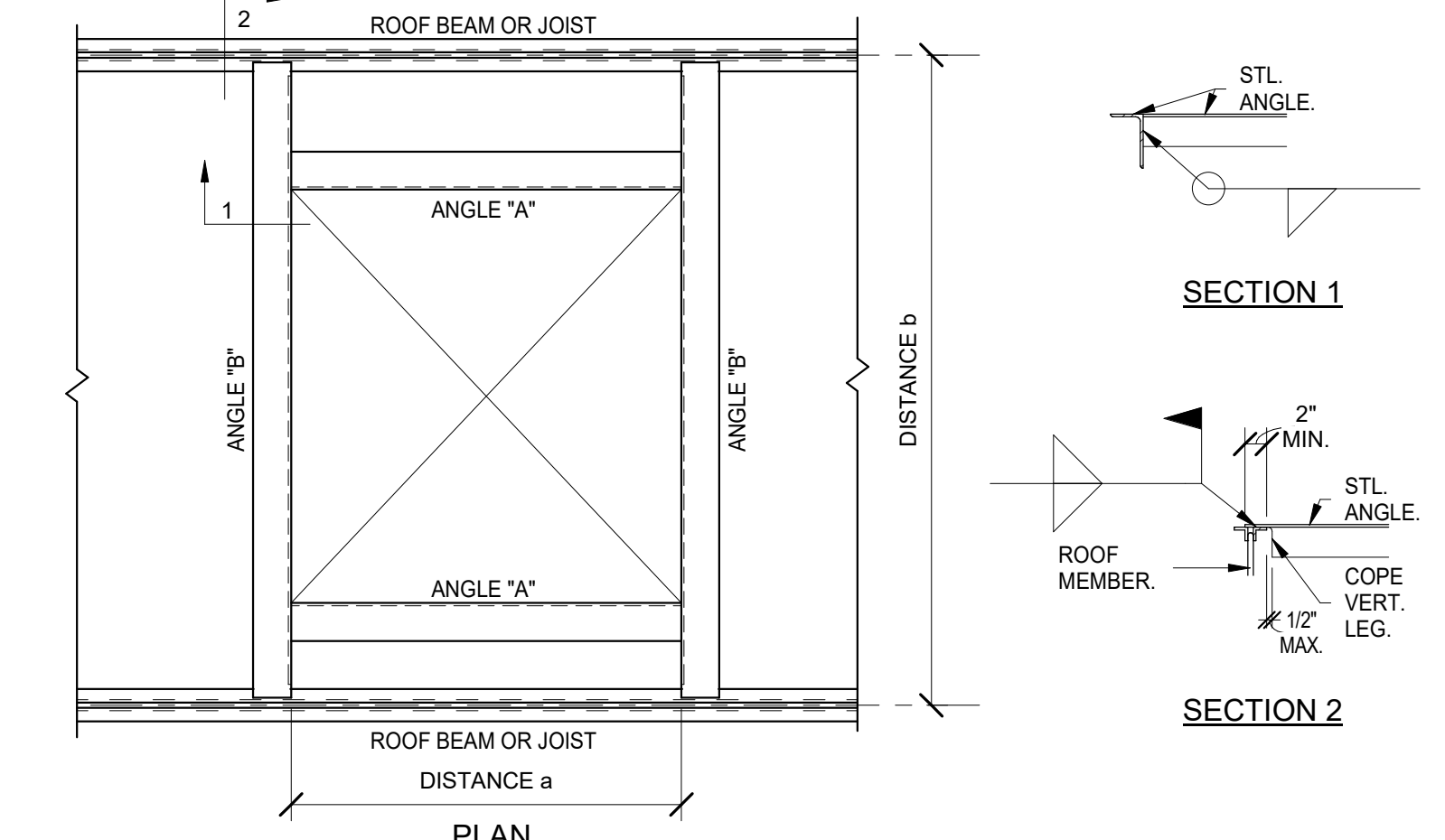
**3 ENTRYWAY FRAMING 3**  
1/2" = 1'-0"



**4 COMMONS @ LOW ROOF**  
1/2" = 1'-0"



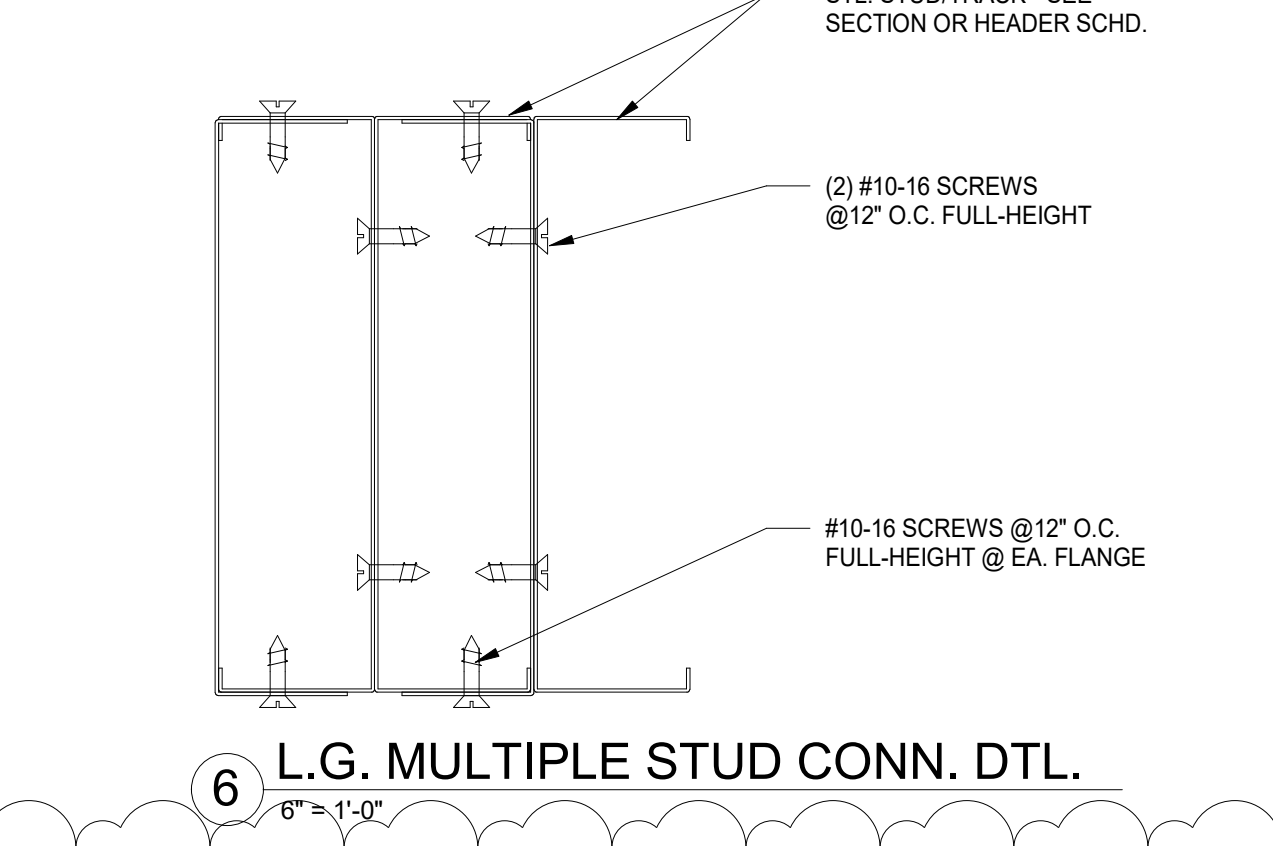
**5 STUD TO TRACK DETAIL**  
3/4" = 1'-0"



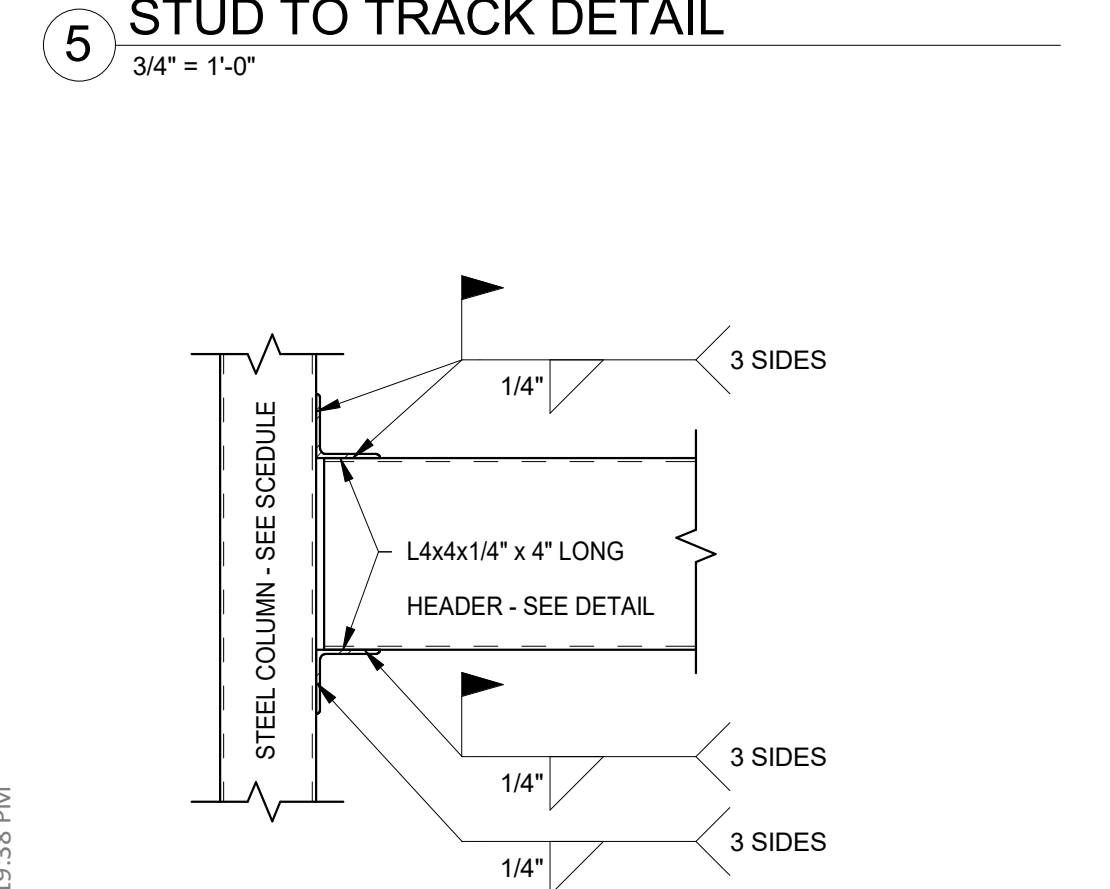
**7 TYPICAL ROOF OPENING W.A.F.**  
3/4" = 1'-0"

ANGLE "A"	ANGLE "B"	DISTANCE b			
		0ft - 4ft	4ft - 8ft	8ft - 12ft	12ft - 16ft
0ft - 2ft	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"
2ft - 4ft	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"
4ft - 6ft	L5x3x1/4"	L3x3x1/4"	L5x3x1/4"	L5x3x1/4"	L5x3x1/4"
6ft - 8ft	L5x3x3/8"	L5x3x3/8"	L5x3x3/8"	L5x3x3/8"	L5x3x3/8"

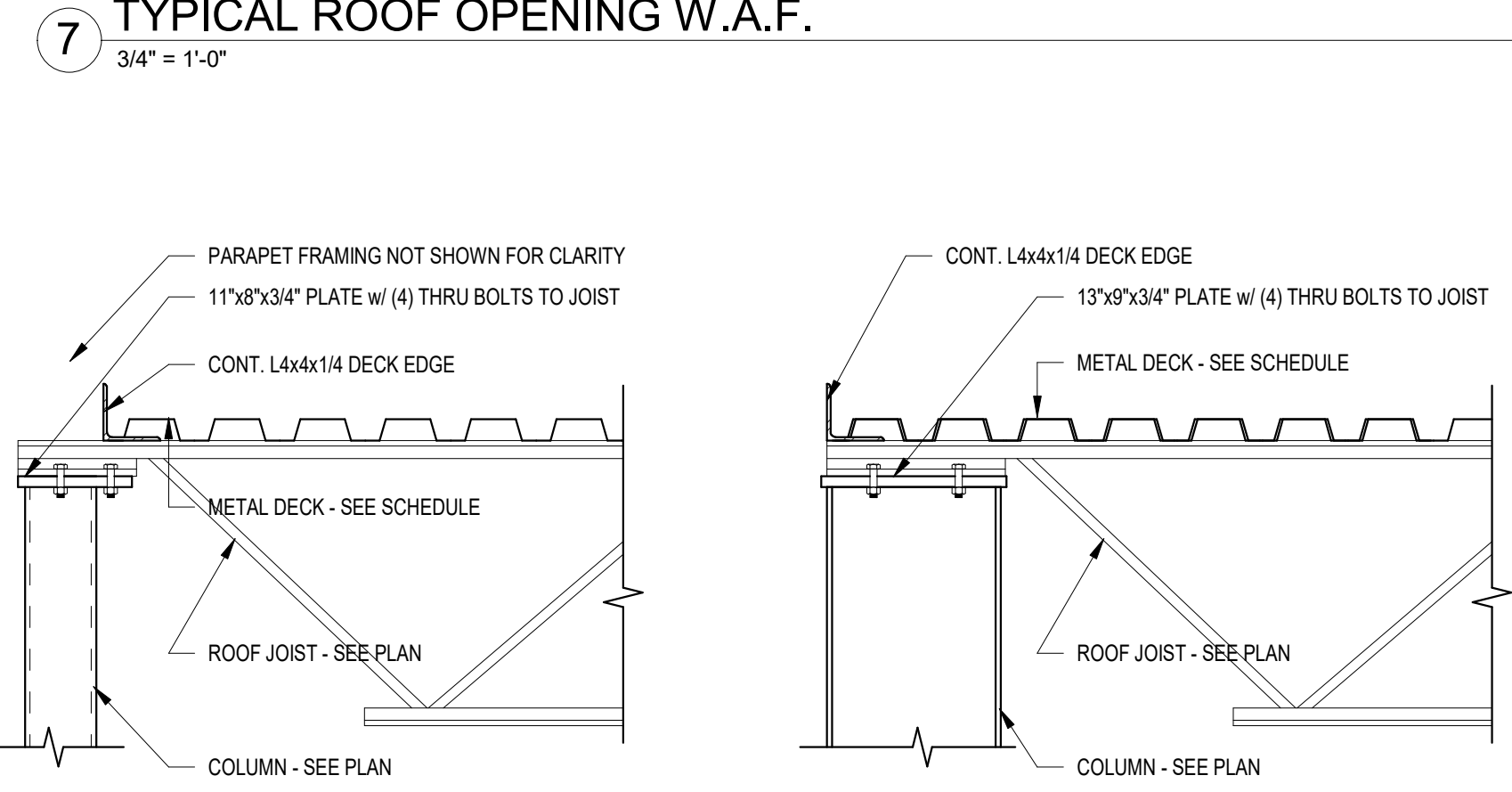
NOTES: - LONG LEGS VERTICAL, (TYP.)  
- FOR OPENINGS LARGER THAN SHOWN, CONTACT STRUCTURAL ENGINEER.



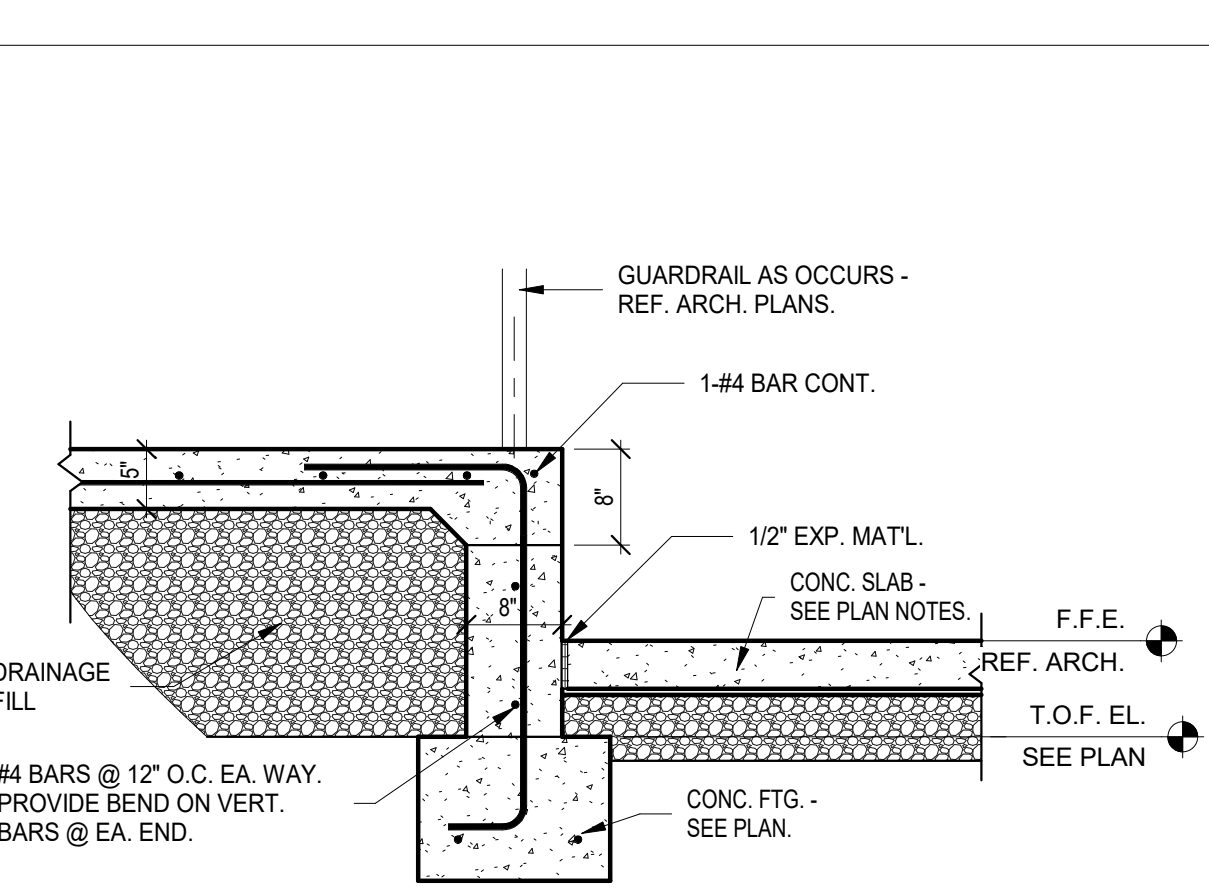
**6 L.G. MULTIPLE STUD CONN. DTL.**  
6" = 1'-0"



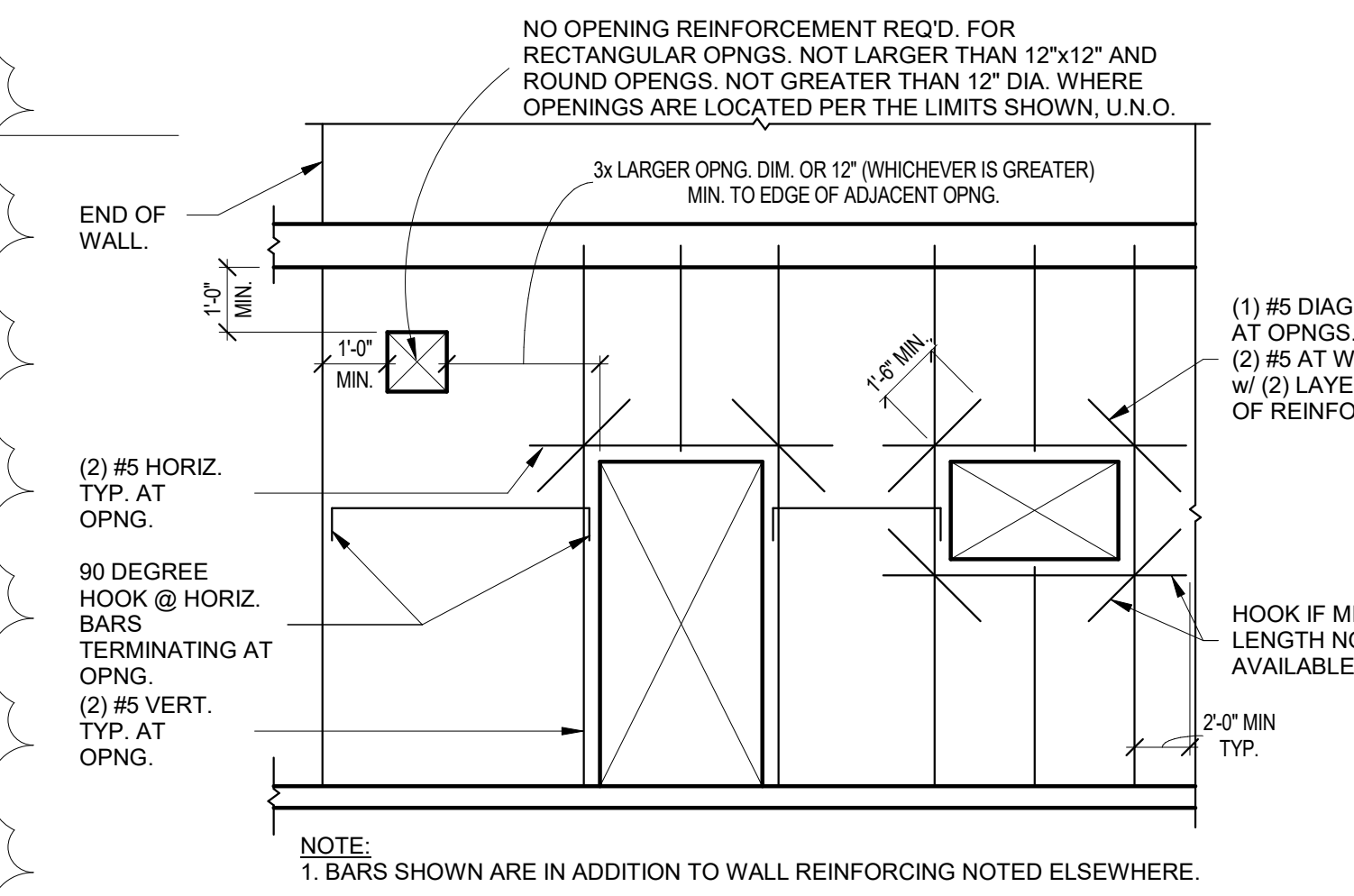
**8 HSS JAMB TO HSS HEADER/SILL**  
1" = 1'-0"



**9 JOIST BRG. ON COL.**  
1" = 1'-0"



**10 FOUND. WALL SECTION @ RAMP**  
3/4" = 1'-0"



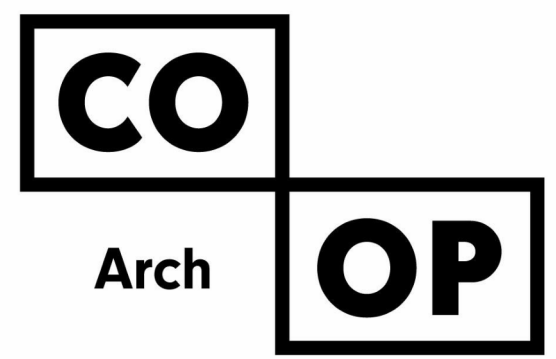
**11 TYP. CONC. WALL OPNG. REINF.**  
3/8" = 1'-0"

### KEYNOTE SCHEDULE

7.54	PREFINISHED METAL SCUPPER AND DOWNSPOUT (W/ ALL REQ. FLASHING & SUPPORTS). PROVIDE SPLASH PAD WHERE RETURNING TO GRADE.
7.55	PREFINISHED OVERFLOW SCUPPER (W/ ALL REQ. FLASHING, TRIMS, ETC.). LOCATE OVERFLOW SCUPPER 2" MIN. ABOVE MAIN SCUPPER.
8.17	ACCESS DOOR & FRAME; 2HR RATING. BASIS OF DESIGN: ACUDOR FB-5060-DW 24"X48"
12.04	MANUAL ROLLER WINDOW SHADES
12.05	MOTORIZED ROLLER WINDOW SHADES
26.22	CARD READER AND ADA PADDLE SWITCH
26.23	ADA PADDLE SWITCH

### GENERAL NOTES

1. FIRE RATED WALL ARE INDICATED ON THE CODE PLANS.
2. PROVIDE FIRE EXTINGUISHERS AND CABINETS AS SHOWN ON THE CODE PLAN(S).
3. REFER TO SHEET **G003** FOR ADA STANDARDS.
4. REFER TO SHEET **G003** FOR WALL, ROOF, AND FLOOR TYPES.
5. INTERIOR DIMENSIONS ARE FROM FACE OF GWB/CMU TO FACE OF GWB/CMU UNLESS OTHERWISE NOTED.
6. ALL WALL TYPES TO EXTEND TO DECK UNLESS OTHERWISE NOTED ON WALL TYPES.
7. EXTERIOR DIMENSIONS ARE FROM FACE OF BRICK/SHEATHING UNLESS OTHERWISE NOTED.
8. COORDINATE WORK DONE BY OTHERS AS INDICATED ON THE DRAWINGS.
9. INCREASE WALL THICKNESS OF METAL STUD AND CONCRETE BLOCK WALLS AS REQUIRED TO ACCOMMODATE MECHANICAL AND ELECTRICAL DEVICES - VERIFY W/ ARCHITECT PRIOR TO WORK.
10. SEE MECHANICAL FOR ALL FLOOR DRAIN SIZES AND LOCATIONS U.N.O. SET FLOOR DRAINS MINIMUM 1/2" BELOW FINISHED FLOOR. PROVIDE EVEN SLOPE FROM WALL TO DRAIN W/ A MAXIMUM SLOPE OF 1/4" PER FOOT.
11. VERIFY DRYWALL CONTROL JOINT LOCATIONS W/ ARCHITECT ON SITE PRIOR TO INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONTROL JOINTS AT 30'-0" O.C. MAX. IN LONG WALL EXPANSES. CONTROL JOINTS AT DOOR JAMBS EXTENDING FROM DOOR HEAD TO CEILING. CONSIDERATION SHALL ALSO BE GIVEN TO LOCATING CONTROL JOINTS FROM FLOOR TO CEILING AT EITHER EDGE OF LARGE WINDOW OPENINGS.
12. VERIFY HOISTWAY SHAFT SIZE REQUIREMENTS W/ ELEVATOR MANUFACTURER & COORDINATE.
13. COORDINATE ALL CHASE SIZES AND LOCATIONS W/ MECHANICAL. PROVIDE CHASES AT ALL EXPOSED MECHANICAL & ELECTRICAL WITH ADJACENT WALL MATERIAL AS REQUIRED.
14. COORDINATE ALL SHEAR WALL LOCATIONS W/ STRUCTURAL PLANS.
15. THE AIR & MOISTURE WEATHER BARRIER IS TO BE CONTINUOUS FROM THE BASE OF THE WALLS UP TO & TYING INTO THE ROOF BARRIER SYSTEM.
16. WALL TYPES ARE '4C' TYPICALLY UNLESS NOTED OTHERWISE
17. NEW CMU IN EXISTING AREAS SHALL ALIGN WITH EXISTING BONDING PATTERNS (STACKED OR RUNNING)

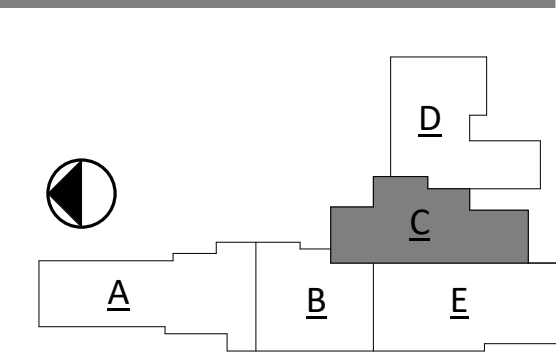


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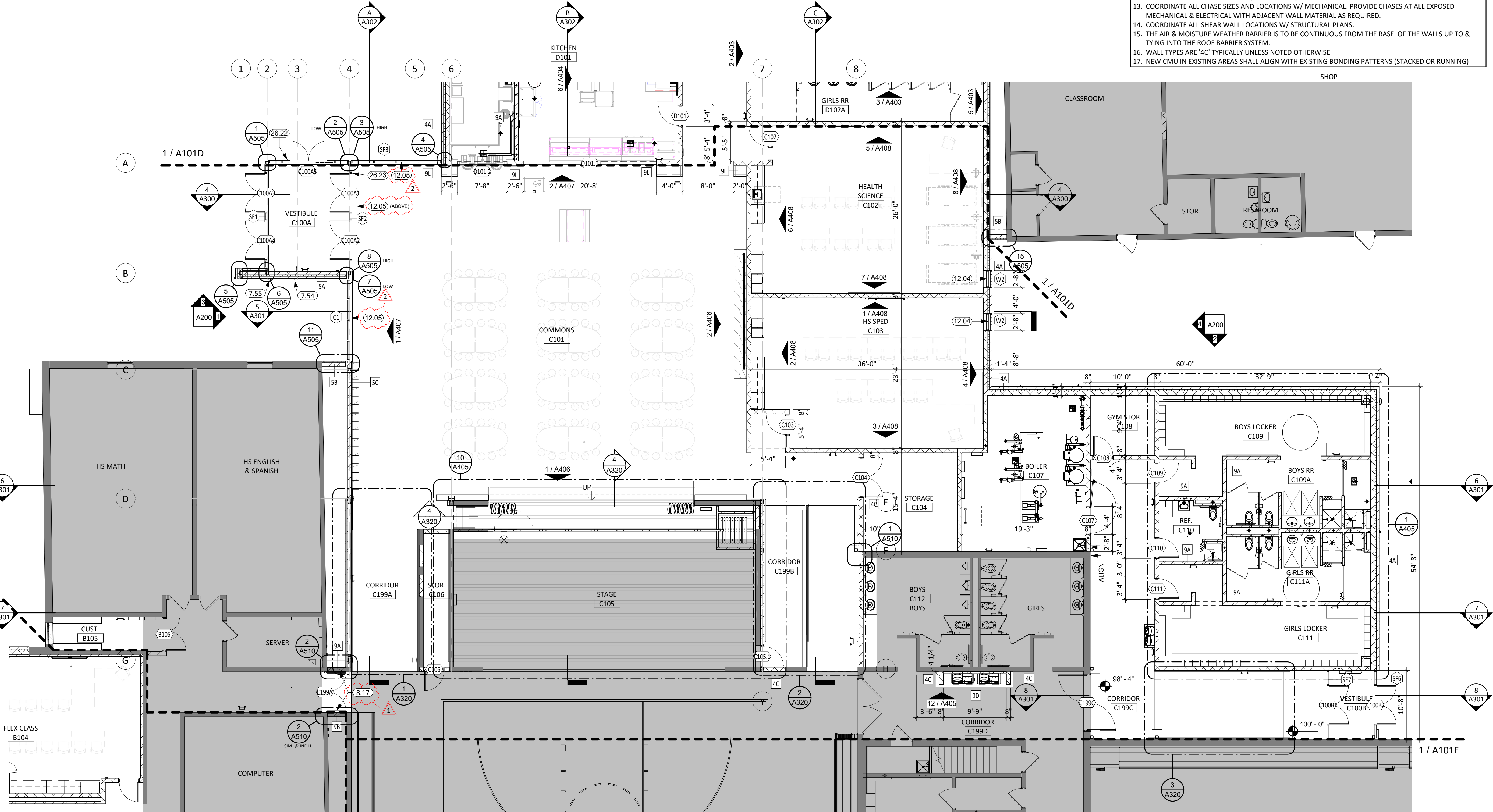
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	ADD 01	02/10/23
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
FIRST FLOOR PLAN - AREA C

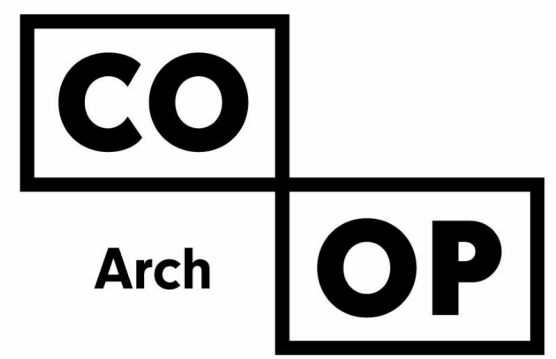
# A101C



FIRST FLOOR PLAN - AREA C

1/8" = 1'-0"

2/16/2023 3:52:27 PM

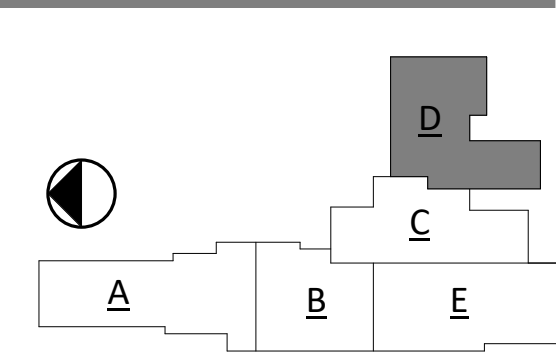


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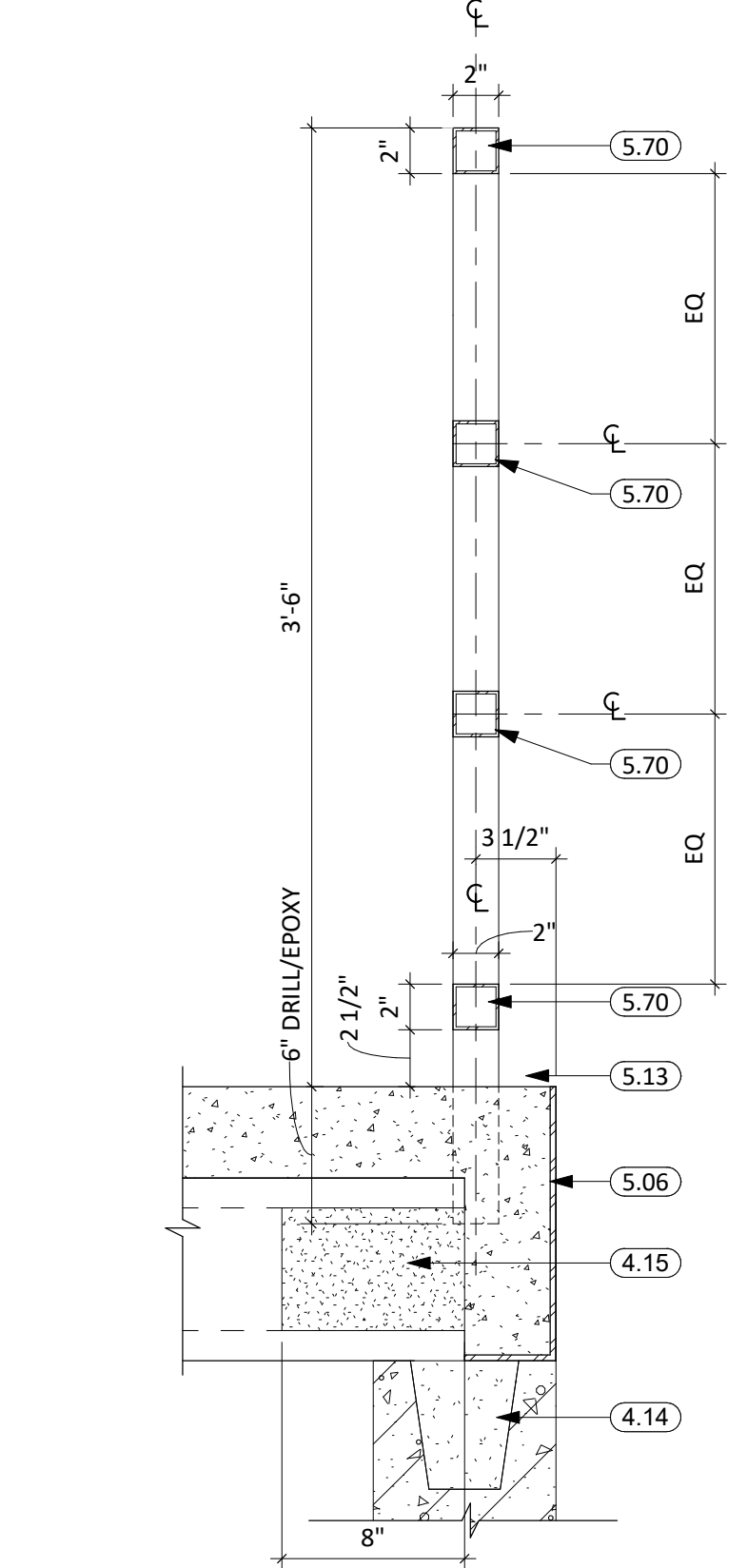
**GENERAL NOTES**

1. FIRE RATED WALL ARE INDICATED ON THE CODE PLAN(S).
2. PROVIDE FIRE EXTINGUISHERS AND CABINETS AS SHOWN ON THE CODE PLAN(S).
3. REFER TO SHEET **0000** FOR ADA STANDARDS.
4. REFER TO SHEET **0003** FOR WALL, ROOF, AND FLOOR TYPES.
5. INTERIOR DIMENSIONS ARE FROM FACE OF GWB/CMU TO FACE OF GWB/CMU UNLESS OTHERWISE NOTED.
6. ALL WALL TYPES TO EXTEND TO DECK UNLESS OTHERWISE NOTED ON WALL TYPES.
7. EXTERIOR DIMENSIONS ARE FROM FACE OF BRICK/SHEATHING UNLESS OTHERWISE NOTED.
8. COORDINATE WORK DONE BY OTHERS AS INDICATED ON THE DRAWINGS.
9. INCREASE WALL THICKNESS OF METAL STUD AND CONCRETE BLOCK WALLS AS REQUIRED TO ACCOMMODATE MECHANICAL AND ELECTRICAL DEVICES - VERIFY w/ ARCHITECT PRIOR TO WORK.
10. SEE MECHANICAL FOR ALL FLOOR DRAIN SIZES AND LOCATIONS U.N.O. SET FLOOR DRAINS MINIMUM 1/4" BELOW FINISHED FLOOR. PROVIDE EVEN SLOPE FROM WALL TO DRAIN W/ A MAXIMUM SLOPE OF 1/4" PER FOOT.
11. VERIFY DRYWALL CONTROL JOINT LOCATIONS w/ ARCHITECT ON SITE PRIOR TO INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONTROL JOINTS AT 30'-0" O.C. MAX. IN LONG WALL EXPANSES. CONTROL JOINTS AT DOOR JAMBS EXTENDING FROM DOOR HEAD TO CEILING. CONSIDERATION SHALL ALSO BE GIVEN TO LOCATING CONTROL JOINTS FROM FLOOR TO CEILING AT EITHER EDGE OF LARGE WINDOW OPENINGS.
12. VERIFY HOISTWAY SHAFT SIZE REQUIREMENTS w/ ELEVATOR MANUFACTURER & COORDINATE.
13. COORDINATE ALL CHASE SIZES AND LOCATIONS w/ MECHANICAL. PROVIDE CHASES AT ALL EXPOSED MECHANICAL & ELECTRICAL WITH ADJACENT WALL MATERIAL AS REQUIRED.
14. COORDINATE ALL SHEAR WALL LOCATIONS w/ STRUCTURAL PLANS.
15. THE AIR & MOISTURE WEATHER BARRIER IS TO BE CONTINUOUS FROM THE BASE OF THE WALLS UP TO & TYING INTO THE ROOF BARRIER SYSTEM.
16. WALL TYPES ARE '4C' TYPICALLY UNLESS NOTED OTHERWISE
17. NEW CMU IN EXISTING AREAS SHALL ALIGN WITH EXISTING BONDING PATTERNS (STACKED OR RUNNING)

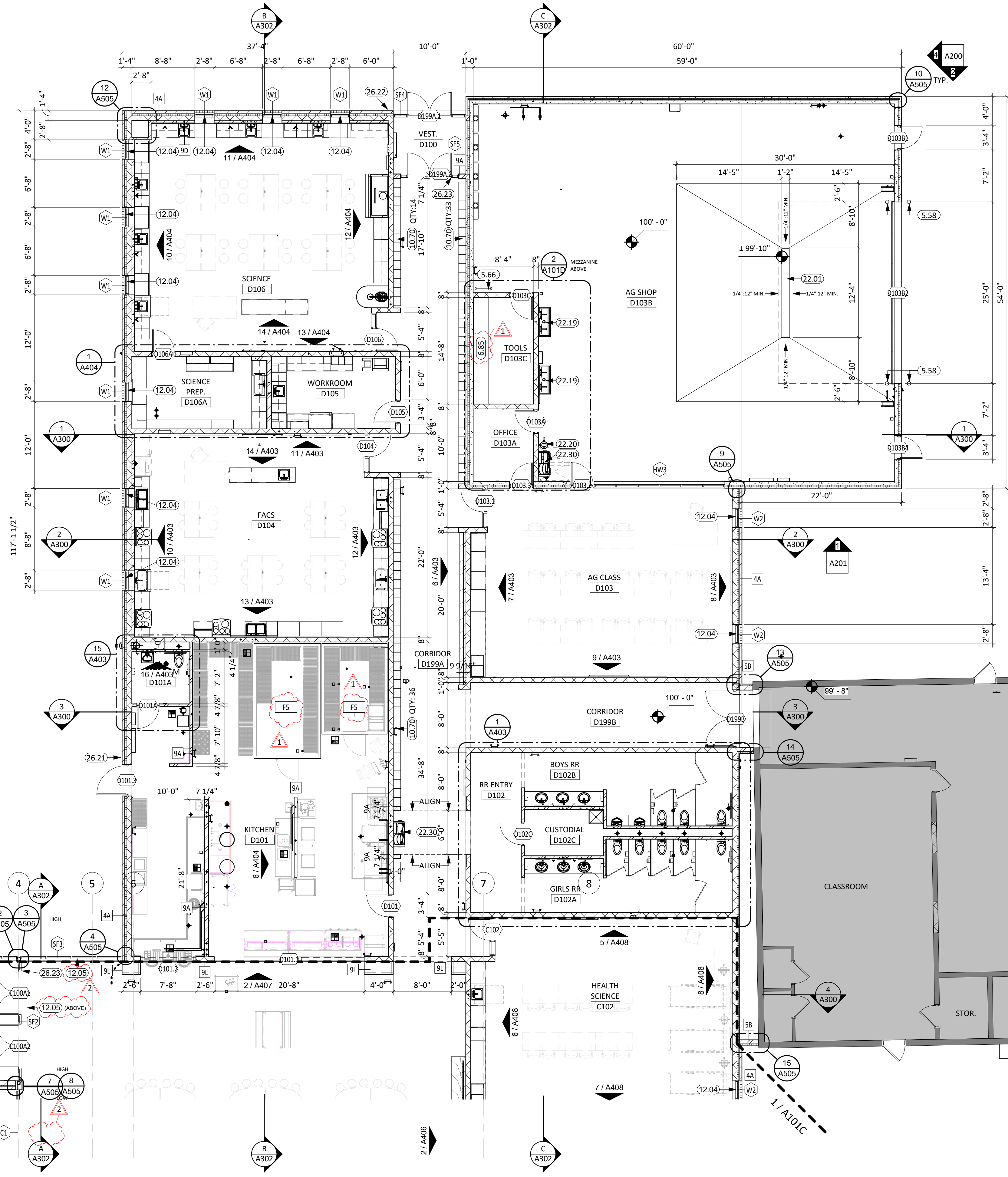
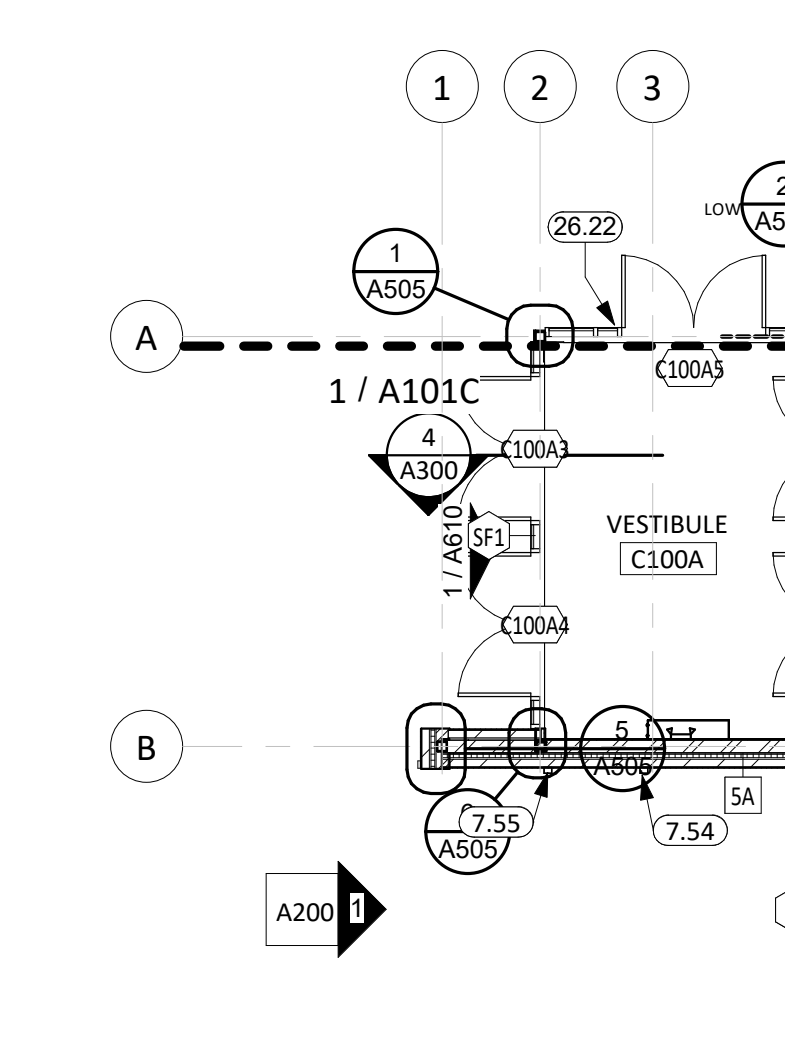
**KEYNOTE SCHEDULE**

4.14	BOND BEAM MASONRY UNIT
4.15	FILL w/GROUT
5.06	STRUCTURAL STEEL PLATE (SEE ARCH. & STRUCT.)
5.13	STEEL CONNECTION (SEE ARCH. & STRUCT.)
5.58	PIPE BOLLARD (FILL w/CONC.) (SEE ARCH. & STRUCT.)
5.66	STEEL LADDER (SEE ARCH. & STRUCT.)
5.70	SQUARE STEEL GAUDDRAIL SECTION (SEE ARCH. & STRUCT.)
5.76	GAUDDRAIL (SEE ARCH. & STRUCT.)
6.85	PLASTIC LAMINATE COUNTERTOP ON 3/4" PLYWOOD SUBSTRATE w/ COUNTERTOP SUPPORTS @ 24" O.C. FINISH SURFACE @ 36" AFF.
7.54	PREFINISHED METAL SCUPPER AND DOWNSPOUT (w/ ALL REQ. FLASHING & SUPPORTS). PROVIDE SPLASH PAD WHERE RETURNING TO GRADE.
7.55	PREFINISHED OVERFLOW SCUPPER (w/ ALL REQ. FLASHING, TRIMS, ETC.). LOCATE OVERFLOW SCUPPER 2" MIN. ABOVE MAIN SCUPPER.
10.70	15"W x 12"D x 6"H SINGLE TIER METAL LOCKERS w/ 4" METAL BASE
12.04	MANUAL ROLLER WINDOW SHADES
12.05	MOTORIZED ROLLER WINDOW SHADES
22.01	TRENCH DRAIN
22.19	UTILITY SINK; SEE PLUMBING
22.20	EMERGENCYEYEWASH UNIT
22.30	ELECTRIC WATER COOLER
23.24	AIR COMPRESSOR; SEE MECHANICAL
26.21	CARD READER
26.22	CARD READER AND ADA PADDLE SWITCH
26.23	ADA PADDLE SWITCH

**2 MEZZANINE FLOOR PLAN**  
1/8" = 1'-0"



**3 MEZZ GUARDRAIL**  
1 1/2" = 1'-0"



**FIRST FLOOR PLAN - AREA D**  
1/8" = 1'-0"

CO-OP PROJECT NO: 2153



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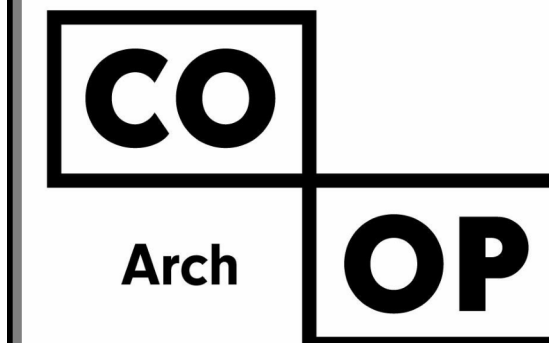
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	ADD 01	02/10/23
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
FIRST FLOOR PLAN - AREA D

**A101D**

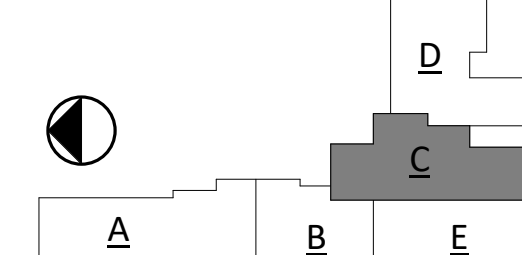


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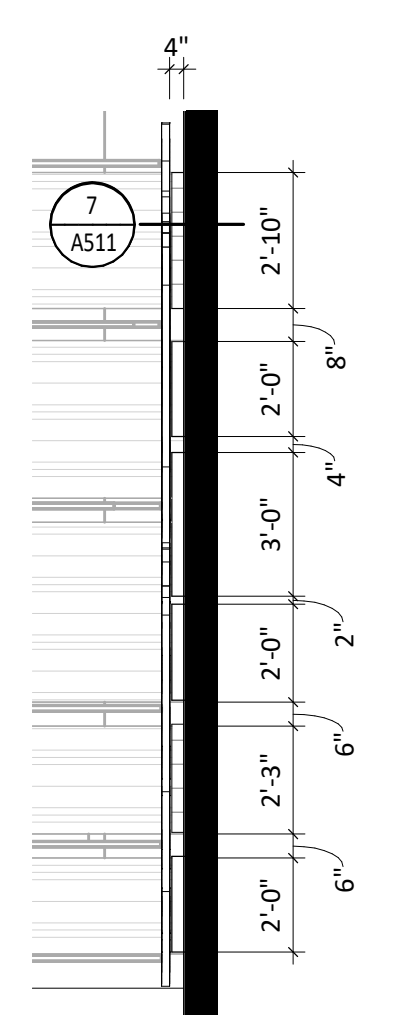
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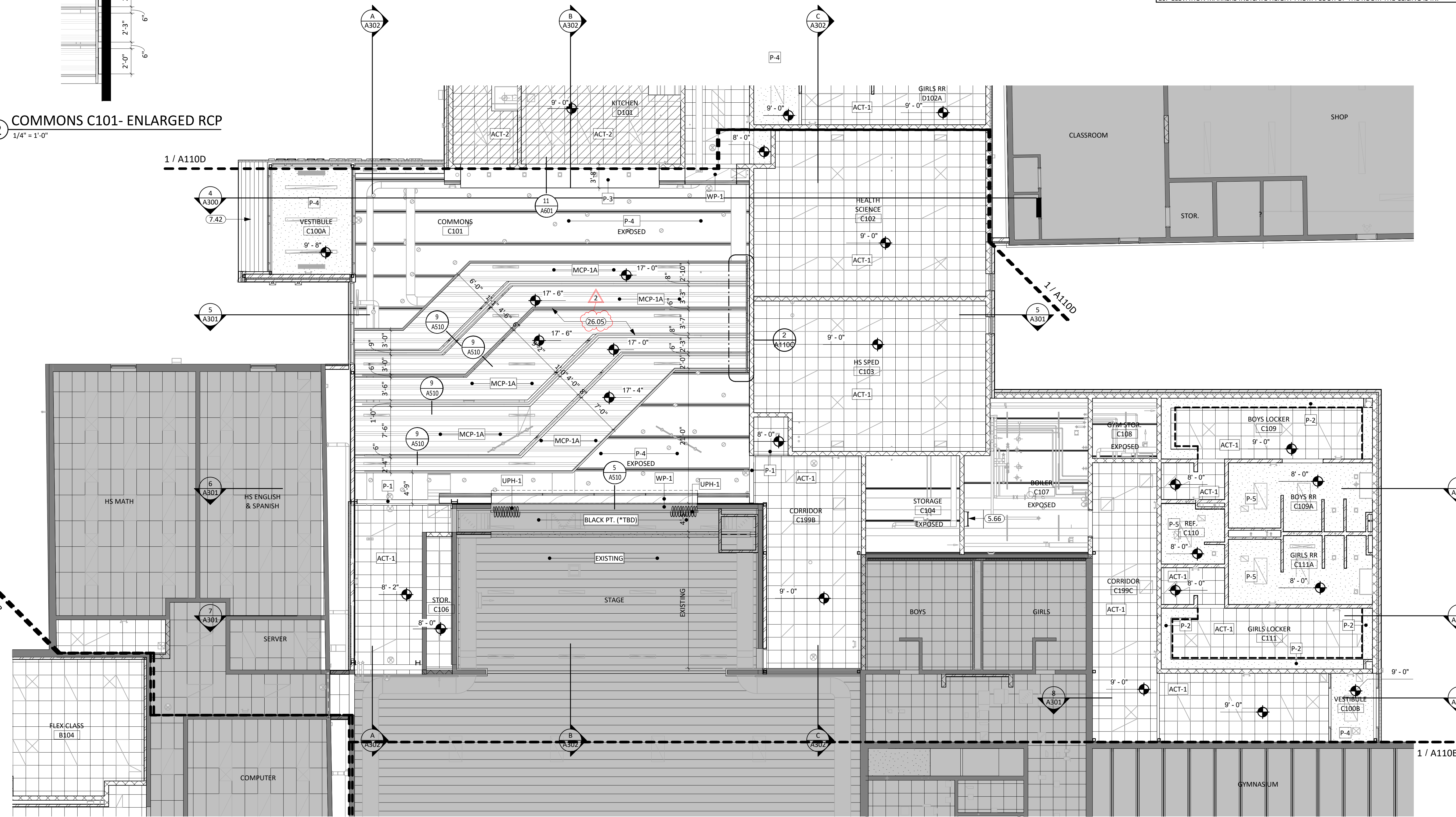


KEYNOTE SCHEDULE	
5.66	STEEL LADDER (SEE ARCH. & STRUCT.)
7.42	METAL SOFFIT PANELS
26.05	G.C. TO COORDINATE LINEAR PENDANT INSTALLATION SIMULTANEOUS WITH SPECIALTY CEILING CLOUD

- GENERAL NOTES**
- ALL DIMENSIONS ARE FROM FACE OF FINISH MATERIAL UNLESS OTHERWISE NOTED.
  - REFER TO SPECIFICATIONS FOR CEILING AND FIXTURE SUSPENSION REQUIREMENTS.
  - PROVIDE ACCESS DOORS AT MECHANICAL UNIT LOCATIONS ABOVE CEILING. COORDINATE NUMBER REQUIRED AND LOCATIONS WITH MECHANICAL SHEETS.
  - CENTER CEILING GRID IN AREAS SUCH THAT THERE WILL BE NO CEILING TILE LESS THAN 6" IN THE SMALLEST DIMENSION, UNLESS OTHERWISE NOTED.
  - CENTER LIGHT FIXTURES BETWEEN WALLS AND/OR CEILING BULKHEADS UNLESS OTHERWISE DIMENSIONED.
  - IN EXPOSED TO STRUCTURE ROOMS, CENTER LIGHTS FIXTURES WITHIN ROOMS UNLESS OTHERWISE NOTED.
  - THE REFLECTED CEILING PLANS ARE INTENDED TO AID IN COORDINATION ONLY AND ARE NOT INTENDED TO BE COMPREHENSIVE. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. NOTIFY ARCHITECT WHERE CONFLICTS OCCUR.
  - PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.
  - PROVIDE GLASS-MATT FACED GYPSUM SHEATHING BEHIND TILE FINISHES AT ALL SHOWERS AND BATHTUBS.
  - ELEVATION MARKERS INDICATE HEIGHT FROM FLOOR OF THE ROOM THE CEILING IS IN.



**2 COMMONS C101- ENLARGED RCP**  
1/4" = 1'-0"



CO-OP PROJECT NO: 2153



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01/30/2023 CONSTRUCTION DOCUMENTS

**REVISION SCHEDULE:**

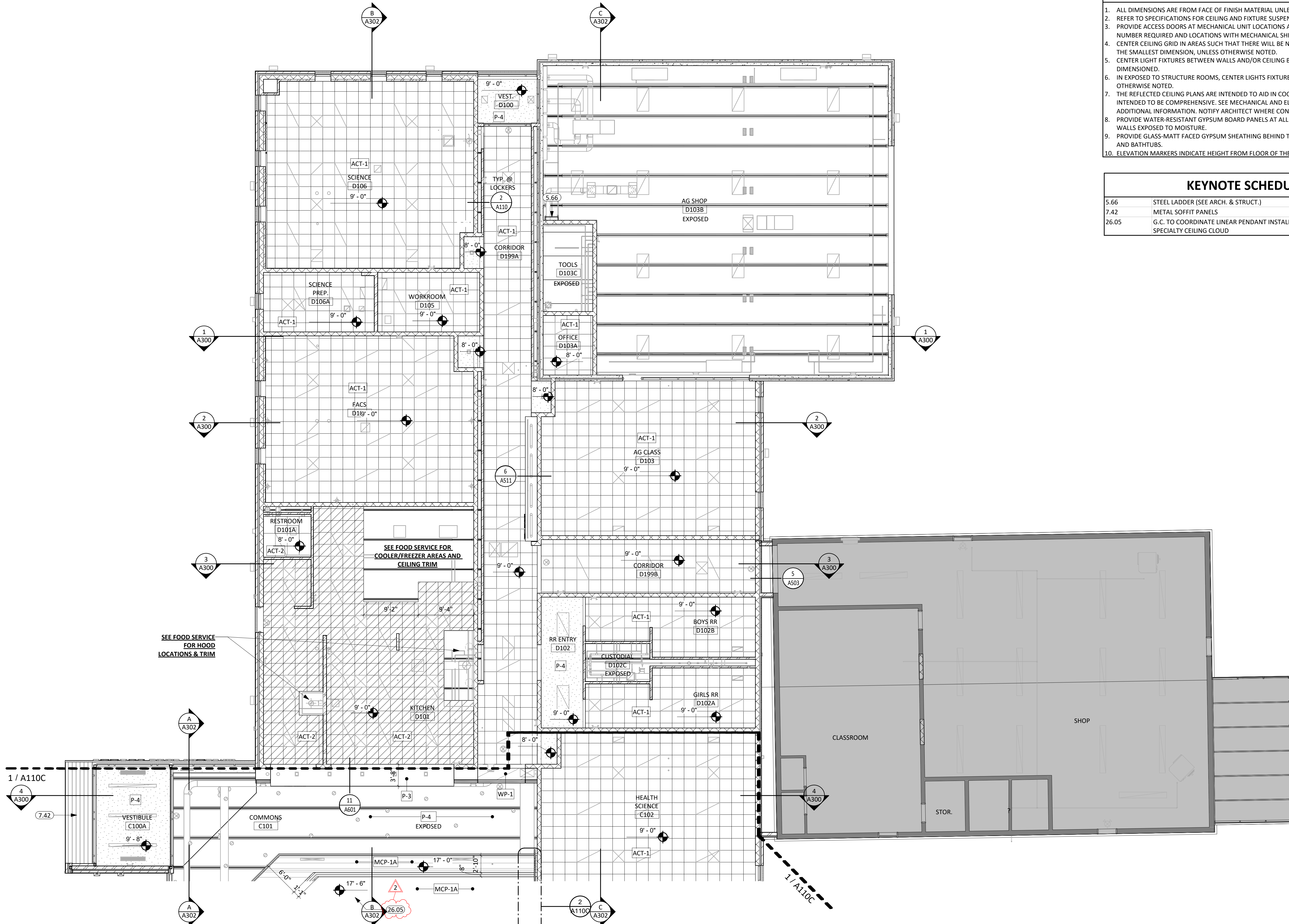
REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

**PROJECT:**  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

**SHEET TITLE:**  
REFLECTED CLG PLAN - AREA C

**A110C**

**REFLECTED CEILING PLAN - AREA C**  
1/8" = 1'-0"

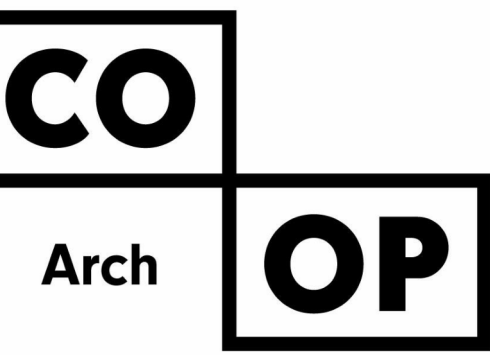


### GENERAL NOTES

1. ALL DIMENSIONS ARE FROM FACE OF FINISH MATERIAL UNLESS OTHERWISE NOTED.
2. REFER TO SPECIFICATIONS FOR CEILING AND FIXTURE SUSPENSION REQUIREMENTS.
3. PROVIDE ACCESS DOORS AT MECHANICAL UNIT LOCATIONS ABOVE CEILING. COORDINATE NUMBER REQUIRED AND LOCATIONS WITH MECHANICAL SHEETS.
4. CENTER CEILING GRID IN AREAS SUCH THAT THERE WILL BE NO CEILING TILE LESS THAN 6" IN THE SMALLEST DIMENSION, UNLESS OTHERWISE NOTED.
5. CENTER LIGHT FIXTURES BETWEEN WALLS AND/OR CEILING BULKHEADS UNLESS OTHERWISE DIMENSIONED.
6. IN EXPOSED TO STRUCTURE ROOMS, CENTER LIGHTS FIXTURES WITHIN ROOMS UNLESS OTHERWISE NOTED.
7. THE REFLECTED CEILING PLANS ARE INTENDED TO AID IN COORDINATION ONLY AND ARE NOT INTENDED TO BE COMPREHENSIVE. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. NOTIFY ARCHITECT WHERE CONFLICTS OCCUR.
8. PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.
9. PROVIDE GLASS-MATT FACED GYPSUM SHEATHING BEHIND TILE FINISHES AT ALL SHOWERS AND BATHTUBS.
10. ELEVATION MARKERS INDICATE HEIGHT FROM FLOOR OF THE ROOM THE CEILING IS IN.

### KEYNOTE SCHEDULE

5.66	STEEL LADDER (SEE ARCH. & STRUCT.)
7.42	METAL SOFFIT PANELS
26.05	G.C. TO COORDINATE LINEAR PENDANT INSTALLATION SIMULTANEOUS WITH SPECIALTY CEILING CLOUD

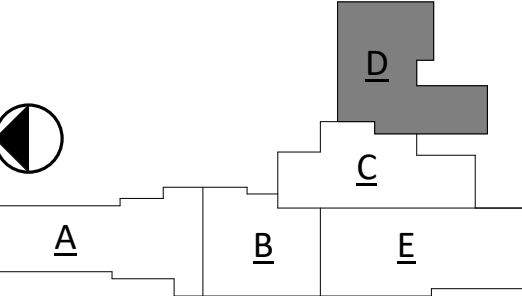


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REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

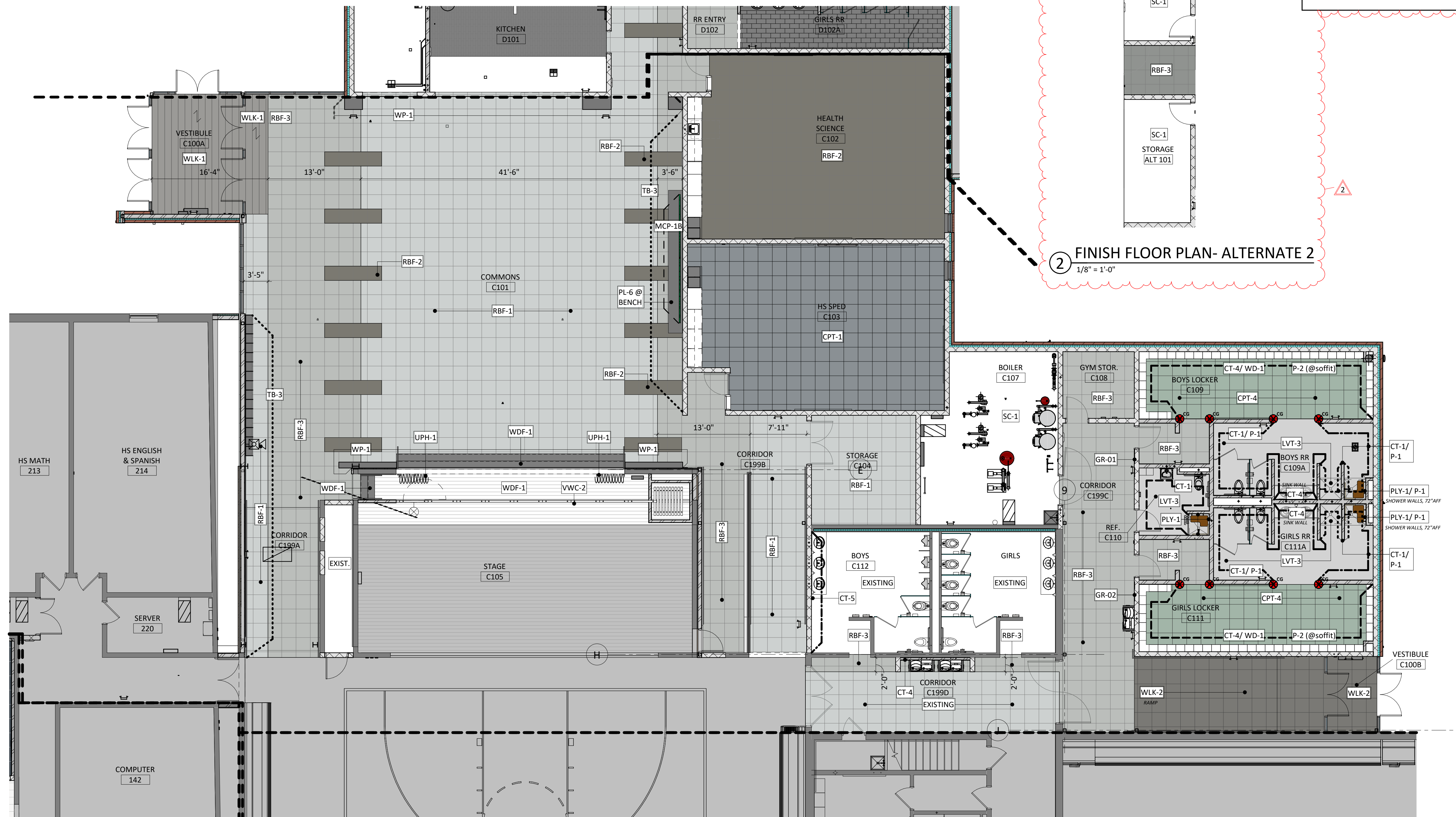
PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
REFLECTED CLG PLAN AREA - D

# A110D

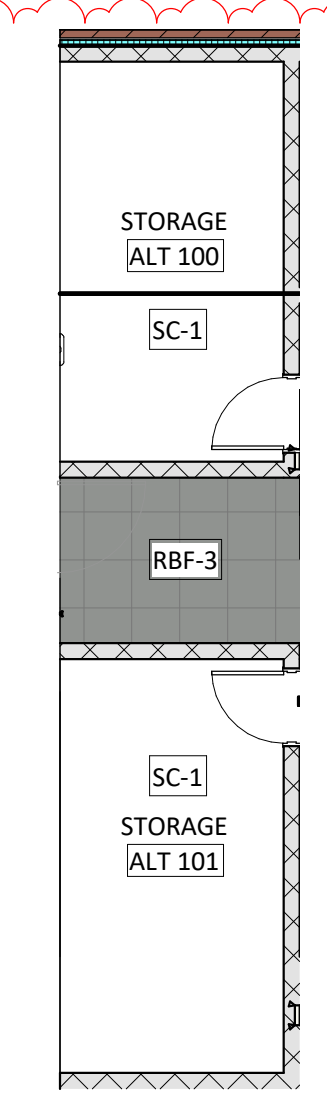
REFLECTED CEILING PLAN - AREA D

1/8" = 1'-0"

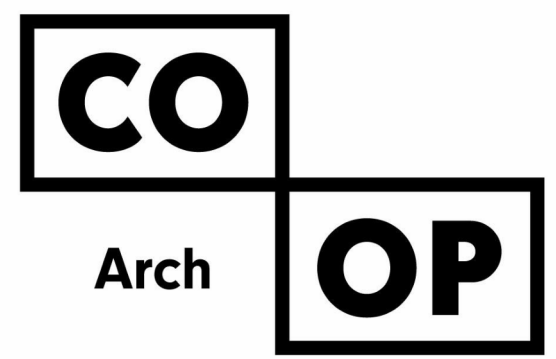


1 FINISH FLOOR PLAN - AREA C & E  
1/8" = 1'-0"

2 FINISH FLOOR PLAN - ALTERNATE 2  
1/8" = 1'-0"



- GENERAL NOTES**
- REFER TO SHEET **A601** FOR ROOM FINISH SCHEDULE AND LEGEND.
  - INTERIOR WALLS FINISHES ARE FULL HEIGHT, UNLESS OTHERWISE NOTED.
  - PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.
  - PROVIDE GLASS-MATT FACED GYPSUM SHEATHING BEHIND TILE FINISHES AT ALL SHOWERS AND BATHTUBS.
  - SEE FLOOR PLAN(S) AND INTERIOR ELEVATIONS FOR CASEWORK INFORMATION. FIELD VERIFY DIMENSIONS OF CASEWORK OPENINGS.

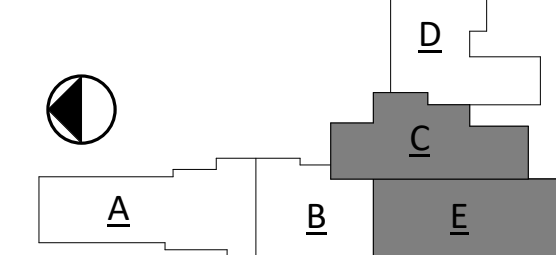


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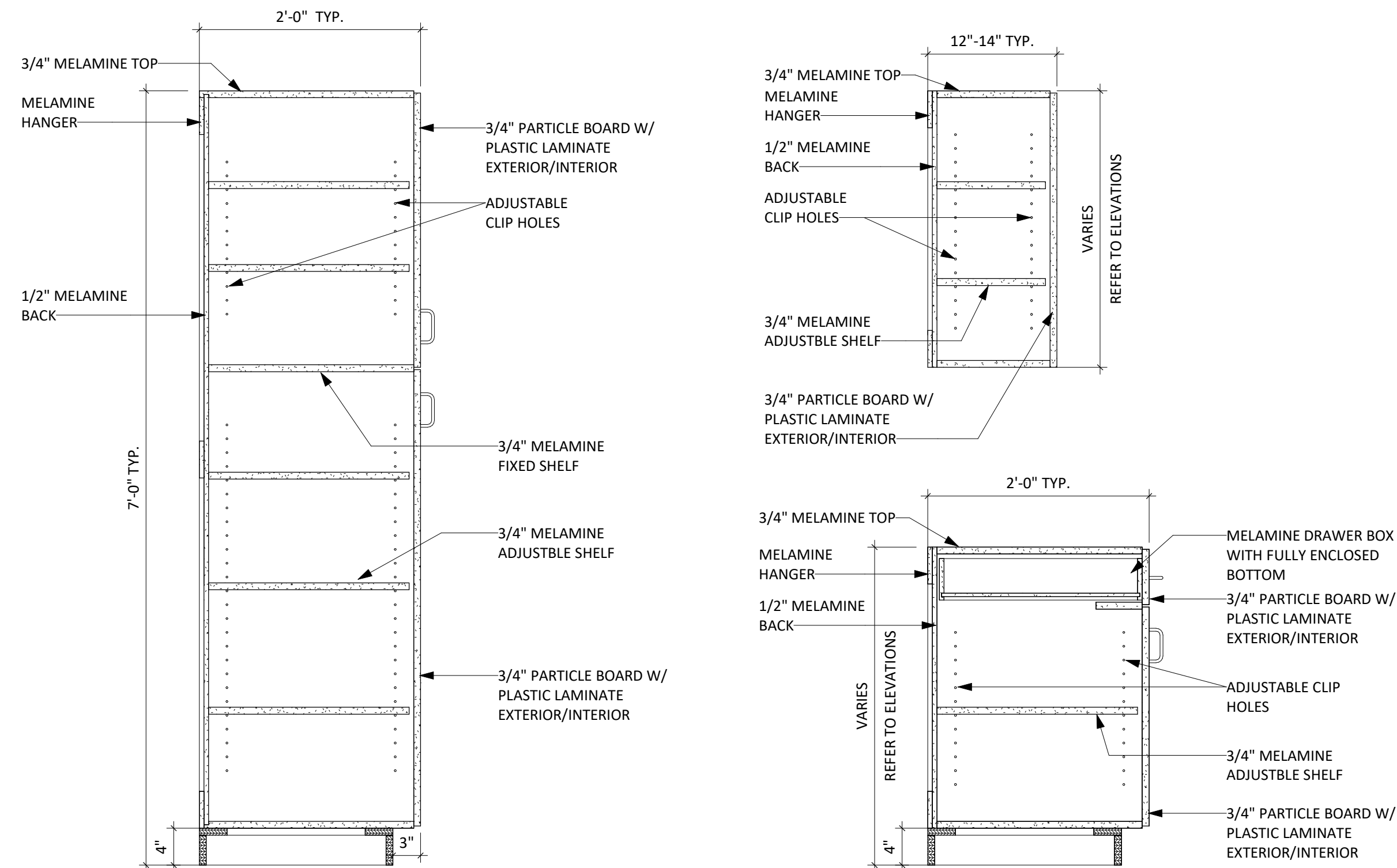
REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

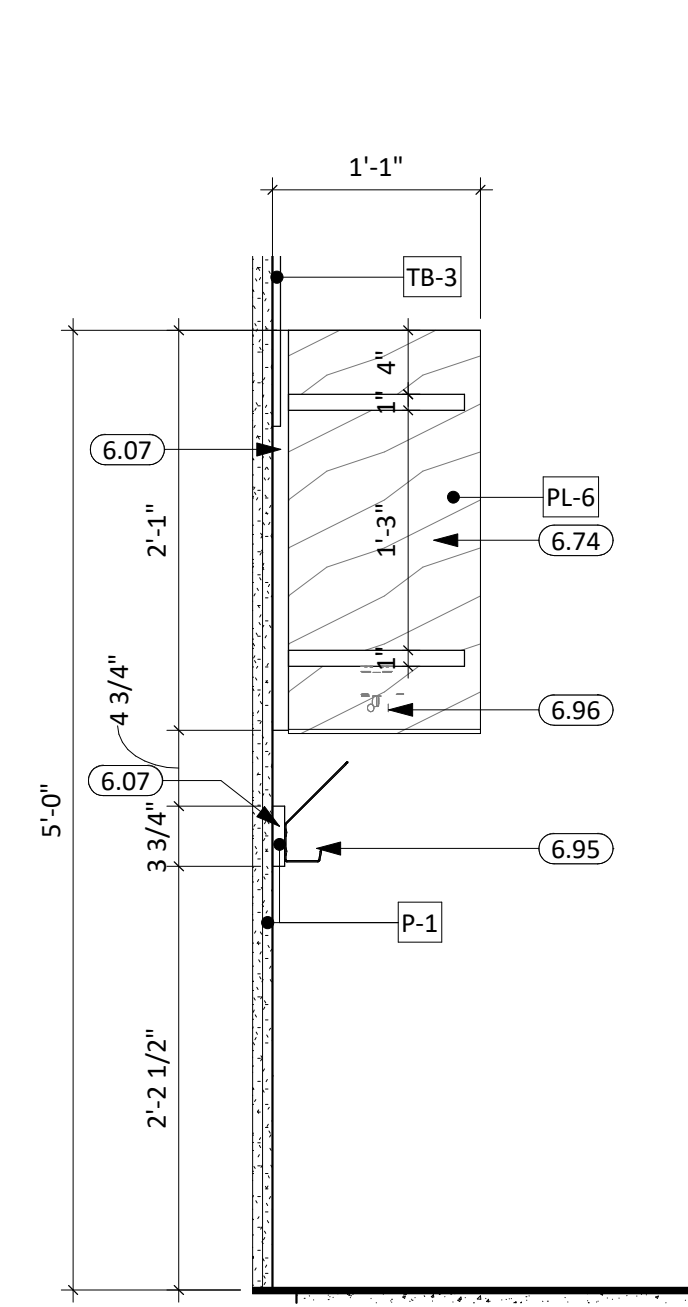
SHEET TITLE:  
ENLARGED FINISH PLANS-  
AREA(S) C & E

A122

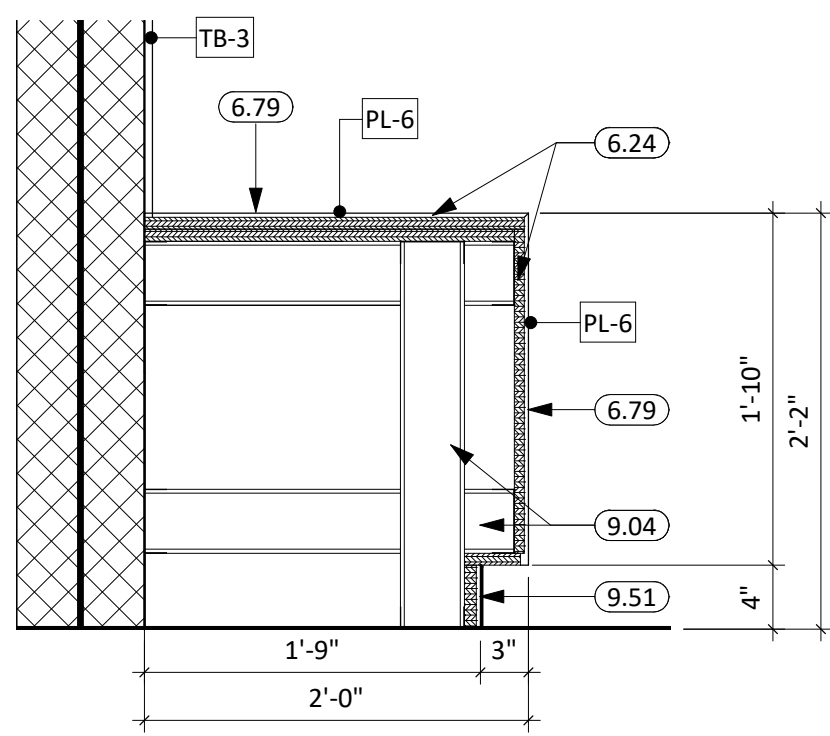




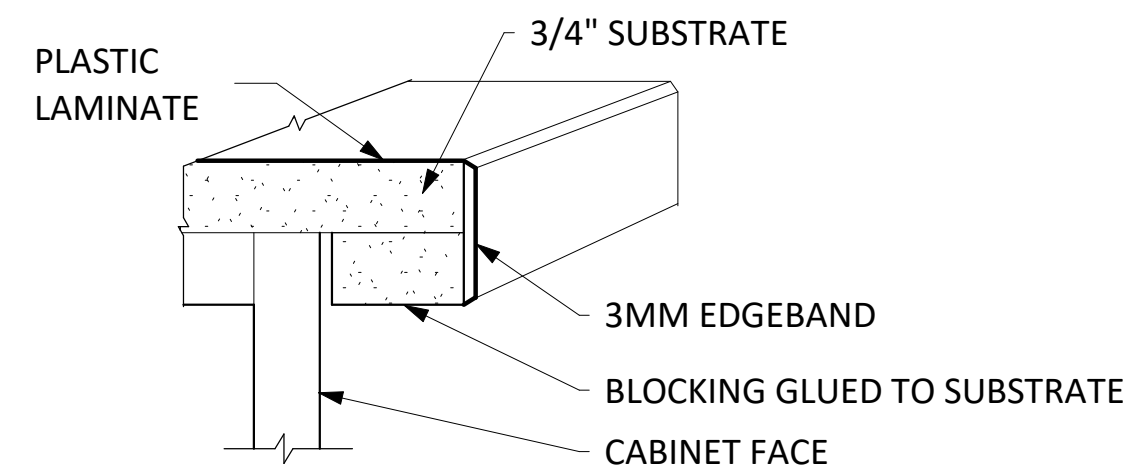
1 TYP. CABINET DETAILS  
1" = 1'-0"



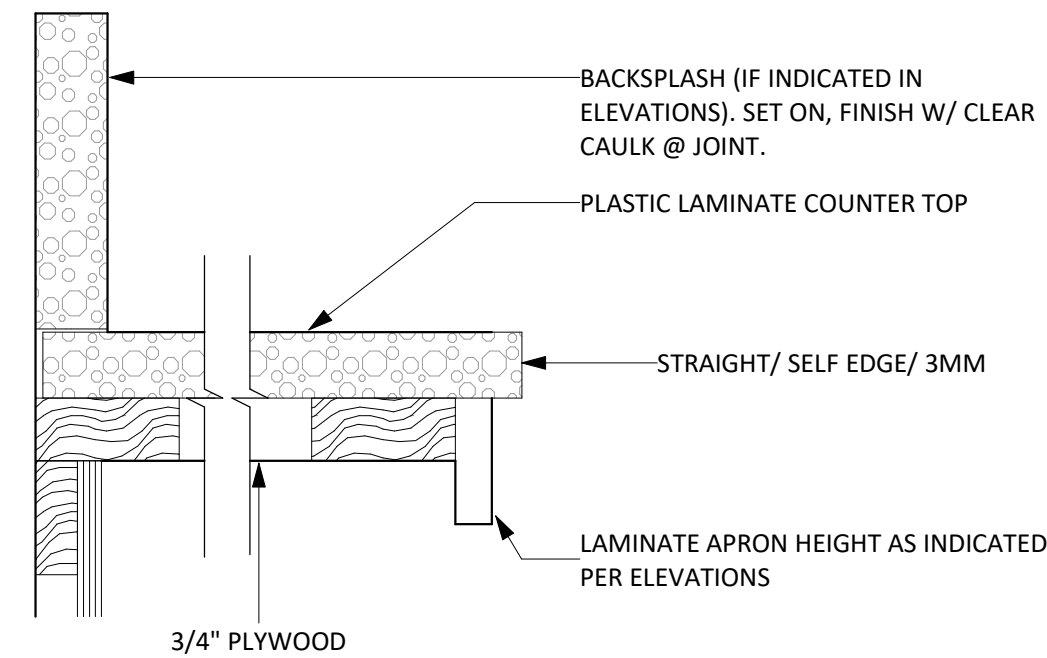
2 BAG DROP CASEWORK SECTION  
1" = 1'-0"



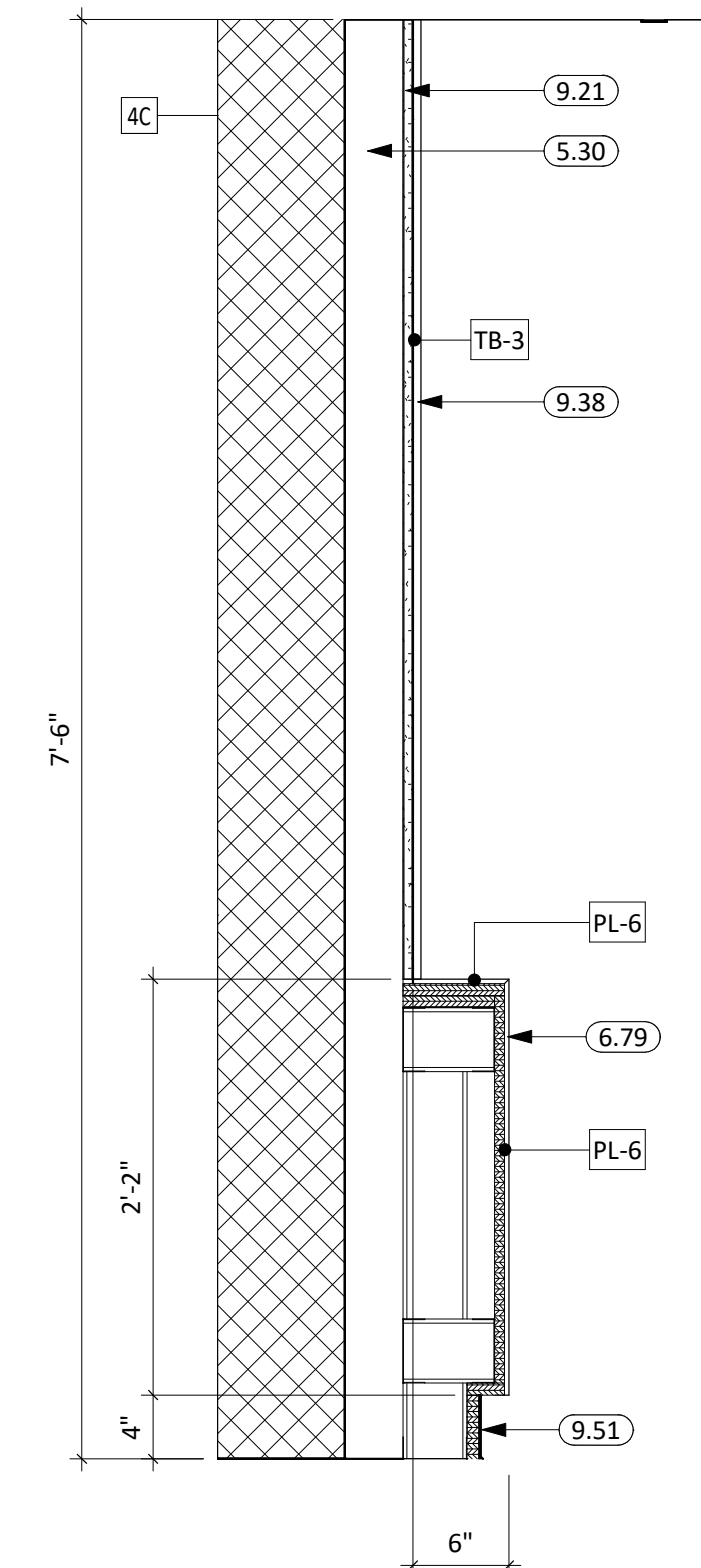
3 COMMONS BENCH DETAIL  
1" = 1'-0"



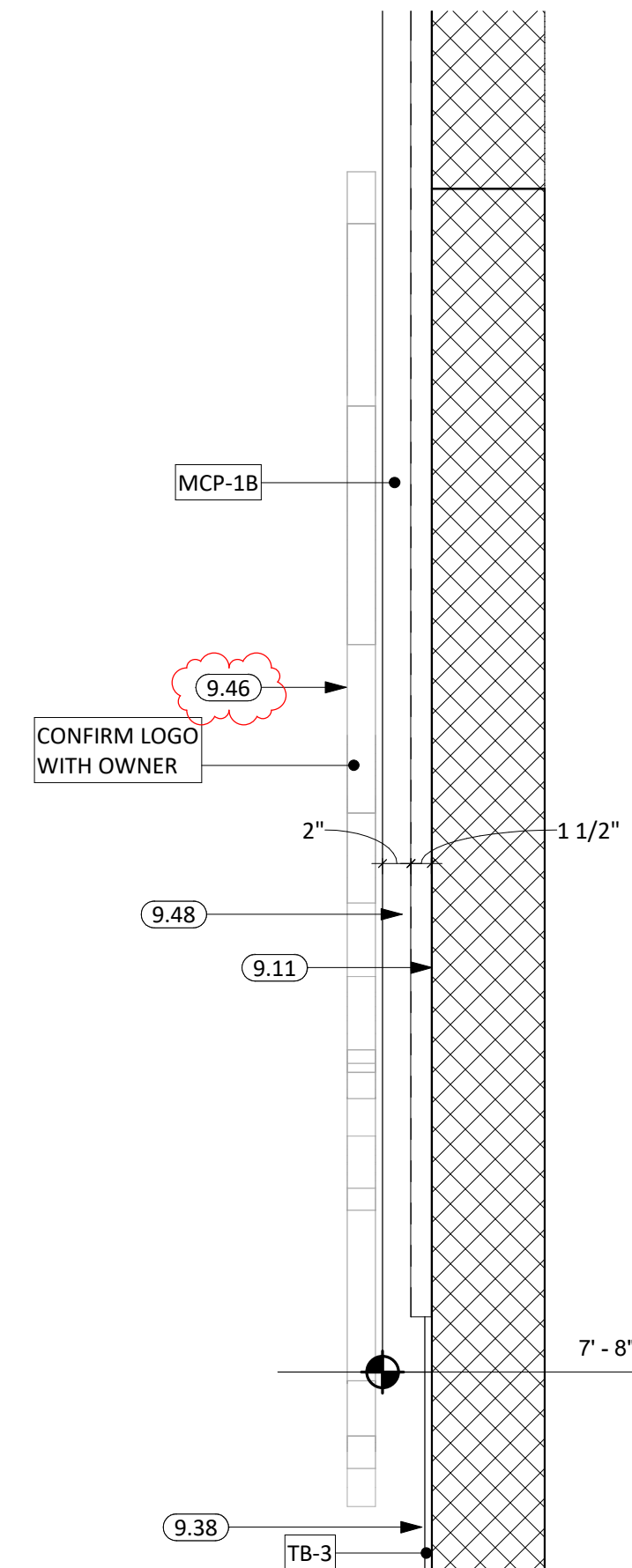
4 3MM EDGEBAND  
1 1/2" = 1'-0"



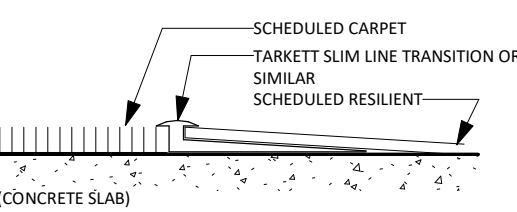
5 PLAM COUNTERTOP W/ LAM. APRON  
1 1/2" = 1'-0"



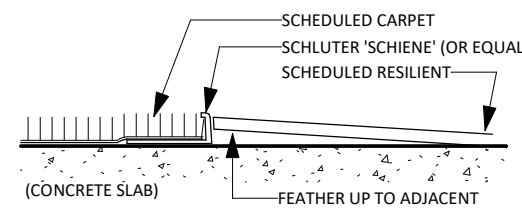
6 WALL DISPLAY SECTION DETAIL  
1" = 1'-0"



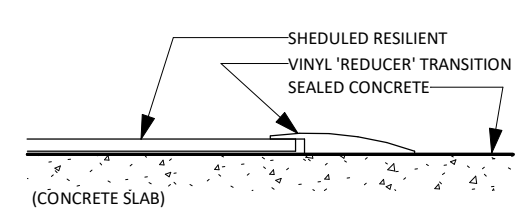
7 ACOUSTIC METAL PANEL VERT. SECTION  
1" = 1'-0"



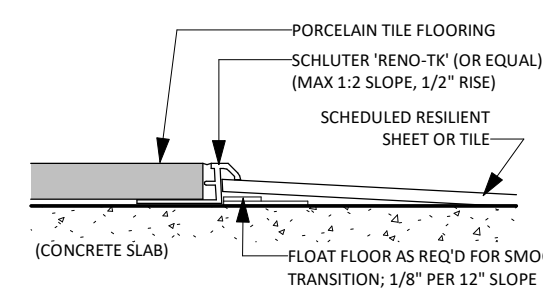
8 CARPET TO RESILIENT - VINYL  
6" = 1'-0"



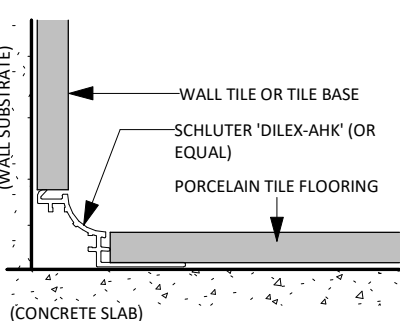
9 CARPET TO RESILIENT - SCHLUTER  
6" = 1'-0"



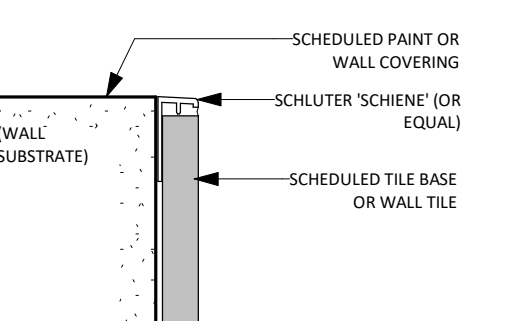
10 RESILIENT TO CONCRETE  
6" = 1'-0"



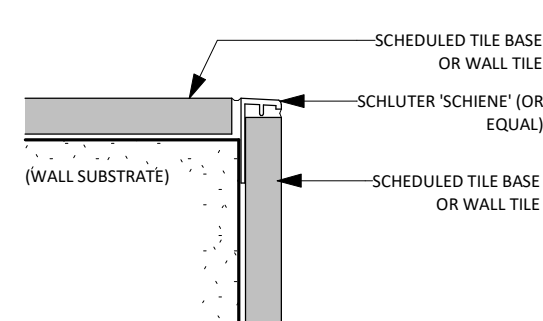
11 TILE TO RESILIENT  
6" = 1'-0"



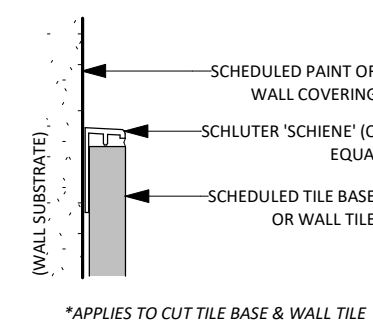
13 TILE FLOOR TO WALL  
6" = 1'-0"



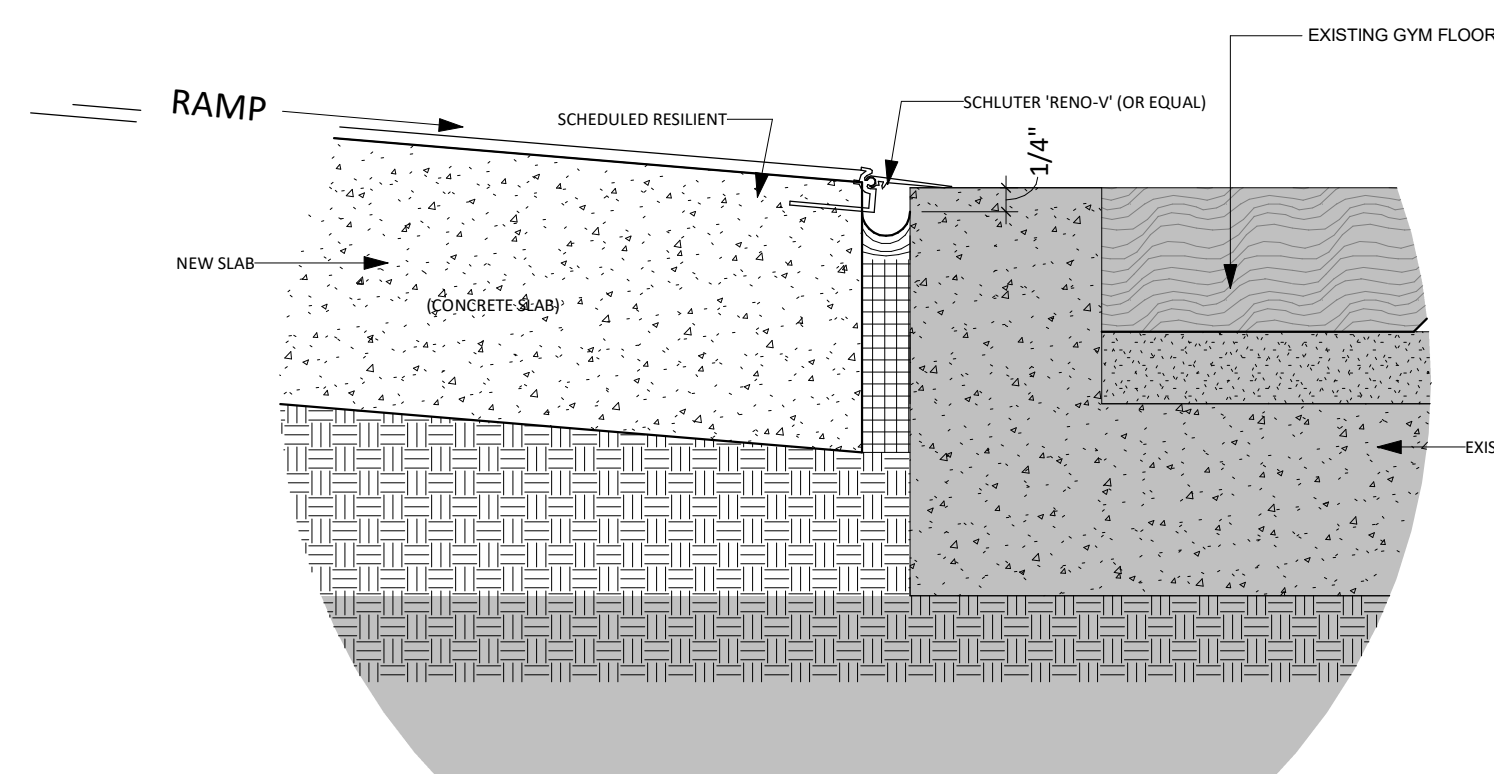
14 WALL TILE TO GWB OUTSIDE CORNER  
6" = 1'-0"



15 WALL TILE TO OUTSIDE CORNER - SCHIENE  
6" = 1'-0"

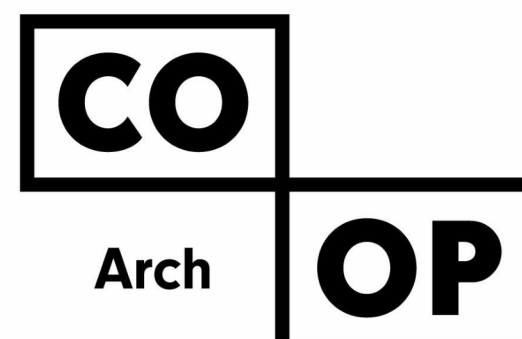


16 WALL TILE TO GWB  
6" = 1'-0"



12 RESILIENT TO EXISTING @ RAMP  
6" = 1'-0"

KEYNOTE SCHEDULE	
5.30	3 5/8" STRUCTURAL STEEL STUD & TRACK FRAMING (SEE ARCH. & STRUCT.)
6.07	2x WOOD BLOCKING AS REQUIRED
6.24	5/8" PLYWOOD
6.74	PLASTIC LAMINATE WALL CABINET
6.79	HIGH PRESSURE LAMINATE CASEWORK
6.95	DOUBLE WALL COAT HOOKS
6.96	TRIPLE PURSE/ CEILING HOOKS, OR SIMILAR
9.04	3 5/8" STEEL STUD & TRACK FRAMING
9.11	1 1/2" FURRING CHANNEL
9.21	5/8" GYPSUM BOARD
9.38	WALLCOVERING WRAPPED 5/8" X 60" (MIN) CORK BOARD
9.46	1/8" ACRYLIC DIMENSIONAL SIGNAGE ON STRUCTURAL HIDDEN STAND-OFF(S) MOUNTED @ OPENINGS BETWEEN METAL WALL PANELS. FLOAT CYCLONE-LOGO & SCALE DOWN, AS NEEDED
9.48	ARMSTRONG 'DIVERGENG' ACOUSTIC METAL PANEL
9.51	RESILIENT BASE



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CO-OP PROJECT NO: 2153



ISSUE:  
01/30/2023 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
INTERIOR DETAILS

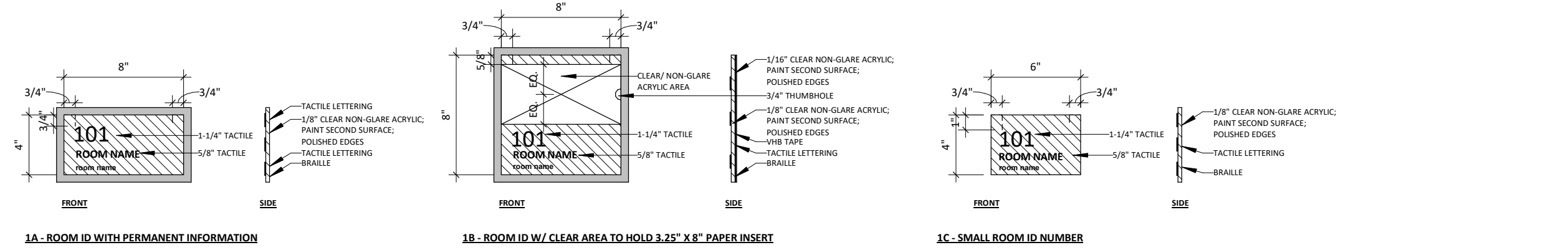
A511

ROOM SIGNAGE KEY					
Room Number	Name	Signage Type & Color	Signage Mount Type	Text Color	Signage Comments
A101	WORK ROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
A102	RR ENTRY	2A/ 2B   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	2 SIGNS REQUIRED, LOCATION OF SIGNAGE MOUNT *TBD
A102A	BOYS	-	-	-	
A102B	GIRLS	-	-	-	
A103	ELEM. FLEX RM #1	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A103A	SM. GROUP	1C   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A103B	SPEECH	1C   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A103C	OT/PT	1C   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A103D	VESTIBULE	-	-	-	
A104	ELEM. FLEX RM #2	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A105	SMALL GROUP	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A106	SPEECH CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A107A	-	-	-	-	EXISTING SIGNAGE, VERIFY NEEDS
A107B	-	-	-	-	EXISTING SIGNAGE, VERIFY NEEDS
A108	RECEPTION	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME WITH RECEPTION STAFF. MOUNT SIGN AT NEW OPERABLE WINDOW OPENING
A199	CORRIDOR	-	-	-	
B101	MUSIC OFFICE	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME. 2 SIGNS REQUIRED
B102	STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME WITH BAND STAFF
B103	MUSIC ROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME. 2 SIGNS REQUIRED
B103A	BAND STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME WITH BAND STAFF. 2 SIGNS REQUIRED
B103B	PRACTICE RM. #1	1C   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
B103C	PRACTICE RM. #2	1C   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
B104	FLEX CLASSROOM	1B   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	2 SIGNS REQUIRED
B105	CUSTODIAL	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
B106	1-ON-1	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
B107	FLEX CLASSROOM	1B   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
B107A	ART STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	
B108	1-ON-1	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
B199A/ B199B	CORRIDOR	-	-	-	
C100A	VESTIBULE	-	-	-	
C100B	VESTIBULE	-	-	-	
C101	COMMONS	-	-	-	
C102	HEALTH SCIENCE	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C103	SPED CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C104	STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C105	STAGE	1C   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME OR NEED. LOCATION OF SIGN NEAR STAIR ENTRY.
C106	STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C107	BOILER	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME

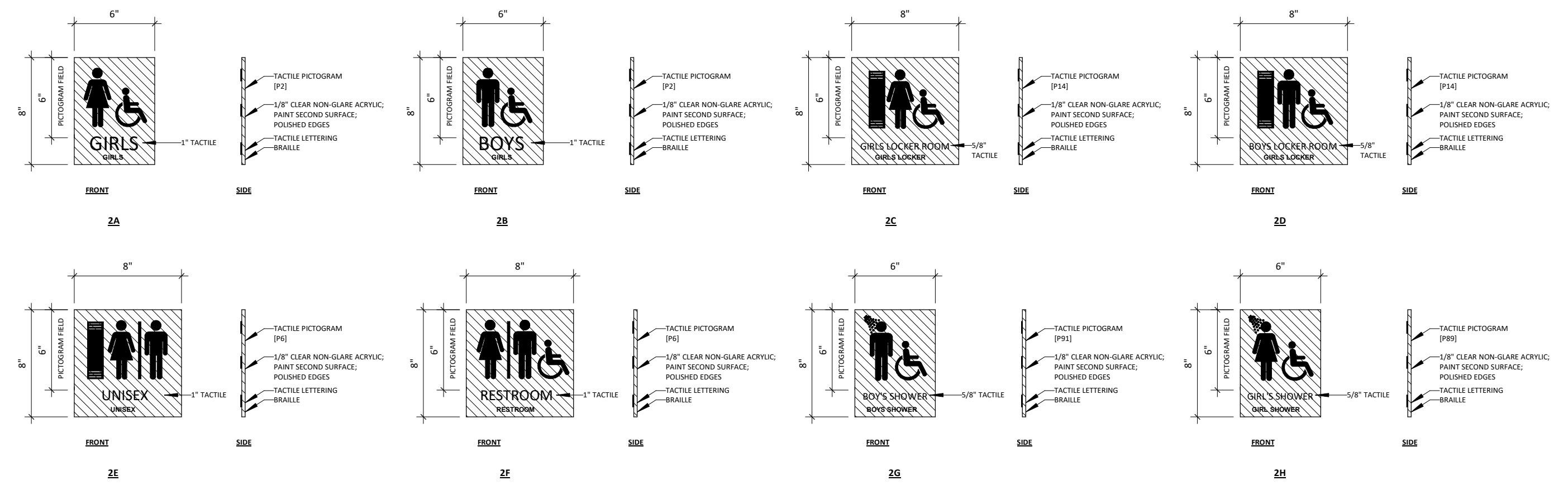
ROOM SIGNAGE KEY					
Room Number	Name	Signage Type & Color	Signage Mount Type	Text Color	Signage Comments
C108	GYM STORAGE	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C109	BOYS LOCKER RM	2C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	
C109A	BOYS RR	-	-	-	
C110	REF. LOCKER RM	2E   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C111	GIRLS LOCKER RM	2D   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	
C111A	GIRLS RR	-	-	-	
C112	-	-	-	-	EXISTING SIGNAGE
C199A	CORRIDOR	-	-	-	
C199B	CORRIDOR	-	-	-	
C199C	CORRIDOR	-	-	-	
C199D	CORRIDOR	-	-	-	
D100	VESTIBULE	-	-	-	
D101	KITCHEN	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
D101A	RESTROOM	2F   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
D102	RR ENTRY	2A/ 2B   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	2 SIGNS REQUIRED, LOCATION OF SIGNAGE MOUNT *TBD
D102A	GIRLS RR	-	-	-	
D102B	BOYS RR	-	-	-	
D102C	CUSTODIAL	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	
D103	AG CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D103A	AG OFFICE	1A   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME. 2 SIGNS REQUIRED
D103B	AG SHOP	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	LOCATION OF SIGNAGE MOUNT *TBD
D103C	TOOLS	1C   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D104	FACS CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D105	WORK ROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
D106	SCIENCE CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D106A	SCIENCE PREP ROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D199A	CORRIDOR	-	-	-	
D199B	CORRIDOR	-	-	-	

**NOTE:**  
ALL ROOM NUMBERS ARE CONNECTED TO THE ARCHITECTURAL PLAN ROOM NUMBERING, NOT EXISTING ROOM NUMBERING. GC TO CONFIRM ALL ROOM NUMBERS & NAMES BY SCHOOL STAFF PRIOR TO SUBMITTALS.

### ROOM SIGNAGE - '1' SERIES



### RESTROOM SIGNAGE - '2' SERIES



CO-OP PROJECT NO: 2153

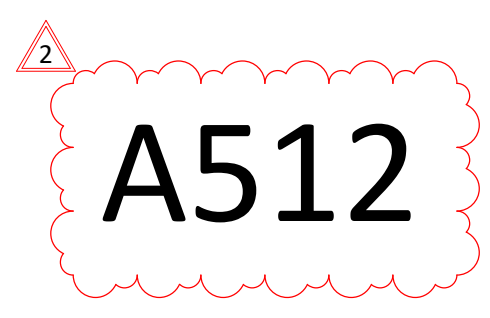


ISSUE: 01/30/2023 CONSTRUCTION DOCUMENTS

REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
INTERIOR SIGNAGE



Addendum No. ME-1  
To Mechanical & Electrical Plans and Specifications:  
**Willow Lake School Addition**  
**Willow Lake, South Dakota**

Addendum Dated: February 16, 2023

Original Plans & Specifications Dated: January 30, 2023

SCOPE OF THIS ADDENDUM: The following becomes part of the original plans and specifications, taking precedence over the items that may conflict. The bidder shall note receipt and make acknowledgement of the addendum on the bid form, incorporating its provision in the bid.

PLAN AND SPECIFICATION CHANGES AND CLARIFICATIONS:

1. Mechanical Table of Contents – See the attached revised table of contents to include section 23 0900 under the scope of Ventilation and Air Conditioning Work (price to be included in HVAC bid, but still broken out under line items #1 & #2).
2. Sheet M202C – See the attached revised sheet for temporary heat provisions in existing gym, and temporary re-installation of lavs in Boys 279.
3. Sheet M402C – Add floor drain to shower in Ref C110 with piping as shown. This is the same style shower as the transfer SH-1A's in the locker rooms.
4. Sheet M502C – See the attached revised sheet for revisions to hydronic piping.
5. Sheet M503D – See the attached revised sheet for revisions to hydronic piping.
6. Sheet M704E – See the attached revised sheet for clarification to TC/VC phasing.
7. Sheet M904 – See the attached revised sheet for revisions to the exhaust fan schedule.
8. Sheet E202CD – See the attached revised sheet for temp heater connection and stage panel demolition.
9. Sheet E302C – See the attached revised sheet for new stage panel.
10. Sheet E304E – See attached revised sheet for Electric Heat phasing note.
11. Sheet E402C – See the attached revised sheet for coordination notes.
12. Sheet E600 – See the attached revised sheet for riser diagram update.
13. Sheet E700 – See the attached revised sheet for new panel schedule.
14. Sheet E702 – See the attached revised sheet for Luminaire Schedule updates.

APPROVED EQUALS:

The following list of equipment manufacturers shall be added to the approved equals listed on the plan sheet schedules and considered as approved equals subject to meeting all requirements of the plans and specifications – final acceptance subject to shop drawing approval.

1. Slotted Fume Exhaust Hoods: Nordfab
2. Panelboards and Gear: Siemens

Sichmeller Engineering  
(605) 225-4344

Attachments: Revised Mechanical Table of Contents  
Sheet M202C – Area C – Plumbing & Hydronics Demolition Plan  
Sheet M502C – Area C – Above Grade Plumbing & Hydronics Plan  
Sheet M503D – Area D – Above Grade Plumbing & Hydronics Plan  
Sheet M704E – Area E – HVAC Plan

Sheet M904 – Mechanical Schedules  
Sheet E202CD – Area C & D – Electrical Demolition Plan  
Sheet E302C – Area C – Power & Data Plan  
Sheet E304E – Area E – Power & Data Plan  
Sheet E402C – Area C – Lighting Plan  
Sheet E600 – Electrical Details  
Sheet E700 – Electrical Schedules  
Sheet E702 – Electrical Schedules – Continued 2

Table of Contents

Division	Section Title	Pages
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**DIVISION 21 – FIRE PROTECTION**

21 1000	Fire Suppression Systems	11
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**DIVISION 22 - PLUMBING**

22 0500	General Plumbing Requirements	6
22 0510	Basic Plumbing Materials and Methods	6
22 0700	Plumbing Systems Insulation	3
22 4000	Plumbing	7

**DIVISION 23 – HEATING, VENTILATION AND AIR CONDITIONING**

23 0500	General HVAC Requirements	7
23 0510	Basic HVAC Materials and Methods	4
23 0593	Testing, Adjusting, and Balancing (Air and Water)	3
23 0700	HVAC Systems Insulation	5
23 0900	Controls & Control Sequences	13
23 2113	Hydronic Piping Systems	16
23 2123	HVAC Hydronic Pumps	4
23 7000	Ventilation and Air Conditioning	21

**FIRE PROTECTION WORK SHALL INCLUDE:**

SECTION 21 1000

**PLUMBING, & HYDRONICS WORK SHALL INCLUDE:**

SECTION 22 4000, 23 2113, & 23 2123

& SECTIONS 22 0500, 22 0510, 22 0700, 23 0500, 23 0510, & 23 0700 AS APPLIES

**VENTILATION AND AIR CONDITIONING WORK SHALL INCLUDE:**

SECTION 23 0593, 23 0900, & 23 7000

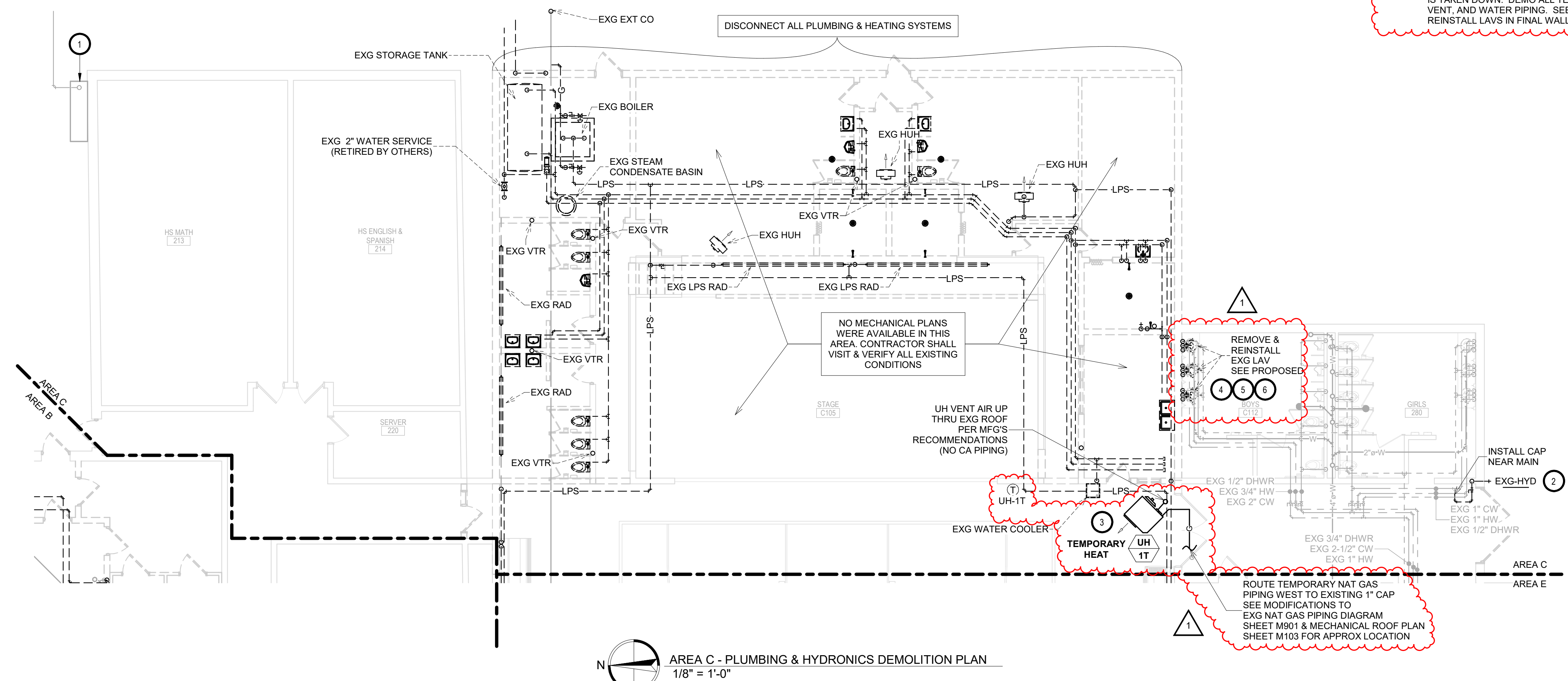
& SECTIONS 23 0500, 23 0510 & 23 0700 AS APPLIES

MECHANICAL GENERAL NOTES:

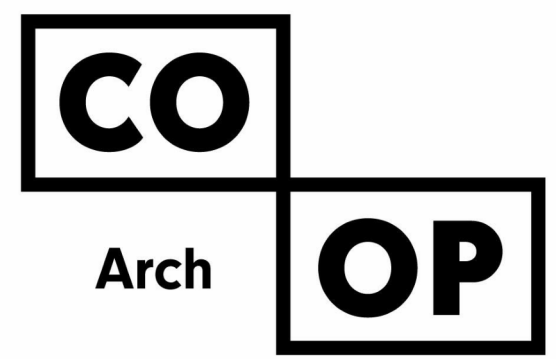
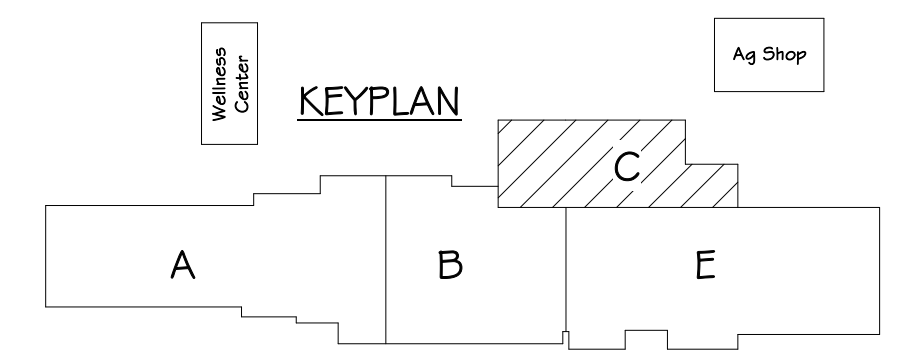
- CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES, INCLUDING ANY NECESSARY DEMOLITION.
- REMOVE MECHANICAL EQUIPMENT IN THE AREAS SHOWN ON THE PLAN, DISCONNECT SERVICES AND REMOVE TO A POINT OUT OF THE WAY OF THE GENERAL DEMOLITION. MARK ON THE PLAN TO CLEARLY SHOW WHERE THESE SERVICES ARE STOPPED. DEMOLITION WORK SHALL BE COORDINATED WITH THE OWNER. SHOULD QUESTIONS ARISE REGARDING THE REMOVAL OF EQUIPMENT, CONFER WITH THE OWNER BEFORE SUCH EQUIPMENT IS DEMOLISHED. MATERIALS REMOVED BY DEMOLITION SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE SPECIFICALLY NOTED. MATERIAL THE OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
- EQUIPMENT SHOWN ON DRAWINGS AS EXISTING IS BASED ON EXISTING PLANS AND LIMITED FIELD INVESTIGATION. THE FIELD SURVEY WAS CONDUCTED TO VERIFY, AS MUCH AS POSSIBLE, THE ACCURACY OF THE LOCATIONS SHOWN. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THE "EXISTING CONDITIONS" AS SHOWN ON THE DRAWINGS AS THE DEMOLITION WORK PROGRESSES. PERFORM MODIFICATIONS AND ADDITIONS AS NECESSARY TO CORRECT FOR THESE HIDDEN CONDITIONS AND ALLOW FOR THE COMPLETION OF THE NEW WORK.
- THE EXISTING BUILDING WILL BE IN USE DURING THIS CONSTRUCTION. SCHEDULE AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTIONS. TEMPORARY SERVICES SHALL BE INSTALLED IF ONE PHASE OF CONSTRUCTION DISRUPTS SERVICE TO ANOTHER AREA OF THE BUILDING OR IF EQUIPMENT HAS TO BE RELOCATED TO ALLOW CONSTRUCTION TO PROGRESS. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER'S SITE REPRESENTATIVE. AFTER SERVICE HAS BEEN RESTORED FOLLOWING AN INTERRUPTION, INSPECT AREAS AFFECTED BY THE INTERRUPTION AND BE RESPONSIBLE FOR RETURNING AUTOMATICALLY CONTROLLED EQUIPMENT TO THE SAME OPERATING CONDITION, WHICH EXISTED PRIOR TO THE INTERRUPTION.
- PROVIDE PENETRATIONS TO THE BUILDING STRUCTURE AS REQUIRED FOR INSTALLATION. WHERE EXISTING OR TEMPORARY SYSTEMS ARE BEING DEMOLISHED, WHICH LEAVE OPENINGS IN THE EXISTING BUILDING STRUCTURE, THE BUILDING STRUCTURE SHALL BE PATCHED TO MATCH THE EXISTING CONSTRUCTION AND MAINTAIN THE EXISTING BUILDING FIRE RATINGS. ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
- ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
- THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE TESTING & CLEANING OF EACH RESPECTIVE SYSTEM IN ACCORDANCE WITH APPLICABLE STATE & LOCAL CODES. TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION. WRITTEN NOTIFICATION OF TEST, DATE, AND RESULTS SHALL BE FURNISHED TO THE ENGINEER BEFORE CONCEALING OR COVERING THE INSTALLATION. TESTS SHALL BE REPEATED UNTIL EACH SYSTEM IS PROVEN ACCEPTABLE.

KEYNOTES

- EXISTING GRADE ELEVATIONS WILL CHANGE. EXISTING GAS METERFIT WILL HAVE TO BE RAISED BY UTILITY TO ACCOMMODATE PROPOSED GRADE CHANGES. EXISTING NORTHWESTERN ENERGY NATURAL GAS METER #23464. PLUMBING CONTRACTOR TO COORDINATE WITH KIRBY WICKS OF NWE AT 605-353-7609 FOR ANY UTILITY REQUIRED CHANGES TO THE METER FIT (ANY NWE COSTS ASSOCIATED WITH THE NATURAL GAS METERFIT WILL BE BILLED DIRECTLY TO THE OWNER). PC TO MODIFY EXISTING NATURAL GAS PIPING AFTER NWE METERFIT TO ACCOMMODATE THE ADDITIONAL NATURAL GAS PIPING. SEE MODIFICATIONS TO EXISTING NATURAL GAS PIPING DIAGRAM.
- PC TO DISCONNECT AND REMOVE EXISTING PLUMBING FIXTURE, DOMESTIC WATER AND INSTALL CAP NEAR MAIN.
- PC TO PROVIDE & INSTALL UH-1T, REZNOR UDX-400 WITH 332 MBH OUTPUT, POWER VENTING, WITH HANGING VIBRATION ISOLATION, AND LOW VOLTAGE NON-PROGRAMMABLE T-STAT, CLEAR LOCKABLE COVER, AND CONTROL WIRING.
- PC TO DEMO ALL WASTE, VENT, AND WATER PIPING IN WALL TO BE DEMO'D. DEMO WASTE BELOW GRADE TO THE SOUTH TO ALLOW FOR TEMPORARY EXTERIOR WALL INSTALLATION.
- TEMPORARY WASTE, VENT, COLD AND HOT WATER TO BE ROUTED UNINSULATED SURFACE MOUNTED TO TEMPORARY WALL. NO PIPING WILL BE ALLOWED IN EXTERIOR WALL. DEMO AND PATCHING OF CONCRETE FLOOR BY OTHERS. ROUTE HOT, COLD, AND VENT PIPING DOWN WEST OF THE COUNTERTOP, AND ROUTE UNDER COUNTERTOP TO EACH LAV. TEMPORARILY REINSTALL EXISTING LAVS.
- REMOVE AND SALVAGE LAVS AFTER TEMPORARY WALL IS TAKEN DOWN. DEMO ALL TEMPORARY WASTE, VENT, AND WATER PIPING. SEE PROPOSED TO REINSTALL EXISTING LAVS.



AREA C - PLUMBING & HYDRONICS DEMOLITION PLAN  
1/8" = 1'-0"



1108 S. Main St. 102  
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601 Kansas City St. 7  
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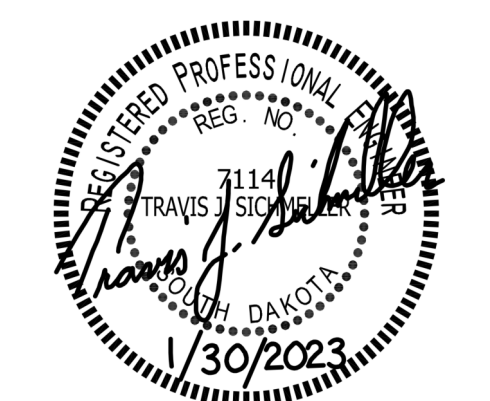
440 E. 8th St 221  
Sioux Falls, SD 57103  
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**SICHMELLER ENGINEERING**  
Mechanical & Electrical Engineering

801 Railroad Ave. SE  
Aberdeen, SD 57401  
Phone: 605-225-4344  
www.siceng.biz

SE PROJECT NO: 220900771



ISSUE:  
1/30/23 CONSTRUCTION DOCUMENTS

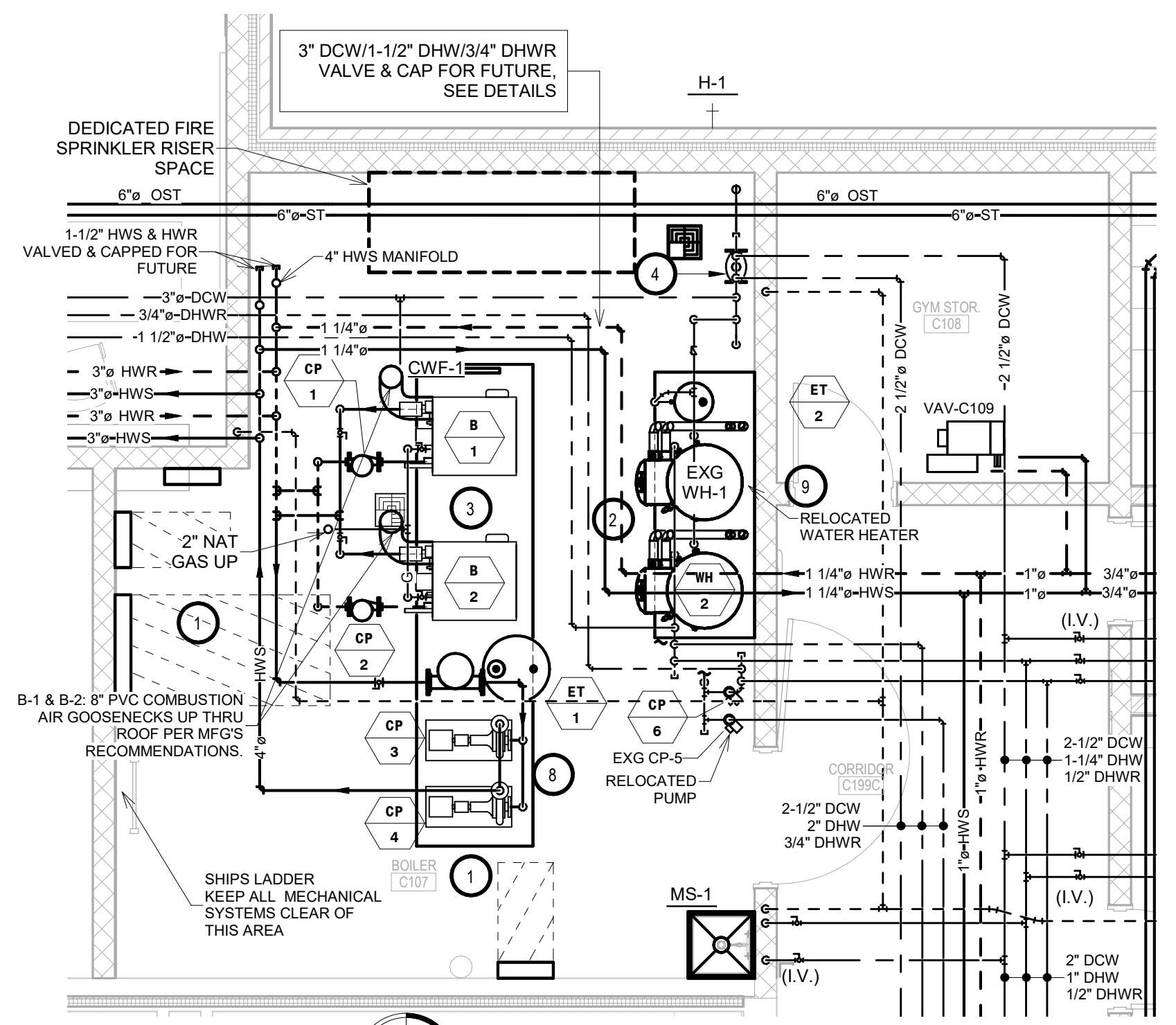
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	Addendum ME 1	02-16-23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
AREA C - PLUMBING & HYDRONICS DEMOLITION PLAN

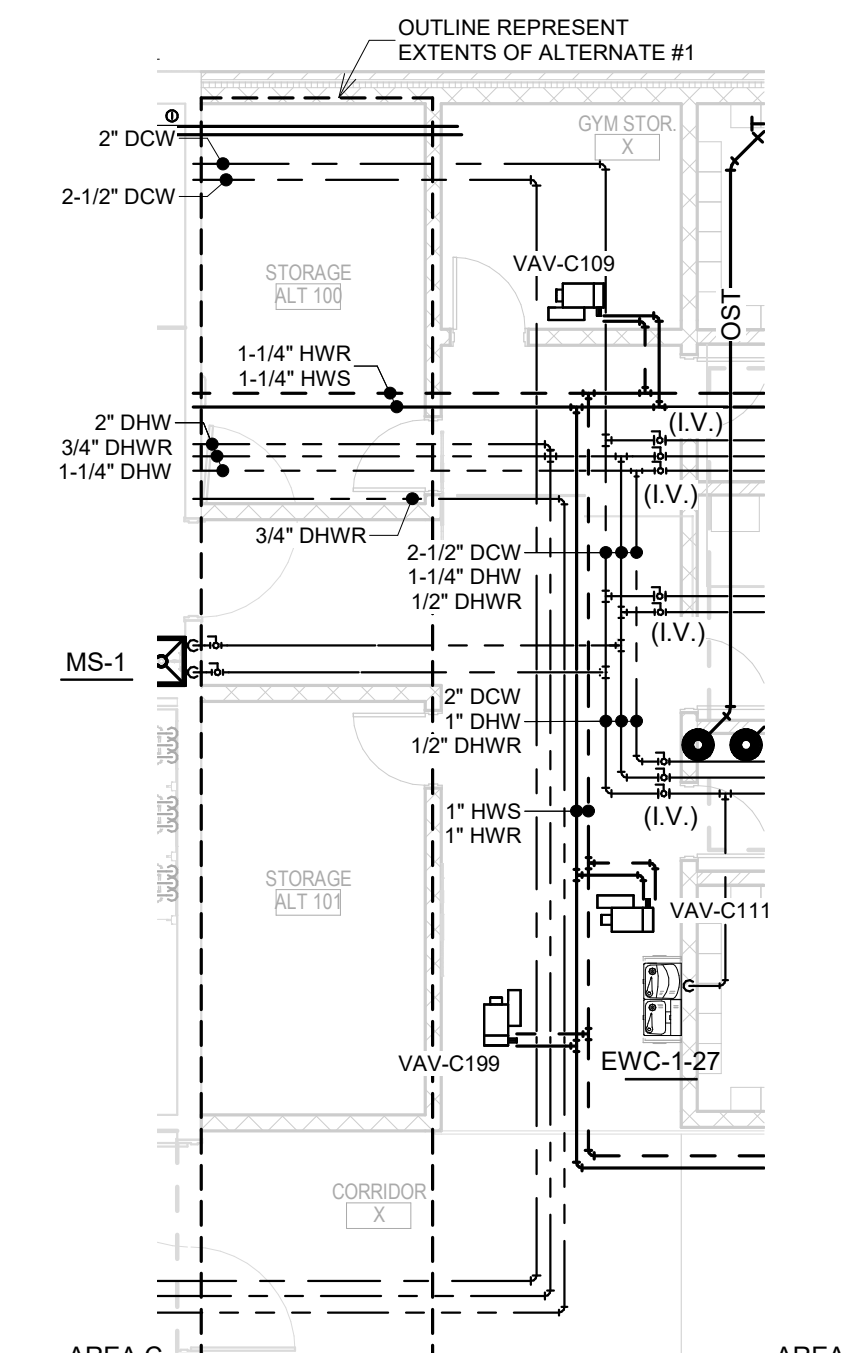
**M202C**



AREA C - ENLARGED BOILER ROOM PLAN  
1/4" = 1'-0"

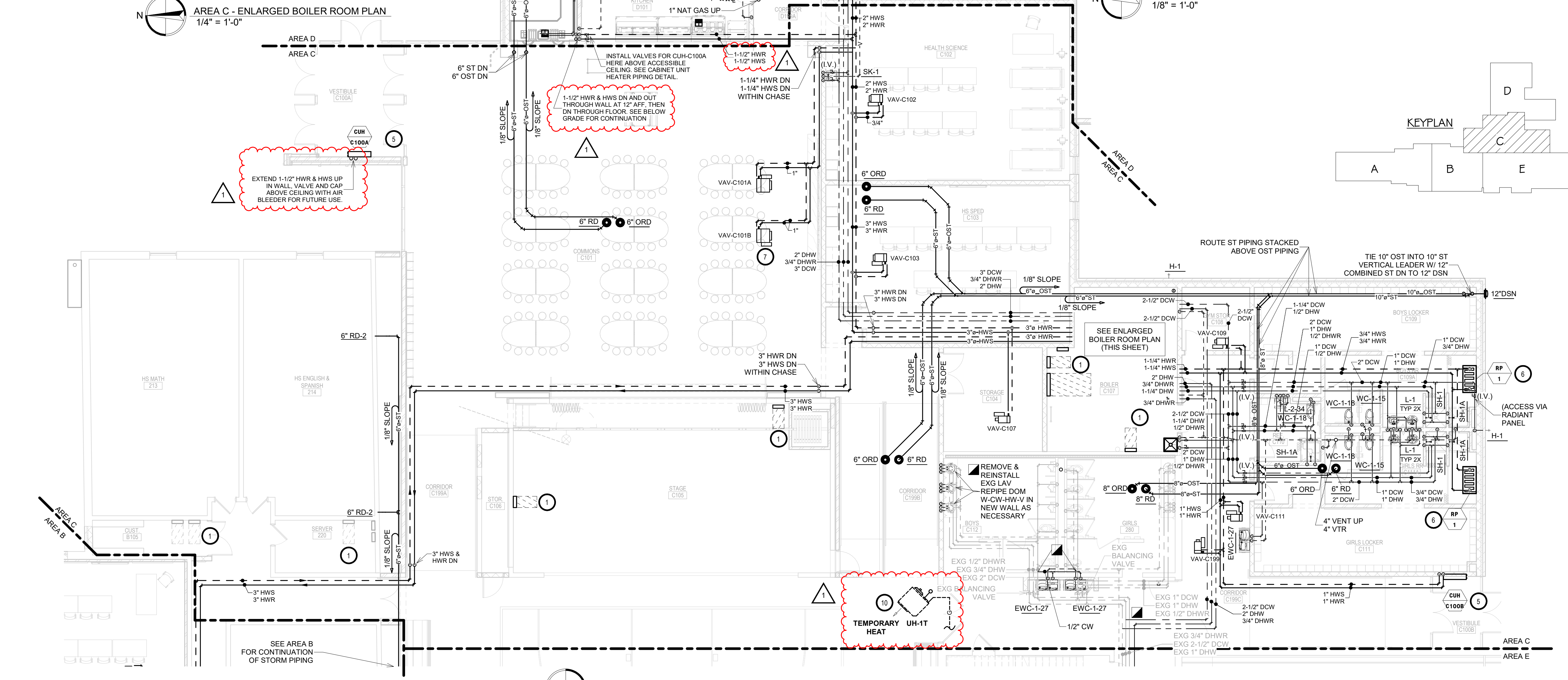
- KEYNOTES:**
- THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.
  - SEE MODIFICATIONS TO EXISTING NATURAL GAS WATER HEATER PIPING DIAGRAM.
  - SEE HEATING WATER SYSTEM PIPING DIAGRAM INCLUDING 3-WAY DDC TEMPERATURE CONTROL VALVE NOT SHOWN ON THIS PLAN VIEW FOR SIMPLICITY.
  - SEE WATER HEADER PIPING DIAGRAM.
  - SEE CABINET UNIT HEATER PIPING DETAIL.
  - SEE RADIANT PANEL PIPING DETAIL.
  - TYPICAL - SEE VAV HEATING COIL PIPING DETAIL.
  - SEE END SUCTION PUMP DETAIL.
  - RWH-1 AND WH-2 VENTING & COMBUSTION AIR THRU ROOF, WITH SPACING, HEIGHTS, & TERMINATIONS PER MFG'S REQUIREMENTS. CONCENTRIC KITS ARE NOT ACCEPTABLE.
  - ONCE ADDITION IS COMPLETE, PC TO DISCONNECT AND REMOVE TEMPORARY HEAT UH-1T, INSTALL INSULATED WEATHER TIGHT CAP ON VENTING, REMOVE LOW VOLTAGE NON-PROGRAMMABLE T-STAT, CLEAR LOCKABLE COVER, CONTROL WIRING, AND GAS PIPING BACK TO MAIN AND CAP.

- GENERAL NOTES:**
- ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
  - THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.
  - ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
  - ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
  - THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.
  - CONTRACTOR SHALL COORDINATE ALL PLUMBING WITH LIGHT FIXTURES, HVAC, FIRE SPRINKLER, AND STRUCTURAL TO ACCOMMODATE LIMITED CEILING SPACE.
  - FRESH AIR INTAKES TO BE MINIMUM 10' FROM ANY EXHAUST TERMINATION.
  - CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES.
  - COORDINATE NEW SERVICES WITH LOCAL UTILITIES.
  - PLUMBING CONTRACTOR TO PROVIDE VENTING FOR ALL FLOOR DRAINS, TRENCH DRAINS, AND FLOOR SINKS AS SHOWN OR AS REQUIRED BY CODE.

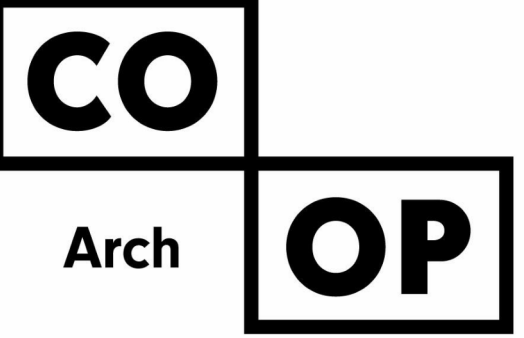
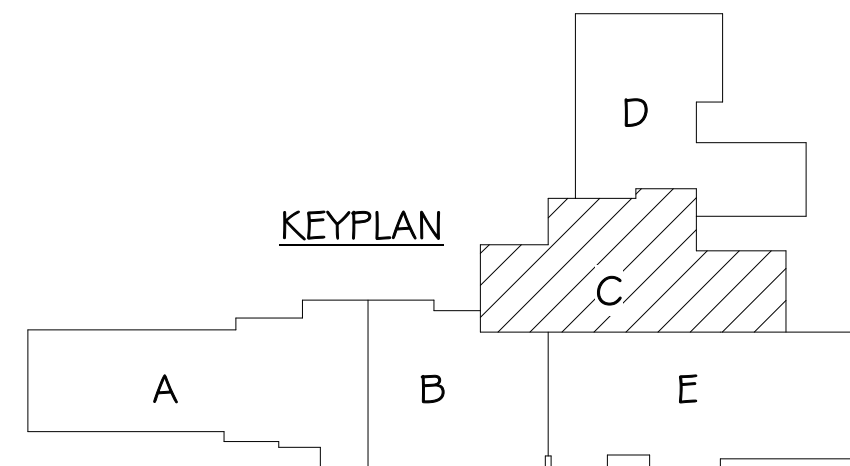


AREA C - ABOVE GRADE PLUMBING & HYDRONICS PLAN - ADD ALTERNATE #1  
1/8" = 1'-0"

- SPECIAL NOTES:**
- ALL MECHANICAL SYSTEMS, EXCLUDING DROPS, TO BE INSTALLED AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.
  - FLOOR DRAINS & SINK LOCATIONS SHALL BE INSTALLED IN LOCATIONS PROPER TO ACCEPT INDIRECT DRAIN PIPING FROM BOILERS, WATER HEATER, RELIEFS, ETC. (TRIP HAZARDS FROM PIPING WILL NOT BE ACCEPTABLE).
  - ALL FLOOR CLEANOUTS TO BE LOCATED IN INCONSPICUOUS LOCATIONS. CLEANOUTS LOCATED IN DOORWAYS AND MIDDLE OF HALLWAYS WILL NOT BE ACCEPTABLE.
  - ALL STORM DRAINAGE TO BE 1/8" SLOPE UNLESS OTHERWISE SPECIFIED.



AREA C - ABOVE GRADE PLUMBING & HYDRONICS PLAN  
1/8" = 1'-0"



1108 S. Main St. 102  
Aberdeen, SD 57401  
Phone: 605-725-4852

601 Kansas City St. 7  
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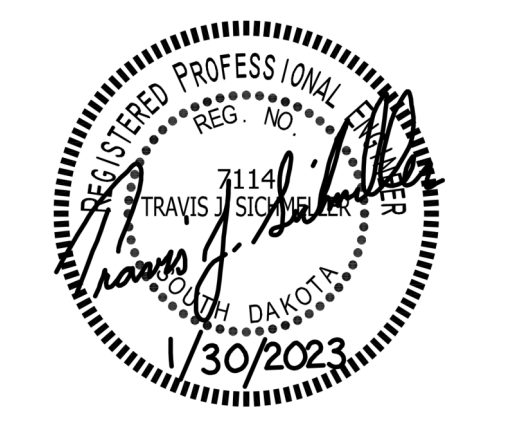
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SE PROJECT NO: 220900771



**ISSUE:**  
1/30/23 CONSTRUCTION DOCUMENTS

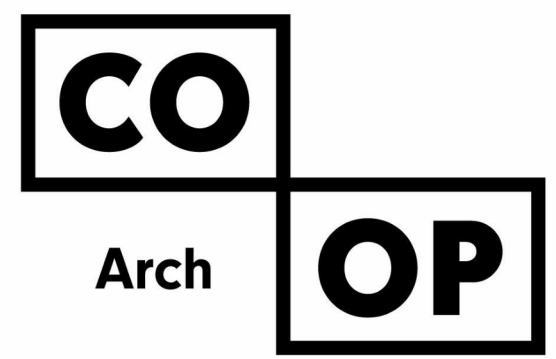
**REVISION SCHEDULE:**

REV. #	REV. DSC.	REV. DATE
1	Addendum ME 1	02-16-23

**PROJECT:**  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

**SHEET TITLE:**  
AREA C - ABOVE GRADE  
PLUMBING & HYDRONICS PLAN

**M502C**



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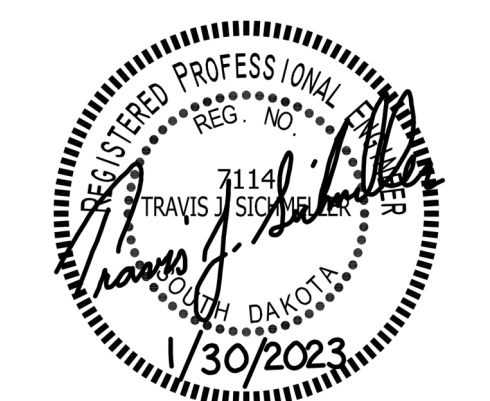
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1	Addendum ME 1	02-16-23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
AREA D - ABOVE GRADE  
PLUMBING & HYDRONICS PLAN

**M503D**

**GENERAL NOTES:**

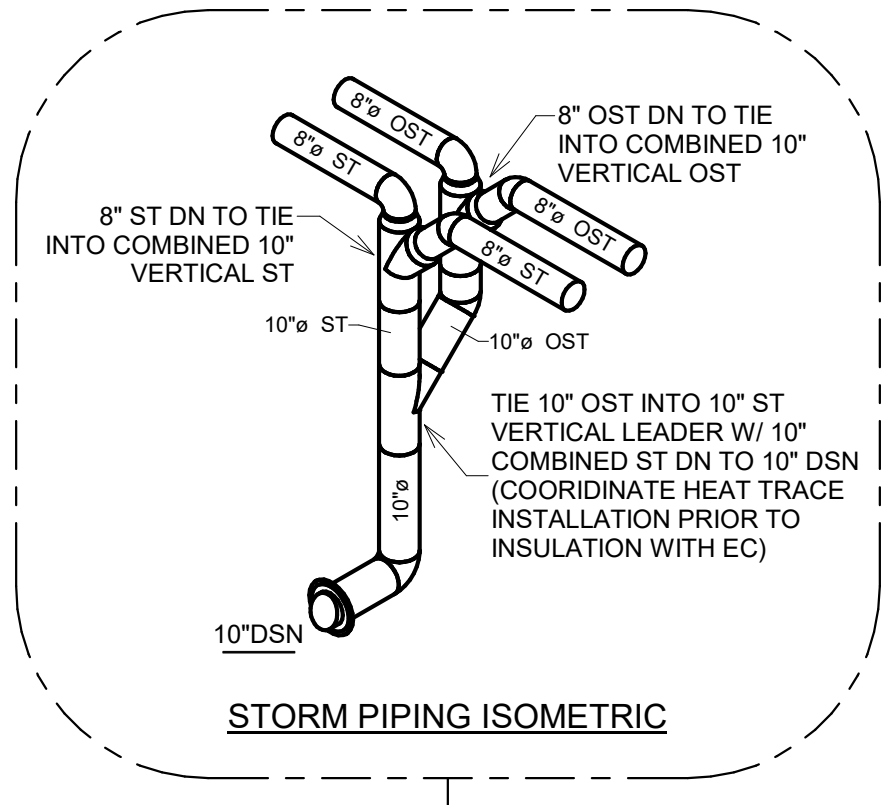
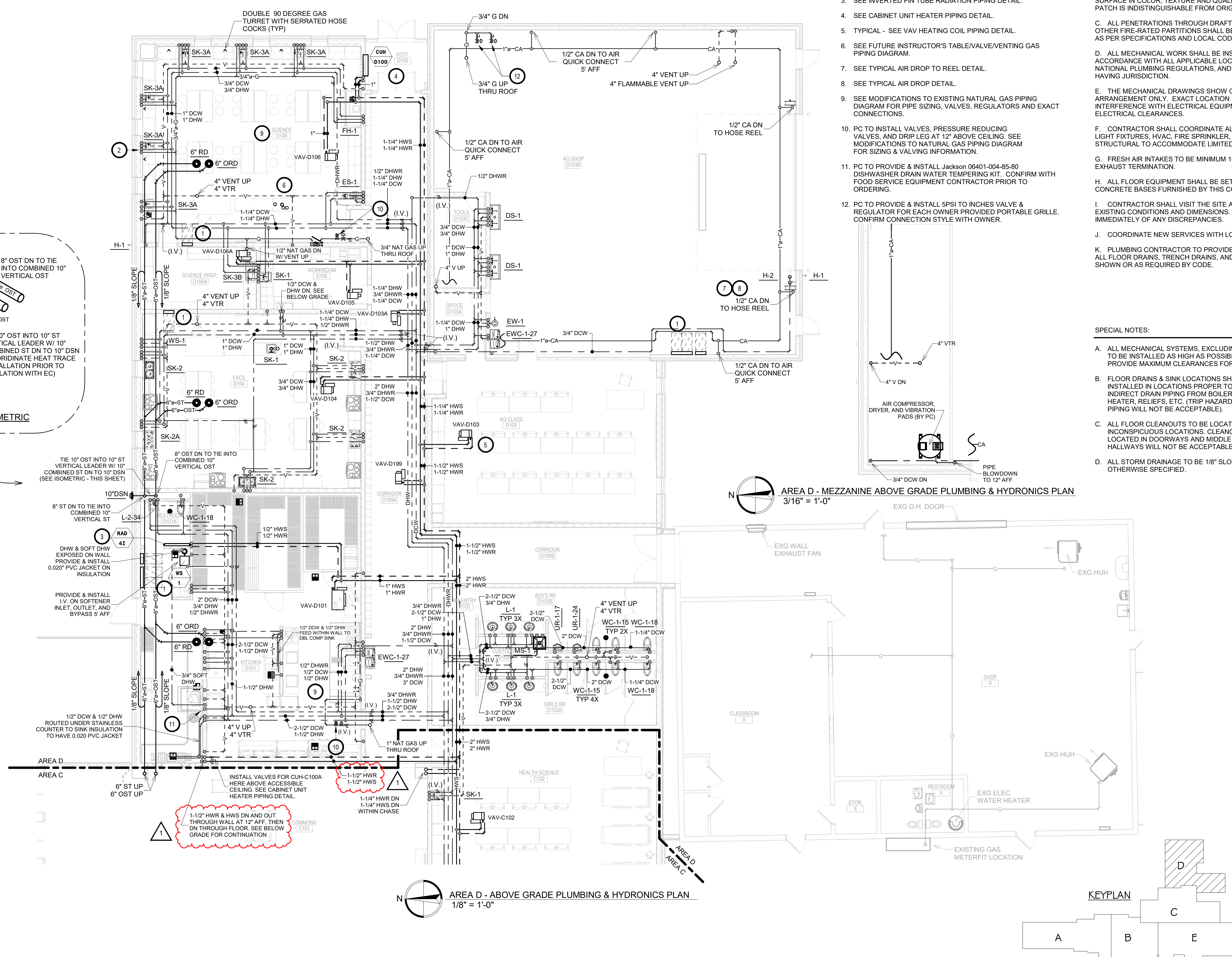
- ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.
- ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
- ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
- THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.
- CONTRACTOR SHALL COORDINATE ALL PLUMBING WITH LIGHT FIXTURES, HVAC, FIRE SPRINKLER, AND STRUCTURAL TO ACCOMMODATE LIMITED CEILING SPACE.
- FRESH AIR INTAKES TO BE MINIMUM 10' FROM ANY EXHAUST TERMINATION.
- ALL FLOOR EQUIPMENT SHALL BE SET ON 4" HIGH CONCRETE BASES FURNISHED BY THIS CONTRACTOR.
- CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES.
- COORDINATE NEW SERVICES WITH LOCAL UTILITIES.
- PLUMBING CONTRACTOR TO PROVIDE VENTING FOR ALL FLOOR DRAINS, TRENCH DRAINS, AND FLOOR SINKS AS SHOWN OR AS REQUIRED BY CODE.

**SPECIAL NOTES:**

- ALL MECHANICAL SYSTEMS, EXCLUDING DROPS, TO BE INSTALLED AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.
- FLOOR DRAINS & SINK LOCATIONS SHALL BE INSTALLED IN LOCATIONS PROPER TO ACCEPT INDIRECT DRAIN PIPING FROM BOILERS, WATER HEATER, RELIEFS, ETC. (TRIP HAZARDS FROM PIPING WILL NOT BE ACCEPTABLE).
- ALL FLOOR CLEANOUTS TO BE LOCATED IN INCONSPICUOUS LOCATIONS. CLEANOUTS LOCATED IN DOORWAYS AND MIDDLE OF HALLWAYS WILL NOT BE ACCEPTABLE.
- ALL STORM DRAINAGE TO BE 1/8" SLOPE UNLESS OTHERWISE SPECIFIED.

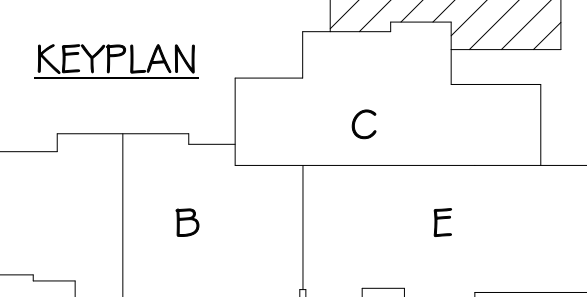
**KEYNOTES:**

- THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.
- TYPICAL - 1/2" WELDED NAT GAS DN TO GAS TURRET, SEE MODIFICATIONS TO EXISTING NATURAL GAS PIPING DIAGRAM.
- SEE INVERTED FIN TUBE RADIATION PIPING DETAIL.
- SEE CABINET UNIT HEATER PIPING DETAIL.
- TYPICAL - SEE VAV HEATING COIL PIPING DETAIL.
- SEE FUTURE INSTRUCTOR'S TABLE/VALVE/VENTING GAS PIPING DIAGRAM.
- SEE TYPICAL AIR DROP TO REEL DETAIL.
- SEE TYPICAL AIR DROP DETAIL.
- SEE MODIFICATIONS TO EXISTING NATURAL GAS PIPING DIAGRAM FOR PIPE SIZING, VALVES, REGULATORS AND EXACT CONNECTIONS.
- PC TO INSTALL VALVES, PRESSURE REDUCING VALVES, AND DRIP LEG AT 12" ABOVE CEILING. SEE MODIFICATIONS TO NATURAL GAS PIPING DIAGRAM FOR SIZING & VALVING INFORMATION.
- PC TO PROVIDE & INSTALL Jackson 06401-004-85-80 DISHWASHER DRAIN WATER TEMPERING KIT. CONFIRM WITH FOOD SERVICE EQUIPMENT CONTRACTOR PRIOR TO ORDERING.
- PC TO PROVIDE & INSTALL 5PSI TO INCHES VALVE & REGULATOR FOR EACH OWNER PROVIDED PORTABLE GRILLE. CONFIRM CONNECTION STYLE WITH OWNER.

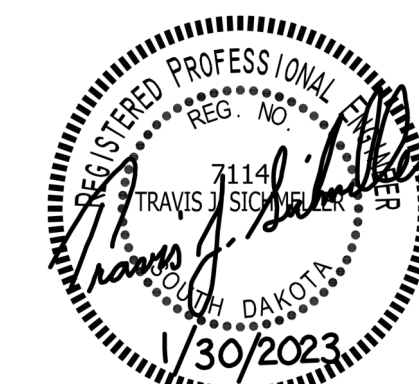


**AREA D - MEZZANINE ABOVE GRADE PLUMBING & HYDRONICS PLAN**  
3/16" = 1'-0"

**AREA D - ABOVE GRADE PLUMBING & HYDRONICS PLAN**  
1/8" = 1'-0"







GENERAL NOTES:

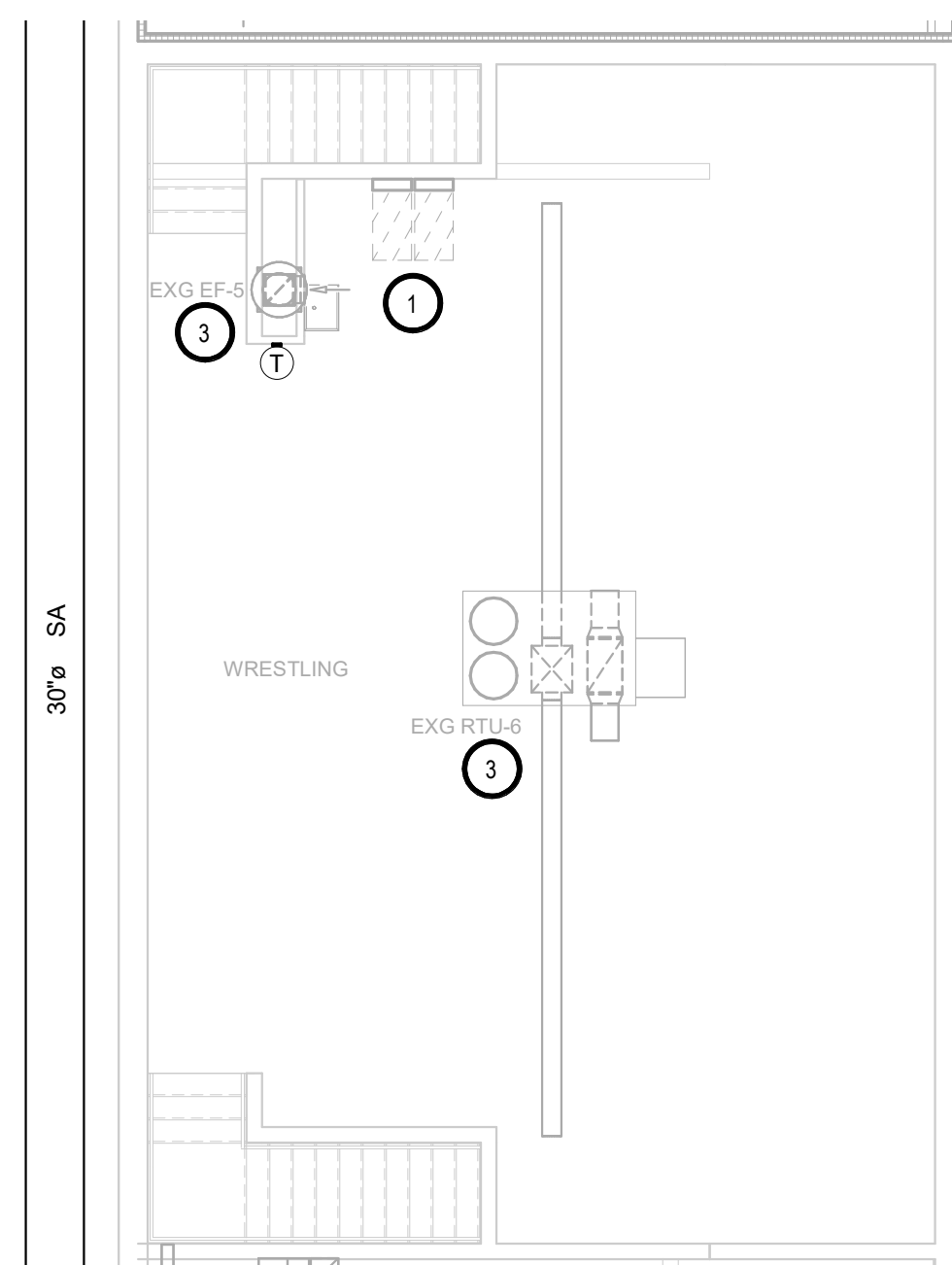
- A. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
- B. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.
- C. ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
- D. ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
- E. THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.
- F. COORDINATE INSTALLATION OF ALL HVAC WITH PLUMBING, FIRE SPRINKLER, LIGHT FIXTURES, AND STRUCTURE TO ACCOMMODATE LIMITED CEILING SPACE.
- G. FOR SIMPLICITY DUCT INSULATION NOT SHOWN, DUCT SIZES INDICATED ON DRAWING ARE INTERNAL DIMENSIONS. AS NEEDED ADJUST ACTUAL SIZE FOR INSULATION THICKNESS AS SPECIFIED.
- H. ALL FLEXIBLE DUCTWORK AND CONNECTORS BETWEEN THE LOW PRESSURE DUCTWORK AND THE DIFFUSERS SHALL BE THE SIZE OF THE DIFFUSER INLET.
- I. PROVIDE & INSTALL VIBRATION ISOLATION ON ALL HANGING EQUIPMENT. PROVIDE & INSTALL VIBRATION ABSORPTION MOUNTING PADS ON ALL EQUIPMENT MOUNTED ON FLOOR.
- K. ALL DUCTWORK TO BE SEALED AIRTIGHT.

KEYNOTES:

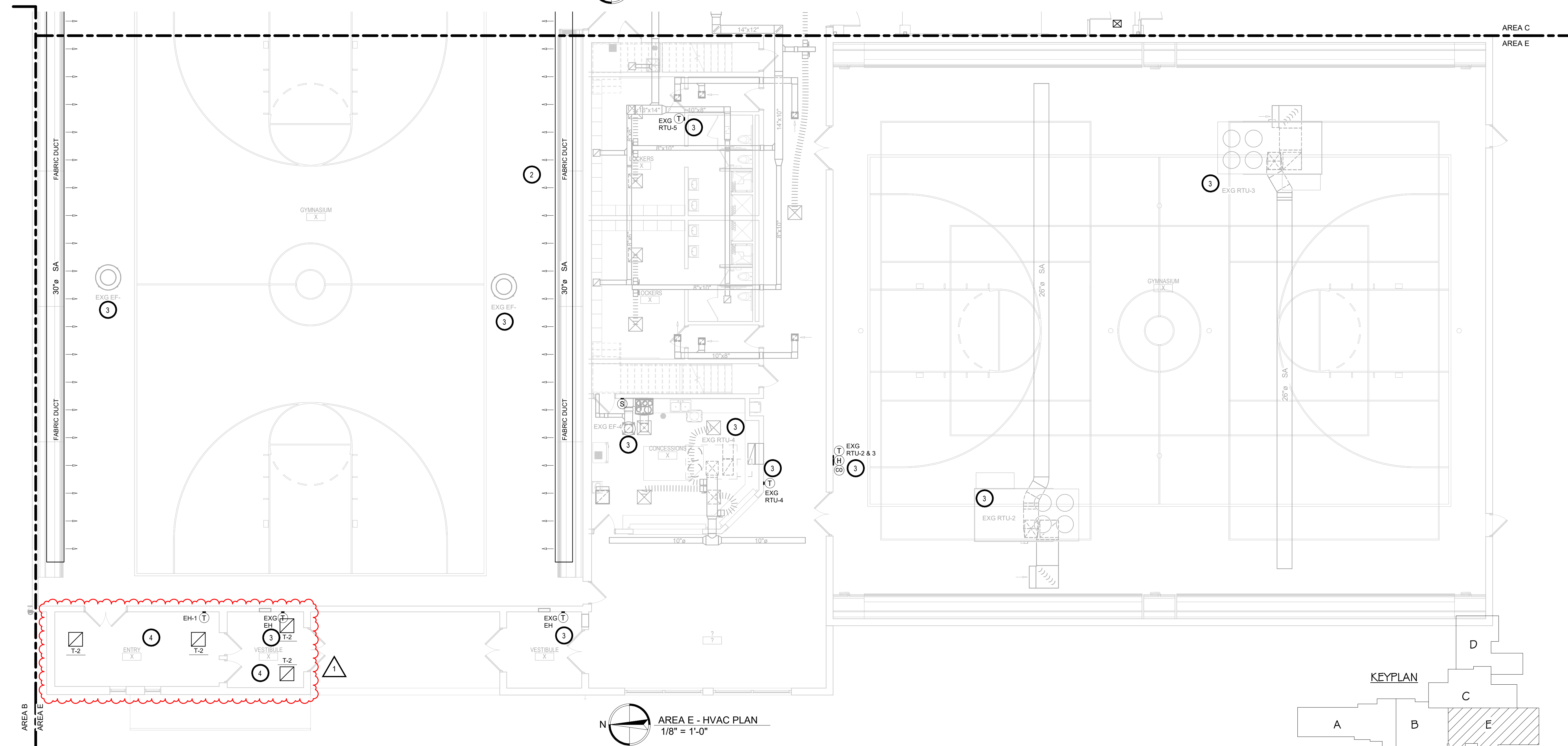
- 1. THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.
- 2. VENTILATION CONTRACTOR TO PROVIDE AND INSTALL 30"ø FABRIC DUCT.
- 3. TYP - TC TO PROVIDE NEW T-STATS, CONTROL CABLING, AND DDC TEMPERATURE CONTROL SYSTEM FOR EXISTING EQUIPMENT. SEE SPECS.
- 4. CONTROLS WORK AND TRANSFER REGISTERS WORK TO BE COMPLETED PRIOR TO HEATING SEASON OF 2023/2024.

SPECIAL NOTES:

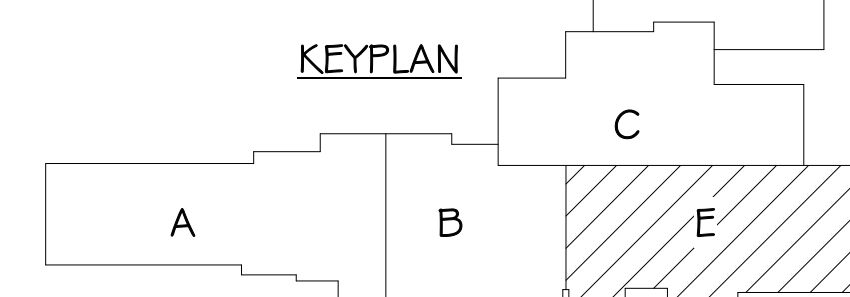
- A. ALL MECHANICAL SYSTEMS, EXCLUDING DROPS, TO BE INSTALLED AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.



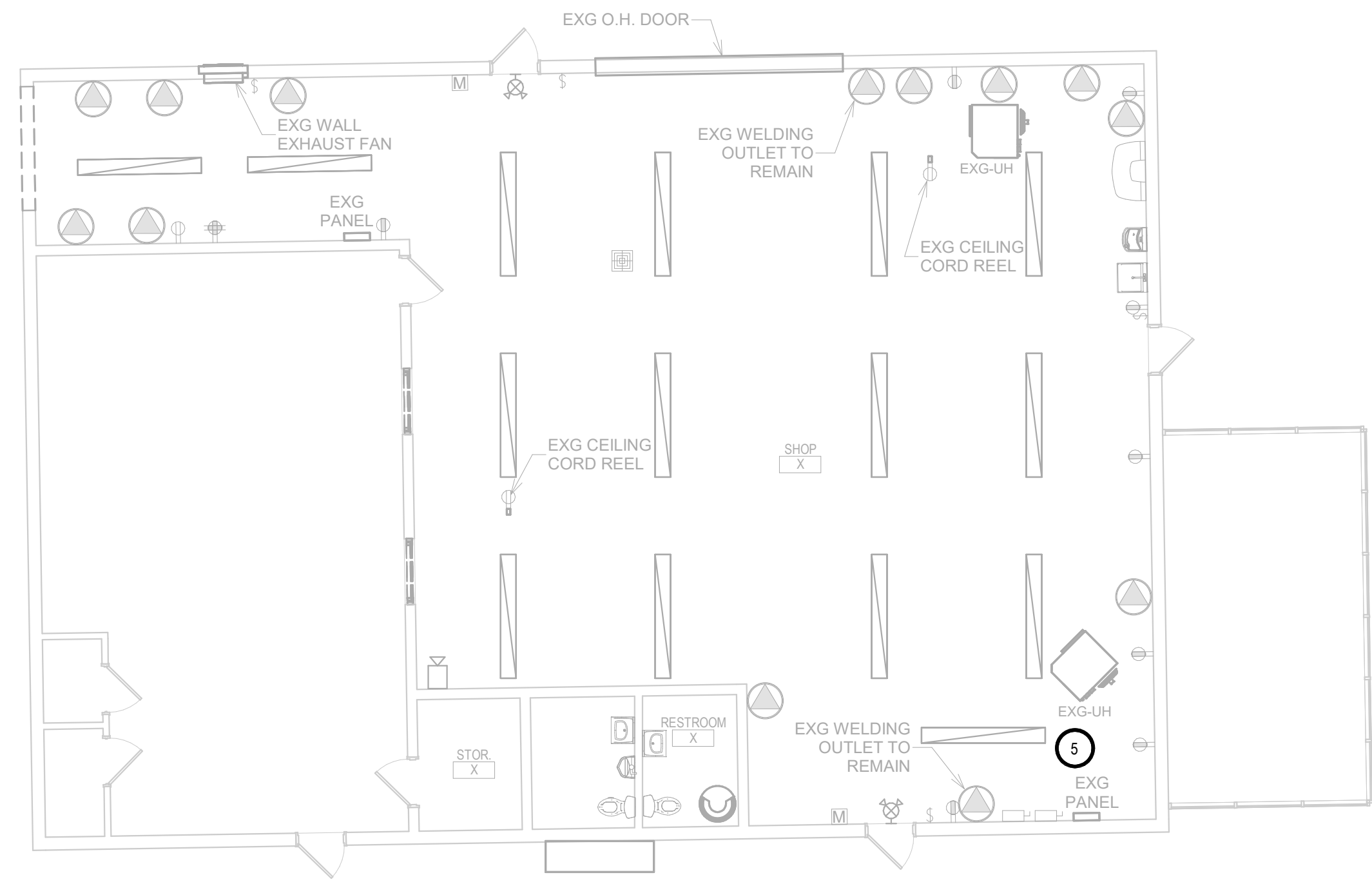
AREA E - MEZZANINE HVAC PLAN  
1/8" = 1'-0"



AREA E - HVAC PLAN  
1/8" = 1'-0"







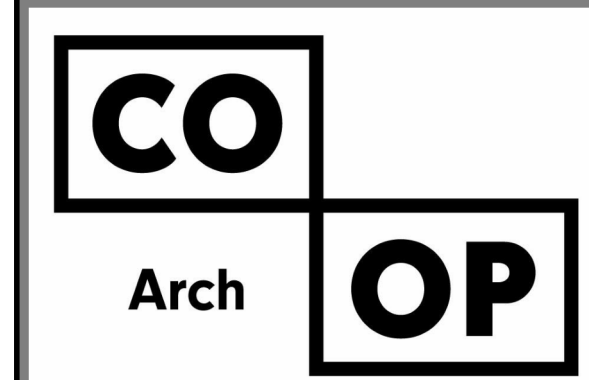
AREA D - ELECTRICAL DEMOLITION PLAN  
1/8" = 1'-0"

**KEYNOTES**

- ELECTRICAL CONTRACTOR SHALL SURVEY EXISTING ELECTRICAL RACEWAYS FOR UTILIZATION. IF DEEMED TO REMAIN BY OWNER PROVIDE RELOCATION OF CONDUITS AROUND CONSTRUCTION AREAS AND PROTECTION OF CIRCUITS DURING CONSTRUCTION PHASES.
- ELECTRICAL CONTRACTOR SHALL PROVIDE REMOVAL AND REINSTALLATION OF SPEAKER AS REQUIRED FOR CONSTRUCTION IN AREA, PROVIDE PROTECTION OF CIRCUIT AND DEVICE DURING CONSTRUCTION PHASES.
- ELECTRICAL CONTRACTOR SHALL PROVIDE REMOVAL OF 200 AMP DISCONNECT AND UNDERGROUND FEEDER BACK TO MAIN DISTRIBUTION PANEL. VERIFY EXISTING BRANCH CIRCUITS ARE BEING DEMOED UNDER CURRENT CONSTRUCTION. PROVIDE EXTENSION OF ANY SMALL BRANCH CIRCUITS TO PANEL IN NEW ADDITION.
- PROVIDE REMOVAL OF EXISTING FACP FOR INSTALLATION OF NEW FACP WITH VOICE NOTIFICATION. VERIFY FINAL REQUIREMENTS WITH SIEMENS FIRE ALARM SUPPLIER AND SYSTEMS PLANS.
- EXISTING AG SHOP ELECTRICAL TO REMAIN IN WORKING ORDER FOR SCHOOL USE DURING CONSTRUCTION. PROVIDE PROTECTION OF EXISTING FEEDER FROM MAIN SWB. SEE SITE PLAN EM101 FOR ADDITIONAL INFORMATION.
- STAGE PANEL: PROVIDE REMOVAL AND REPLACEMENT OF EXISTING STAGE PANELS. SEE PANEL SCHEDULE AND POWER PLAN FOR ADDITIONAL INFORMATION. PROVIDE EXTENSION OF ALL BRANCH CIRCUITING AS REQUIRED FOR CONNECTION TO NEW PANEL.
- TEMPORARY GYM HEAT: PROVIDE 120 VOLT, 20 AMP CONNECTION FROM EXG PNL 'L3' OR NEAREST DEDICATED 120 VOLT BRANCH CIRCUIT. PROVIDE 20 AMP RATED TOGGLE DISCONNECT AT HEATER.

**ELECTRICAL GENERAL NOTES**

- CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES, INCLUDING ANY NECESSARY DEMOLITION.
- REMOVE ELECTRICAL EQUIPMENT IN THE AREAS SHOWN ON THE PLAN. DISCONNECT CIRCUITS AND CONDUITS AND REMOVE TO A POINT OUT OF THE WAY OF THE GENERAL DEMOLITION. MARK ON THE PLAN TO CLEARLY SHOW WHERE THESE CIRCUITS ARE STOPPED. DISCONNECT THE POWER AND LIGHTING CIRCUITS IN THE PANELS TO ASSURE THAT THERE IS NO DANGER FROM ELECTRICAL SHOCK HAZARD PRESENT. DEMOLITION WORK SHALL BE COORDINATED WITH THE OWNER. SHOULD QUESTIONS ARISE REGARDING THE REMOVAL OF EQUIPMENT, CONFER WITH THE OWNER BEFORE SUCH EQUIPMENT IS DEMOLISHED. MATERIALS REMOVED BY DEMOLITION SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE SPECIFICALLY NOTED. MATERIAL THE OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
- EQUIPMENT SHOWN ON DRAWINGS AS EXISTING IS BASED ON EXISTING PLANS AND LIMITED FIELD INVESTIGATION. THE FIELD SURVEY WAS CONDUCTED TO VERIFY, AS MUCH AS POSSIBLE, THE ACCURACY OF THE LOCATIONS SHOWN. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THE "EXISTING CONDITIONS" AS SHOWN ON THE DRAWINGS AS THE DEMOLITION WORK PROGRESSES. PERFORM MODIFICATIONS AND ADDITIONS AS NECESSARY TO CORRECT FOR THESE HIDDEN CONDITIONS AND ALLOW FOR THE COMPLETION OF THE NEW WORK.
- THE EXISTING BUILDING WILL BE IN USE DURING THIS CONSTRUCTION. SCHEDULE AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTIONS. TEMPORARY SERVICES SHALL BE INSTALLED IF ONE PHASE OF CONSTRUCTION DISRUPTS SERVICE TO ANOTHER AREA OF THE BUILDING OR IF EQUIPMENT HAS TO BE RELOCATED TO ALLOW CONSTRUCTION TO PROGRESS. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER'S SITE REPRESENTATIVE. AFTER SERVICE HAS BEEN RESTORED FOLLOWING AN INTERRUPTION, INSPECT AREAS AFFECTED BY THE INTERRUPTION AND BE RESPONSIBLE FOR RETURNING AUTOMATICALLY CONTROLLED EQUIPMENT TO THE SAME OPERATING CONDITION, WHICH EXISTED PRIOR TO THE INTERRUPTION.
- PROVIDE PENETRATIONS TO THE BUILDING STRUCTURE AS REQUIRED FOR INSTALLATION. WHERE EXISTING OR TEMPORARY SYSTEMS ARE BEING DEMOLISHED, WHICH LEAVE OPENINGS IN THE EXISTING BUILDING STRUCTURE, THE BUILDING STRUCTURE SHALL BE PATCHED TO MATCH THE EXISTING CONSTRUCTION AND MAINTAIN THE EXISTING BUILDING FIRE RATINGS.
- ALL ELECTRICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NFPA AND NEC CODES, AND THE AUTHORITY HAVING JURISDICTION.



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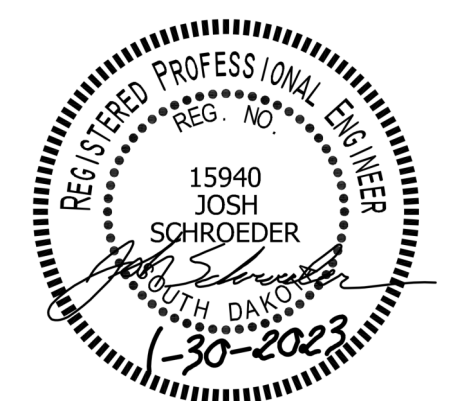
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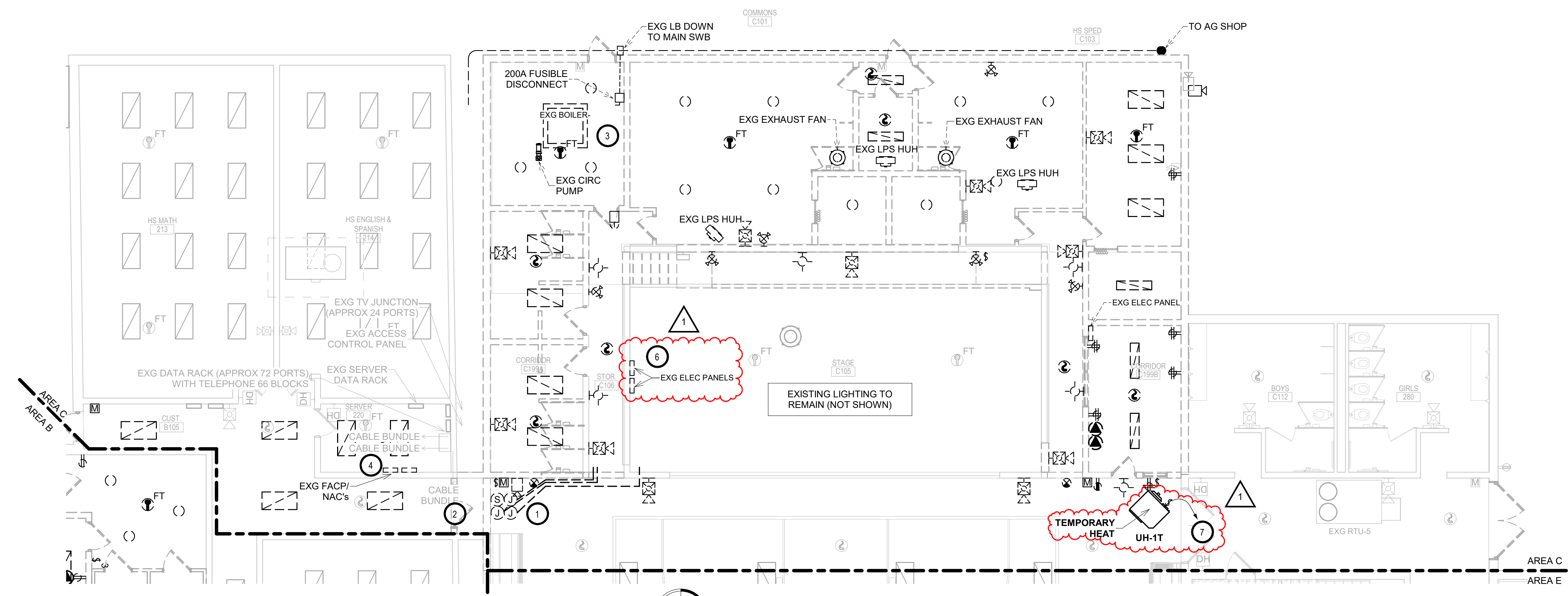
REVISION SCHEDULE:

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1	Addendum ME 1	02-16-23

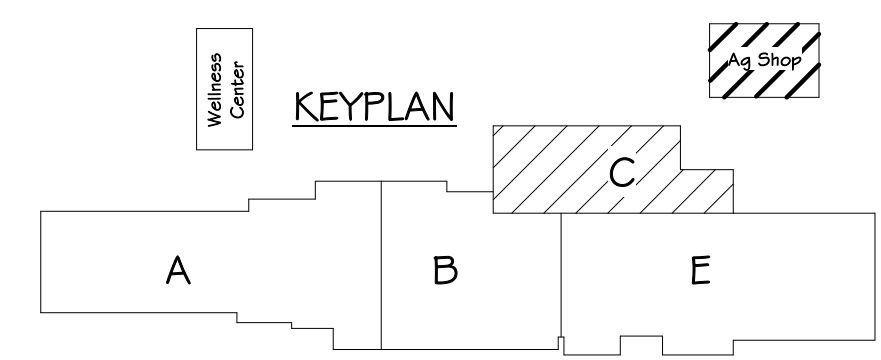
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WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

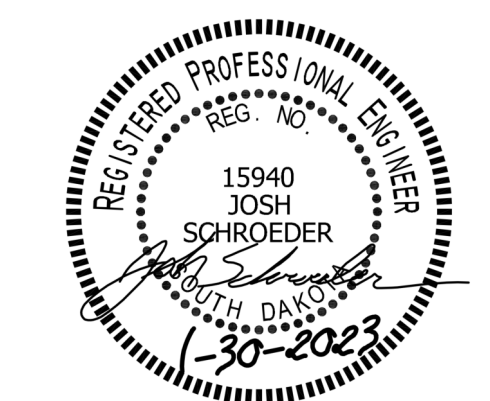
SHEET TITLE:  
AREA C & D - ELECTRICAL DEMOLITION PLAN

**E202CD**



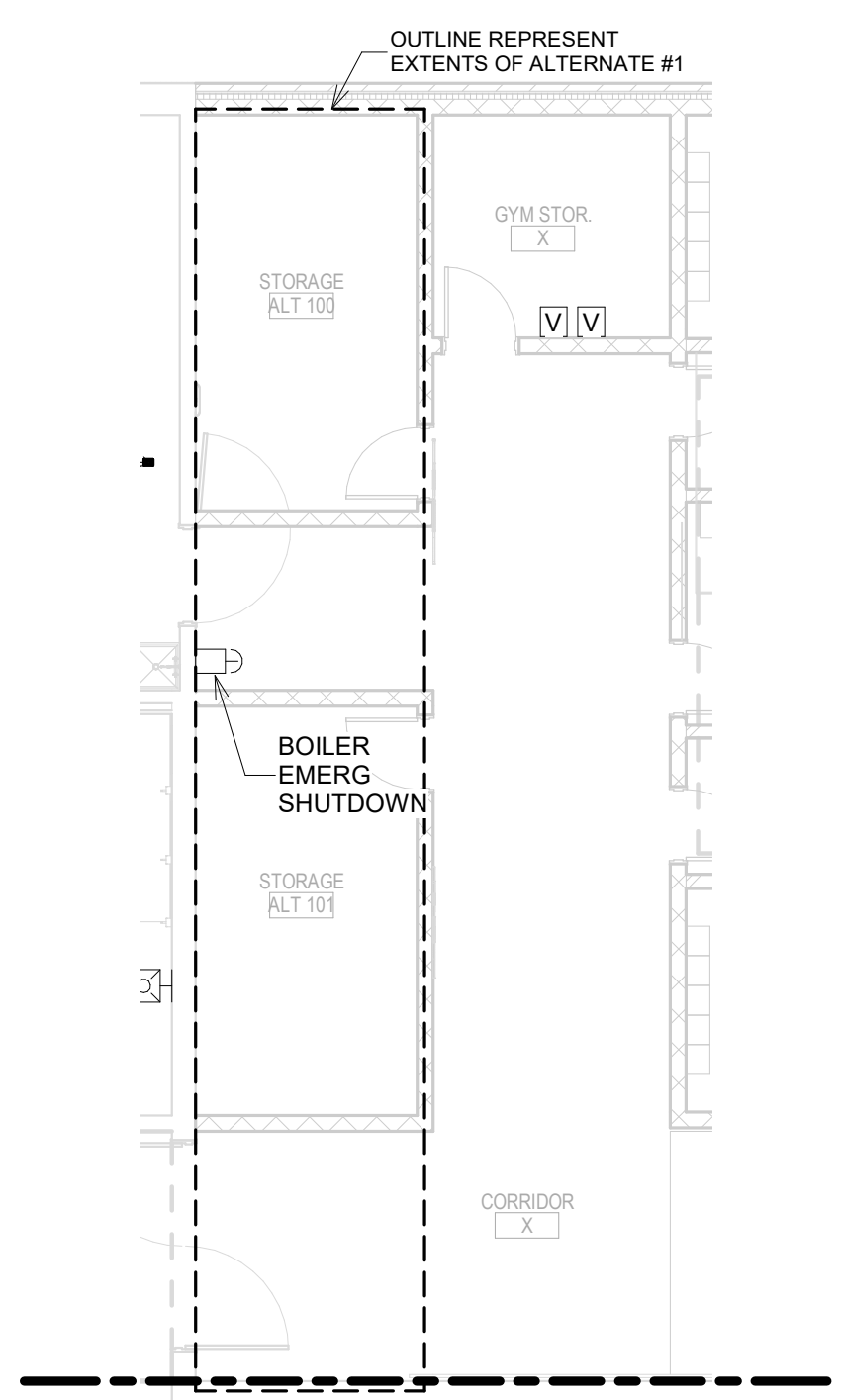
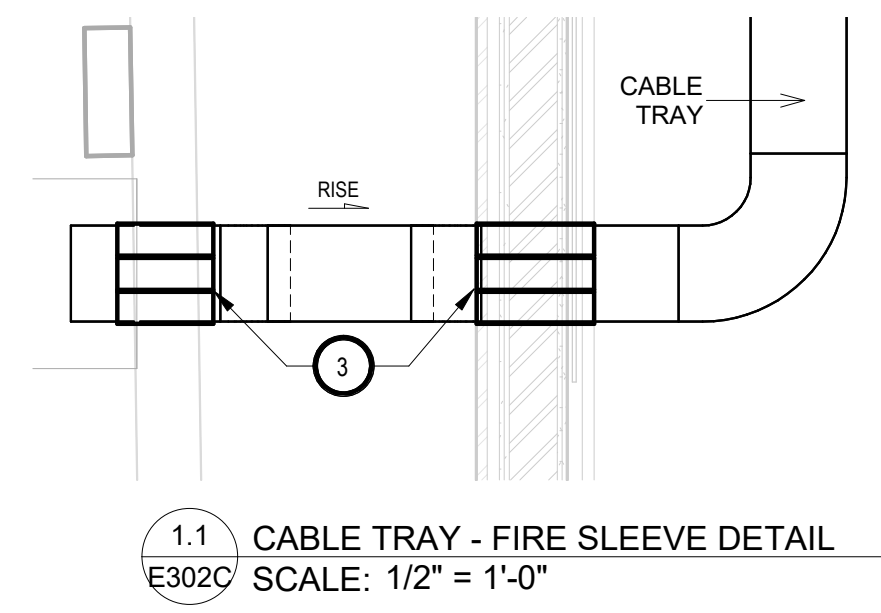
AREA C - ELECTRICAL DEMOLITION PLAN  
1/8" = 1'-0"



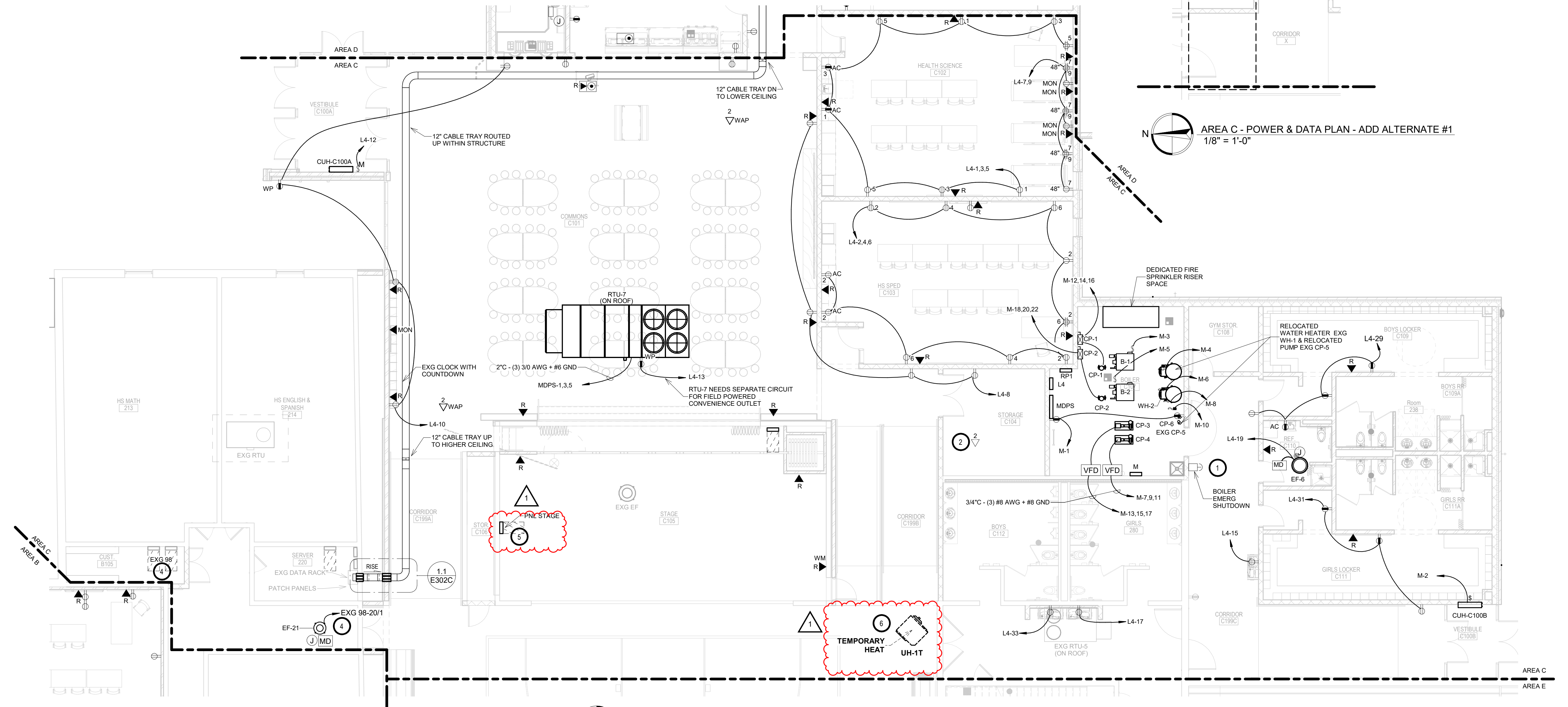


**KEYNOTES**

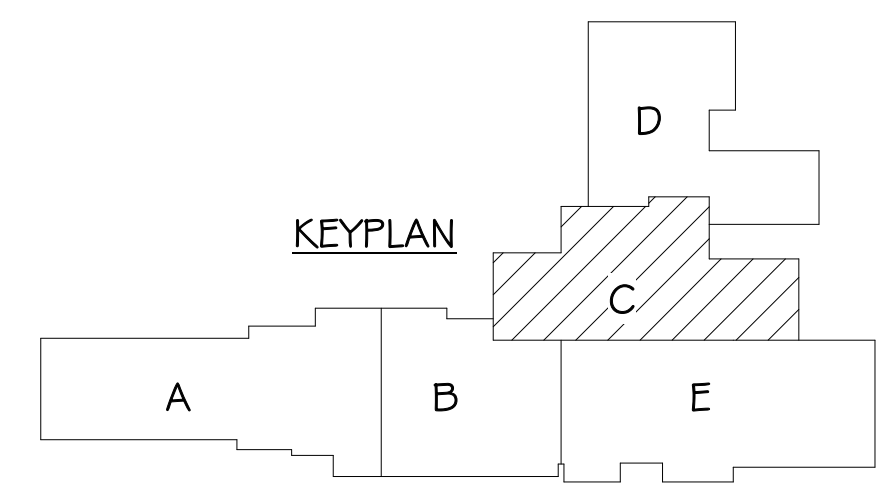
1. INSTALL STOPPER STATION SS22A12A-EN WITH TEXT "BOILER SHUTDOWN". SHUT DOWN ALL BOILERS AT THE SAME TIME. SWITCH TO BE MOUNTED AT 60" AFF.
2. PROVIDE 2 DATA CABLES ABOVE CEILING FOR FUTURE USE. PROVIDE 30' OF ADDITIONAL CABLING FOR ROUTING TO FUTURE LOCATION. NEATLY COIL AND TIE ABOVE CEILING SPACE, TERMINATE AND TEST CABLES.
3. FIRE SLEEVE: PROVIDE HILTI FIRE SLEEVES THROUGH FIRE WALLS FOR TELECOMMUNICATION CABLING. PROVIDE TOTAL OF (6) 4 INCH HILTI SPEED SLEEVES MODEL CFS-SL-GA-L.
4. PROVIDE 120 VOLT, 20 AMP CONNECTION TO EF-21 FROM CORRIDOR PANEL. PANEL INFO: SQUARE D, 208/120 VOLT, 400 AMP, NQOD PANELBOARD.
5. PROVIDE RECONNECTION OF ALL BRANCH CIRCUITS FROM EXISTING PANELS SALVAGED DURING CONSTRUCTION. PANEL SHALL BE OPERATIONAL PRIOR TO DEMOLITION OF EXISTING BOILER ROOM AND LOCKER ROOMS. PROVIDE UNI-STRUT STRUCTURE AND 3/4 INCH, GRAY PAINTED, FIRE RATED PLYWOOD FOR MOUNTING OF PANEL AS REQUIRED.
6. ONCE ADDITION IS COMPLETE, TEMPORARY HEATER TO BE REMOVED BY OTHERS. DISCONNECT AND REMOVE CIRCUIT BACK TO PANEL.

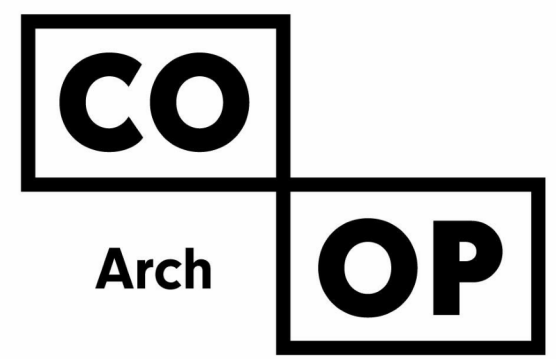


AREA C - POWER & DATA PLAN - ADD ALTERNATE #1  
1/8" = 1'-0"



AREA C - POWER & DATA PLAN  
1/8" = 1'-0"





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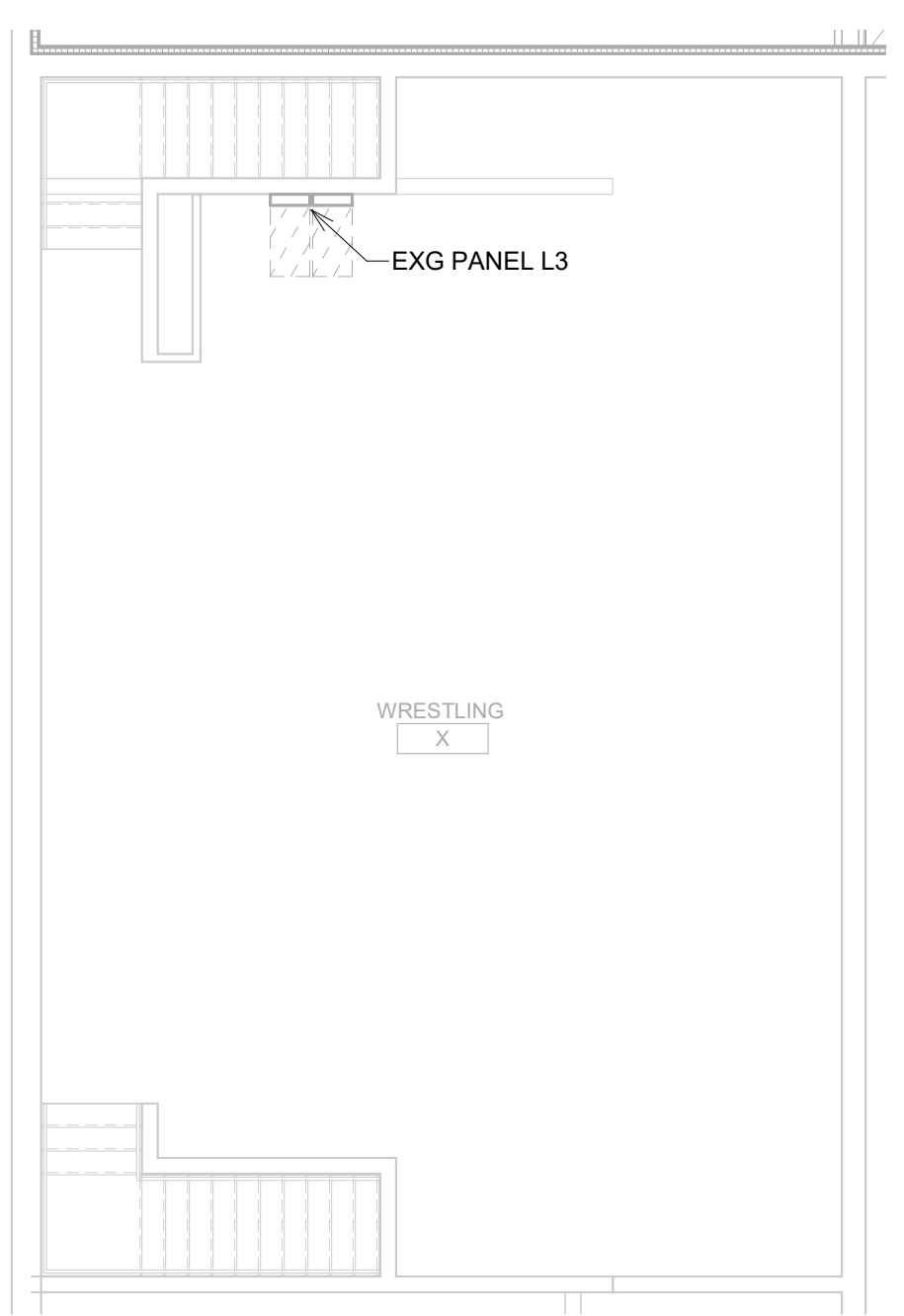
PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
AREA E - POWER & DATA PLAN

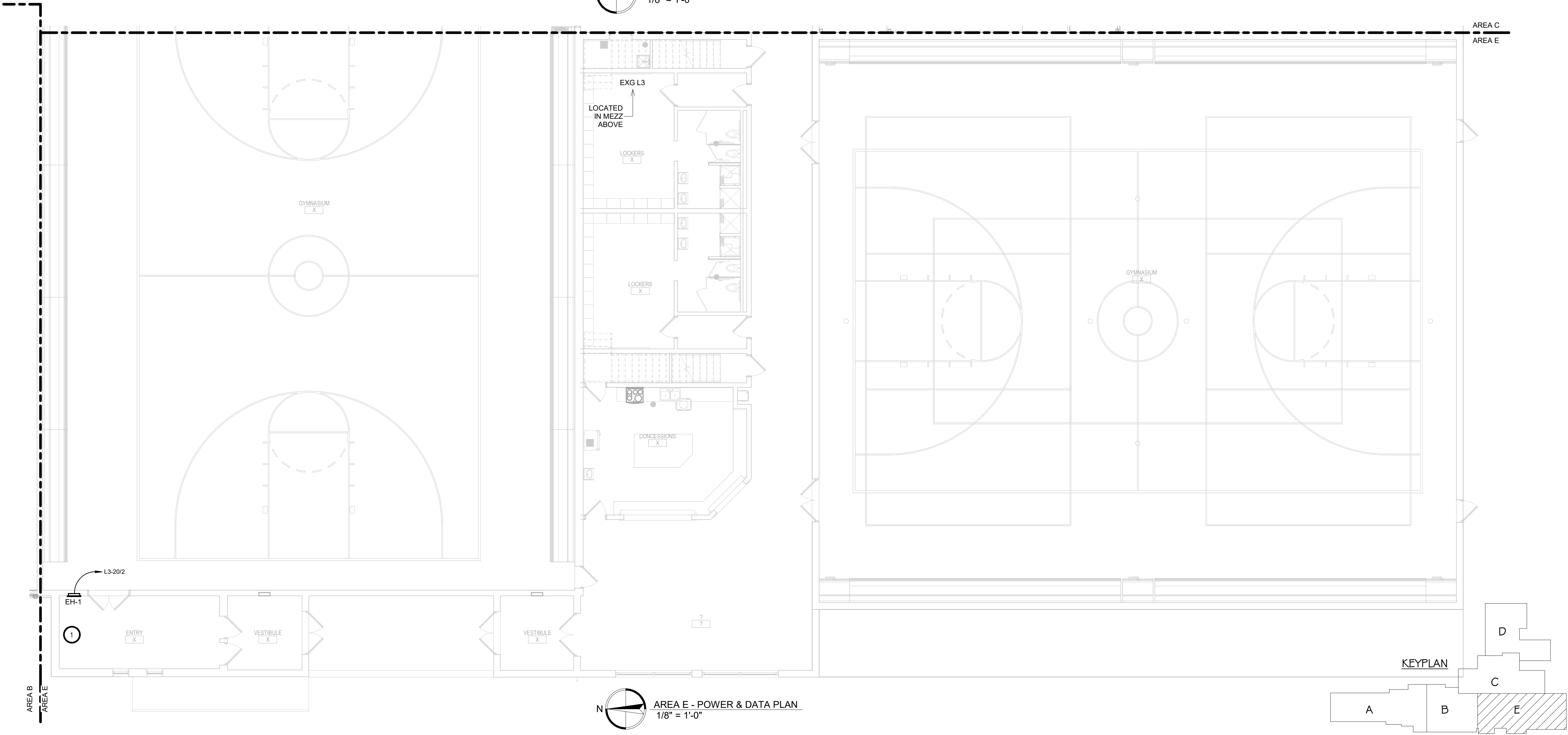
**E304E**

**KEYNOTES**

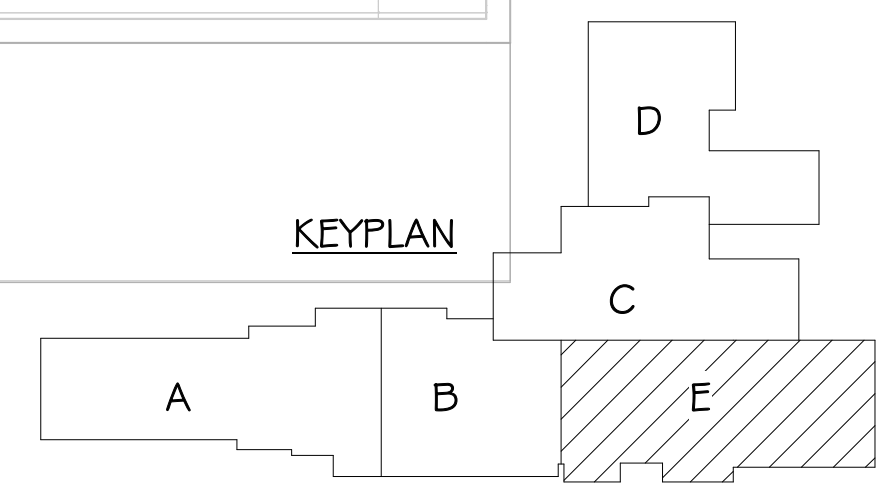
1. TYPICAL FOR EH-1. EC TO PROVIDE & INSTALL ELECTRIC HEATER, USE BERKO FRA4020 WITH A RELAY SO TC CAN CONTROL THE HEAT. PROVIDE NEW 20 AMP, 2 POLE CIRCUIT BREAKER IN EXISTING PANEL 'L3'. WORK TO BE COMPLETED PRIOR TO HEATING SEASON OF 2023/2024.



**AREA E - MEZZANINE POWER & DATA PLAN**  
1/8" = 1'-0"



**AREA E - POWER & DATA PLAN**  
1/8" = 1'-0"



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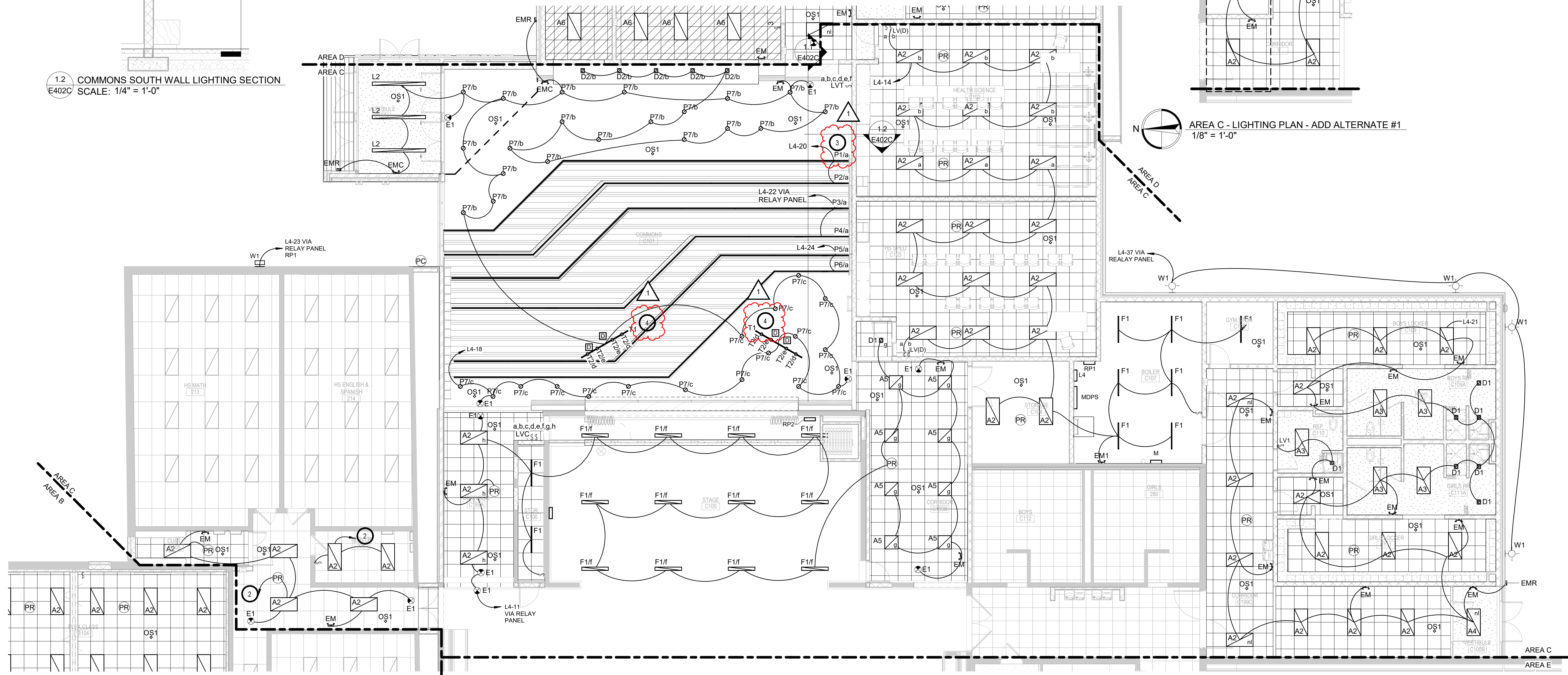
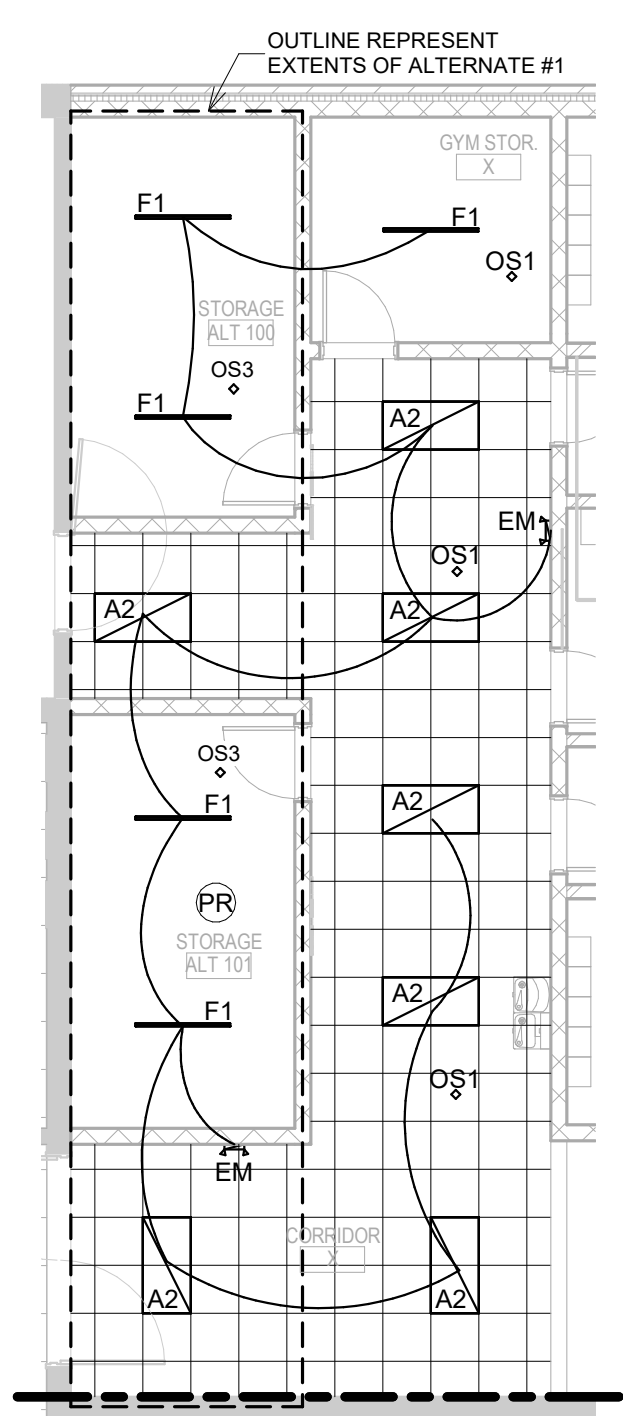
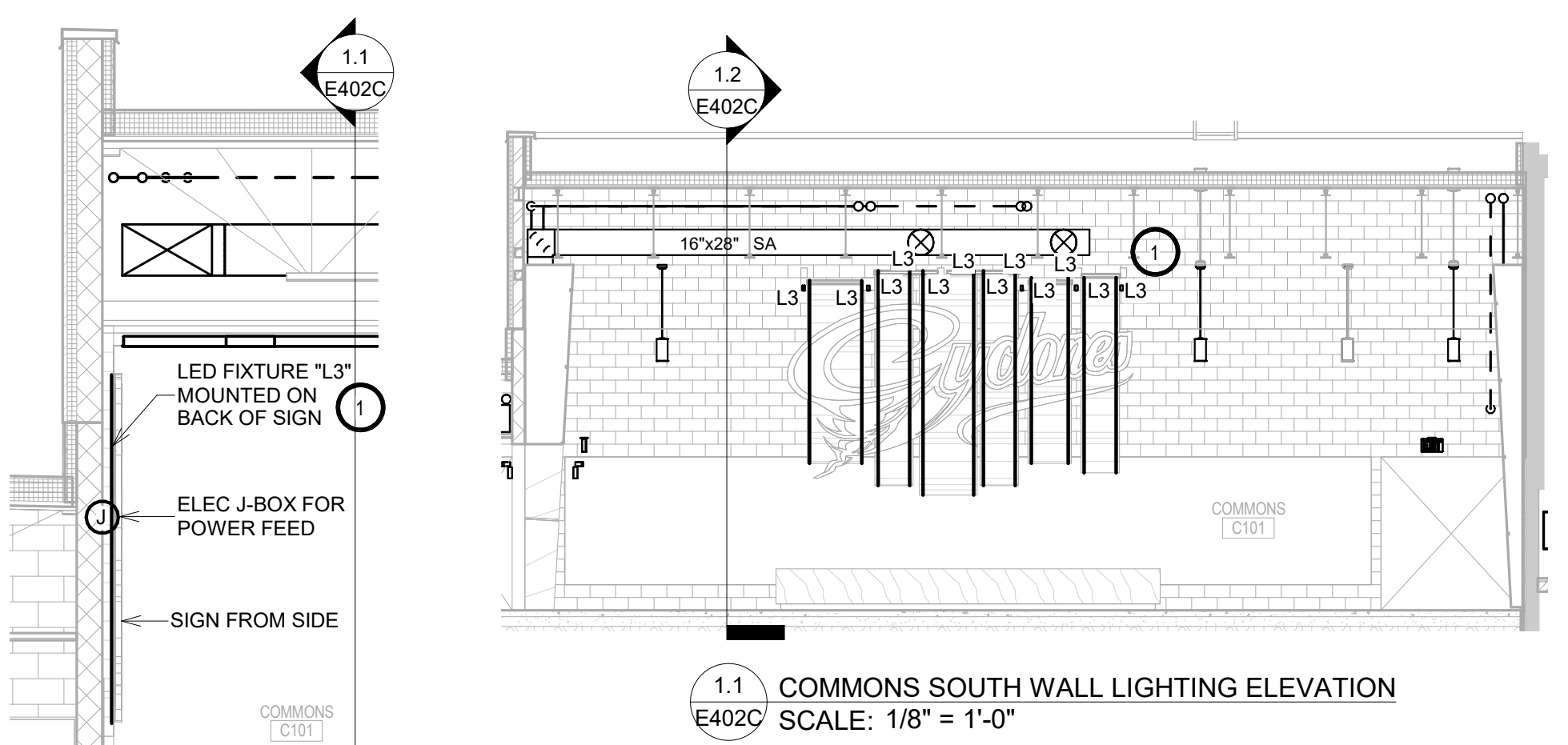
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WILLOW LAKE, SOUTH DAKOTA

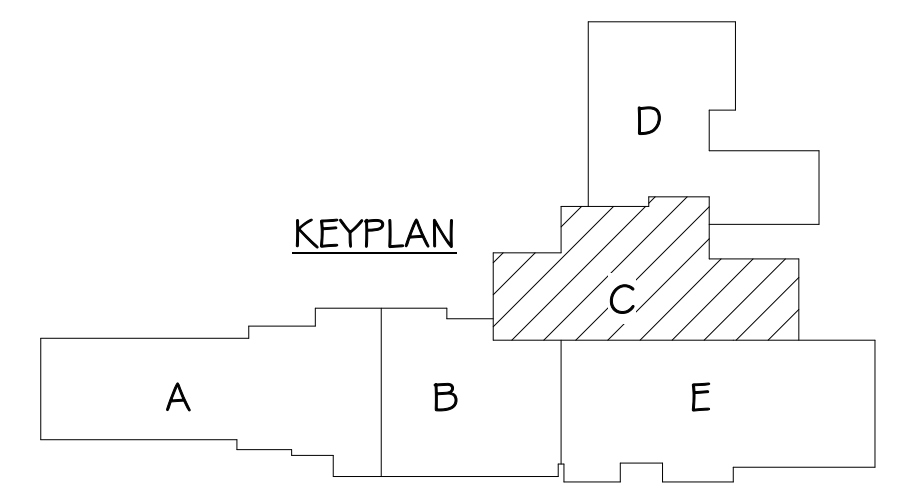
SHEET TITLE:  
AREA C - LIGHTING PLAN

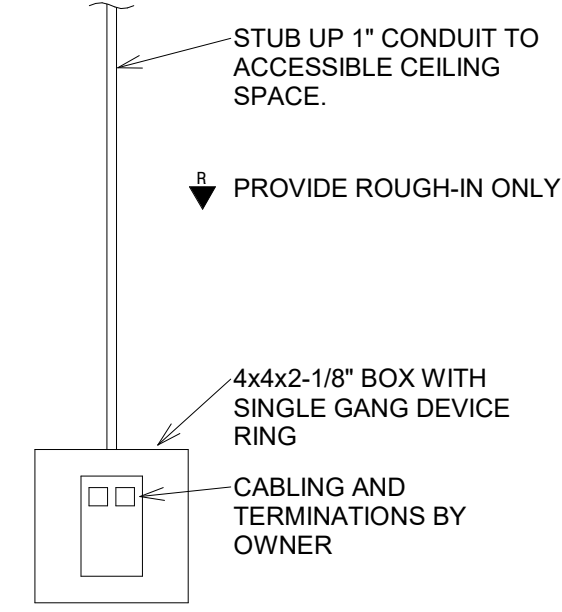
**E402C**

- KEYNOTES**
1. PROVIDE MONTING OF LINEAR LED FIXTURE TYPE 'L3' TO THE REAR OF CYCLONES SIGNAGE. COORDINATE FINAL REQUIREMENTS IN FIELD AND PROVIDE.
  2. PROVIDE BRANCH CIRCUIT CONNECTION TO EXISTING LIGHTING BRANCH CIRCUIT FOR ROOM SALVAGED DURING DEMOLITION. VERIFY EXISTING BRANCH CIRCUIT LOADING IN FIELD AND NOTIFY ENGINEER OF ANY OVERLOAD CONDITIONS.
  3. PROVIDE COORDINATION OF TYPE P1-P6 FIXTURES WITH GENERAL CONTRACTOR AND CEILING SUPPLIER FOR INSTALLATION.
  4. TRACK: DO NOT SUPPORT TRACK LIGHTING FROM CLOUD SYSTEM. PROVIDE PENDANT MOUNTING FROM DECK ABOVE.

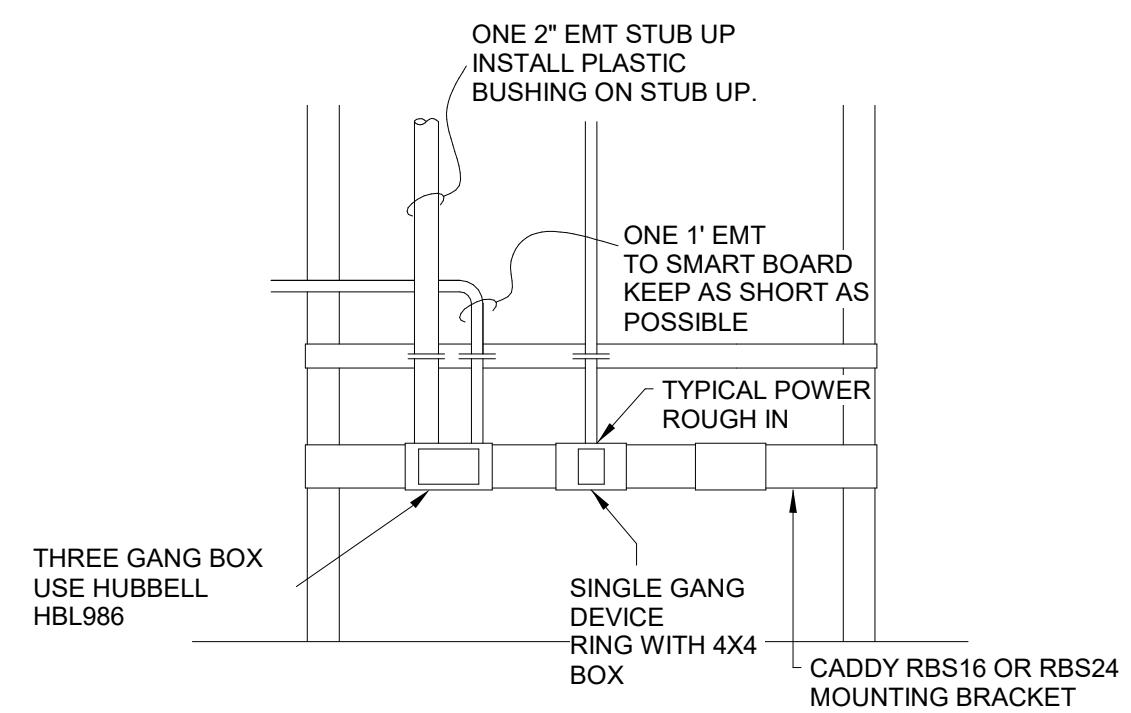


AREA C - LIGHTING PLAN  
1/8" = 1'-0"

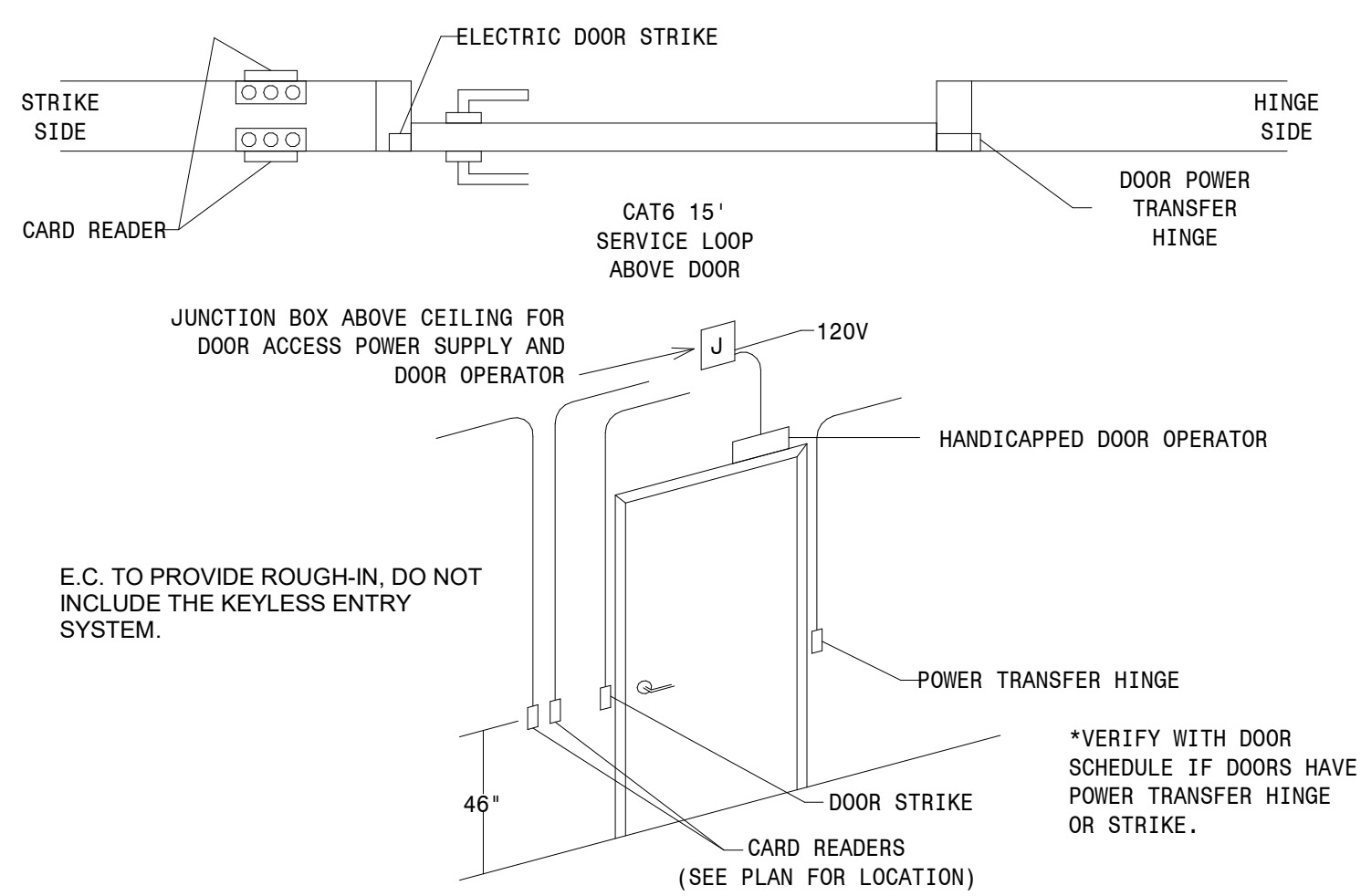




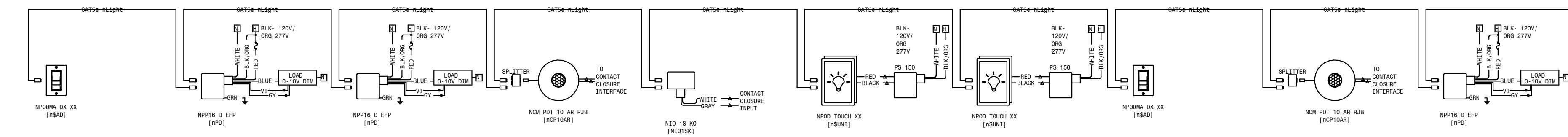
**Typical Data Location Detail**  
No Scale



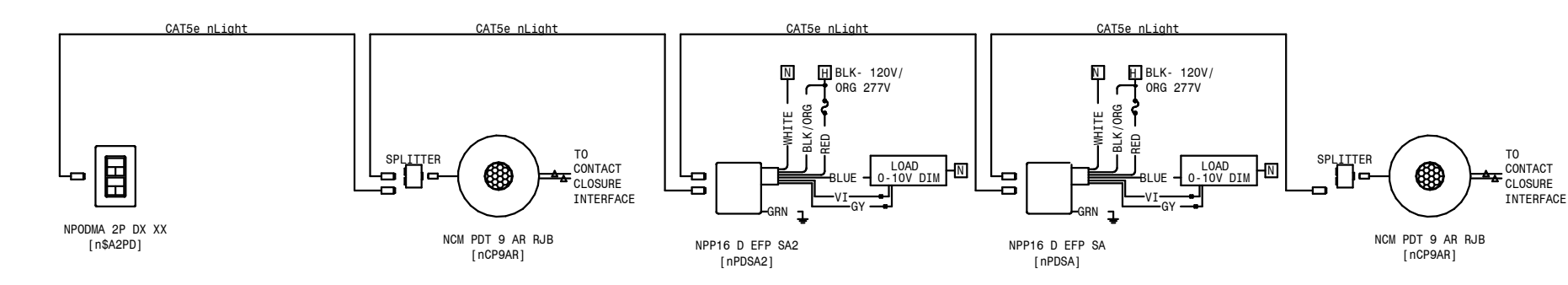
**Typical T/S Detail**  
NOT TO SCALE



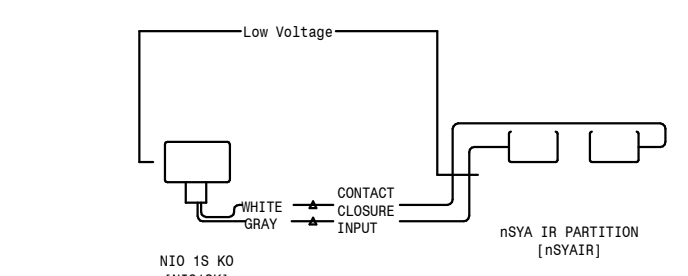
DEVICE	EC PROVIDE
DOOR STRIKE	1/2" CONDUIT FROM STRIKE TO ACCESSIBLE CEILING ABOVE DOOR
CARD READERS	3/4" CONDUIT TO ACCESSIBLE CEILING, 4X4X2 1/8 BOX WITH SINGLE GANG DEVICE RING
DOOR OPERATOR	120V CONNECTION TO OPERATOR, AND EMPTY 1/2" CONDUIT TO ABOVE CEILING FOR SECURITY CONTRACTOR
JUNCTION BOX	120V CIRCUIT TO J-BOX ABOVE DOOR FOR SECURITY/DOOR LOCK POWER SUPPLY
POWER TRANSFER HINGE	1/2" CONDUIT FROM FRAME TO ACCESSIBLE CEILING ABOVE DOOR



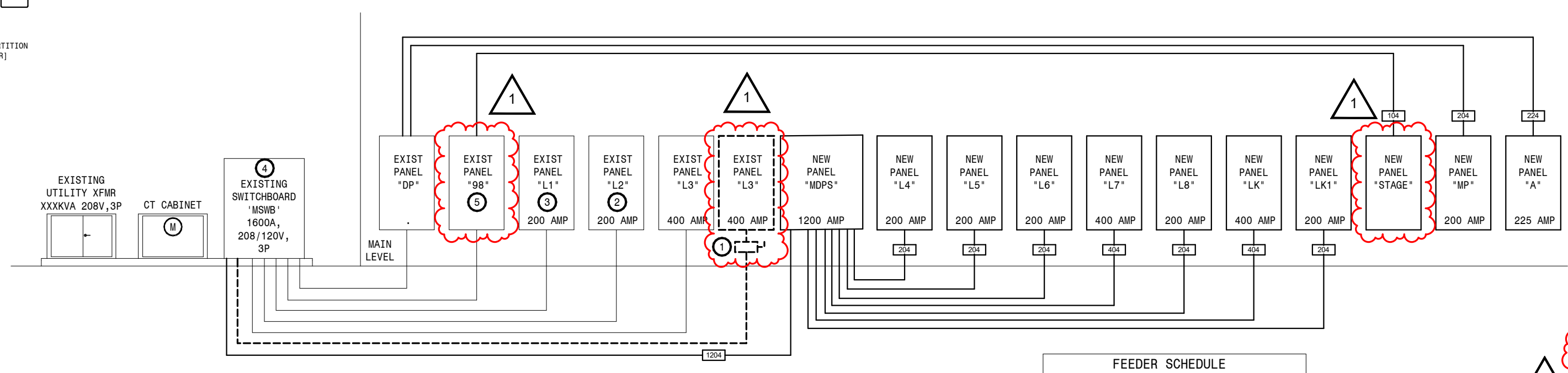
**1 nLight - Flex Rooms**  
NOT TO SCALE



**2 nLight - Typical Classroom**  
NOT TO SCALE



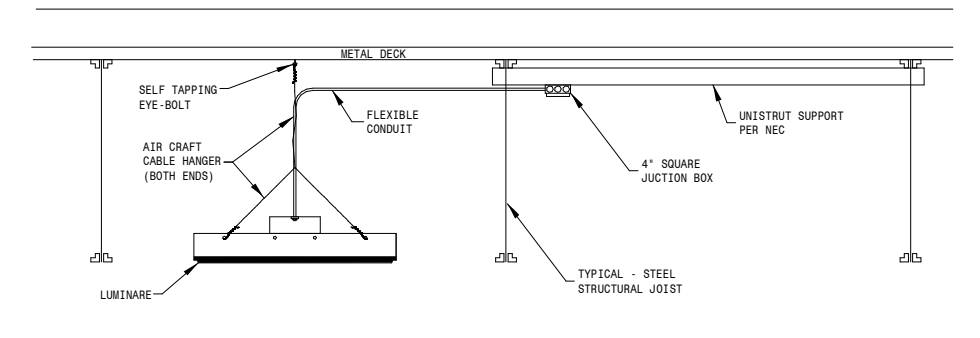
**3 Low Voltage - Flex Rooms**  
NOT TO SCALE



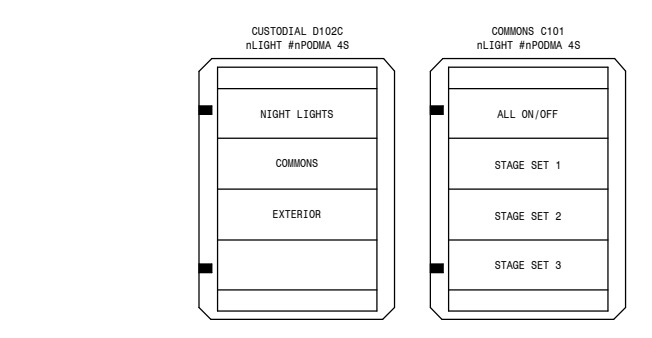
- RISER DIAGRAM NOTES:**
- PROVIDE DEMOLITION AND REMOVAL OF EXISTING 200 AMP DISCONNECT AND FEEDER LOCATED IN AREA C BOILER ROOM.
  - EXISTING PANEL 'L2': PROVIDE (2) NEW 30 AMP, 2 POLE CIRCUIT BREAKERS IN PANEL FOR CONNECTION OF DSC-10, DSC-11. PANEL INFO - SQUARE D SERIES NO, 225 MAX AMP, 208Y/120V, 3 PHASE, 4 WIRE, 10KAIC, CAT#45367625680040001.
  - EXISTING PANEL 'L1': PROVIDE NEW (1) 40 AMP, 2 POLE CIRCUIT BREAKERS, AND (1) 15 AMP SINGLE POLE CIRCUIT BREAKER IN PANEL FOR CONNECTION OF FC-A103 AND CU-A103. PANEL INFO - SQUARE D SERIES NO, 225 MAX AMP, 208Y/120V, 3 PHASE, 4 WIRE, 10KAIC, CAT#12367625680030001.
  - EXISTING MAIN SWD 'MDP': PROVIDE NEW (1) 1200AMP, 3 POLE CIRCUIT BREAKER AND (1) 100 AMP, 3 POLE CIRCUIT BREAKER IN SWB FOR CONNECTION OF PANEL 'MDPS' AND RTU-10. PANEL INFO - SQUARE D GED SERIES 2, 1000 AMP, 208Y/120V, 3 PHASE, 4 WIRE, CAT#36762568-00, PLANT 44.
  - EXISTING PANEL '98': PROVIDE 100 AMP, 3 POLE CIRCUIT BREAKER IN EXISTING PANEL FOR CONNECTION OF NEW STAGE PANEL. PANEL INFO: SQUARE D, N000 PANELBOARD, 400 AMP, 208Y/120V, 3 PHASE, 4 WIRE, PERU PLANT F.G. 12-1064792P-001.

**Power Riser Diagram**  
NOT TO SCALE

FEEDER TAG	AMPACITY	CONDUIT AND THIN WIRE (75 DEG C USE)
10A	100	1 1/2" C - 4 #10 & 1 #6 GND
10A	100	2" C - 4 #10 & 1 #6 GND
20A	200	2 1/2" C - 4 #10 & 1 #6 GND
25A	225	2 1/2" C - 4 #10 & 1 #6 GND
40A	400	4" C - 4 #10 & 1 #6 GND
100A	1000	4" C - 3 1/2" C - 4 #10 & 1 #6 GND

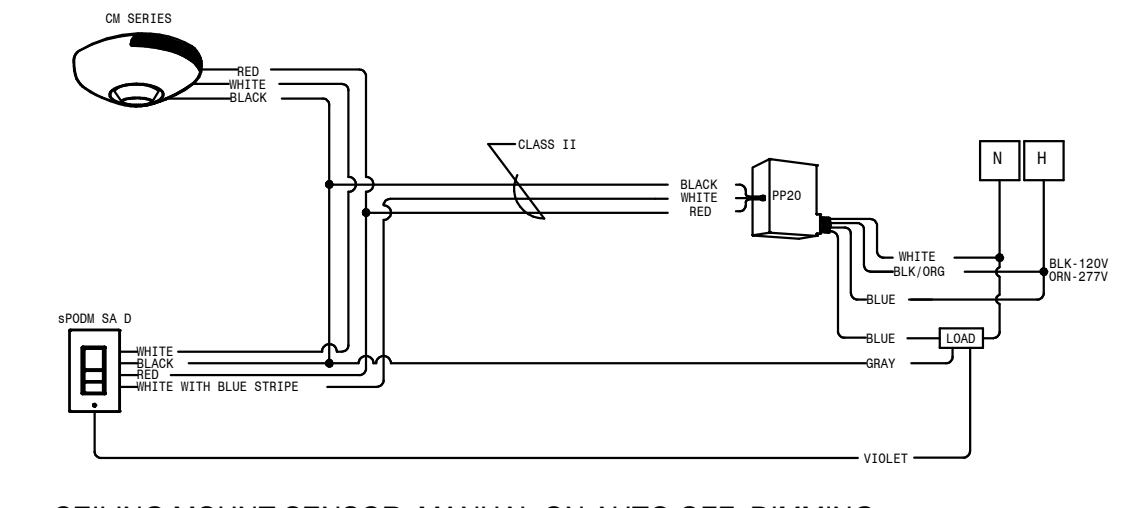


**Highbay Mounting Detail**  
NOT TO SCALE

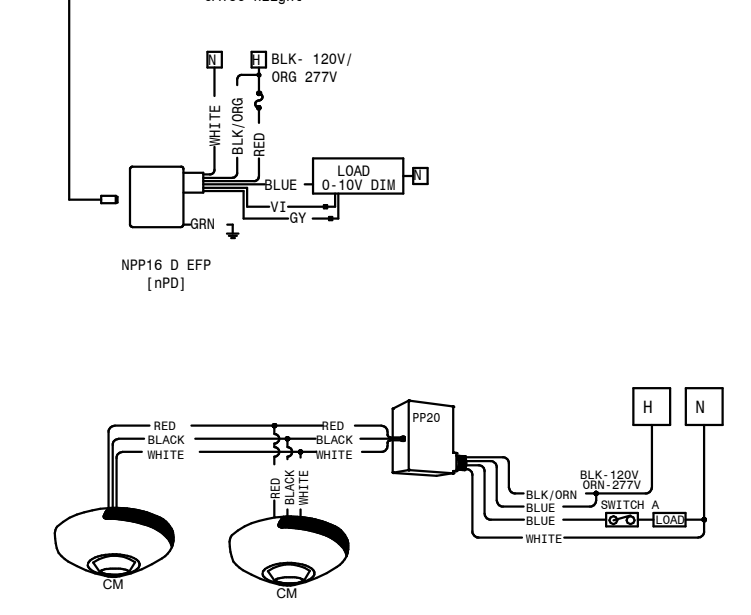


- NOTES:**
- PROVIDE ENGRAVED BUTTONS AS INDICATED, LABELS WILL NOT BE ACCEPTED.
  - "ALL ON/OFF" SHALL TURN ON ALL LIGHTING COMMONS C101, OFF SHALL TURN OFF THE SAME LIGHT FIXTURES EXCEPT NIGHT LIGHTING CIRCUIT (NL) FOR ALL AREAS.
  - "NIGHT LIGHTS" SHALL CONTROL ALL CORRIDOR NIGHT LIGHTS INCLUDING MAIN ENTRY FIXTURES.
  - "COMMONS" SHALL TURN ON/OFF ALL LIGHT FIXTURE IN COMMONS EXCEPT TRACK LIGHTING.
  - "EXTERIOR" SHALL CONTROL ALL EXTERIOR BUILDING LIGHT FIXTURES.
  - "STAGE SET 1" PROGRAM TYPICAL STAGE LIGHTING FOR FLOODS ONLY.
  - "STAGE SET 2" PROGRAM TYPICAL STAGE LIGHTING FOR FLOODS ONLY AND SPOT LIGHTS ON/OFF WITH SET DIMMING POINTS.
  - "STAGE SET 3" PROGRAM TYPICAL STAGE LIGHTING PER OWNER REQUEST.

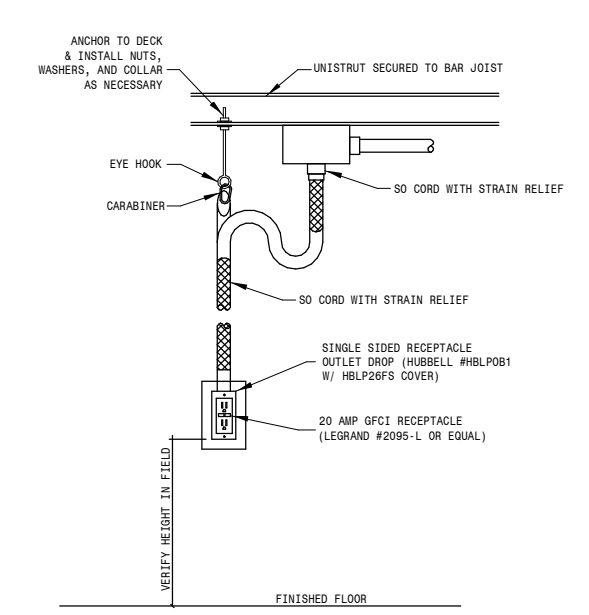
**4 Lighting Control Engraving Detail**  
NOT TO SCALE



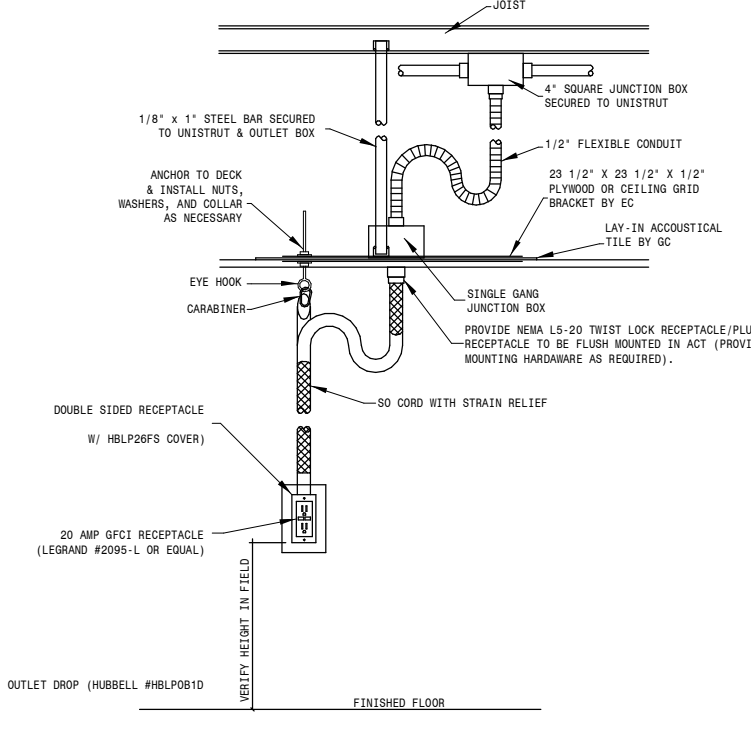
**CEILING MOUNT SENSOR, MANUAL ON AUTO OFF, DIMMING**  
NOT TO SCALE



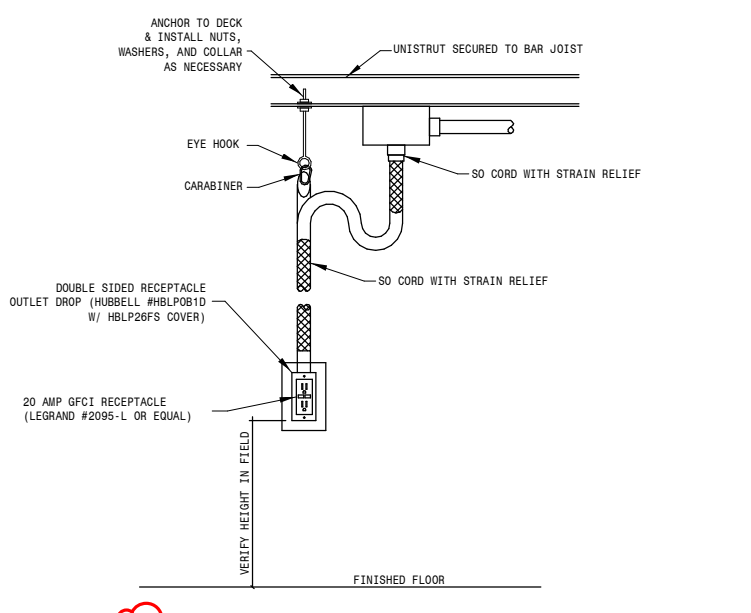
**PP20 SINGLE CIRCUIT W/MULTIPLE OCC SENSORS**  
NOT TO SCALE



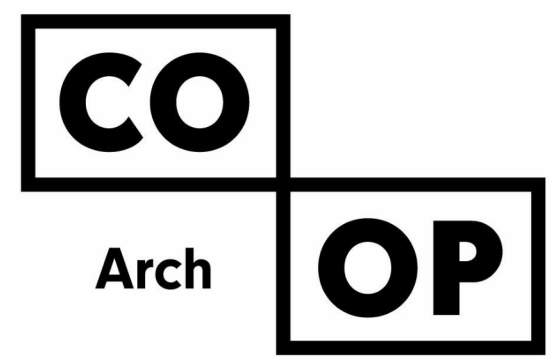
**1 Cord Drop Detail 'D1'**  
NOT TO SCALE



**2 Cord Drop Detail 'D2'**  
NOT TO SCALE



**3 Cord Drop Detail 'D3'**  
NOT TO SCALE



1108 S. Main St. 102  
Aberdeen, SD 57401  
Phone: 605-725-4852

601 Kansas City St. 7  
Rapid City, SD 57701  
Phone: 605-716-3652

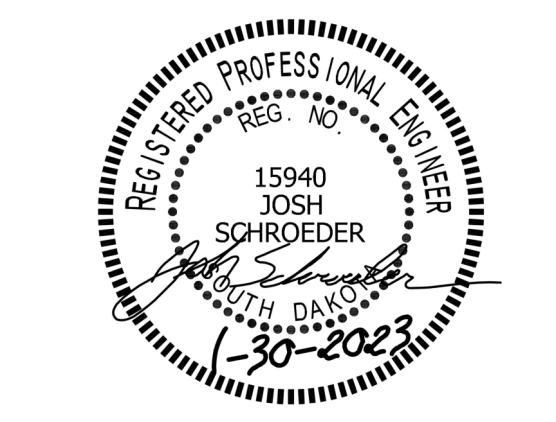
440 E. 8th St 221  
Sioux Falls, SD 57103  
Phone: 605-334-9999

co-oparch.com

**SICHMELLER ENGINEERING**  
Mechanical & Electrical Engineering

801 Railroad Ave. SE  
Aberdeen, SD 57401  
Phone: 605-225-4344  
www.siceng.biz

SE PROJECT NO: 220900771



**ISSUE:**  
1/30/23 CONSTRUCTION DOCUMENTS

**REVISION SCHEDULE:**

REV. #	REV. DSC.	REV. DATE
1	Addendum ME 1	02-16-23

**PROJECT:**  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

**SHEET TITLE:**  
ELECTRICAL DETAILS

**E600**









16/ FEB / 2023

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**ADDENDUM NO. 2**  
**Feb 16, 2023**

Project: Willow Lake School Addition

Section 114000 Food Service Equipment

The following modifications shall become a part of the Contract Documents.  
Bidders are to acknowledge this addendum on the bid form.

**APPROVED SUBSTITUTIONS:**

**SECTION 3.05 ITEMIZED EQUIPMENT**

ITEM 28.1 - Dispoer  
Salvajor Model 200-SA-3-ARSSLD  
208 volts 3 phase

ITEM 45 – Disposer  
Salvajor Model 200-CA-18-ARSSLD  
208 volts 3 phase

**REVISIONS TO SPECIFICATIONS:**

**SECTION 3.05 ITEMIZED EQUIPMENT**

ITEM 54 – Mop Sink  
Replace with Model 9-OP-48  
Splash shield – replace with model K-290R, 16” splash on right & back.  
Furnished with service faucet, model K-240

**END OF ADDENDUM**

042000 UNIT MASONRY

**DIVISION 05 - METALS**

051200 STRUCTURAL STEEL FRAMING  
052100 STEEL JOIST FRAMING  
053100 STEEL DECKING  
054000 COLD-FORMED METAL FRAMING  
055000 METAL FABRICATIONS  
055213 PIPE AND TUBE RAILINGS  
055305 METAL GRATINGS AND FLOOR PLATES

**DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES**

061000 ROUGH CARPENTRY  
064100 ARCHITECTURAL WOOD CASEWORK  
068316 FIBERGLASS REINFORCED PANELING

**DIVISION 07 - THERMAL AND MOISTURE PROTECTION**

071400 FLUID-APPLIED WATERPROOFING  
072100 THERMAL INSULATION  
072119 FOAMED-IN-PLACE INSULATION  
072500 WEATHER BARRIERS  
074113 METAL ROOF PANELS  
074213 METAL WALL PANELS  
075323 ETHYLENE-PROPYLENE-DIENE-MONOMER ROOFING (EPDM)  
076200 SHEET METAL FLASHING AND TRIM  
077200 ROOF ACCESSORIES  
078400 FIRESTOPPING  
079005 JOINT SEALERS  
079513 EXPANSION JOINT COVER ASSEMBLIES

**DIVISION 08 - OPENINGS**

081113 HOLLOW METAL DOORS AND FRAMES  
081416 FLUSH WOOD DOORS  
083100 ACCESS DOORS AND PANELS  
083313 COILING COUNTER DOORS  
083323 OVERHEAD COILING DOORS  
083613 SECTIONAL DOORS  
084313 ALUMINUM-FRAMED STOREFRONTS  
084413 GLAZED ALUMINUM CURTAIN WALLS  
085113 ALUMINUM WINDOWS  
087100 DOOR HARDWARE  
088000 GLAZING

**DIVISION 09 - FINISHES**

092116 GYPSUM BOARD ASSEMBLIES

092216	NON-STRUCTURAL METAL FRAMING
093000	TILING
095100	ACOUSTICAL CEILINGS
095400	SPECIALTY CEILINGS
096429	WOOD STRIP AND PLANK FLOORING
096433	LAMINATED WOOD FLOORING
096500	RESILIENT FLOORING
096813	TILE CARPETING
097800	INTERIOR WALL PANELING
098430	SOUND-ABSORBING WALL AND CEILING UNITS
099000	PAINTING AND COATING

#### **DIVISION 10 - SPECIALTIES**

101100	VISUAL DISPLAY UNITS
101400	SIGNAGE
102113.13	METAL TOILET COMPARTMENTS
102239	FOLDING PANEL PARTITIONS
102600	WALL AND DOOR PROTECTION
102800	TOILET, BATH, AND LAUNDRY ACCESSORIES
104400	FIRE PROTECTION SPECIALTIES
105100	LOCKERS
105617	WALL MOUNTED STANDARDS AND SHELVING

#### **DIVISION 11 - EQUIPMENT**

114000	FOOD SERVICE EQUIPMENT
115300	LABORATORY EQUIPMENT
116143	STAGE CURTAINS
116813	PLAYGROUND EQUIPMENT

#### **DIVISION 12 - FURNISHINGS**

122400	WINDOW SHADES
123280	INSTRUMENT STORAGE
123600	COUNTERTOPS

#### **DIVISION 21 – FIRE PROTECTION**

211000	FIRE SUPPRESSION SYSTEMS
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#### **DIVISION 22 – PLUMBING**

220500	GENERAL PLUMBING REQUIREMENTS
220510	BASIC PLUMBING MATERIALS AND METHODS
220700	PLUMBING SYSTEMS INSULATION
224000	PLUMBING

#### **DIVISION 23 – HEATING, VENTILATION AND AIR CONDITIONING (HVAC)**

230500	GENERAL HVAC REQUIREMENTS
230510	BASIC HVAC MATERIAL AND METHODS
230593	TESTING, ADJUSTING, AND BALANCING (AIR & WATER)
230700	HVAC SYSTEMS INSULATION
230900	CONTROLS & CONTROL SEQUENCES
232113	HYDRONIC PIPING SYSTEMS
232123	HVAC HYDRONIC PUMPS
237000	VENTILATION AND AIR CONDITIONING

## **DIVISION 26 - ELECTRICAL**

260100	BASIC MATERIALS AND METHODS
260200	DEMOLITION
260500	COMMON WORK RESULTS FOR ELECTRICAL
260519	CONDUCTORS AND CABLES
260526	GROUNDING AND BONDING
260529	HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
260533	RACEWAYS AND BOXES
260553	IDENTIFICATION FOR ELECTRICAL SYSTEMS
260923	LIGHTING CONTROL DEVICES
262416	PANELBOARDS
262726	WIRING DEVICES
262816	ENCLOSED SWITCHES AND CIRCUIT BREAKERS
265119	LED INTERIOR LIGHTING
270536	CABLE TRAY FOR COMMUNICATIONS SYSTEMS
271500	VOICE AND DATA COMMUNICATION CABLING
275123	SCHOOL PAGING AND INTERCOM
275313	DIGITAL CLOCK SYSTEMS
284621	ADDRESSABLE FIRE-ALARM SYSTEMS

## **DIVISION 31 - EARTHWORK**

311000	SITE CLEARING
312200	GRADING
312323	FILL
312323.43	GEOFOAM

## **DIVISION 32 – EXTERIOR IMPROVEMENTS**

321123	AGGREGATE BASE COURSES
321216	ASPHALT PAVING
321313	CONCRETE PAVING
321816.13	PLAYGROUND PROTECTIVE SURFACING
323113	CHAIN LINK FENCES AND GATES
329219	SEEDING
329300	PLANTS



## LIST OF DRAWING SHEETS

### COVER

### GENERAL

G000	CODE STANDARDS
G001	BUILDING CODE SUMMARY & SYMBOLS LEGEND
G002	BUILDING CODE PLAN
G003	TYPICAL ASSEMBLIES & GENERAL NOTES
G004	PHASING PLAN

### SITE PREPARATION

SP101	SITE DEMOLITION PLAN
SP102	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
SP103	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
SP201	SITE LAYOUT PLAN
SP301	SITE GRADING PLAN
SP401	UTILITY PLAN & PROFILE
SP501	SITE DETAILS
SP502	SITE DETAILS
SP503	SITE DETAILS
SP504	STANDARD PLATES
SP505	STANDARD PLATES

### LANDSCAPING

L101	SITE PLANTING PLAN
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### STRUCTURAL

S000	STRUCTURAL GENERAL NOTES
S001	STRUCTURAL SCHEDULES
S100A	FOOTING & FOUNDATION PLAN - AREA A
S100B	FOOTING & FOUNDATION PLAN - AREA B
S100C	FOOTING & FOUNDATION PLAN - AREA C
S100D	FOOTING & FOUNDATION PLAN - AREA D
S200A	ROOF FRAMING PLAN - AREA A
S200B	ROOF FRAMING PLAN - AREA B
S200C	ROOF FRAMING PLAN - AREA C
S200D	ROOF FRAMING PLAN - AREA D
S300	STRUCTURAL DETAILS
S301	STRUCTURAL DETAILS
S302	BRACED FRAME ELEVATIONS
S303	WALL SECTIONS
S304	STRUCTURAL DETAILS

## DEMOLITION

D100 DEMOLITON PLAN - OVERALL  
D101A DEMOLITION PLAN - AREA A  
D101B DEMOLITION PLAN - AREA B  
D101C DEMOLITION PLAN - AREA C

## ARCHITECTURAL

A100 OVERALL FIRST FLOOR PLAN  
A101A FIRST FLOOR PLAN - AREA A  
A101B FIRST FLOOR PLAN - AREA B  
A101C FIRST FLOOR PLAN - AREA C  
A101D FIRST FLOOR PLAN - AREA D  
A101E FIRST FLOOR PLAN - AREA E  
A105 ROOF PLAN OVERALL  
A105A ROOF PLAN - AREA A  
A105B ROOF PLAN AREA B  
A105C ROOF PLAN - AREA C  
A105D ROOF PLAN - AREA D  
A105E ROOF PLAN - AREA E  
A110 REFLECTED CLG PLAN - OVERALL  
A110A REFLECTED CLG PLAN - AREA A  
A110B REFLECTED CLG PLAN - AREA B  
A110C REFLECTED CLG PLAN - AREA C  
A110D REFLECTED CLG PLAN AREA - D  
A110E REFLECTED CLG PLAN AREA - E  
A119 FINISH SCHEDULE & LEGENDS  
A120 ENLARGED FINISH PLANS- AREA A  
A121 ENLARGED FINISH PLANS- AREA B  
A122 ENLARGED FINISH PLANS- AREA(S) C & E  
A123 ENLARGED FINISH PLANS- AREA D  
A200 EXTERIOR ELEVATIONS  
A201 EXTERIOR ELEVATIONS  
A300 BUILDING SECTIONS  
A301 BUILDING SECTIONS  
A302 BUILDING SECTIONS  
A310 WALL SECTIONS  
A311 WALL SECTIONS  
A312 WALL SECTIONS  
A313 WALL SECTIONS  
A314 WALL SECTIONS  
A315 WALL SECTIONS  
A320 STAIR/RAMP SECTIONS & DETAILS  
A400 ENLARGED PLANS & INTERIOR ELEVATIONS  
A401 ENLARGED PLANS & INTERIOR ELEVATIONS  
A402 ENLARGED PLANS & INTERIOR ELEVATIONS



A403 ENLARGED PLANS & INTERIOR ELEVATIONS  
A404 ENLARGED PLANS & INTERIOR ELEVATIONS  
A405 ENLARGED PLANS & INTERIOR ELEVATIONS  
A406 ENLARGED PLANS & INTERIOR ELEVATIONS  
A407 INTERIOR ELEVATIONS  
A408 INTERIOR ELEVATIONS  
A500 EXTERIOR DETAILS  
A501 EXTERIOR DETAILS  
A503 EXTERIOR DETAILS  
A505 EXTERIOR PLAN DETAILS  
A510 INTERIOR DETAILS  
A511 INTERIOR DETAILS  
A512 INTERIOR SIGNAGE  
A600 DOOR SCHEDULE & DETAILS  
A601 DOOR & FRAME DETAILS  
A610 GLAZING ELEVATIONS  
A611 GLAZING DETAILS  
A991 ALTERNATE

#### **MECHANICAL**

EM100 MOTOR SCHEDULE, LEGENDS & SHEET INDEX  
EM101 ELECTRICAL & MECHANICAL SITE PLAN  
EM102 ENLARGED KITCHEN LAYOUT  
M103 MECHANICAL ROOF PLAN  
M200A AREA A - PLUMBING & HYDRONICS DEMOLITION PLAN  
M201B AREA B - PLUMBING & HYDRONICS DEMOLITION PLAN  
M202C AREA C - PLUMBING & HYDRONICS DEMOLITION PLAN  
M203E AREA E - PLUMBING & HYDRONICS DEMOLITION PLAN  
M300A AREA A - HVAC DEMOLITION PLAN  
M301B AREA B - HVAC DEMOLITION PLAN  
M302C AREA C - HVAC DEMOLITION PLAN  
M303E AREA E - HVAC DEMOLITION PLAN  
M400A AREA A - BELOW GRADE PLUMBING & HYDRONICS PLAN  
M401B AREA B - BELOW GRADE PLUMBING & HYDRONICS PLAN  
M402C AREA C - BELOW GRADE PLUMBING & HYDRONICS PLAN  
M403D AREA D - BELOW GRADE PLUMBING & HYDRONICS PLAN  
M404E AREA E - BELOW GRADE PLUMBING & HYDRONICS PLAN  
M500A AREA A - ABOVE GRADE PLUMBING & HYDRONICS PLAN  
M501B AREA B - ABOVE GRADE PLUMBING & HYDRONICS PLAN  
M502C AREA C - ABOVE GRADE PLUMBING & HYDRONICS PLAN  
M503D AREA D - ABOVE GRADE PLUMBING & HYDRONICS PLAN  
M504E AREA E - ABOVE GRADE PLUMBING & HYDRONICS PLAN  
M600 FIRE PROTECTION - LEGENDS & DETAILS  
M601C AREA C - FIRE PROTECTION PLAN  
M602D AREA D - FIRE PROTECTION PLAN

M603E AREA E - FIRE PROTECTION PLAN  
M700A AREA A - HVAC PLAN  
M701B AREA B - HVAC PLAN  
M702C AREA C - HVAC PLAN  
M703D AREA D - HVAC PLAN  
M704E AREA E - HVAC PLAN  
M705 HVAC TEMPERATURE CONTROL ZONE PLAN  
M800 PLUMBING FIXTURE SCHEDULE  
M900 MECHANICAL DETAILS  
M901 MECHANICAL DETAILS CONTINUED  
M902 MECHANICAL DETAILS & ISOMETRICS  
M903 MECHANICAL SECTIONS  
M904 MECHANICAL SCHEDULES

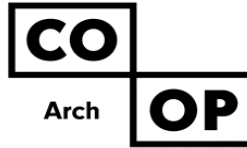
#### **ELECTRICAL**

E200A AREA A - ELECTRICAL DEMOLITION PLAN  
E201B AREA B - ELECTRICAL DEMOLITION PLAN  
E202CD AREA C - ELECTRICAL DEMOLITION PLAN  
E203E AREA E - ELECTRICAL DEMOLITION PLAN  
E300A AREA A - POWER & DATA PLAN  
E301B AREA B - POWER & DATA PLAN  
E302C AREA C - POWER & DATA PLAN  
E303D AREA D - POWER & DATA PLAN  
E304E AREA E - POWER & DATA PLAN  
E400A AREA A - LIGHTING PLAN  
E401B AREA B - LIGHTING PLAN  
E402C AREA C - LIGHTING PLAN  
E403D AREA D - LIGHTING PLAN  
E404E AREA E - LIGHTING PLAN  
E500A AREA A - SPECIAL SYSTEMS PLAN  
E501B AREA B - SPECIAL SYSTEMS PLAN  
E502C AREA C - SPECIAL SYSTEMS PLAN  
E503D AREA D - SPECIAL SYSTEMS PLAN  
E504E AREA E - SPECIAL SYSTEMS PLAN  
E600 ELECTRICAL DETAILS  
E700 ELECTRICAL SCHEDULES  
E701 ELECTRICAL SCHEDULES - CONTINUED  
E702 ELECTRICAL SCHEDULES - CONTINUED 2

#### **FOOD SERVICE**

F101 FOOD SERVICE / PLAN VIEW  
F102 FOOD SERVICE / ELEVATIONS  
F103 FOOD SERVICE / SPECIAL CONDITIONS  
F104 FOOD SERVICE / DETAILS  
F105 FOOD SERVICE / WALL BACKING

**F106 FOOD SERVICE / UTILITIES**



**Willow Lake School Addition/Renovation  
Plan Holders List**

Trade	Name	Location	e-Mail	Phone
<b>Owner &amp; Design Team</b>				
Owner	Willow Lake School District 12-3	Willow Lake, SD	<a href="mailto:chris.lee@k12.sd.us">chris.lee@k12.sd.us</a>	605.625.5945
Architect	CO-OP Architecture	Sioux Falls, SD	<a href="mailto:levi@co-oparch.com">levi@co-oparch.com</a>	605-334-9999
Landscape	Confluence	Sioux Falls, SD	<a href="mailto:lpudwill@thinkconfluence.com">lpudwill@thinkconfluence.com</a>	605-339-1205
Structural	RISE, Inc.	Sioux Falls, SD	<a href="mailto:jchristensen@riseincorp.com">jchristensen@riseincorp.com</a> <a href="mailto:whkoch@riseincorp.com">whkoch@riseincorp.com</a>	605-743-2510
Mechanical	Sichmeller Engineering, Inc.	Aberdeen, SD	<a href="mailto:travis@mseng.biz">travis@mseng.biz</a> <a href="mailto:lukem@siceng.biz">lukem@siceng.biz</a>	605-225-4344
Electric	Sichmeller Engineering, Inc.	Aberdeen, SD	<a href="mailto:josh@siceng.biz">josh@siceng.biz</a>	402-740-3801
Food Service	Envision Kitchen	Sioux Falls, SD	<a href="mailto:danhauge@sio.midco.net">danhauge@sio.midco.net</a>	605-261-1916

<b>Printers</b>				
Printer	Quality Quick Prints	Aberdeen, SD	<a href="mailto:dianem@myqqp.com">dianem@myqqp.com</a>	605-226-2541
Printer	CES Color	Sioux Falls, SD	<a href="mailto:print@cescolor.com">print@cescolor.com</a>	605-332-2550

<b>Building Exchanges</b>				
BX	Sioux Falls Builders Exchange	Sioux Falls, SD	<a href="mailto:info@sfbx.com">info@sfbx.com</a>	605-357-8687
BX	Plains Builders Exchange	Sioux Falls, SD	<a href="mailto:info@plainsbuilders.com">info@plainsbuilders.com</a>	605-334-8886
BX	Aberdeen Builders Exchange	Aberdeen, SD	<a href="mailto:dakotabuild@midconetwork.com">dakotabuild@midconetwork.com</a>	605-225-4733
BX	Fargo-Moorhead	Fargo, ND	<a href="mailto:info@fmbx.org">info@fmbx.org</a>	701-237-6772
BX	Construction Industry Center	Rapid City, SD	<a href="mailto:chrissy@constructionindustrycenter.com">chrissy@constructionindustrycenter.com</a>	605-343-5252
BX	Minneapolis Builders Exchange	Minneapolis, MN	<a href="mailto:jb@mbex.org">jb@mbex.org</a>	612-381-2620

<b>General Contractor</b>				
General Contractor	Gray Construction	Watertown, SD	<a href="mailto:dustin@grayconstruct.com">dustin@grayconstruct.com</a>	605-886-3102
General Contractor	WS Construction Management	Sioux Falls, SD	<a href="mailto:john@wsconstructionmanagement.com">john@wsconstructionmanagement.com</a>	605-275-9726
General Contractor	Kyburz-Carlson	Aberdeen, SD	<a href="mailto:mkeller@kyburzcarlson.com">mkeller@kyburzcarlson.com</a>	605-225-6161
General Contractor	Tellinghuisen Inc.	Willow Lake, SD	<a href="mailto:zanel@tellinghuisen.com">zanel@tellinghuisen.com</a>	605-881-2075

<b>Mechanical Contractors</b>				
Mechanical Contractor	Active Heating and Cooling	Watertown, SD	<a href="mailto:thadi@activeheatinginc.com">thadi@activeheatinginc.com</a>	605-882-2663

<b>Electrical Contractors</b>				
Electrical Contractor	Eframson Electric	Bryant, SD	<a href="mailto:estimator@eframsonelectric.com">estimator@eframsonelectric.com</a>	605-881-3562 605-868-2426
Electrical Contractor	Marquardt Electric	Watertown, SD	kylemarq@gmail.com npzaug@gmail.com	605-886-2107
Electrical Contractor	Sentry Crane and Services	Watertown, SD	<a href="mailto:masonc@sentryusa.com">masonc@sentryusa.com</a>	605-233-0137

**SECTION 034113  
PRECAST CONCRETE HOLLOW CORE PLANKS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Precast floor planks.
- B. Connection plates with brackets and hangers.
- C. Grouting plank joint keys.

**1.02 RELATED REQUIREMENTS**

- A. Section 033000 - Cast-in-Place Concrete.

**1.03 REFERENCE STANDARDS**

- A. ACI 301 - Specifications for Concrete Construction 2020.
- B. ACI 318 - Building Code Requirements for Structural Concrete 2019 (Reapproved 2022).
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel 2019.
- D. ASTM A416/A416M - Standard Specification for Low-Relaxation, Seven-Wire Steel Strand for Prestressed Concrete 2018.
- E. AWS D1.1/D1.1M - Structural Welding Code - Steel 2020, with Errata (2022).
- F. AWS D1.4/D1.4M - Structural Welding Code - Steel Reinforcing Bars 2018, with Amendment (2020).
- G. IAS AC157 - Accreditation Criteria for Fabricator Inspection Programs for Reinforced and Precast/Prestressed Concrete 2017.
- H. PCI MNL-116 - Manual for Quality Control for Plants and Production of Structural Precast Concrete Products 2021.
- I. PCI MNL-120 - PCI Design Handbook 2017, with Errata (2021).
- J. PCI MNL-123 - Connections Manual: Design and Typical Details of Connections for Precast and Prestressed Concrete 1988.
- K. PCI MNL-124 - Design for Fire Resistance of Precast Prestressed Concrete 2011.
- L. PCI MNL-126 - PCI Manual for the Design of Hollow Core Slabs and Walls 2015.
- M. PCI MNL-135 - Tolerance Manual for Precast and Prestressed Concrete Construction 2000.
- N. PCI (CERT) - PCI Plant Certification Current Edition.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination: Coordinate location of hanger tabs and devices for mechanical and electrical work and cutting of field openings.
- B. Preinstallation Meeting: Convene one week before starting work of this section.
  - 1. Discuss anchor and weld plate locations, sleeve locations, and cautions regarding cutting or core drilling.

**1.05 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Indicate standard component configuration, design loads, deflections, and cambers.
- C. Shop Drawings: Indicate plank locations, unit identification marks, connection details, edge conditions, bearing requirements, support conditions, dimensions, openings, openings intended to be field cut, and relationship to adjacent materials.
  - 1. Submit design calculations.
- D. Welders' Certificates.
- E. Designer's Qualification Statement.

- F. Fabricator's Qualification Statement: Provide documentation showing precast concrete fabricator is accredited under IAS AC157.
- G. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.

### **1.06 QUALITY ASSURANCE**

- A. Designer Qualifications: Design precast concrete hollow core planks under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of documented experience.
- C. Fabricator Qualifications: Precast concrete fabricator accredited by IAS according to IAS AC157.
- D. Erector Qualifications: Company specializing in performing the type of work specified in this section, with minimum 5 years of documented experience.

### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Lifting or Handling Devices: Capable of supporting member in positions anticipated during manufacture, storage, transportation, and erection.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Precast Concrete Hollow Core Planks:
  - 1. Any manufacturer with PCI Plant Certification.
  - 2. Substitutions: See Section 016000 - Product Requirements.

### **2.02 PRECAST UNITS**

- A. Precast Hollow Core Planks: Comply with PCI MNL-120, PCI MNL-126, PCI MNL-124 ACI 318, and ACI 301.
  - 1. Dimensions as indicated on drawings.
  - 2. Design components to withstand dead loads and design loads in the configuration indicated on drawings and as follows:
    - a. Floor Assembly: 85 pounds per square foot dead load.
    - b. Floor Assembly (Light/Heavy): 125/250 pounds per square foot live load.
    - c. Maximum Allowable Deflection of Floor Planks: 1/240 of span (total load) and 1/360 (live load), cambered to achieve flat surface under dead load.
  - 3. Design connections in accordance with PCI MNL-123.
  - 4. Design components to accommodate construction tolerances, deflection of other building structural members and clearances of intended openings.

### **2.03 MATERIALS**

- A. Concrete Materials: ACI 301.
- B. Tensioning Steel Tendons: ASTM A416/A416M, Grade 250 - 250K psi; seven-wire stranded steel cable; low-relaxation type; full length without splices; weldless; uncoated.
- C. Reinforcing Steel: ASTM A615/A615M, Grade 40 (40,000 psi) deformed steel bars.
- D. Non-Shrink Grout: Non-metallic, minimum compressive strength of 10,000 psi at 28 days.
- E. Cement Grout: Minimum compressive strength of 3,000 psi at 28 days.

### **2.04 ACCESSORIES**

- A. Connecting and Supporting Devices: Plates, angles, items cast into concrete, items connected to steel framing members, and inserts: ASTM A36/A36M carbon steel; prime painted.
- B. Core Hole End Plugs: Cardboard insert with stiff concrete fill.
- C. Hanger Tabs: Galvanized steel, designed to fit into grouted key joints, capable of supporting 500 lbs dead load, predrilled to receive hanger.

- D. Bearing Pads: High density plastic, 1/8 inch thick, smooth on one side. Vulcanized elastomeric compound molded to size.
- E. Sill Seal: Compressible glass fiber strips.

## **2.05 FABRICATION**

- A. Weld reinforcing in accordance with AWS D1.4/D1.4M.
- B. Embed anchors, inserts, plates, angles, and other items at locations indicated.
- C. Provide openings required by other sections, at locations indicated.
- D. Cut exposed ends flush.
- E. Plant Finish: Finish members to PCI MNL-116 Commercial Grade.
- F. Connecting and Supporting Steel Devices: Do not paint surfaces in contact with concrete or surfaces requiring field welding.

## **2.06 FABRICATION TOLERANCES**

- A. Comply with PCI MNL-116 and PCI MNL-135, except as specifically amended below.
  - 1. Maximum Variation From Nominal Dimensions:
    - a. Width: Plus or minus 1/4 in.
    - b. Length: Plus or minus 1/2 in.
    - c. Depth: Plus or minus 1/4 in.
  - 2. Maximum Variation From Intended Camber: Plus or minus 1/4 inch in 10 feet.
  - 3. Maximum Variation from Plan End Squareness: Plus or minus 1/4 in.
  - 4. Maximum Sweep: Plus or minus 1/4 in.
  - 5. Maximum Misalignment of Anchors, Inserts, Openings: Plus or minus 1/8 inch.
  - 6. Maximum Bowing of Members: Length/360.
  - 7. Maximum Bowing of Members: Plus or minus 1/4 inch in 10 feet to a maximum of 3/8 inch.

## **2.07 SOURCE QUALITY CONTROL**

- A. Produce planks in accordance with requirements of PCI MNL-116. Maintain plant records and quality control program during production of precast planks. Make records available upon request.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that site conditions are ready to receive work and field measurements are as indicated on shop drawings.

### **3.02 PREPARATION**

- A. Prepare support devices for the erection procedure and temporary bracing.

### **3.03 ERECTION**

- A. Erect members without damage to structural capacity, shape, or finish. Replace or repair damaged members.
- B. Install bearing pads and sill seal at bearing ends of planks as indicated.
- C. Align and maintain uniform horizontal and end joints, as erection progresses.
- D. Maintain temporary bracing in place until final connection is made. Protect members from staining.
- E. Adjust differential camber between precast members to tolerance before final attachment and grouting.
- F. Adjust differential elevation between precast members to tolerance before final attachment.
- G. Secure units in place. Perform welding in accordance with AWS D1.1/D1.1M.
- H. Grout longitudinal keys as indicated.



- I. Make plank-to-plank joints smooth using grout, troweled smooth. Transition differential elevation of adjoining planks with grout to a maximum slope of 1:12.

### **3.04 TOLERANCES**

- A. Erect members level and plumb within allowable tolerances. Comply with PCI MNL-135, except as specifically amended below.
  1. Plan Location from Building Grid Datum: Plus or minus 3/4 in.
  2. Top Elevation from Building Elevation Datum at Plank Ends: Plus or minus 1/2 inch.
  3. Maximum Jog in Alignment of Matching Ends: Plus or minus 1/2 inch.
  4. Exposed Joint Dimension: Plus or minus 3/8 inch.
  5. Differential Top Elevation As Erected: Plus or minus 3/8 inch.
  6. Bearing Length in Span Direction: Plus or minus 3/8 inch.
  7. Differential Bottom Elevation of Exposed Planks: Plus or minus 3/16 inch.

### **3.05 PROTECTION**

- A. Protect members from damage caused by field welding or erection operations.

### **3.06 CLEANING**

- A. Clean weld marks, dirt, and blemishes from surface of exposed members.

**END OF SECTION**

**SECTION 096429  
WOOD STRIP AND PLANK FLOORING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Wood strip and plank flooring, nailed.
- B. Secondary subflooring.

**1.02 RELATED REQUIREMENTS**

- A. Section 061000 - Rough Carpentry: Wood subfloor surface.

**1.03 REFERENCE STANDARDS**

- A. MFMA (SPEC) - Guide Specifications for Maple Flooring Systems current edition.
- B. NWFA (IG) - Installation Guidelines Current Edition.

**1.04 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for flooring.
- C. Shop Drawings: Indicate floor joint pattern and termination details.
- D. Manufacturer's Instructions: Indicate standard and special installation procedures.
- E. Samples: Submit two samples 2-1/4 by 12 inch in size illustrating floor finish, color, and sheen.
- F. Maintenance Data: Include maintenance procedures and recommended maintenance materials.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 016000 - Product Requirements, for additional provisions.
  - 2. Extra Flooring Material: 1 square yards matching installed flooring.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least five years of documented experience.

**1.06 FIELD CONDITIONS**

- A. Do not install wood flooring until wet construction work is complete and ambient air at installation space has moisture content stabilized at maximum moisture content of 40 percent.
- B. Provide heat, light, and ventilation prior to installation.
- C. Store materials in area of installation for minimum period of 24 hours prior to installation.
- D. Maintain minimum room temperature of 65 degrees F for a period of two days prior to delivery of materials to installation space, during installation, and after installation.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Hardwood Strip and Plank Flooring:
  - 1. Substitutions: See Section 016000 - Product Requirements

**2.02 MATERIALS**

- A. Wood Strip Flooring - Type WDF-1:
  - 1. Species: Northern hard maple.
  - 2. Grade: No. 2 Common and better.
  - 3. Moisture Content: 7 to 9 percent.
  - 4. Actual Thickness: 25/32 inch.
  - 5. Actual Width: 2-1/4 inches.

- 6. Edge: Tongue and groove.
- 7. Length: Random, minimum of 9 inches.
- B. Flooring Nails: Type recommended by flooring manufacturer.
- C. Secondary Subflooring: 23/32 inch thick plywood, with tongue and groove edges; Exposure 1, sanded, preservative treated.
- D. Sheathing Paper: Plain building paper.

### **2.03 ACCESSORIES**

- A. Transition Strip: Same species and finish as flooring material; profiles indicated.
- B. Floor Stain: To match existing flooring; penetrating type recommended by flooring manufacturer.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify existing conditions before starting this work.
- B. Verify wood subfloor is properly secured, smooth and flat to plus or minus 1/4 inch in 10 feet.
- C. Verify that required floor-mounted utilities are in correct location.

### **3.02 PREPARATION**

- A. Secondary Subflooring: Place plywood subflooring.
  - 1. Lay perpendicular to the sleepers, with end joints over sleepers, and nail at 12 inches on center.
- B. Prepare substrate to receive wood flooring in accordance with manufacturer's and NWFA instructions.
- C. Broom clean substrate.

### **3.03 INSTALLATION**

- A. Sheathing Paper: Place over wood subfloor; lap edges and ends 2 inches, staple in place.
- B. Wood Flooring:
  - 1. Install in accordance with manufacturer's and NWFA instructions; predrill and blind nail to subfloor.
  - 2. Lay flooring parallel to length of room areas. Verify alignment as work progresses.
  - 3. Arrange flooring with end matched grain set flush and tight.
  - 4. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar; provide divider strips and transition strips in accordance with flooring manufacturer's recommendations and as indicated.
  - 5. Install edge strips at unprotected or exposed edges, and where flooring terminates.
  - 6. Secure edge strips before installation of flooring with stainless steel screws.
  - 7. Install flooring tight to floor access covers.
  - 8. Provide 2 inch expansion space at fixed walls and other interruptions.
- C. Install base at floor perimeter to cover expansion space in accordance with manufacturer's instructions. Miter inside and outside corners.
- D. Finishing:
  - 1. Mask off adjacent surfaces before beginning sanding.
  - 2. Sand flooring to smooth even finish with no evidence of sander marks. Take precautions to contain dust. Remove dust by vacuum.
  - 3. Apply first coat, allow to dry, then buff lightly with steel wool to remove irregularities. Vacuum clean and wipe with damp cloth before applying succeeding coat.
  - 4. Lightly buff between coats with steel wool and vacuum clean before applying succeeding coat.
  - 5. Apply last coat of finish.

**3.04 CLEANING**

- A. Clean and polish floor surfaces in accordance with floor finish manufacturer's instructions.

**3.05 PROTECTION**

- A. Prohibit traffic on floor finish for 48 hours after installation.
- B. Place protective coverings over finished floors; do not remove coverings until Date of Substantial Completion.

**END OF SECTION**

## **SECTION 101400 SIGNAGE**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Room and door signs.
- B. Building identification signs.
- C. ***Vinyl lettering.***

#### **1.02 REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines current edition.
- B. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.

#### **1.03 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
- C. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
  - 1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
  - 2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
  - 3. Submit for approval by Owner through Architect prior to fabrication.
- D. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.
- E. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
- F. Manufacturer's Installation Instructions: Include installation templates and attachment devices.
- G. Manufacturer's Qualification Statement.
- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

#### **1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.
- C. Store tape adhesive at normal room temperature.

#### **1.06 FIELD CONDITIONS**

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Flat Signs: Basis of Design: Inpro corporation Aspen Collection with back plate.
  - 1. Best Sign Systems, Inc: [www.bestsigns.com/#sle](http://www.bestsigns.com/#sle).
  - 2. Cosco Industries (ADA signs): [www.coscoarchitecturalsigns.com/#sle](http://www.coscoarchitecturalsigns.com/#sle).
  - 3. Inpro: [www.inprocorp.com](http://www.inprocorp.com).
  - 4. Substitutions: See Section 016000 - Product Requirements.
- B. Dimensional Letter Signs:
  - 1. A.R.K. Ramos Architectural Signage Systems; Cast Aluminum Letters: [www.arkramos.com/#sle](http://www.arkramos.com/#sle).
  - 2. Cosco Industries; Cast Aluminum: [www.coscoarchitecturalsigns.com/#sle](http://www.coscoarchitecturalsigns.com/#sle).
  - 3. FASTSIGNS: [www.fastsigns.com/#sle](http://www.fastsigns.com/#sle).
  - 4. Inpro: [www.inprocorp.com](http://www.inprocorp.com).
  - 5. Substitutions: See Section 016000 - Product Requirements.

### **2.02 SIGNAGE APPLICATIONS**

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
  - 1. Sign Type: Flat signs with engraved panel media as specified.
  - 2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
  - 3. Character Height: 1 inch.
  - 4. Sign Height: 2 inches, unless otherwise indicated.
  - 5. Office Doors: Identify with room numbers to be determined later, not the numbers indicated on drawings; in addition, provide "window" section for replaceable occupant name.
  - 6. Conference and Meeting Rooms: Identify with room numbers to be determined later, not the numbers shown on the drawings; in addition, provide "window" section with sliding "In Use/Vacant" indicator.
  - 7. Service Rooms: Identify with room names and numbers to be determined later, not those shown on the drawings.
  - 8. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", room numbers to be determined later, and braille.
  - 9. Include Occupant Load on room signage.
- C. Building Identification Signs:
  - 1. Use individual metal letters.
  - 2. Mount on outside wall in location indicated on drawings.
- D. Other Dimensional Letter Signs: Wall-mounted.

### **2.03 SIGN TYPES**

- A. Flat Signs: Signage media in aluminum frame.
  - 1. Corners: Square.
  - 2. Frame Finish: Natural (clear) anodized.
  - 3. Wall Mounting of One-Sided Signs: Tape adhesive.
- B. Color and Font: Unless otherwise indicated:
  - 1. Character Font: Helvetica, Arial, or other sans serif font.
  - 2. Character Case: Upper case only.
  - 3. Background Color: To be selected from manufacturers full range of colors.
  - 4. Character Color: Contrasting color.

## 2.04 TACTILE SIGNAGE MEDIA

- A. Applied Character Panels: Acrylic plastic base, with applied acrylic plastic letters and braille.
  - 1. Total Thickness: 1/8 inch.
  - 2. Letter Thickness: 1/8 inch.
  - 3. Letter Edges: Square.

## 2.05 DIMENSIONAL LETTERS

- A. Metal Letters:
  - 1. Metal: Aluminum channel.
  - 2. Metal Thickness: 1/8 inch minimum.
  - 3. Letter Height: As indicated on drawings.
  - 4. Text and Typeface:
    - a. Character Font: Helvetica, Arial, or other sans serif font.
    - b. Character Case: Upper case only.
  - 5. Mounting: Concealed.
  - 6. Lighting: Halo lit.

## 2.06 VINYL LETTERS

- A. **Exterior Door Identification:**
  - 1. **Application: Glass.**
  - 2. **Material: Vinyl.**
  - 3. **Size: See Drawings.**
  - 4. **Thickness: 4 mil.**
  - 5. **Weight: .065 lbs/sqft.**
  - 6. **Ink: UV fade-resistant.**

## 2.07 ACCESSORIES

- A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.
- B. Tape Adhesive: Double sided tape, permanent adhesive.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.

### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Locate signs where indicated:
  - 1. Room and Door Signs: Locate on wall at latch side of door with centerline of sign at 60 inches above finished floor.
  - 2. If no location is indicated obtain Owner's instructions.
- D. Protect from damage until Substantial Completion; repair or replace damaged items.

**END OF SECTION**

**SECTION 102600  
WALL AND DOOR PROTECTION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Corner guards.

**1.02 RELATED REQUIREMENTS**

- A. Section 061000 - Rough Carpentry: Blocking for wall and corner guard anchors.
- B. Section 092116 - Gypsum Board Assemblies: Placement of supports in stud wall construction.
- C. Section 092216 - Non-Structural Metal Framing: Placement of supports in stud wall construction.

**1.03 REFERENCE STANDARDS**

- A. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- B. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics 2010 (Reapproved 2018).
- C. ASTM D543 - Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents 2021.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2022.
- E. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials 2022.

**1.04 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Indicate physical dimensions, features, and anchorage details.
- C. Shop Drawings: Include plans, elevation, sections, and attachment details.
- D. Samples: Submit samples illustrating component design, configurations, joinery, color and finish.
- E. Manufacturer's Instructions: Indicate special procedures, perimeter conditions requiring special attention.
- F. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project:
  - 1. See Section 016000 - Product Requirements, for additional provisions.
  - 2. Extra Stock Materials: One package(s) of minimum 96 inches long unit of each kind of covers for corner guards.
- H. Maintenance Data: Manufacturer's instructions for care and cleaning of each type of product. Include information about both recommended and potentially detrimental cleaning materials and methods.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver wall and door protection items in original, undamaged protective packaging. Label items to designate installation locations.
- B. Protect work from moisture damage.
- C. Protect work from UV light damage.
- D. Do not deliver products to project site until areas for storage and installation are fully enclosed, and interior temperature and humidity are in conformance with manufacturer's recommendations for each type of item.



- E. Store products in either horizontal or vertical position, in conformance with manufacturer's instructions.

### **1.06 WARRANTY**

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a one year period after Date of Substantial Completion.
- C. Provide five year manufacturer and installer warranty for metal crash rails.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Corner Guards: Basis of Design: Acrovyn TF Series by Construction Specialties, Inc.
  - 1. Babcock-Davis: [www.babcockdavis.com/#sle](http://www.babcockdavis.com/#sle).
  - 2. Inpro: [www.inprocorp.com/#sle](http://www.inprocorp.com/#sle).
  - 3. Koroseal Interior Products: [www.koroseal.com/#sle](http://www.koroseal.com/#sle).
  - 4. Nystrom, Inc: [www.nystrom.com/#sle](http://www.nystrom.com/#sle).
  - 5. Trim-Tex, Inc: [www.trim-tex.com/#sle](http://www.trim-tex.com/#sle).
  - 6. Substitutions: See Section 016000 - Product Requirements.

### **2.02 PRODUCT TYPES**

- A. Corner Guards - Surface Mounted:
  - 1. Material: High impact vinyl.
  - 2. Width of Wings: 2 inches.
  - 3. Thickness: .040 inch.
  - 4. Corner: Radiused.
  - 5. Color: As selected from manufacturer's standard colors.
  - 6. Length: One piece.
  - 7. Preformed end caps.

### **2.03 FABRICATION**

- A. Fabricate components with tight joints, corners and seams.
- B. Pre-drill holes for attachment.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that substrate surfaces for adhered items are clean and smooth.
  - 1. Test painted or wall covering surfaces for adhesion in inconspicuous area, as recommended by manufacturer. Follow adhesive manufacturer's recommendations for remedial measures at locations and/or application conditions where adhesion test's results are unsatisfactory.

### **3.02 INSTALLATION**

- A. Install components in accordance with manufacturer's instructions, level and plumb, secured rigidly in position to supporting construction.
- B. Position corner guard 4 inches above finished floor to 48 inches high.

### **3.03 TOLERANCES**

- A. Maximum Variation From Required Height: 1/4 inch.

### **3.04 CLEANING**

- A. Clean wall and door protection items of excess adhesive, dust, dirt, and other contaminants.

**END OF SECTION**

**SECTION 123280  
INSTRUMENT STORAGE**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Instrument storage cabinets

**1.02 RELATED REQUIREMENTS**

- A. Section 016000 - Product Requirements:
- B. Section 079200 - Joint Sealants: Sealing joints between casework and countertops and adjacent walls, floors, and ceilings.
- C. Section 123600 - Countertops: Additional requirements for countertops.

**1.03 DEFINITIONS**

- A. Exposed: Portions of casework visible when drawers and cabinet doors are closed, including end panels, bottoms of cases more than 42 inches above finished floor, tops of cases less than 72 inches above finished floor and all members visible in open cases or behind glass doors.
- B. Semi-Exposed: Portions of casework and surfaces behind solid doors, tops of cases more than 72 inches above finished floor and bottoms of cabinets more than 30 inches but less than 42 inches above finished floor.
- C. Concealed: Sleepers, web frames, dust panels and other surfaces not generally visible after installation and cabinets less than 30 inches above finished floor.

**1.04 REFERENCE STANDARDS**

- A. ANSI A135.4 - Basic Hardboard 2012 (Reaffirmed 2020).
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2022.
- C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards 2021, with Errata.

**1.05 ADMINISTRATIVE REQUIREMENTS**

- A. Large Components: Ensure that large components can be moved into final position without damage to other construction.

**1.06 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Component dimensions, configurations, construction details, joint details, attachments; manufacturer's catalog literature on hardware, accessories, and service fittings, if any.
- C. Shop Drawings: Casework locations, large scale plans, elevations, cross sections, rough-in and anchor placement dimensions and tolerances, clearances required.
- D. Samples: For each color and finish for each exposed casework component.
- E. Test Reports: From independent laboratory indicating compliance with referenced chemical-resistance standards for cabinet finish and liner materials.
- F. Maintenance Data: Manufacturer's recommendations for care and cleaning.

**1.07 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than five years of documented experience.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Musical Instrument Storage Casework:

1. Basis of Design: UltraStor Cabinets by Wenger Corporation.
2. Substitutions: See Section 016000 - Product Requirements.

## **2.02 MUSICAL INSTRUMENT STORAGE CASEWORK**

- A. Basis of Design: UltraStor Storage Cabinets as manufactured by Wenger Corporation. Modular instrument storage casework with integral bases, adjustable levelers, and through-bolted fastening, enabling owner reconfiguration of unit layout.
- B. General: Provide through-ventilating instrument storage casework meeting requirements in System Description and Performance Requirements Articles
- C. Side Panels and Divider Panels: Particleboard thermoset panel with no urea formaldehyde added, 3/4 inch (19 mm) thick. Side panels machined to accept unit-to-unit through-bolting.
- D. Open Casework: Provide casework without doors.
- E. Shelving: Sized with adequate gap between shelving and casework side panels to allow air movement inside casework.
  1. Up to 27 inches (686 mm) wide: Removable molded polyethylene shelf, with impact-resistant, radiused front edge, mounted to cabinet wall with self-locking clip.
  2. Over 27 inches (686 mm) wide: For large instrument casework: Removable formed polyethylene shelf, ribbed, with high-impact-resistant, radiused front edge, supported by steel tube frame.
- F. Casework Panel Color: As selected by Architect from manufacturer's standard colors.
- G. Filler Panels and Closure: 3/4 inch (19 mm) thick particleboard thermoset panels with no urea formaldehyde in Oyster color. Provide the following, cut to fit field conditions, where indicated:
  1. Wall filler between cabinet side and wall.
  2. Top filler between cabinet top and wall.
  3. Top of cabinet closure panel between cabinet and finished ceiling or soffits.
  4. Finished back panel for exposed cabinet backs.
- H. Panel Connectors: 1/4-20 by 1.77 inch (45 mm) panel connectors, with steel thread inserts, powder coated to match panels.
- I. Cabinet Levelers: Leveling glides with 3/8 inch (9.5 mm) diameter threaded steel rod in steel corner brackets, minimum two each per cabinet side, accessible from within unit, and concealed in completed installation.
- J. Carcass joinery includes lag screws powder coated to match substrate.
- K. Back panel 7/32 inch (5.6 mm) reinforced with 3/4 inch (19 mm) stretchers panels held in a dado groove and lag screwed in place.
- L. Fasteners: Manufacturer-recommended fasteners as required for casework substrate and project performance requirements, consisting of one or more of the following:
  1. Sheet Metal Screws: SAE J78, corrosion-resistant-coated, self-drilling, self-tapping steel drill screws.
  2. Wood Screws: ASME B18.6.1.
  3. Expansion Anchors in Concrete and Concrete Masonry Units: Carbon-steel, zinc plated.
  4. Hardware supplied to anchor the cabinets to the wall and to adjacent casework.

## **2.03 MATERIALS**

- A. Particleboard: ANSI A208.1, minimum 43 lb/cu. ft. (689 kg/cu. m) density, composite products and adhesives, with no urea formaldehyde added.
- B. Particleboard Thermoset Panels: Particleboard finished with thermally-fused polyester surfacing on both sides meeting performance properties of NEMA LD 3 for VGS grade, edge-banded, including the following:
  1. Surface Abrasion Resistance: Taber Wheel, 400 cycles, for solid colors.
- C. Polyethylene Shelves: High-density, one-piece, blow-molded or polyethylene, with radiused front edge, for abuse-resistant shelves. Same color throughout will not show scratches.
- D. PVC Edge Banding: Radiused PVC extrusions, 1/8 inch (3 mm) thick.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify adequacy of support framing and anchors.

### **3.02 INSTALLATION**

- A. Use anchoring devices to suit conditions and substrate materials encountered.
- B. Set casework items plumb and square, securely anchored to building structure.
- C. Align cabinets to adjoining components, install filler panels where necessary to close gaps.
- D. Replace units that are damaged, including those that have damaged finishes.

### **3.03 ADJUSTING**

- A. Adjust operating parts, including doors, drawers, hardware, and fixtures to function smoothly.

### **3.04 CLEANING**

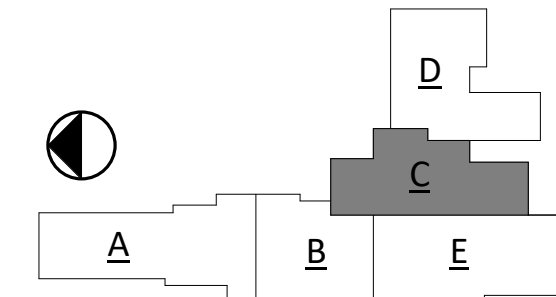
- A. Clean casework surfaces thoroughly.

### **3.05 PROTECTION**

- A. Do not permit finished casework to be exposed to continued construction activity.
- B. Repair damage that occurs prior to Date of Substantial Completion, including finishes, using methods prescribed by manufacturer; replace units that cannot be repaired to like-new condition.

**END OF SECTION**





RISE PROJECT NO: 22359



ISSUE:  
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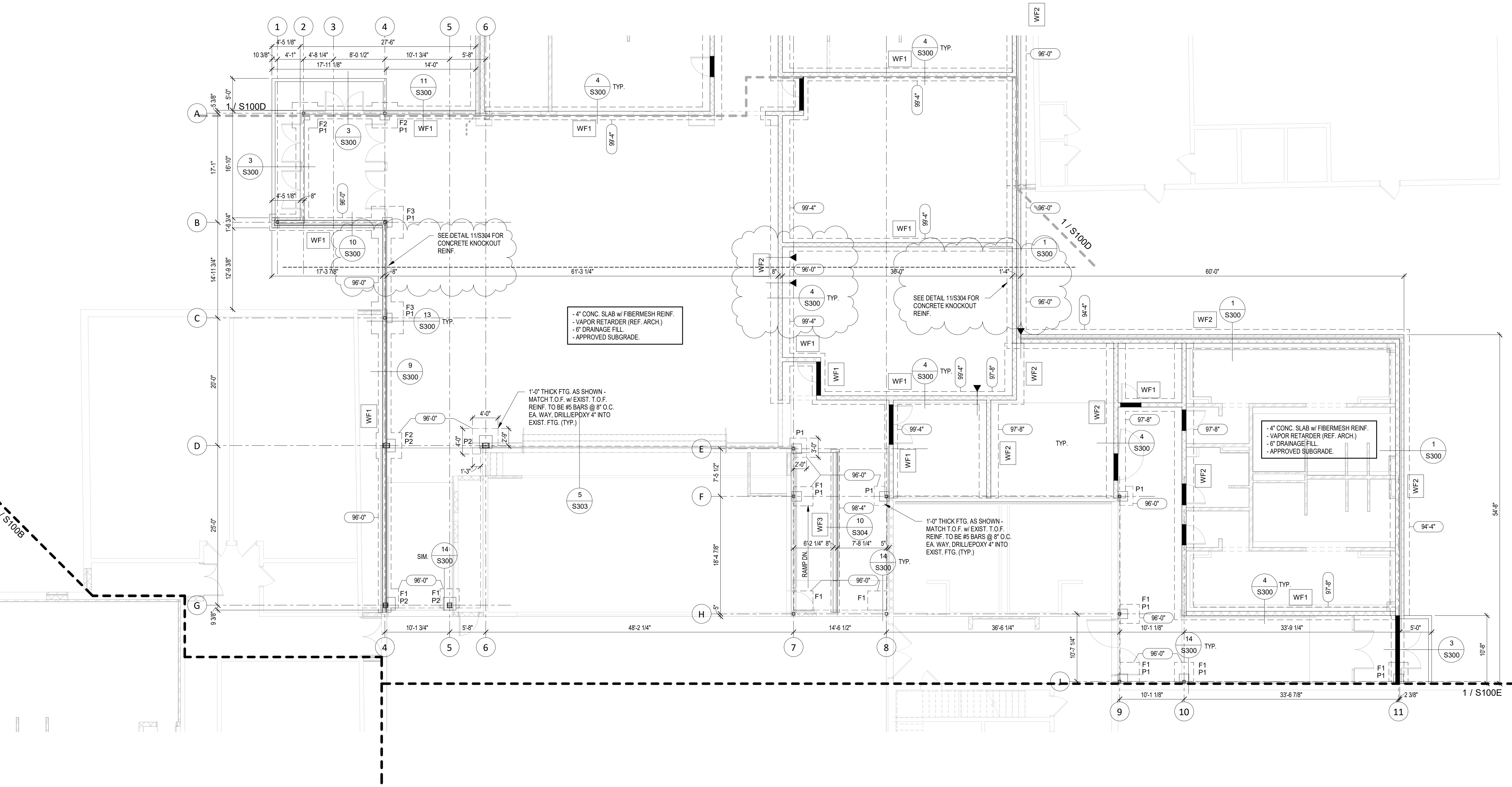
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
2	ADD02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
FOOTING & FOUNDATION PLAN - AREA C

**S100C**



**1 FOOTING & FOUNDATION PLAN - AREA C**  
1/8" = 1'-0"

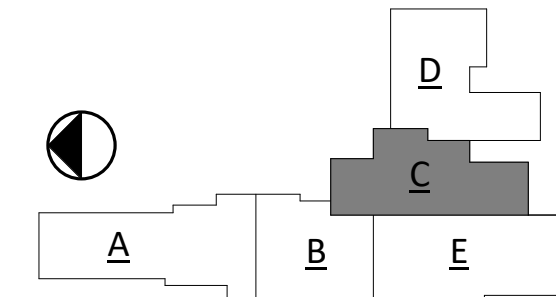
- NOTES:
- CONTRACTOR TO SUBMIT CONTROL JOINT LAYOUT FOR ARCH/ENGINEER APPROVAL
  - SEE STRUCTURAL NOTES FOR SIZE/SPACING LIMITATIONS.
  - SEE 6 & 7 ON SHEET S300 FOR TYPICAL CONTROL JOINT DETAILS.
  - SEE 8/S300 FOR TYPICAL CORNER WALL REINFORCING.

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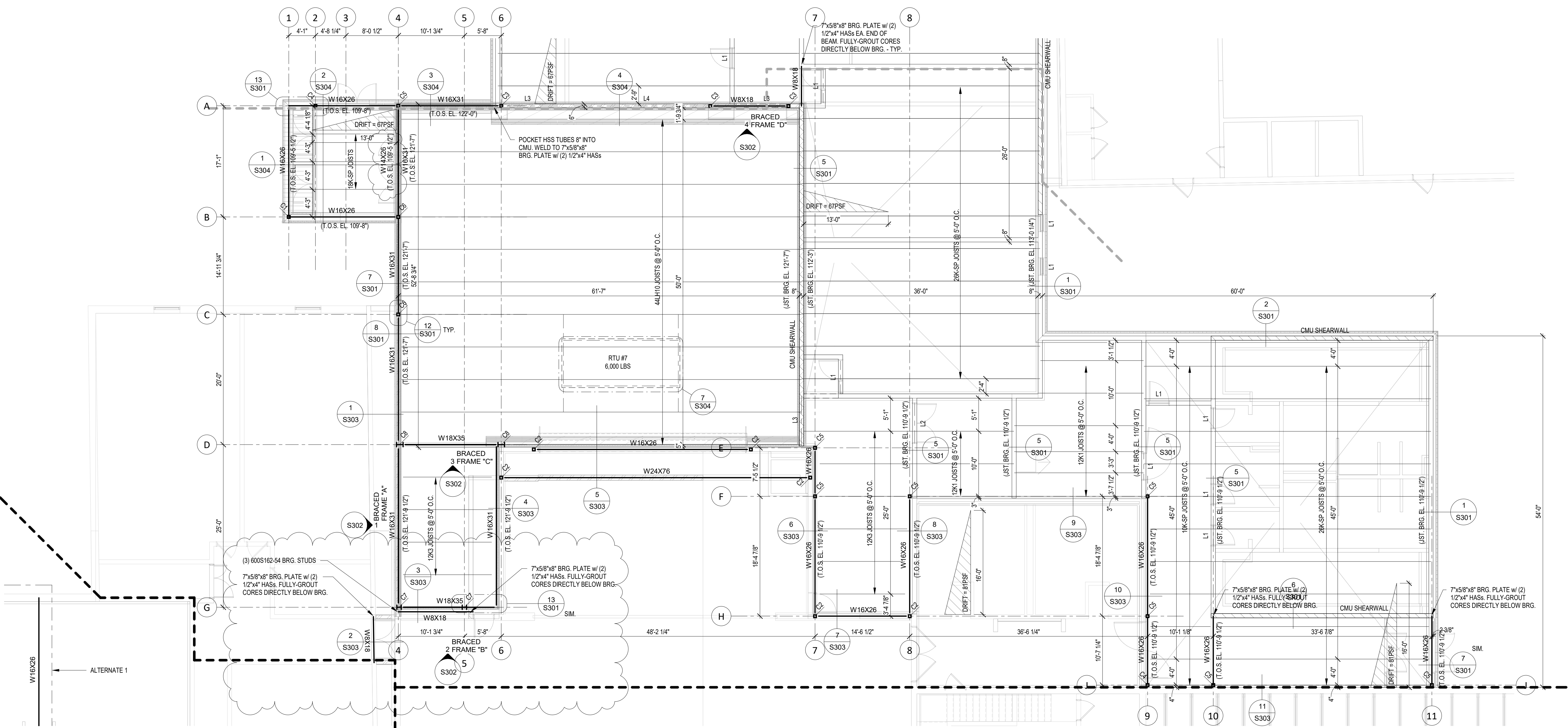
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	ADD 01	02/10/23
2	ADD02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

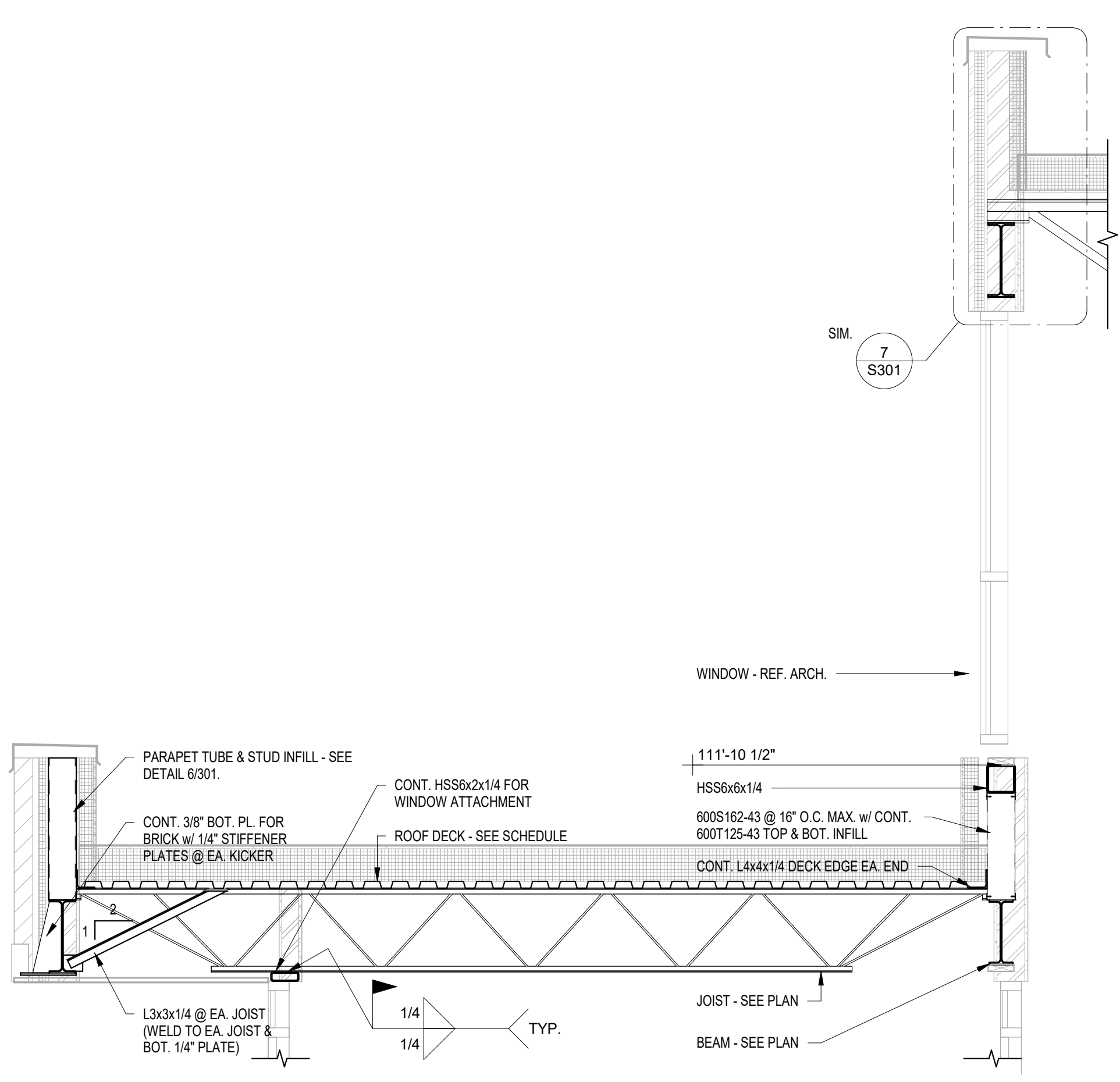
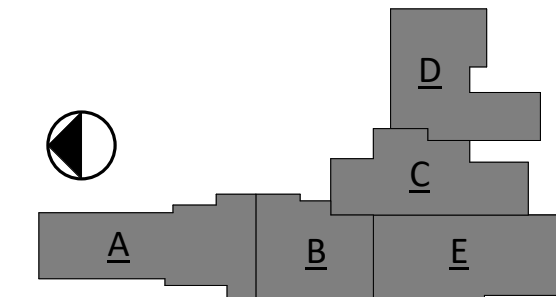
SHEET TITLE:  
ROOF FRAMING PLAN - AREA C

**S200C**

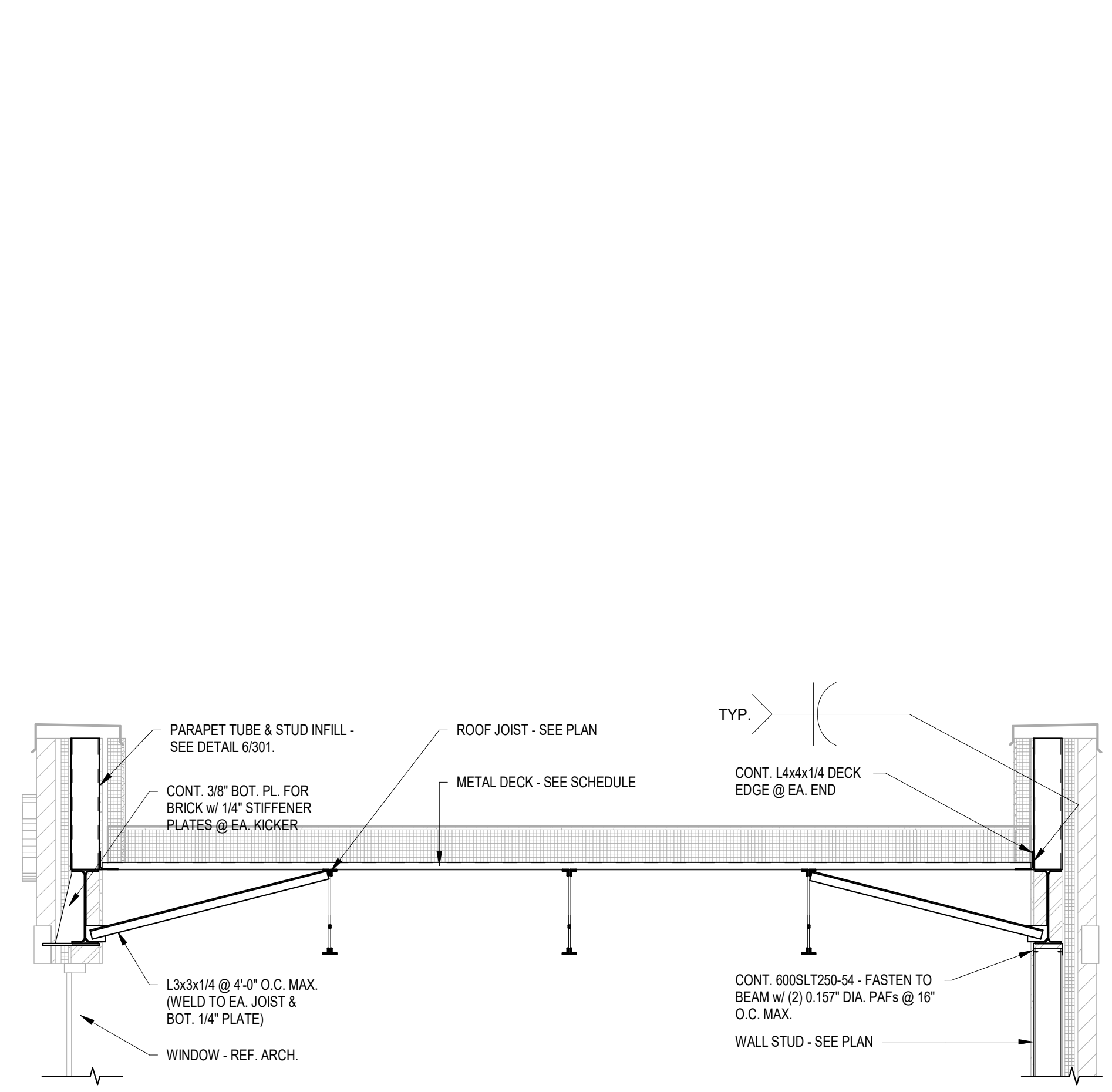


**1** ROOF FRAMING PLAN - AREA C  
1/8" = 1'-0"

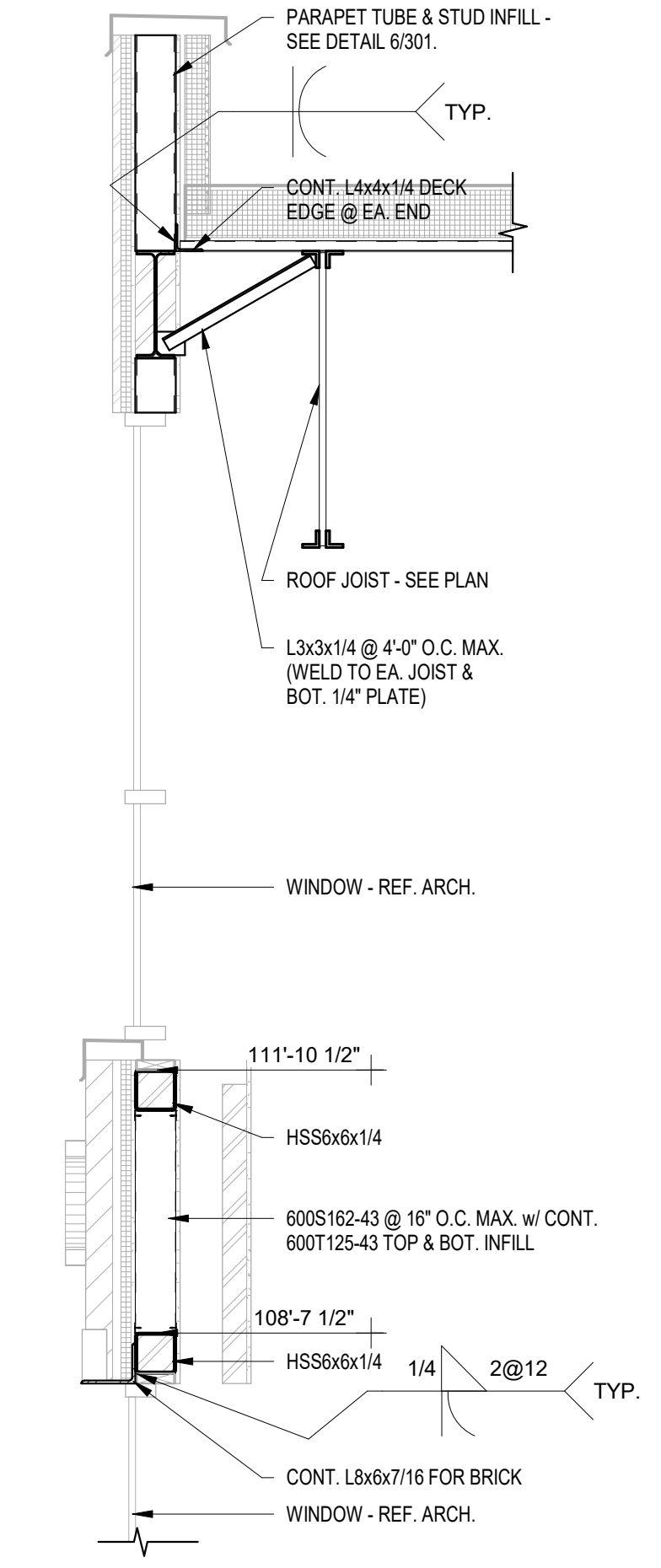
- NOTES:
- ALL EXTERIOR & LOAD-BEARING CMU WALLS TO BE 8" w/ #5 VERTS & GROUT @ 24" O.C. MAX.
  - ALL NON-LOAD BEARING CMU TO HAVE #5 VERTS & GROUT @ 48" O.C. MAX.
  - ALL EXTERIOR LG WALL STUDS TO BE 600S162-54 @ 16" O.C. MAX. (BRIDGE @ 48" O.C. MAX.) - U.N.O.
  - \*CMU SHEARWALL\* = #5 VERTS & GROUT @ 24" O.C. MAX. w/ (2) #5 VERTS ON EA. END OF WALL SEGMENT.



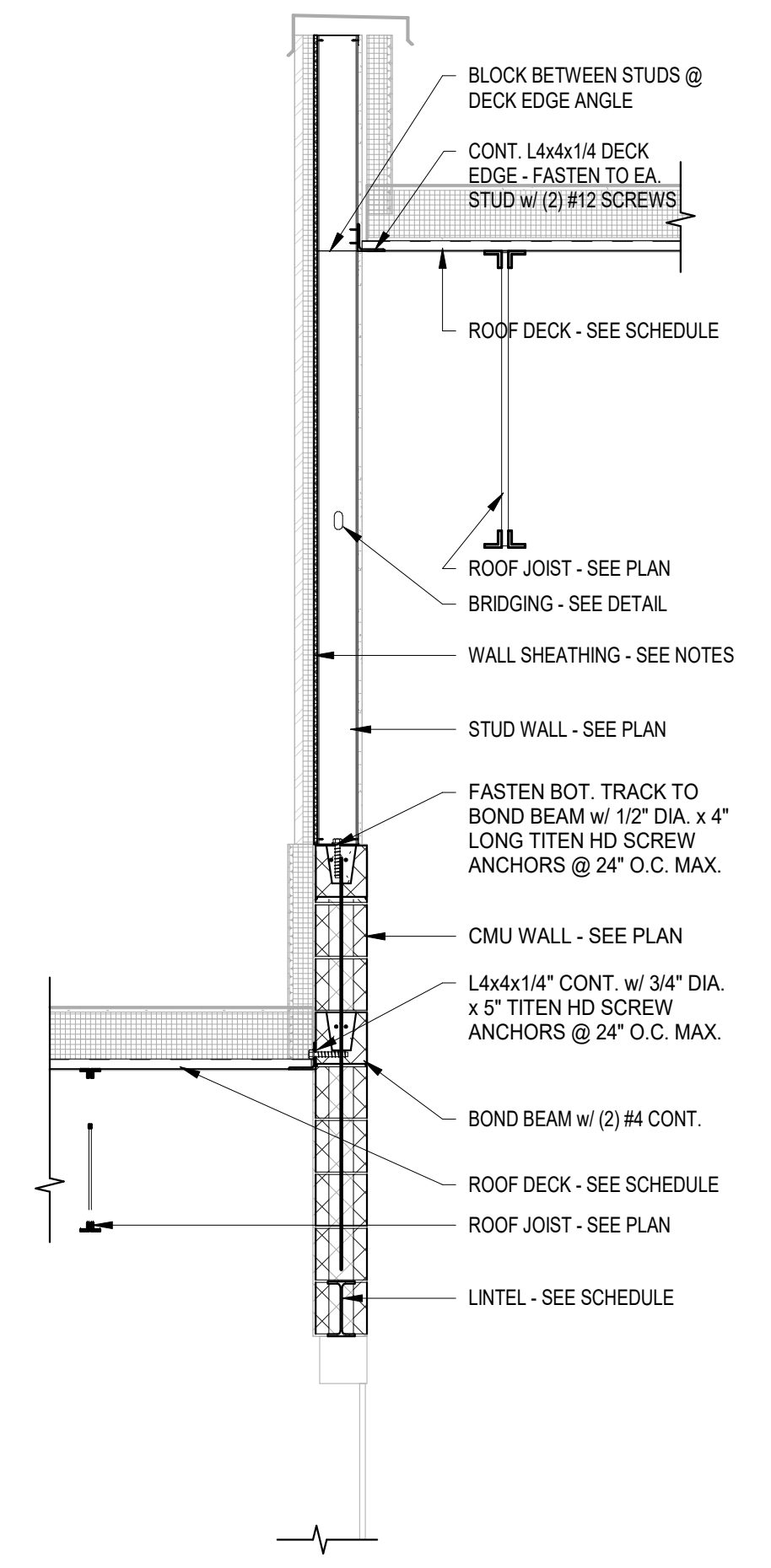
**1 ENTRYWAY FRAMING**  
1/2" = 1'-0"



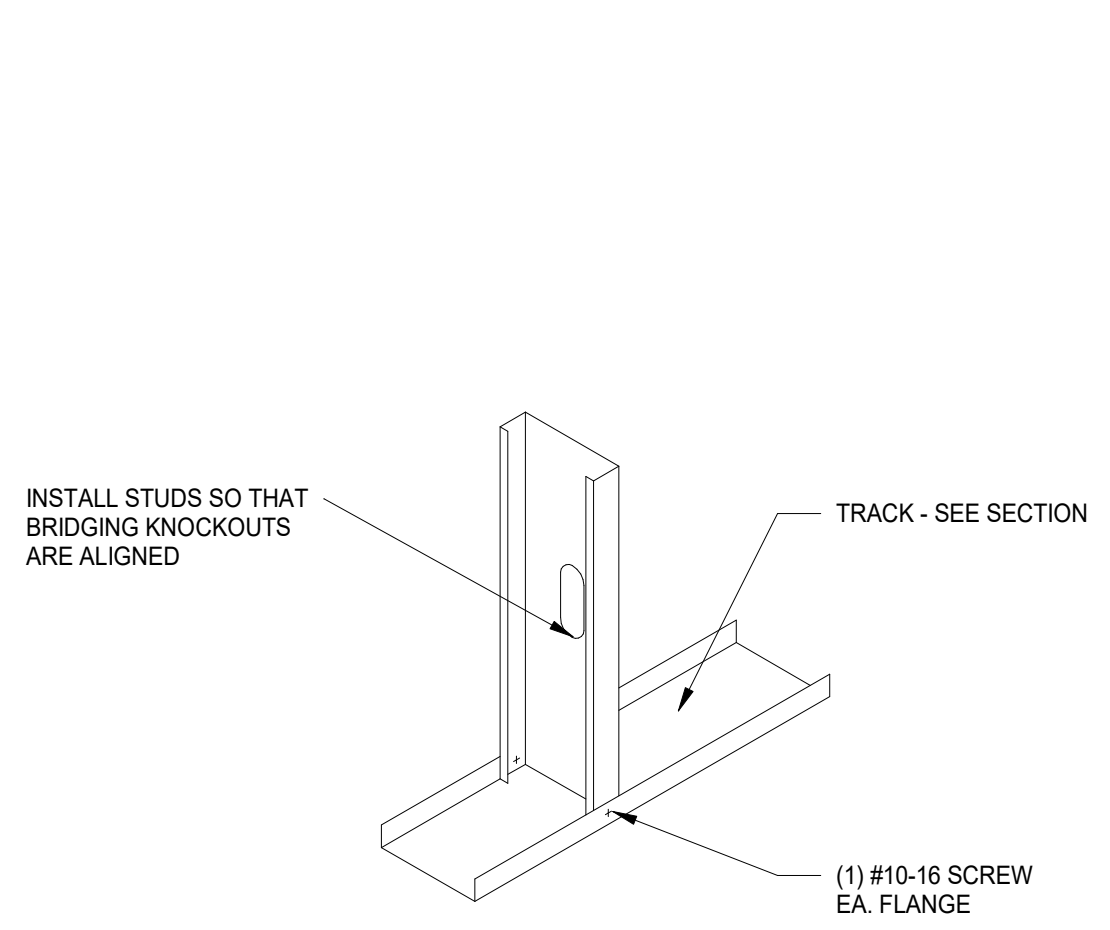
**2 ENTRYWAY FRAMING 2**  
1/2" = 1'-0"



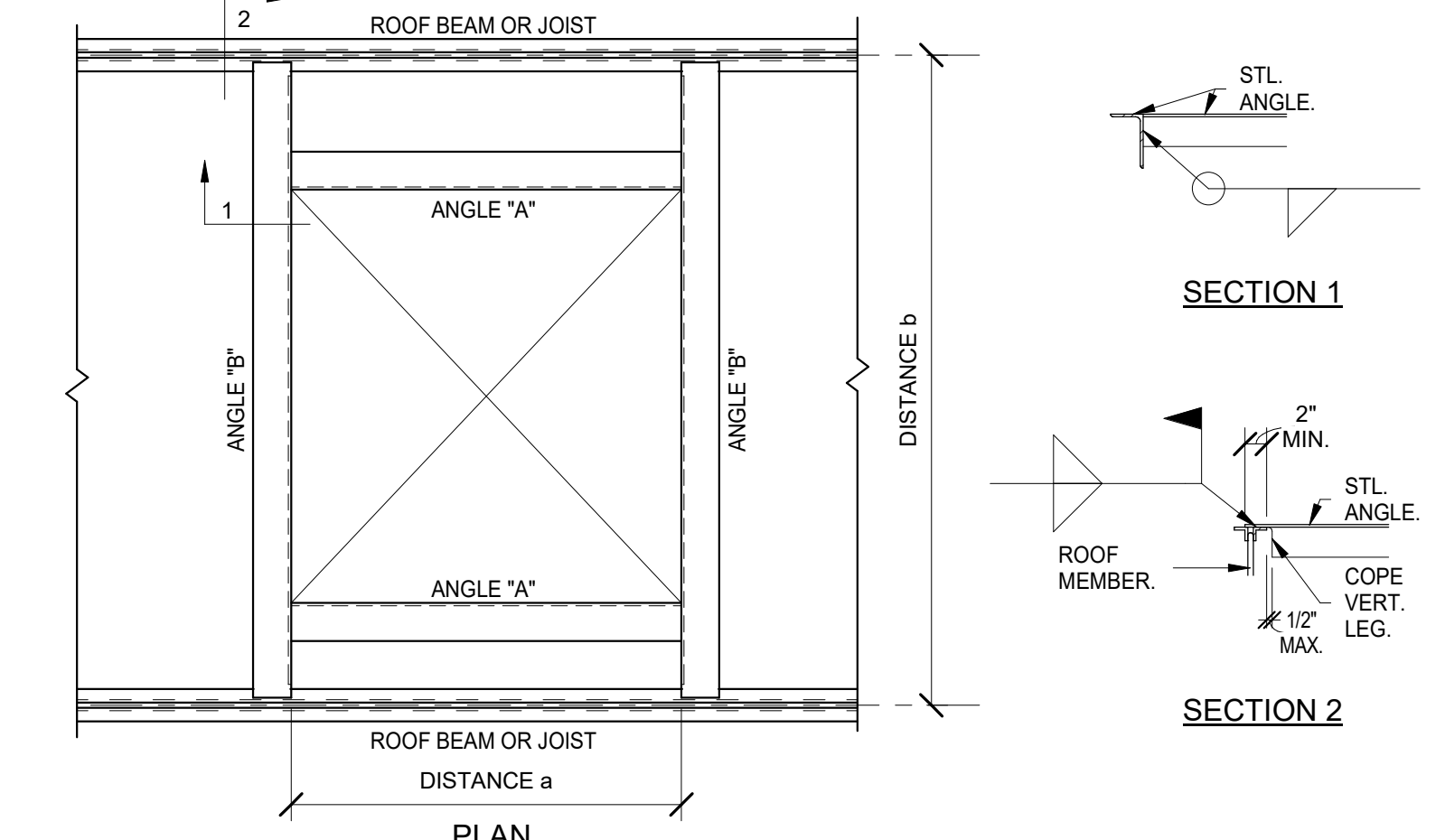
**3 ENTRYWAY FRAMING 3**  
1/2" = 1'-0"



**4 COMMONS @ LOW ROOF**  
1/2" = 1'-0"



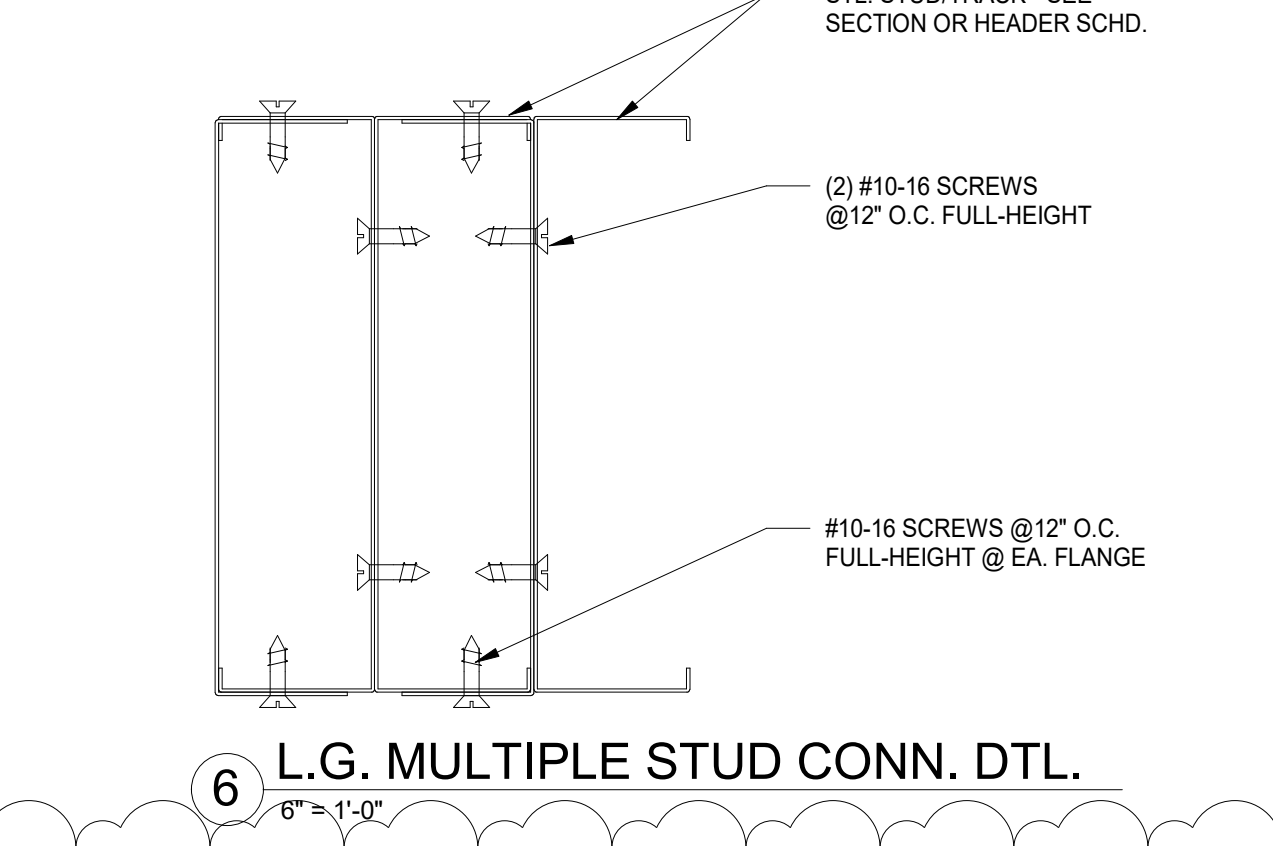
**5 STUD TO TRACK DETAIL**  
3/4" = 1'-0"



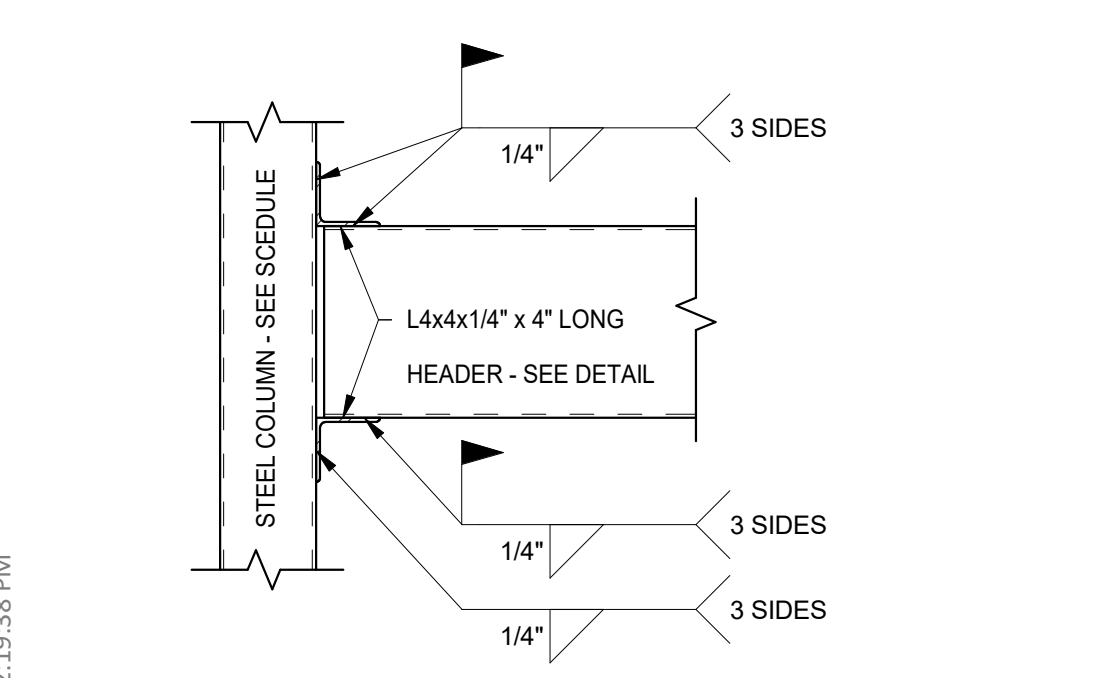
**7 TYPICAL ROOF OPENING W.A.F.**  
3/4" = 1'-0"

		DISTANCE b			
ANGLE "A"	ANGLE "B"	0ft - 4ft	4ft - 8ft	8ft - 12ft	12ft - 16ft
0ft - 2ft		L3x3x1/4"	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"
		L3x3x1/4"	L3x3x1/4"	L5x3x1/4"	L5x3x3/8"
2ft - 4ft		L3x3x1/4"	L3x3x1/4"	L3x3x1/4"	L3x3x1/4"
		L3x3x1/4"	L3x3x1/4"	L5x3x3/8"	L7x4x3/8"
4ft - 6ft		L5x3x1/4"	L5x3x1/4"	L5x3x1/4"	L5x3x1/4"
		L3x3x1/4"	L5x3x1/4"	L7x4x3/8"	L7x4x3/8"
6ft - 8ft		L5x3x3/8"	L5x3x3/8"	L5x3x3/8"	L5x3x3/8"
		L5x3x1/4"	L5x3x3/8"	L7x4x3/8"	L7x4x3/8"

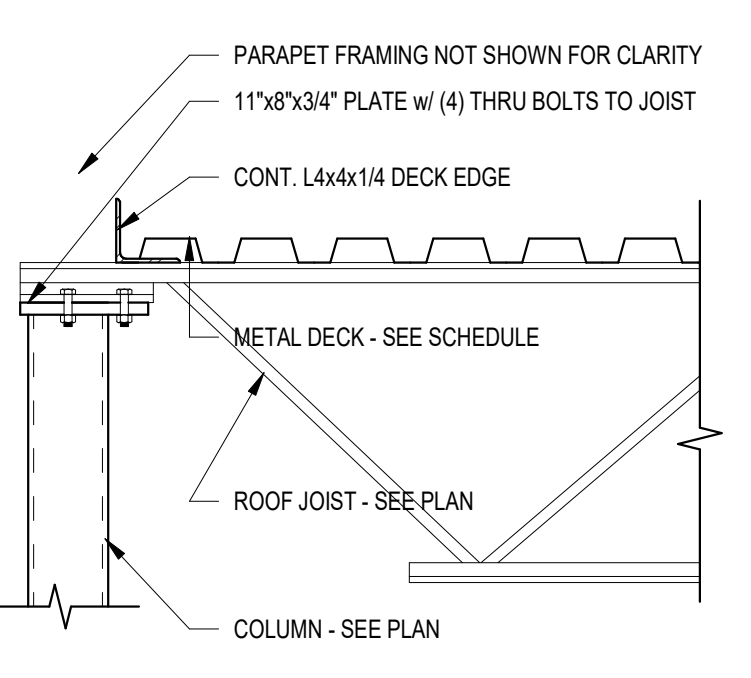
NOTES: - LONG LEGS VERTICAL, (TYP.)  
- FOR OPENINGS LARGER THAN SHOWN, CONTACT STRUCTURAL ENGINEER.



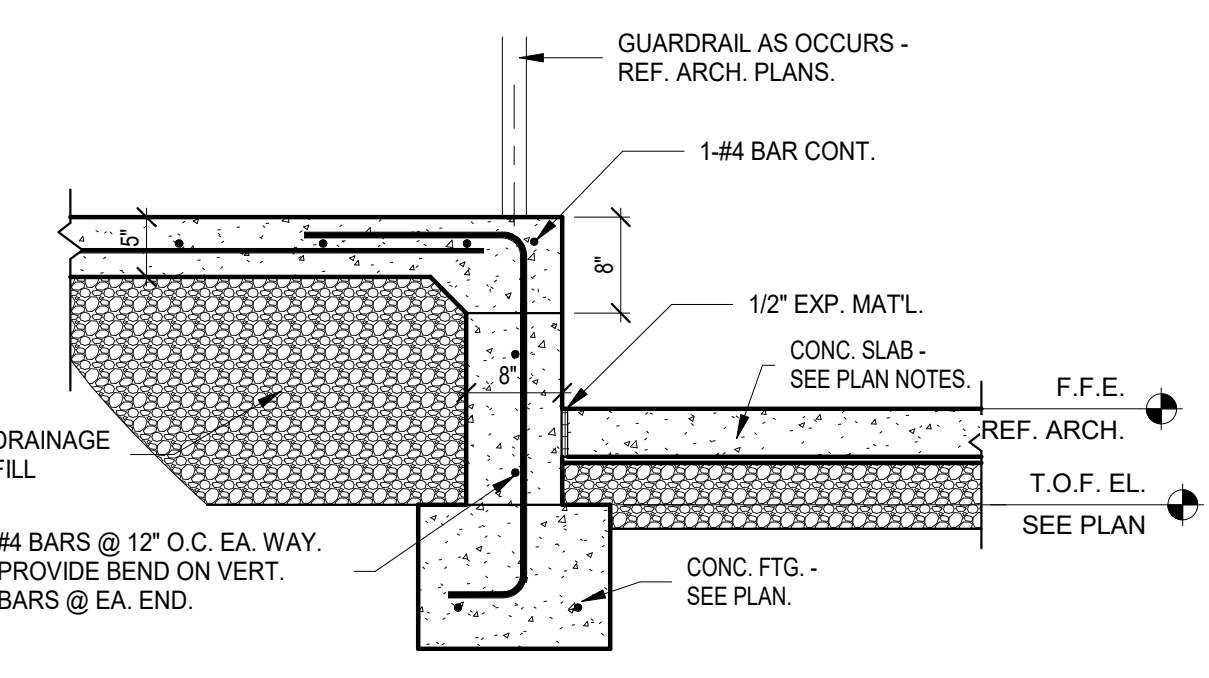
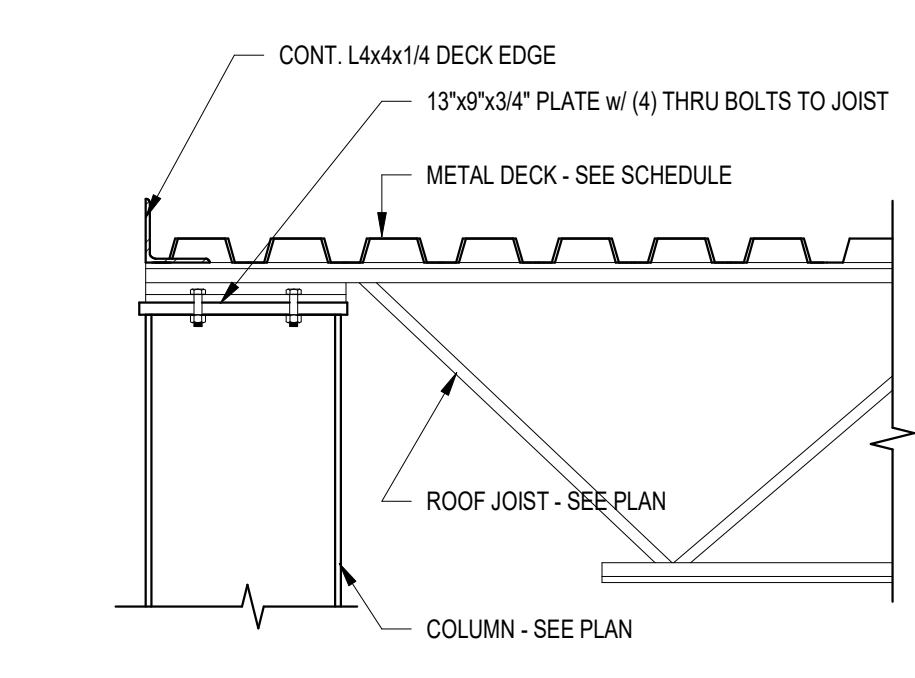
**6 L.G. MULTIPLE STUD CONN. DTL.**  
6" = 1'-0"



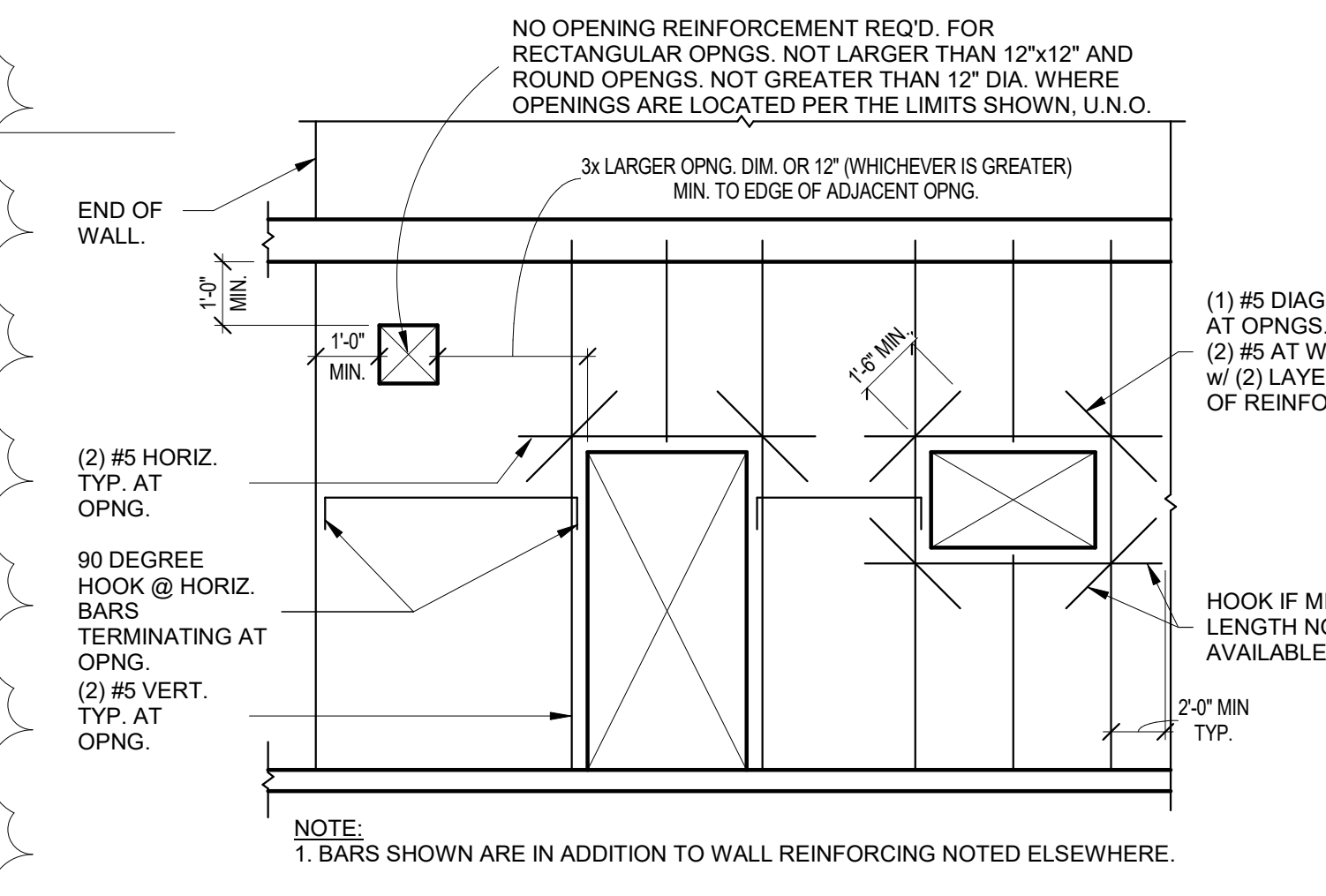
**8 HSS JAMB TO HSS HEADER/SILL**  
1" = 1'-0"



**9 JOIST BRG. ON COL.**  
1" = 1'-0"



**10 FOUND. WALL SECTION @ RAMP**  
3/4" = 1'-0"



**11 TYP. CONC. WALL OPNG. REINF.**  
3/8" = 1'-0"

RISE PROJECT NO: 22359



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REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
2	ADD02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
STRUCTURAL DETAILS

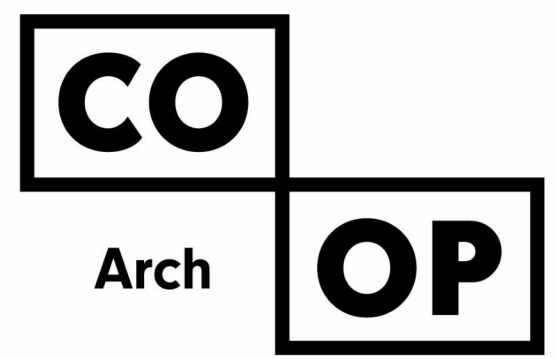


### KEYNOTE SCHEDULE

7.54	PREFINISHED METAL SCUPPER AND DOWNSPOUT (W/ ALL REQ. FLASHING & SUPPORTS). PROVIDE SPLASH PAD WHERE RETURNING TO GRADE.
7.55	PREFINISHED OVERFLOW SCUPPER (W/ ALL REQ. FLASHING, TRIMS, ETC.). LOCATE OVERFLOW SCUPPER 2" MIN. ABOVE MAIN SCUPPER.
8.17	ACCESS DOOR & FRAME; 2HR RATING. BASIS OF DESIGN: ACUDOR FB-5060-DW 24"X48"
12.04	MANUAL ROLLER WINDOW SHADES
12.05	MOTORIZED ROLLER WINDOW SHADES
26.22	CARD READER AND ADA PADDLE SWITCH
26.23	ADA PADDLE SWITCH

### GENERAL NOTES

1. FIRE RATED WALL ARE INDICATED ON THE CODE PLANS.
2. PROVIDE FIRE EXTINGUISHERS AND CABINETS AS SHOWN ON THE CODE PLAN(S).
3. REFER TO SHEET **G003** FOR ADA STANDARDS.
4. REFER TO SHEET **G003** FOR WALL, ROOF, AND FLOOR TYPES.
5. INTERIOR DIMENSIONS ARE FROM FACE OF GWB/CMU TO FACE OF GWB/CMU UNLESS OTHERWISE NOTED.
6. ALL WALL TYPES TO EXTEND TO DECK UNLESS OTHERWISE NOTED ON WALL TYPES.
7. EXTERIOR DIMENSIONS ARE FROM FACE OF BRICK/SHEATHING UNLESS OTHERWISE NOTED.
8. COORDINATE WORK DONE BY OTHERS AS INDICATED ON THE DRAWINGS.
9. INCREASE WALL THICKNESS OF METAL STUD AND CONCRETE BLOCK WALLS AS REQUIRED TO ACCOMMODATE MECHANICAL AND ELECTRICAL DEVICES - VERIFY W/ ARCHITECT PRIOR TO WORK.
10. SEE MECHANICAL FOR ALL FLOOR DRAIN SIZES AND LOCATIONS U.N.O. SET FLOOR DRAINS MINIMUM 1/4" BELOW FINISHED FLOOR. PROVIDE EVEN SLOPE FROM WALL TO DRAIN W/ A MAXIMUM SLOPE OF 1/4" PER FOOT.
11. VERIFY DRYWALL CONTROL JOINT LOCATIONS W/ ARCHITECT ON SITE PRIOR TO INSTALLATION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONTROL JOINTS AT 30'-0" O.C. MAX. IN LONG WALL EXPANSES. CONTROL JOINTS AT DOOR JAMBS EXTENDING FROM DOOR HEAD TO CEILING. CONSIDERATION SHALL ALSO BE GIVEN TO LOCATING CONTROL JOINTS FROM FLOOR TO CEILING AT EITHER EDGE OF LARGE WINDOW OPENINGS.
12. VERIFY HOISTWAY SHAFT SIZE REQUIREMENTS W/ ELEVATOR MANUFACTURER & COORDINATE.
13. COORDINATE ALL CHASE SIZES AND LOCATIONS W/ MECHANICAL. PROVIDE CHASES AT ALL EXPOSED MECHANICAL & ELECTRICAL WITH ADJACENT WALL MATERIAL AS REQUIRED.
14. COORDINATE ALL SHEAR WALL LOCATIONS W/ STRUCTURAL PLANS.
15. THE AIR & MOISTURE WEATHER BARRIER IS TO BE CONTINUOUS FROM THE BASE OF THE WALLS UP TO & TYING INTO THE ROOF BARRIER SYSTEM.
16. WALL TYPES ARE '4C' TYPICALLY UNLESS NOTED OTHERWISE
17. NEW CMU IN EXISTING AREAS SHALL ALIGN WITH EXISTING BONDING PATTERNS (STACKED OR RUNNING)

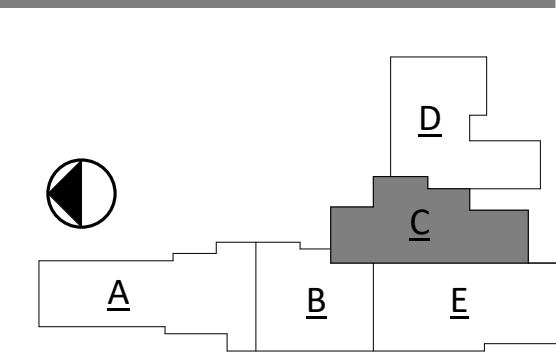


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CO-OP PROJECT NO: 2153



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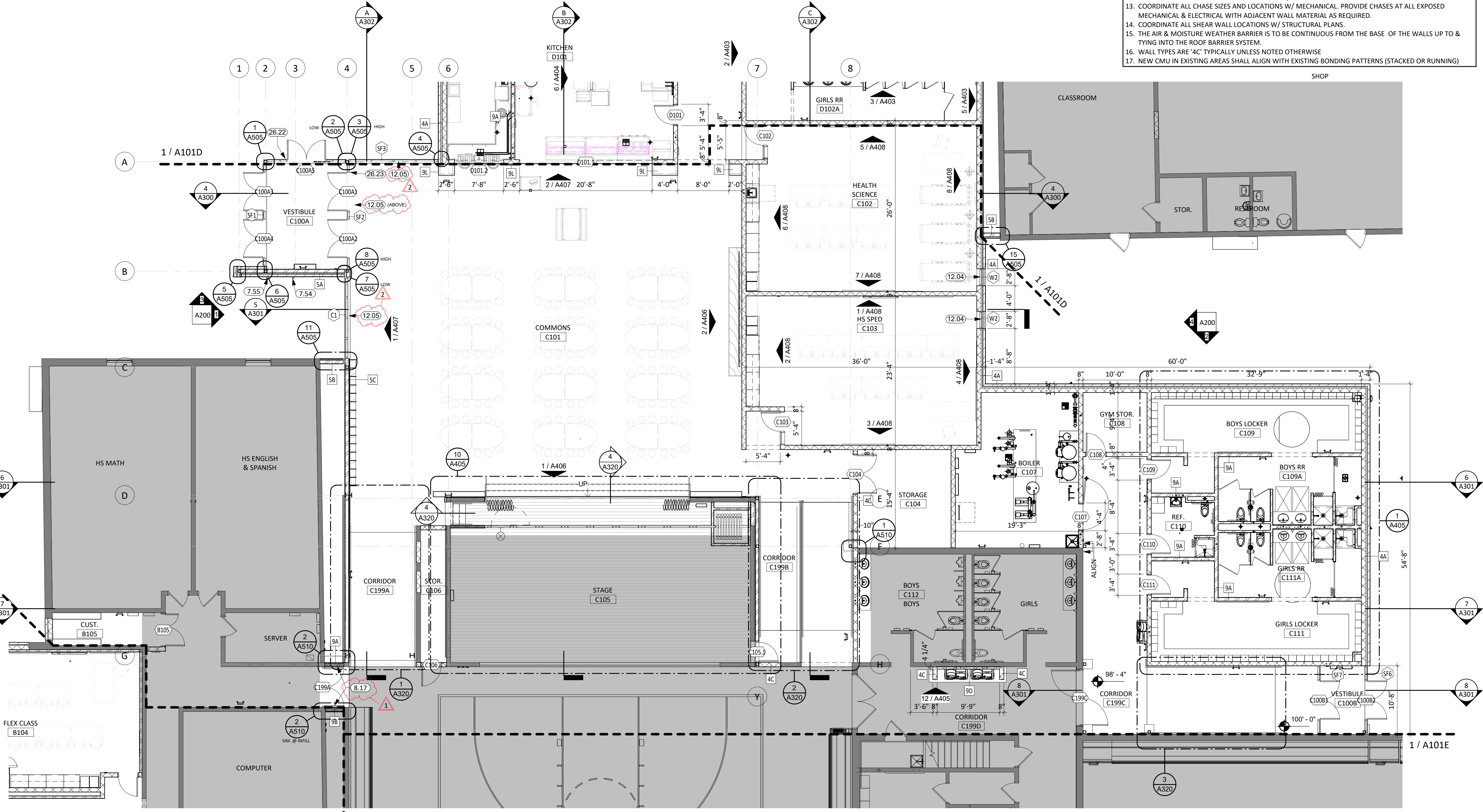
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	ADD 01	02/10/23
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
FIRST FLOOR PLAN - AREA C

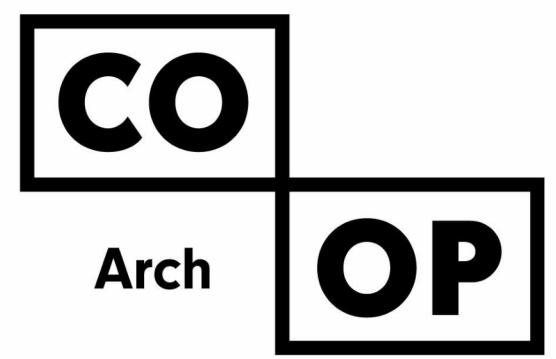
# A101C



FIRST FLOOR PLAN - AREA C

1/8" = 1'-0"

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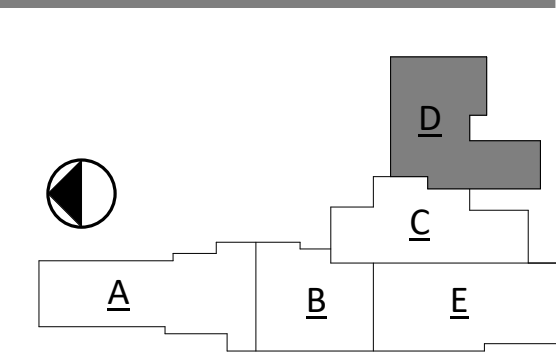


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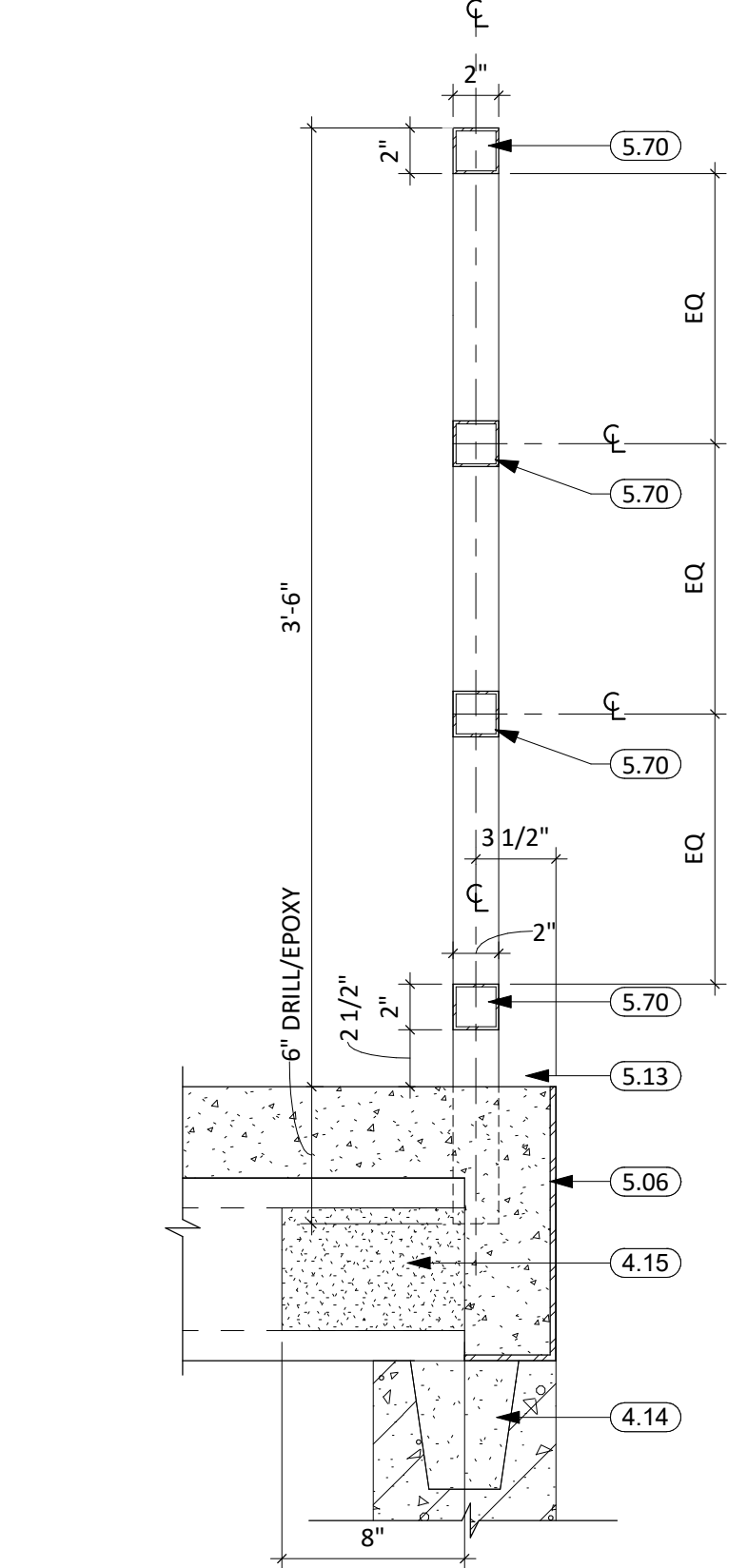
**GENERAL NOTES**

1. FIRE RATED WALL ARE INDICATED ON THE CODE PLAN(S).
2. PROVIDE FIRE EXTINGUISHERS AND CABINETS AS SHOWN ON THE CODE PLAN(S).
3. REFER TO SHEET **0000** FOR ADA STANDARDS.
4. REFER TO SHEET **0003** FOR WALL, ROOF, AND FLOOR TYPES.
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8. COORDINATE WORK DONE BY OTHERS AS INDICATED ON THE DRAWINGS.
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10. SEE MECHANICAL FOR ALL FLOOR DRAIN SIZES AND LOCATIONS U.N.O. SET FLOOR DRAINS MINIMUM 1/4" BELOW FINISHED FLOOR. PROVIDE EVEN SLOPE FROM WALL TO DRAIN W/ A MAXIMUM SLOPE OF 1/4" PER FOOT.
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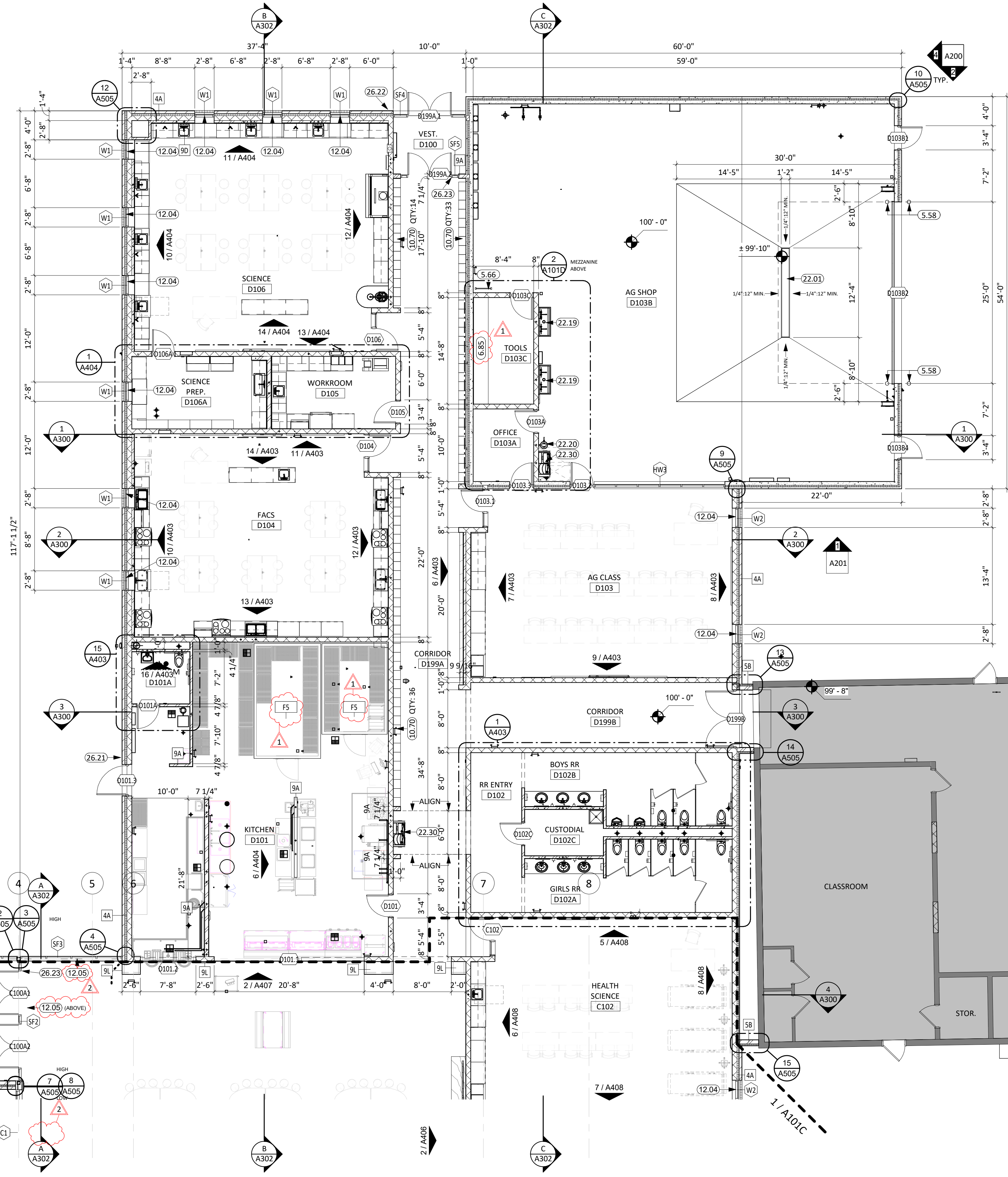
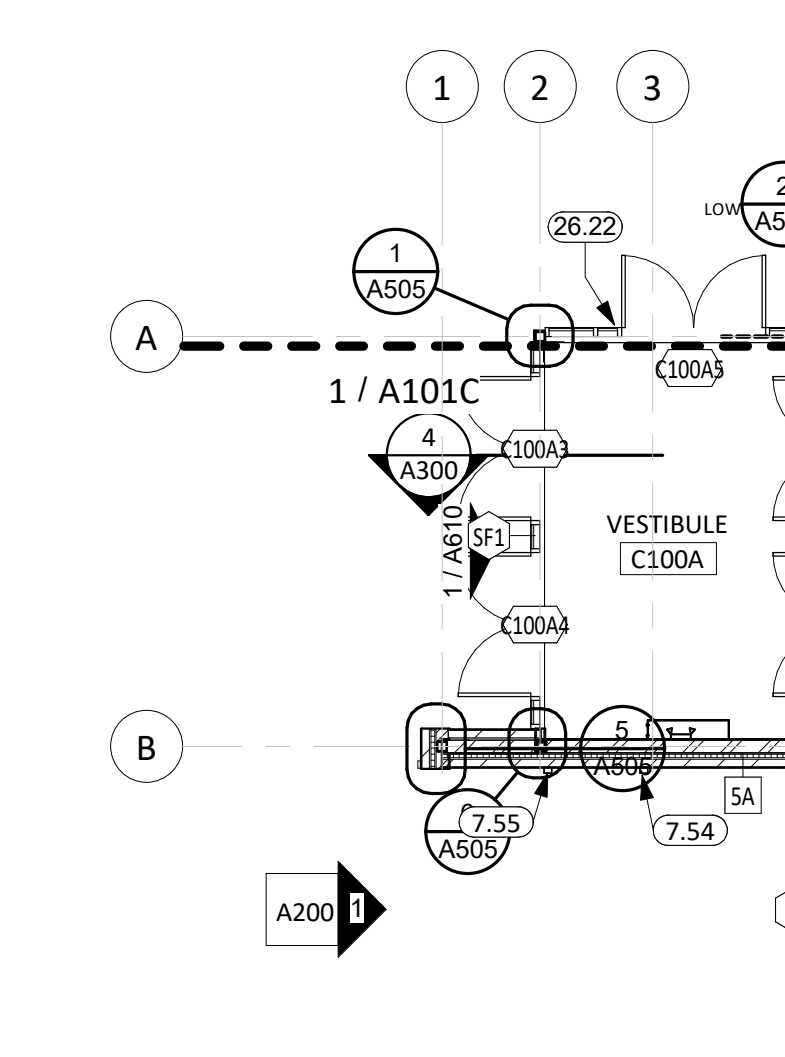
**KEYNOTE SCHEDULE**

4.14	BOND BEAM MASONRY UNIT
4.15	FILL w/GROUT
5.06	STRUCTURAL STEEL PLATE (SEE ARCH. & STRUCT.)
5.13	STEEL CONNECTION (SEE ARCH. & STRUCT.)
5.58	PIPE BOLLARD (FILL w/CONC.) (SEE ARCH. & STRUCT.)
5.66	STEEL LADDER (SEE ARCH. & STRUCT.)
5.70	SQUARE STEEL GAUDDRAIL SECTION (SEE ARCH. & STRUCT.)
5.76	GAUDDRAIL (SEE ARCH. & STRUCT.)
6.85	PLASTIC LAMINATE COUNTERTOP ON 3/4" PLYWOOD SUBSTRATE w/ COUNTERTOP SUPPORTS @ 24" O.C. FINISH SURFACE @ 36" AFF.
7.54	PREFINISHED METAL SCUPPER AND DOWNSPOUT (w/ ALL REQ. FLASHING & SUPPORTS). PROVIDE SPLASH PAD WHERE RETURNING TO GRADE.
7.55	PREFINISHED OVERFLOW SCUPPER (w/ ALL REQ. FLASHING, TRIMS, ETC.). LOCATE OVERFLOW SCUPPER 2" MIN. ABOVE MAIN SCUPPER.
10.70	15"W x 12"D x 6"H SINGLE TIER METAL LOCKERS w/ 4" METAL BASE
12.04	MANUAL ROLLER WINDOW SHADES
12.05	MOTORIZED ROLLER WINDOW SHADES
22.01	TRENCH DRAIN
22.19	UTILITY SINK; SEE PLUMBING
22.20	EMERGENCYEYEWASH UNIT
22.30	ELECTRIC WATER COOLER
23.24	AIR COMPRESSOR; SEE MECHANICAL
26.21	CARD READER
26.22	CARD READER AND ADA PADDLE SWITCH
26.23	ADA PADDLE SWITCH

**2 MEZZANINE FLOOR PLAN**  
1/8" = 1'-0"



**3 MEZZ GUARDRAIL**  
1 1/2" = 1'-0"



**FIRST FLOOR PLAN - AREA D**  
1/8" = 1'-0"

CO-OP PROJECT NO: 2153



ISSUE:  
01/30/2023 CONSTRUCTION DOCUMENTS

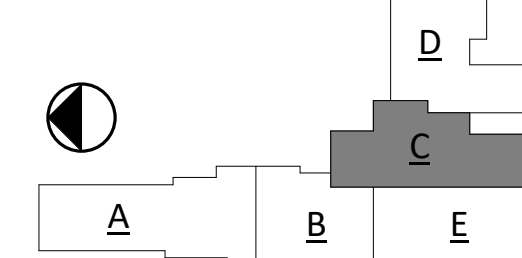
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	ADD 01	02/10/23
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
FIRST FLOOR PLAN - AREA D

**A101D**



CO-OP PROJECT NO: 2153



ISSUE:  
01/30/2023 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:  
REV. # REV. DSC. REV. DATE  
2 ADD 02 02/16/23

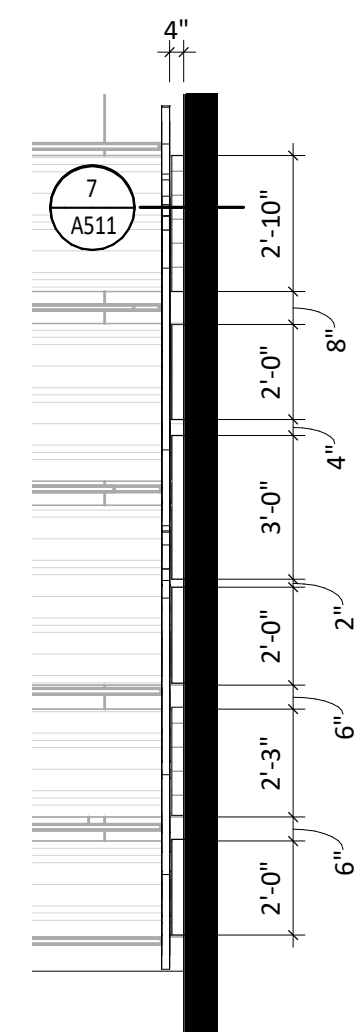
PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
REFLECTED CLG PLAN - AREA C

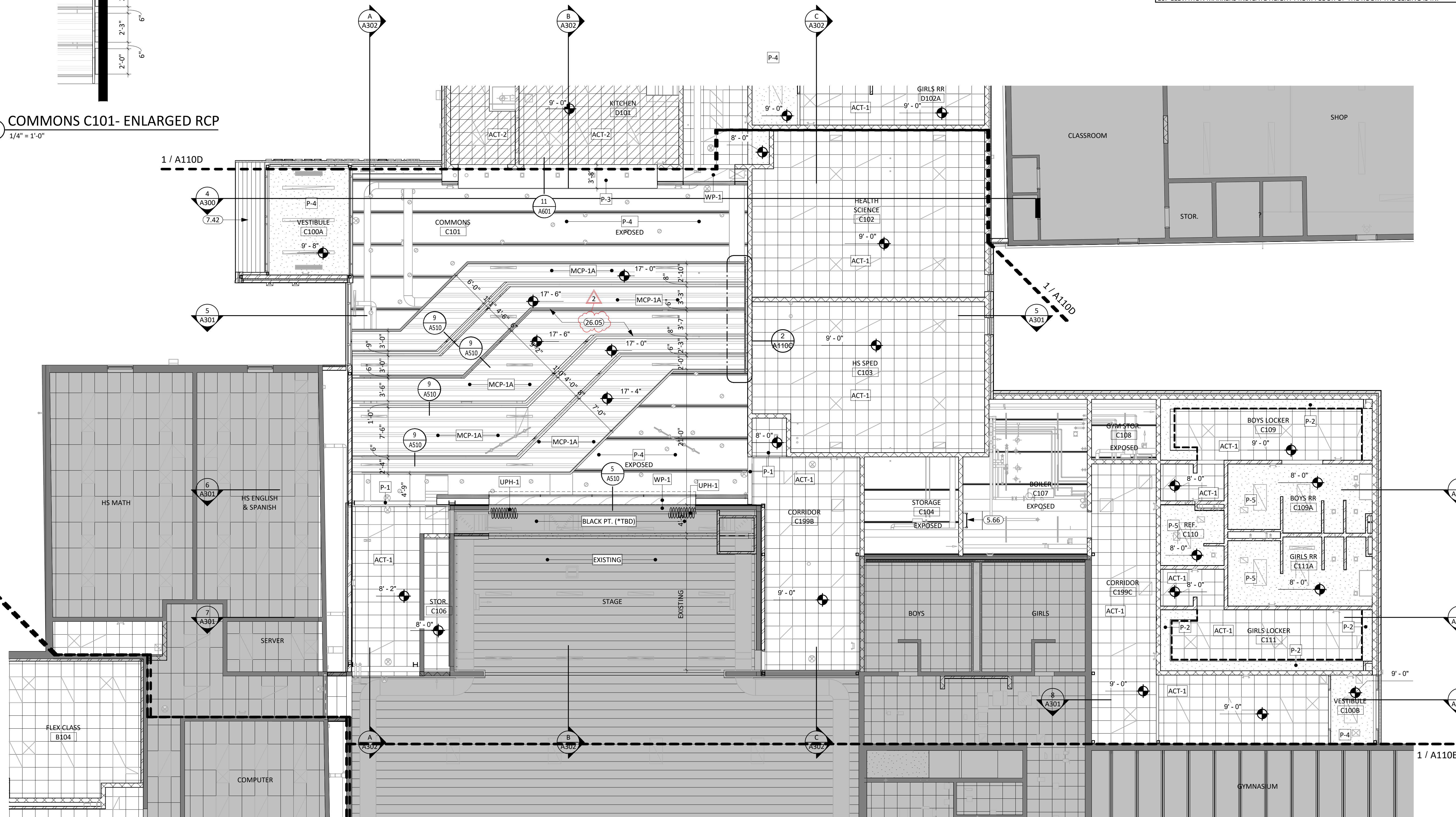
**A110C**

KEYNOTE SCHEDULE	
5.66	STEEL LADDER (SEE ARCH. & STRUCT.)
7.42	METAL SOFFIT PANELS
26.05	G.C. TO COORDINATE LINEAR PENDANT INSTALLATION SIMULTANEOUS WITH SPECIALTY CEILING CLOUD

- GENERAL NOTES**
1. ALL DIMENSIONS ARE FROM FACE OF FINISH MATERIAL UNLESS OTHERWISE NOTED.
  2. REFER TO SPECIFICATIONS FOR CEILING AND FIXTURE SUSPENSION REQUIREMENTS.
  3. PROVIDE ACCESS DOORS AT MECHANICAL UNIT LOCATIONS ABOVE CEILING. COORDINATE NUMBER REQUIRED AND LOCATIONS WITH MECHANICAL SHEETS.
  4. CENTER CEILING GRID IN AREAS SUCH THAT THERE WILL BE NO CEILING TILE LESS THAN 6" IN THE SMALLEST DIMENSION, UNLESS OTHERWISE NOTED.
  5. CENTER LIGHT FIXTURES BETWEEN WALLS AND/OR CEILING BULKHEADS UNLESS OTHERWISE DIMENSIONED.
  6. IN EXPOSED TO STRUCTURE ROOMS, CENTER LIGHTS FIXTURES WITHIN ROOMS UNLESS OTHERWISE NOTED.
  7. THE REFLECTED CEILING PLANS ARE INTENDED TO AID IN COORDINATION ONLY AND ARE NOT INTENDED TO BE COMPREHENSIVE. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. NOTIFY ARCHITECT WHERE CONFLICTS OCCUR.
  8. PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.
  9. PROVIDE GLASS-MATT FACED GYPSUM SHEATHING BEHIND TILE FINISHES AT ALL SHOWERS AND BATHTUBS.
  10. ELEVATION MARKERS INDICATE HEIGHT FROM FLOOR OF THE ROOM THE CEILING IS IN.



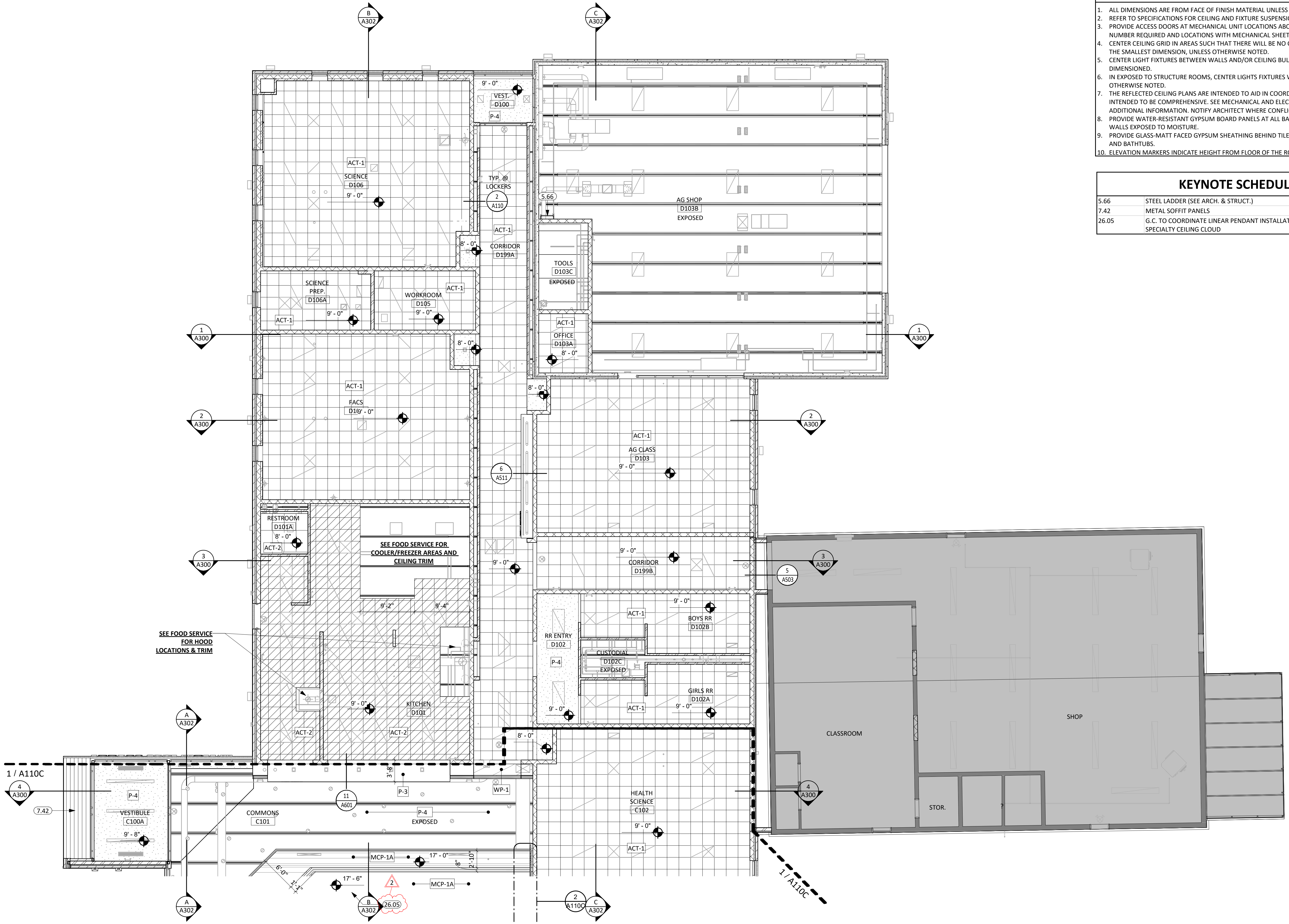
**2** COMMONS C101- ENLARGED RCP  
1/4" = 1'-0"



REFLECTED CEILING PLAN - AREA C

1/8" = 1'-0"

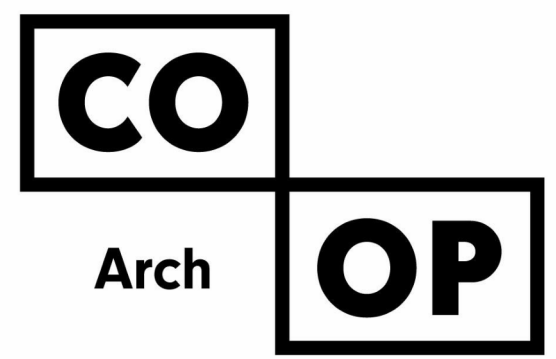
1 / A110B  
1 / A110E



- ### GENERAL NOTES
1. ALL DIMENSIONS ARE FROM FACE OF FINISH MATERIAL UNLESS OTHERWISE NOTED.
  2. REFER TO SPECIFICATIONS FOR CEILING AND FIXTURE SUSPENSION REQUIREMENTS.
  3. PROVIDE ACCESS DOORS AT MECHANICAL UNIT LOCATIONS ABOVE CEILING. COORDINATE NUMBER REQUIRED AND LOCATIONS WITH MECHANICAL SHEETS.
  4. CENTER CEILING GRID IN AREAS SUCH THAT THERE WILL BE NO CEILING TILE LESS THAN 6" IN THE SMALLEST DIMENSION, UNLESS OTHERWISE NOTED.
  5. CENTER LIGHT FIXTURES BETWEEN WALLS AND/OR CEILING BULKHEADS UNLESS OTHERWISE DIMENSIONED.
  6. IN EXPOSED TO STRUCTURE ROOMS, CENTER LIGHTS FIXTURES WITHIN ROOMS UNLESS OTHERWISE NOTED.
  7. THE REFLECTED CEILING PLANS ARE INTENDED TO AID IN COORDINATION ONLY AND ARE NOT INTENDED TO BE COMPREHENSIVE. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. NOTIFY ARCHITECT WHERE CONFLICTS OCCUR.
  8. PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.
  9. PROVIDE GLASS-MATT FACED GYPSUM SHEATHING BEHIND TILE FINISHES AT ALL SHOWERS AND BATHTUBS.
  10. ELEVATION MARKERS INDICATE HEIGHT FROM FLOOR OF THE ROOM THE CEILING IS IN.

### KEYNOTE SCHEDULE

5.66	STEEL LADDER (SEE ARCH. & STRUCT.)
7.42	METAL SOFFIT PANELS
26.05	G.C. TO COORDINATE LINEAR PENDANT INSTALLATION SIMULTANEOUS WITH SPECIALTY CEILING CLOUD

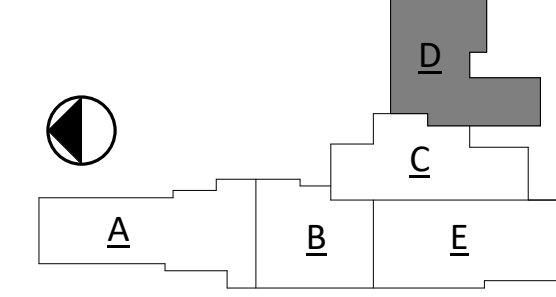


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CO-OP PROJECT NO: 2153



ISSUE:  
01/30/2023 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

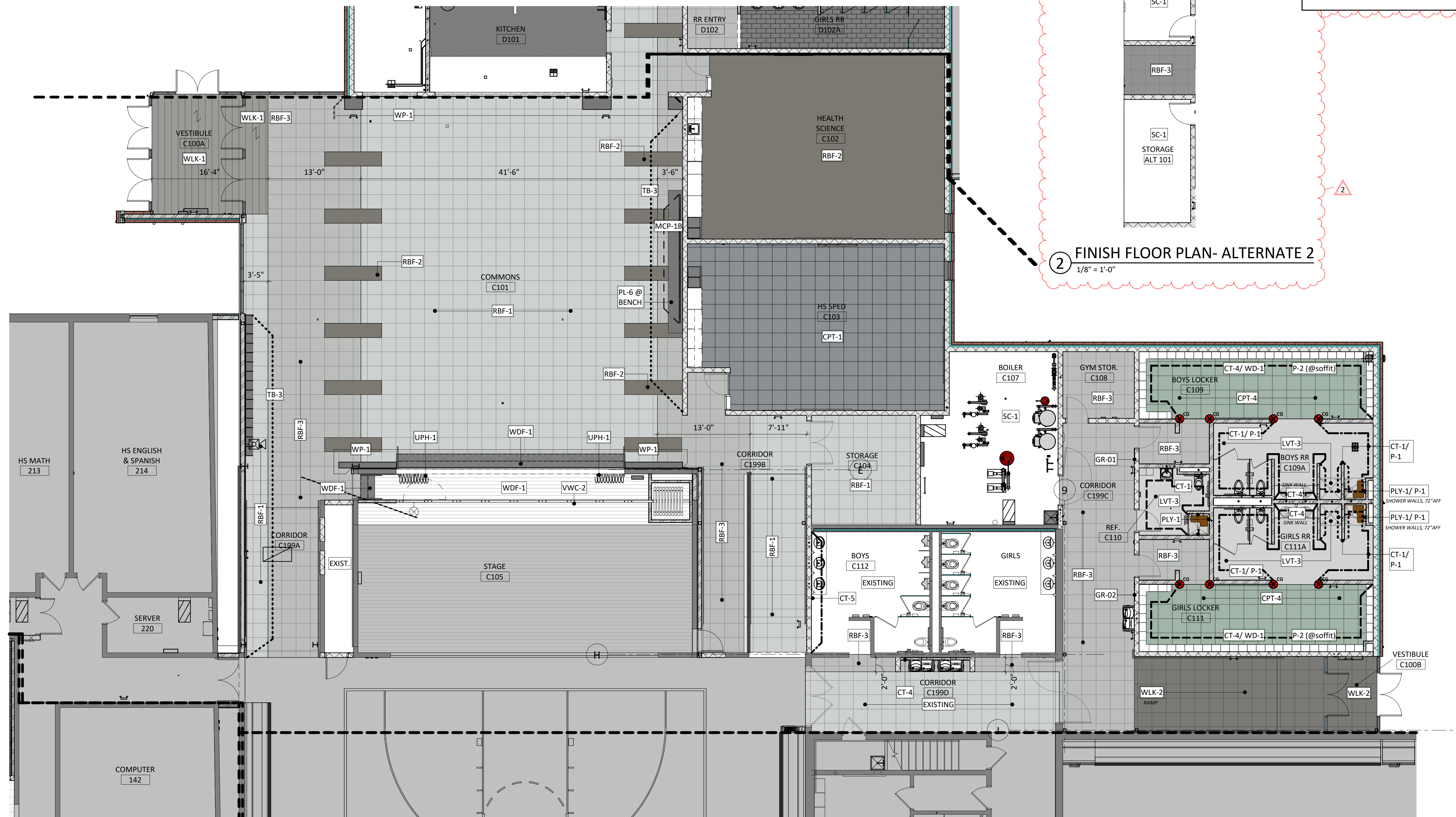
PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
REFLECTED CLG PLAN AREA - D

# A110D

REFLECTED CEILING PLAN - AREA D  
1/8" = 1'-0"

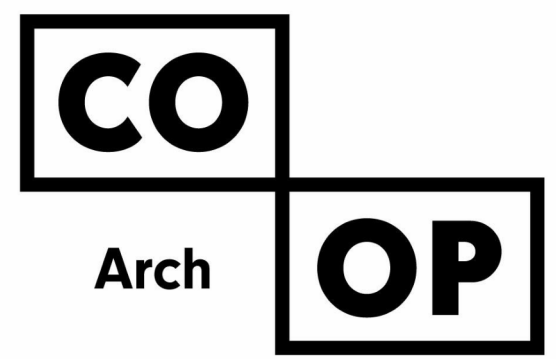
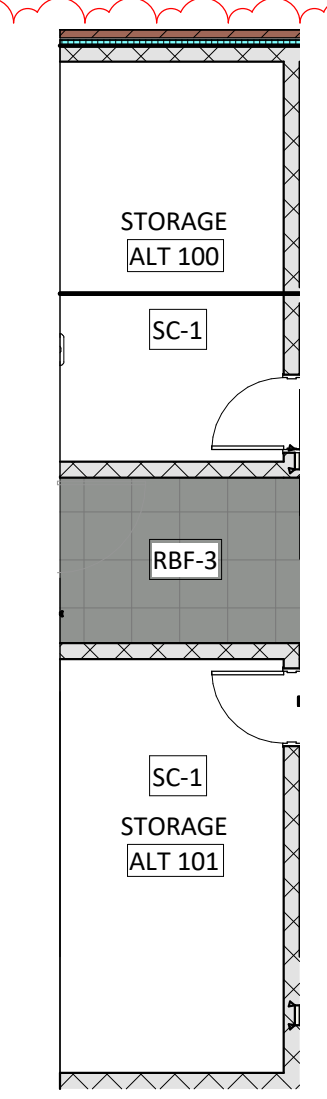
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1 FINISH FLOOR PLAN - AREA C & E  
1/8" = 1'-0"

2 FINISH FLOOR PLAN- ALTERNATE 2  
1/8" = 1'-0"

- GENERAL NOTES**
1. REFER TO SHEET **A601** FOR ROOM FINISH SCHEDULE AND LEGEND.
  2. INTERIOR WALLS FINISHES ARE FULL HEIGHT, UNLESS OTHERWISE NOTED.
  3. PROVIDE WATER-RESISTANT GYPSUM BOARD PANELS AT ALL BATHROOM WALLS AND ANY WALLS EXPOSED TO MOISTURE.
  4. PROVIDE GLASS-MATT FACED GYPSUM SHEATHING BEHIND TILE FINISHES AT ALL SHOWERS AND BATHTUBS.
  5. SEE FLOOR PLAN(S) AND INTERIOR ELEVATIONS FOR CASEWORK INFORMATION. FIELD VERIFY DIMENSIONS OF CASEWORK OPENINGS.

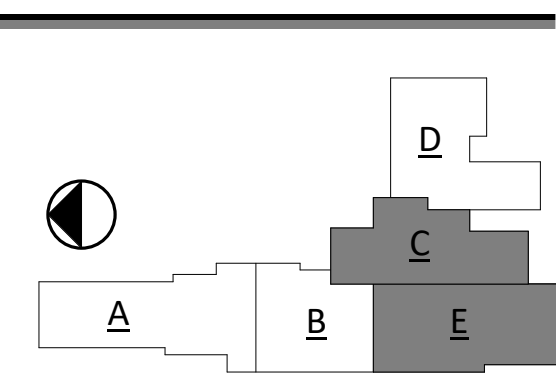


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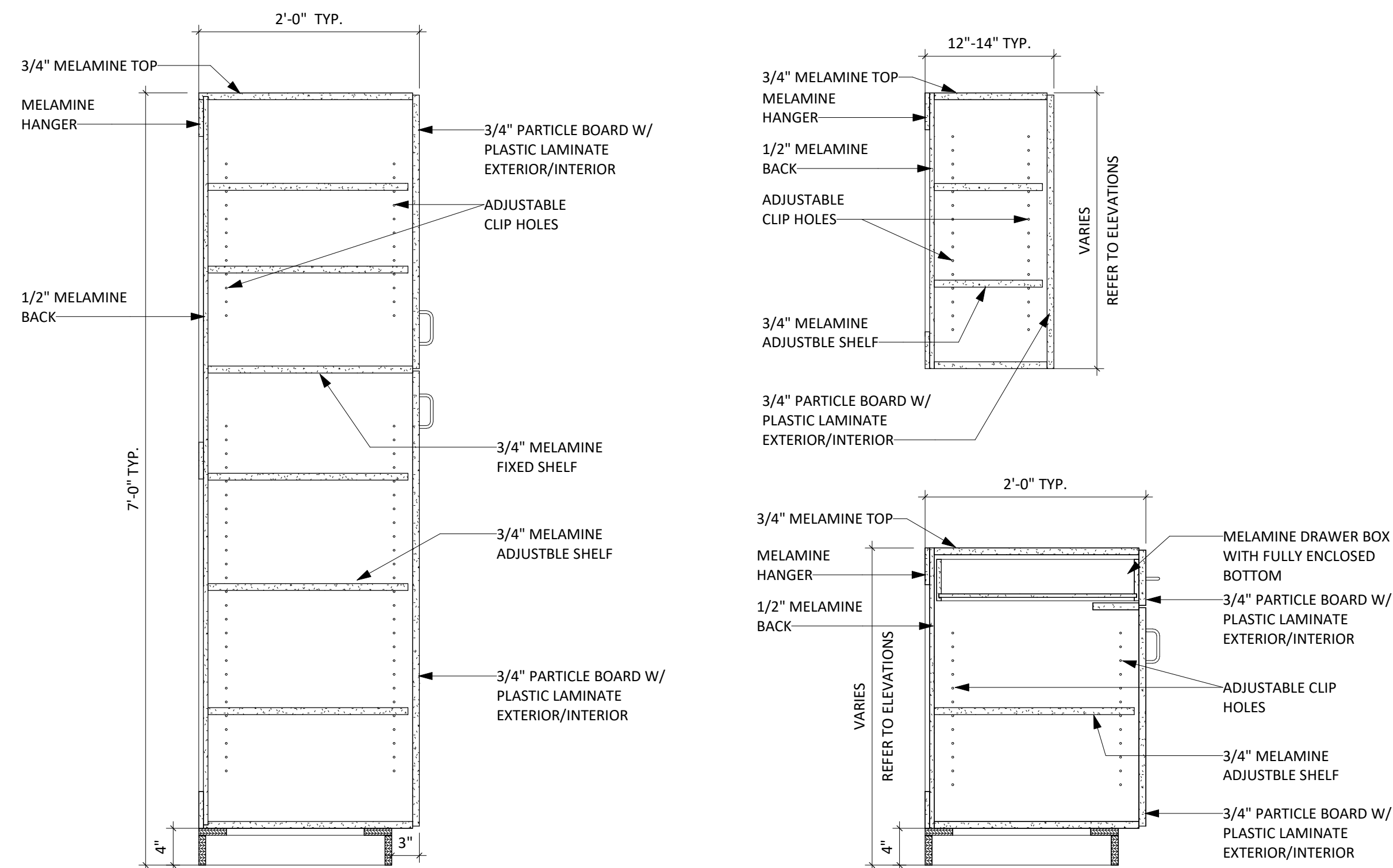
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

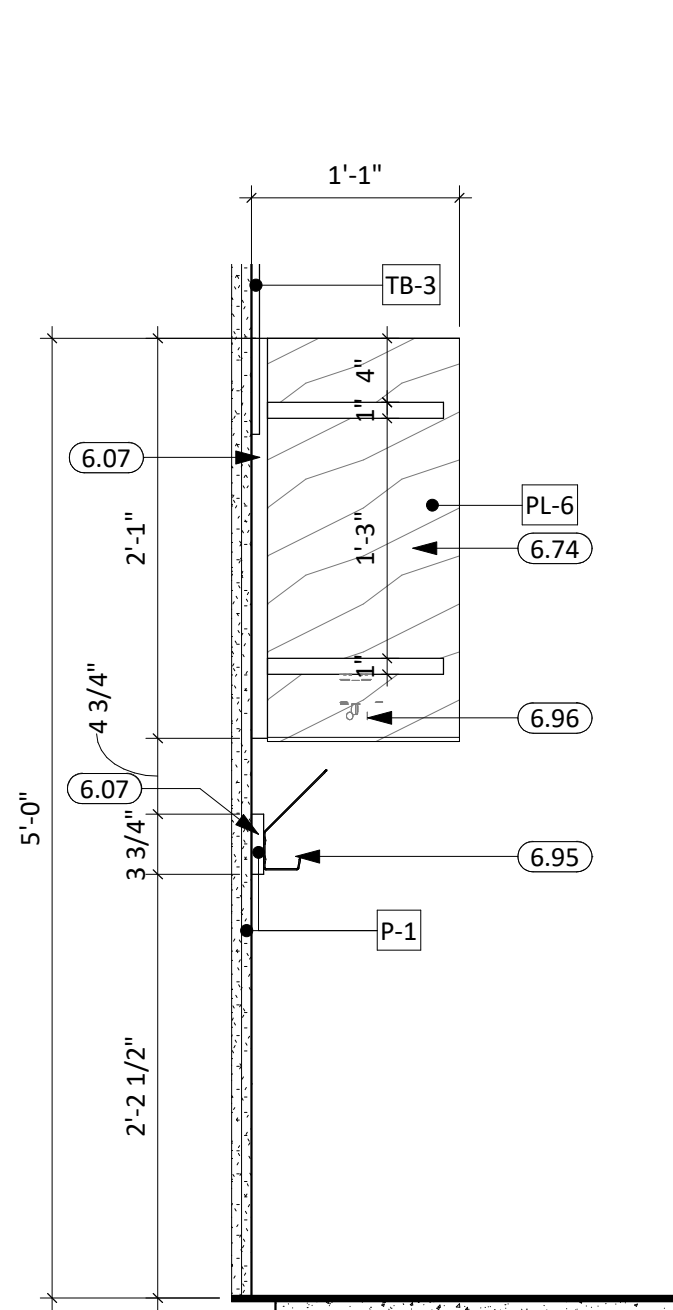
PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
ENLARGED FINISH PLANS-  
AREA(S) C & E

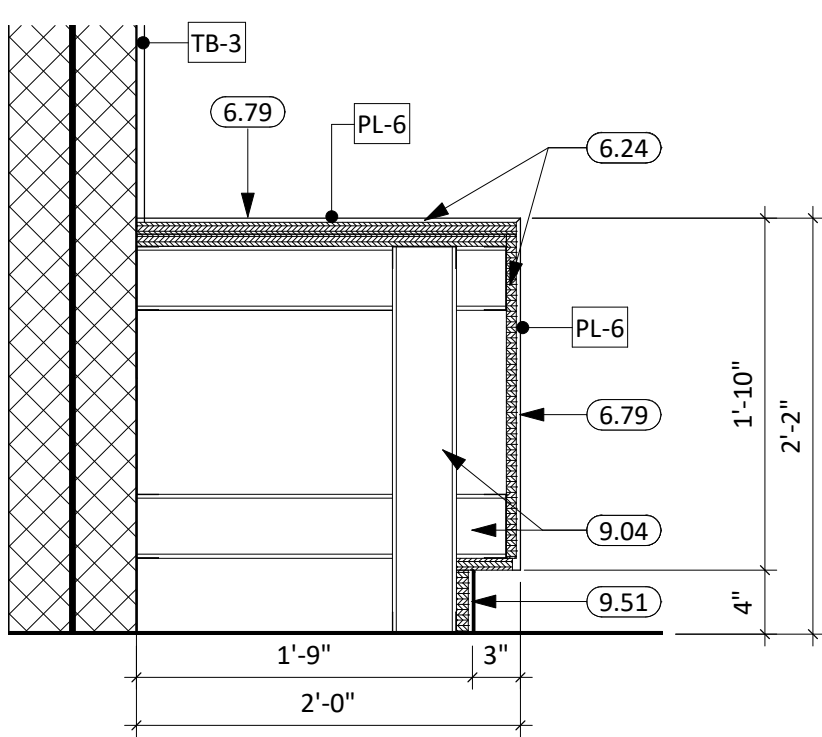
A122



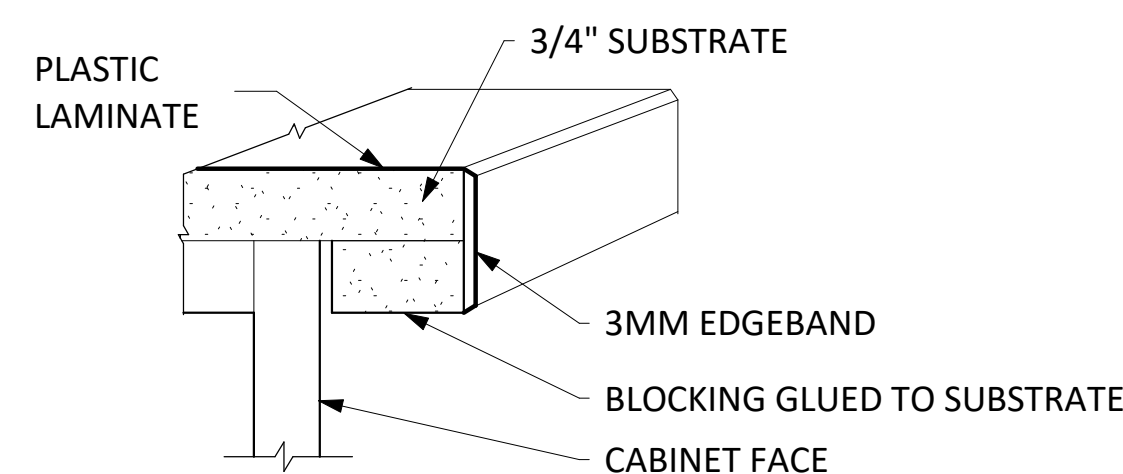
1 TYP. CABINET DETAILS  
1" = 1'-0"



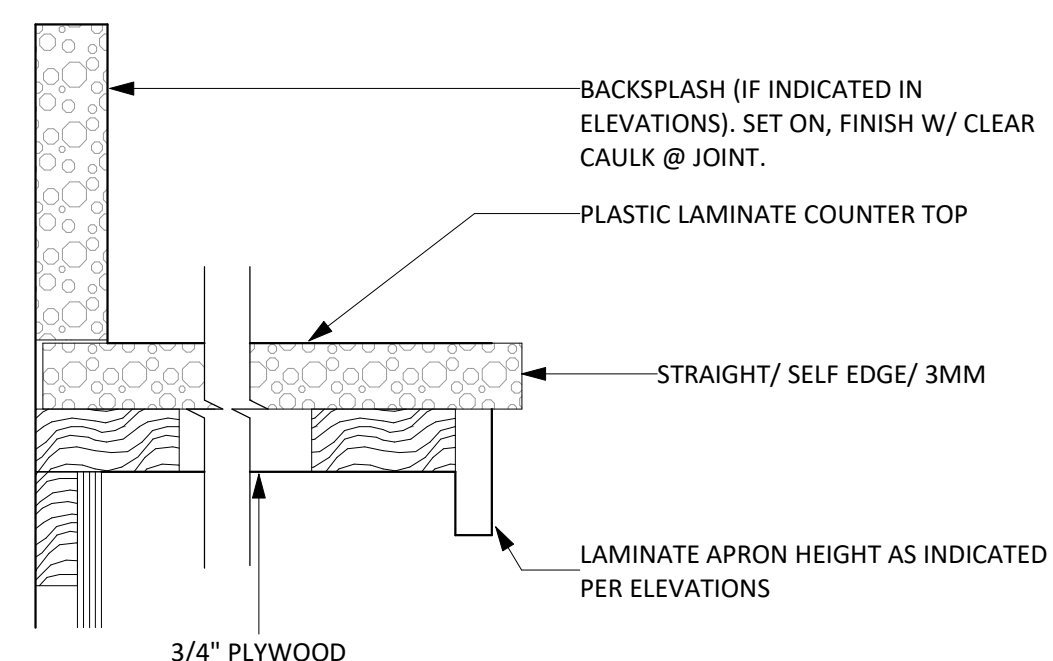
2 BAG DROP CASEWORK SECTION  
1" = 1'-0"



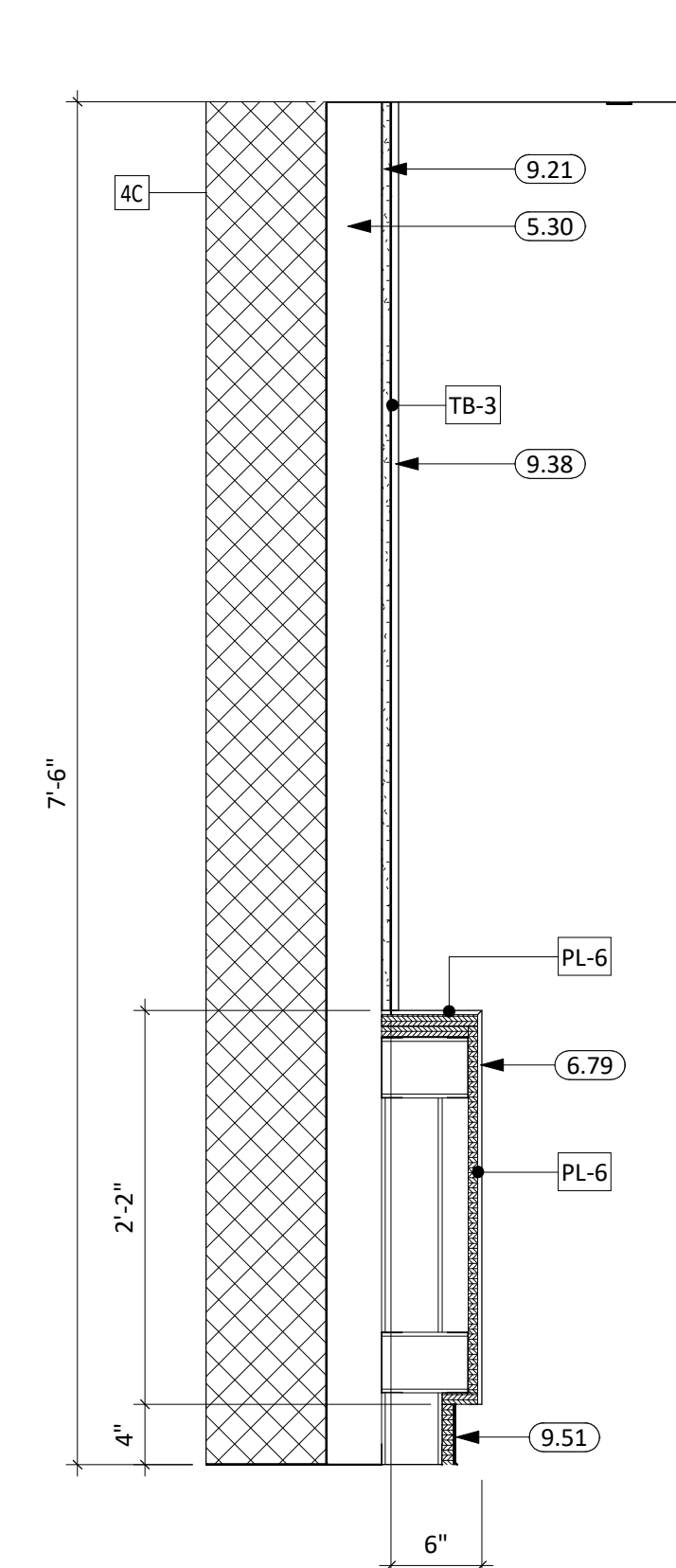
3 COMMONS BENCH DETAIL  
1" = 1'-0"



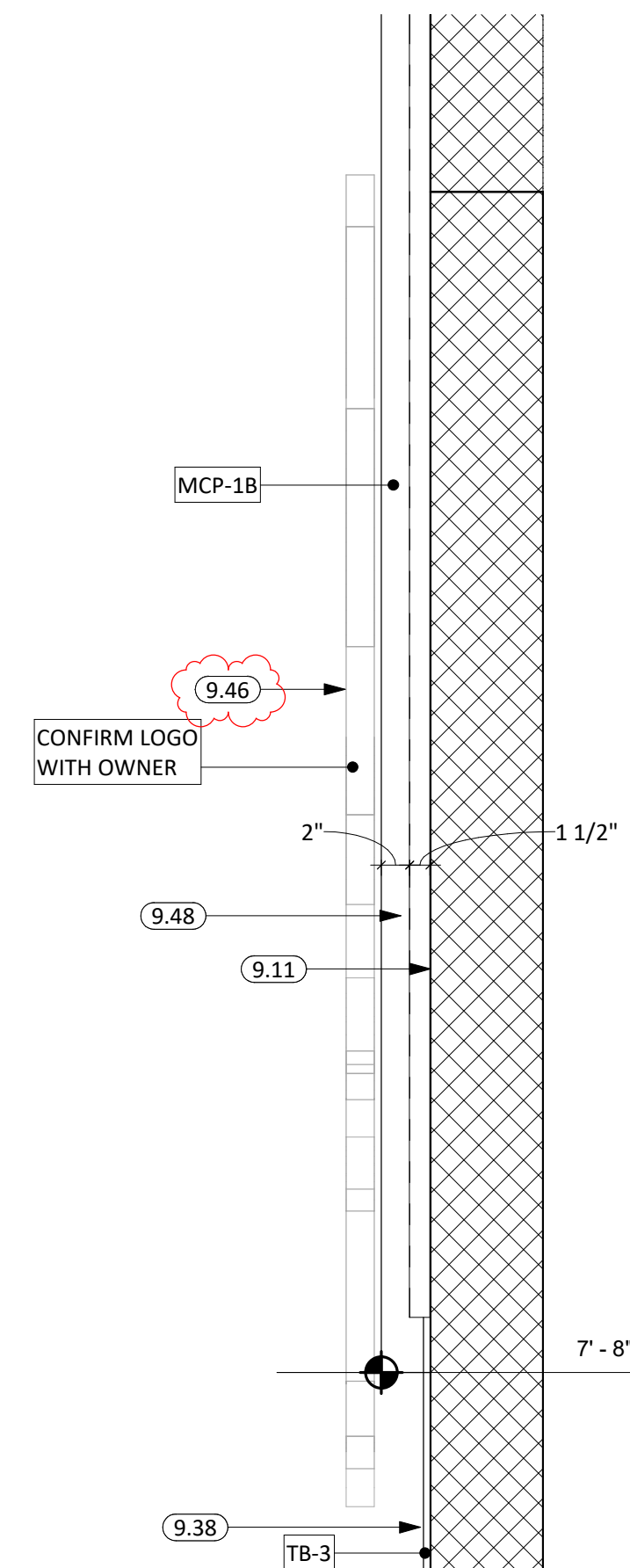
4 3MM EDGEBAND  
1 1/2" = 1'-0"



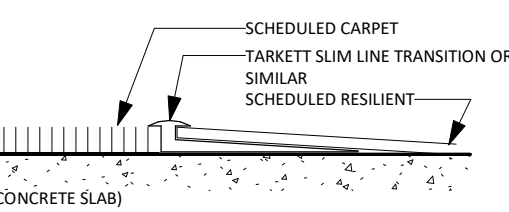
5 PLAM COUNTERTOP W/ LAM. APRON  
1 1/2" = 1'-0"



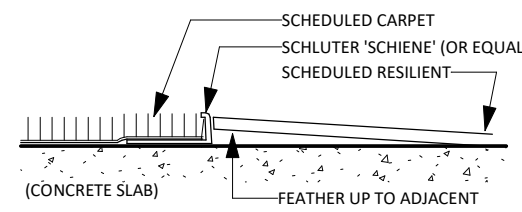
6 WALL DISPLAY SECTION DETAIL  
1" = 1'-0"



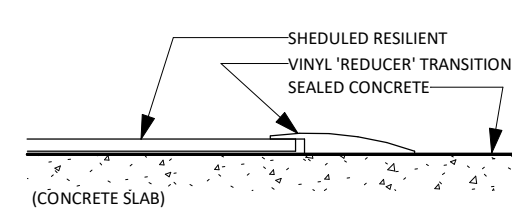
7 ACOUSTIC METAL PANEL VERT. SECTION  
1" = 1'-0"



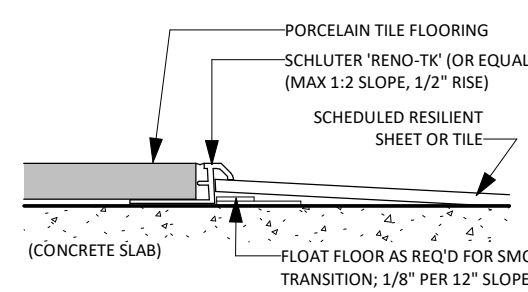
8 CARPET TO RESILIENT - VINYL  
6" = 1'-0"



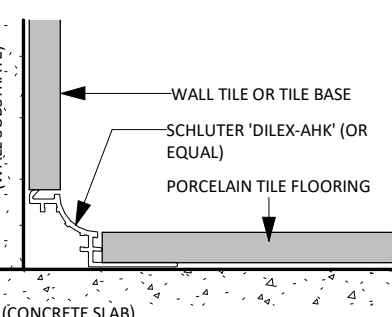
9 CARPET TO RESILIENT - SCHLUTER  
6" = 1'-0"



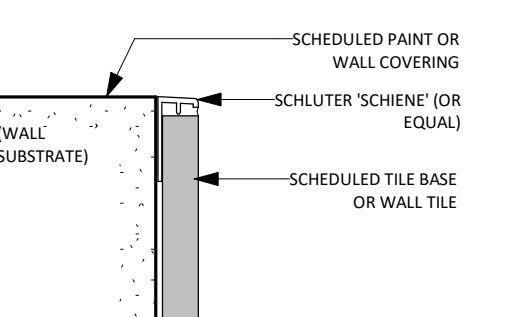
10 RESILIENT TO CONCRETE  
6" = 1'-0"



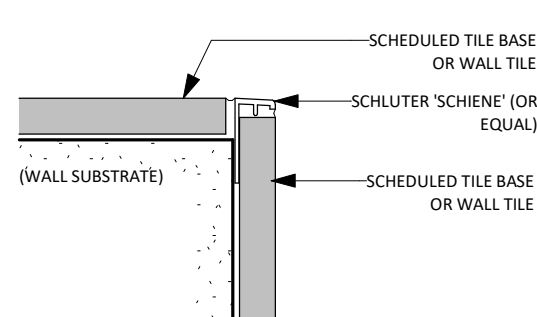
11 TILE TO RESILIENT  
6" = 1'-0"



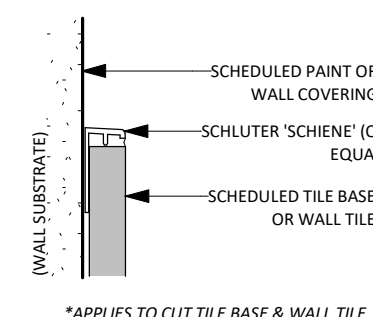
13 TILE FLOOR TO WALL  
6" = 1'-0"



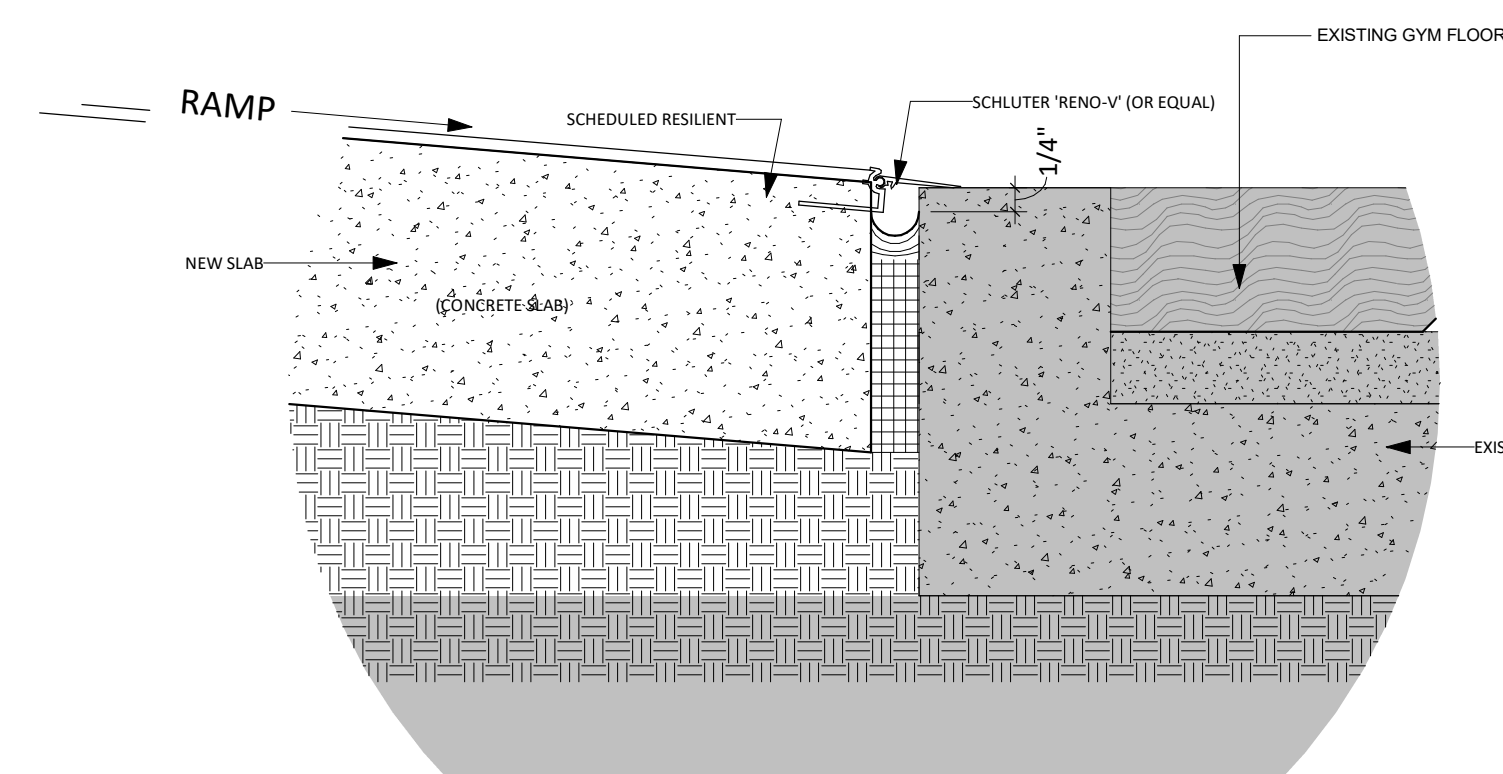
14 WALL TILE TO GWB OUTSIDE CORNER  
6" = 1'-0"



15 WALL TILE TO OUTSIDE CORNER - SCHIENE  
6" = 1'-0"

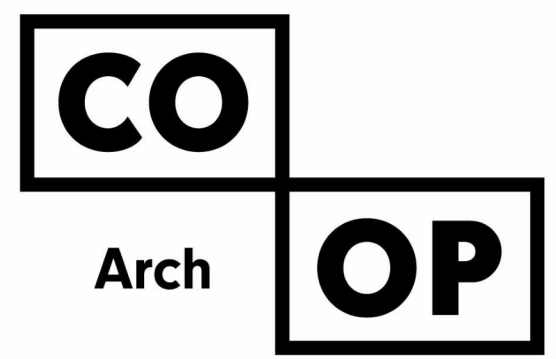


16 WALL TILE TO GWB  
6" = 1'-0"



12 RESILIENT TO EXISTING @ RAMP  
6" = 1'-0"

KEYNOTE SCHEDULE	
5.30	3 5/8" STRUCTURAL STEEL STUD & TRACK FRAMING (SEE ARCH. & STRUCT.)
6.07	2x WOOD BLOCKING AS REQUIRED
6.24	5/8" PLYWOOD
6.74	PLASTIC LAMINATE WALL CABINET
6.79	HIGH PRESSURE LAMINATE CASEWORK
6.95	DOUBLE WALL COAT HOOKS
6.96	TRIPLE PURSE/ CEILING HOOKS, OR SIMILAR
9.04	3 5/8" STEEL STUD & TRACK FRAMING
9.11	1 1/2" FURRING CHANNEL
9.21	5/8" GYPSUM BOARD
9.38	WALLCOVERING WRAPPED 5/8" X 60" (MIN) CORK BOARD
9.46	1/8" ACRYLIC DIMENSIONAL SIGNAGE ON STRUCTURAL HIDDEN STAND-OFF(S) MOUNTED @ OPENINGS BETWEEN METAL WALL PANELS. FLOAT CYCLONE-LOGO & SCALE DOWN, AS NEEDED
9.48	ARMSTRONG 'DIVERGENG' ACOUSTIC METAL PANEL
9.51	RESILIENT BASE



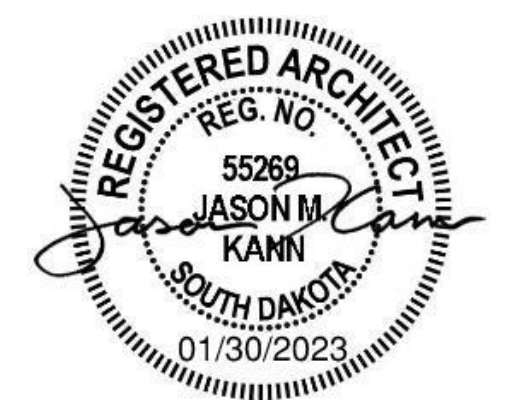
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CO-OP PROJECT NO: 2153



ISSUE:  
01/30/2023 CONSTRUCTION DOCUMENTS

REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
INTERIOR DETAILS

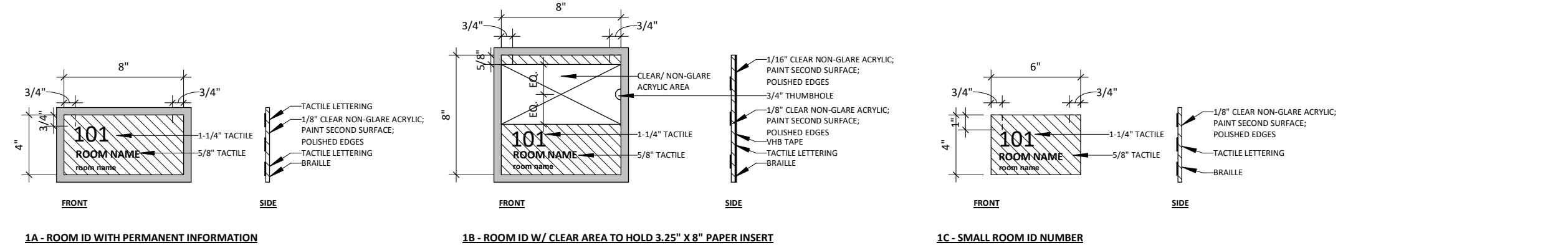
A511

ROOM SIGNAGE KEY					
Room Number	Name	Signage Type & Color	Signage Mount Type	Text Color	Signage Comments
A101	WORK ROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
A102	RR ENTRY	2A/ 2B   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	2 SIGNS REQUIRED, LOCATION OF SIGNAGE MOUNT *TBD
A102A	BOYS	-	-	-	
A102B	GIRLS	-	-	-	
A103	ELEM. FLEX RM #1	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A103A	SM. GROUP	1C   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A103B	SPEECH	1C   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A103C	OT/PT	1C   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A103D	VESTIBULE	-	-	-	
A104	ELEM. FLEX RM #2	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A105	SMALL GROUP	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A106	SPEECH CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
A107A	-	-	-	-	EXISTING SIGNAGE, VERIFY NEEDS
A107B	-	-	-	-	EXISTING SIGNAGE, VERIFY NEEDS
A108	RECEPTION	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME WITH RECEPTION STAFF. MOUNT SIGN AT NEW OPERABLE WINDOW OPENING
A199	CORRIDOR	-	-	-	
B101	MUSIC OFFICE	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME. 2 SIGNS REQUIRED
B102	STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME WITH BAND STAFF
B103	MUSIC ROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME. 2 SIGNS REQUIRED
B103A	BAND STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME WITH BAND STAFF. 2 SIGNS REQUIRED
B103B	PRACTICE RM. #1	1C   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
B103C	PRACTICE RM. #2	1C   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
B104	FLEX CLASSROOM	1B   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	2 SIGNS REQUIRED
B105	CUSTODIAL	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
B106	1-ON-1	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
B107	FLEX CLASSROOM	1B   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
B107A	ART STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	
B108	1-ON-1	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
B199A/ B199B	CORRIDOR	-	-	-	
C100A	VESTIBULE	-	-	-	
C100B	VESTIBULE	-	-	-	
C101	COMMONS	-	-	-	
C102	HEALTH SCIENCE	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C103	SPED CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C104	STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C105	STAGE	1C   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME OR NEED. LOCATION OF SIGN NEAR STAIR ENTRY.
C106	STORAGE	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C107	BOILER	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME

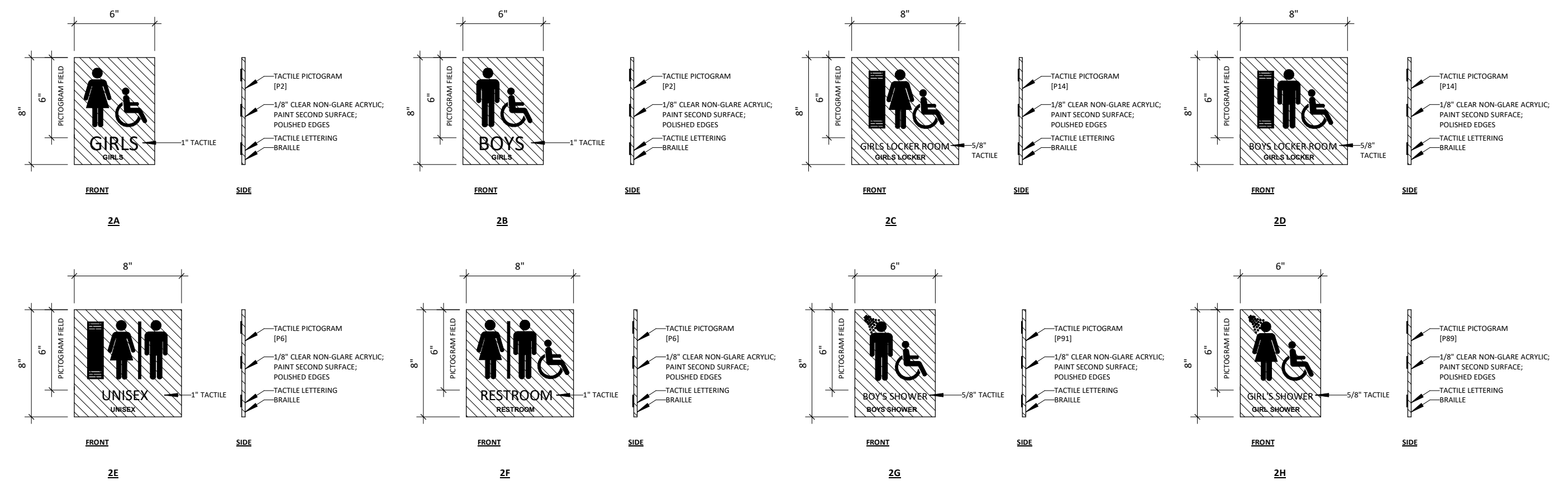
ROOM SIGNAGE KEY					
Room Number	Name	Signage Type & Color	Signage Mount Type	Text Color	Signage Comments
C108	GYM STORAGE	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C109	BOYS LOCKER RM	2C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	
C109A	BOYS RR	-	-	-	
C110	REF. LOCKER RM	2E   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
C111	GIRLS LOCKER RM	2D   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	
C111A	GIRLS RR	-	-	-	
C112	-	-	-	-	EXISTING SIGNAGE
C199A	CORRIDOR	-	-	-	
C199B	CORRIDOR	-	-	-	
C199C	CORRIDOR	-	-	-	
C199D	CORRIDOR	-	-	-	
D100	VESTIBULE	-	-	-	
D101	KITCHEN	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
D101A	RESTROOM	2F   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
D102	RR ENTRY	2A/ 2B   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	2 SIGNS REQUIRED, LOCATION OF SIGNAGE MOUNT *TBD
D102A	GIRLS RR	-	-	-	
D102B	BOYS RR	-	-	-	
D102C	CUSTODIAL	1C   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	
D103	AG CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D103A	AG OFFICE	1A   KHAKI BROWN	DOOR MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME. 2 SIGNS REQUIRED
D103B	AG SHOP	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	LOCATION OF SIGNAGE MOUNT *TBD
D103C	TOOLS	1C   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D104	FACS CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D105	WORK ROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	
D106	SCIENCE CLASSROOM	1A   KHAKI BROWN	SIDE MOUNT W/ SIDE LIGHT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D106A	SCIENCE PREP ROOM	1A   KHAKI BROWN	SIDE MOUNT	BRIGHT WHITE	CONFIRM SIGNAGE NAME
D199A	CORRIDOR	-	-	-	
D199B	CORRIDOR	-	-	-	

**NOTE:**  
ALL ROOM NUMBERS ARE CONNECTED TO THE ARCHITECTURAL PLAN ROOM NUMBERING, NOT EXISTING ROOM NUMBERING. GC TO CONFIRM ALL ROOM NUMBERS & NAMES BY SCHOOL STAFF PRIOR TO SUBMITTALS.

### ROOM SIGNAGE - '1' SERIES



### RESTROOM SIGNAGE - '2' SERIES



CO-OP PROJECT NO: 2153



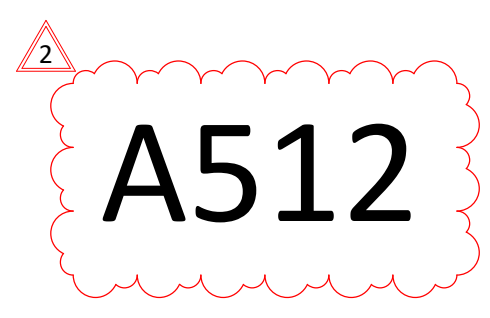
ISSUE:  
01/30/2023 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
2	ADD 02	02/16/23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKE SCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
INTERIOR SIGNAGE



Addendum No. ME-1  
To Mechanical & Electrical Plans and Specifications:  
**Willow Lake School Addition**  
**Willow Lake, South Dakota**

Addendum Dated: February 16, 2023

Original Plans & Specifications Dated: January 30, 2023

SCOPE OF THIS ADDENDUM: The following becomes part of the original plans and specifications, taking precedence over the items that may conflict. The bidder shall note receipt and make acknowledgement of the addendum on the bid form, incorporating its provision in the bid.

PLAN AND SPECIFICATION CHANGES AND CLARIFICATIONS:

1. Mechanical Table of Contents – See the attached revised table of contents to include section 23 0900 under the scope of Ventilation and Air Conditioning Work (price to be included in HVAC bid, but still broken out under line items #1 & #2).
2. Sheet M202C – See the attached revised sheet for temporary heat provisions in existing gym, and temporary re-installation of lavs in Boys 279.
3. Sheet M402C – Add floor drain to shower in Ref C110 with piping as shown. This is the same style shower as the transfer SH-1A's in the locker rooms.
4. Sheet M502C – See the attached revised sheet for revisions to hydronic piping.
5. Sheet M503D – See the attached revised sheet for revisions to hydronic piping.
6. Sheet M704E – See the attached revised sheet for clarification to TC/VC phasing.
7. Sheet M904 – See the attached revised sheet for revisions to the exhaust fan schedule.
8. Sheet E202CD – See the attached revised sheet for temp heater connection and stage panel demolition.
9. Sheet E302C – See the attached revised sheet for new stage panel.
10. Sheet E304E – See attached revised sheet for Electric Heat phasing note.
11. Sheet E402C – See the attached revised sheet for coordination notes.
12. Sheet E600 – See the attached revised sheet for riser diagram update.
13. Sheet E700 – See the attached revised sheet for new panel schedule.
14. Sheet E702 – See the attached revised sheet for Luminaire Schedule updates.

APPROVED EQUALS:

The following list of equipment manufacturers shall be added to the approved equals listed on the plan sheet schedules and considered as approved equals subject to meeting all requirements of the plans and specifications – final acceptance subject to shop drawing approval.

1. Slotted Fume Exhaust Hoods: Nordfab
2. Panelboards and Gear: Siemens

Sichmeller Engineering  
(605) 225-4344

Attachments: Revised Mechanical Table of Contents  
Sheet M202C – Area C – Plumbing & Hydronics Demolition Plan  
Sheet M502C – Area C – Above Grade Plumbing & Hydronics Plan  
Sheet M503D – Area D – Above Grade Plumbing & Hydronics Plan  
Sheet M704E – Area E – HVAC Plan



Sheet M904 – Mechanical Schedules  
Sheet E202CD – Area C & D – Electrical Demolition Plan  
Sheet E302C – Area C – Power & Data Plan  
Sheet E304E – Area E – Power & Data Plan  
Sheet E402C – Area C – Lighting Plan  
Sheet E600 – Electrical Details  
Sheet E700 – Electrical Schedules  
Sheet E702 – Electrical Schedules – Continued 2

Table of Contents

Division	Section Title	Pages
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**DIVISION 21 – FIRE PROTECTION**

21 1000	Fire Suppression Systems	11
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**DIVISION 22 - PLUMBING**

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22 0510	Basic Plumbing Materials and Methods	6
22 0700	Plumbing Systems Insulation	3
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**DIVISION 23 – HEATING, VENTILATION AND AIR CONDITIONING**

23 0500	General HVAC Requirements	7
23 0510	Basic HVAC Materials and Methods	4
23 0593	Testing, Adjusting, and Balancing (Air and Water)	3
23 0700	HVAC Systems Insulation	5
23 0900	Controls & Control Sequences	13
23 2113	Hydronic Piping Systems	16
23 2123	HVAC Hydronic Pumps	4
23 7000	Ventilation and Air Conditioning	21

**FIRE PROTECTION WORK SHALL INCLUDE:**

SECTION 21 1000

**PLUMBING, & HYDRONICS WORK SHALL INCLUDE:**

SECTION 22 4000, 23 2113, & 23 2123

& SECTIONS 22 0500, 22 0510, 22 0700, 23 0500, 23 0510, & 23 0700 AS APPLIES

**VENTILATION AND AIR CONDITIONING WORK SHALL INCLUDE:**

SECTION 23 0593, 23 0900, & 23 7000

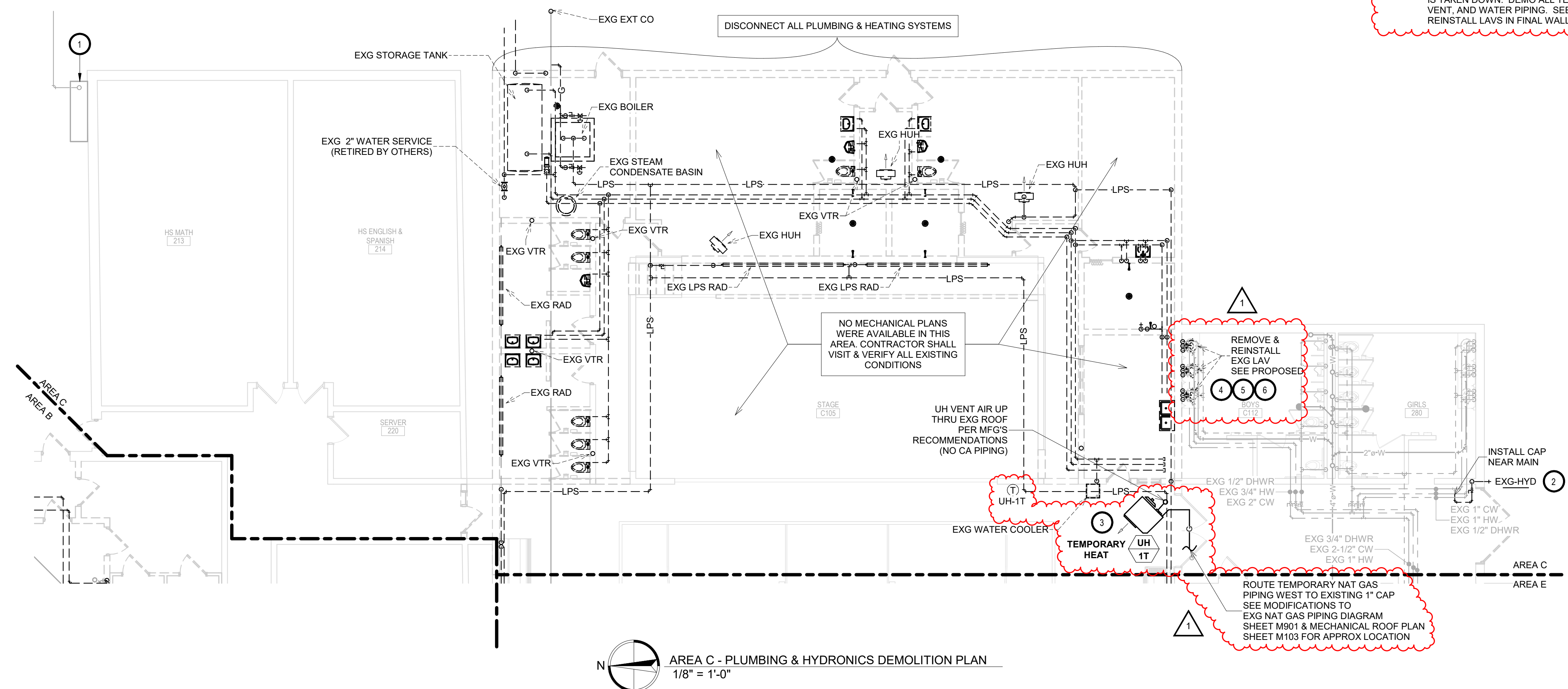
& SECTIONS 23 0500, 23 0510 & 23 0700 AS APPLIES

MECHANICAL GENERAL NOTES:

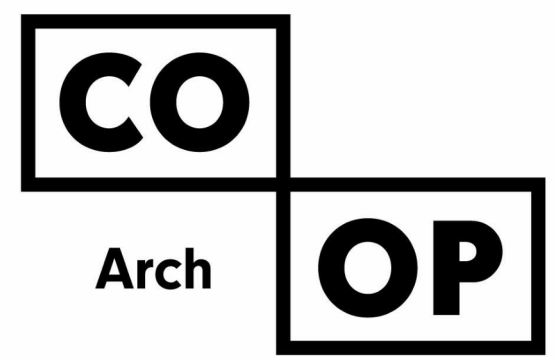
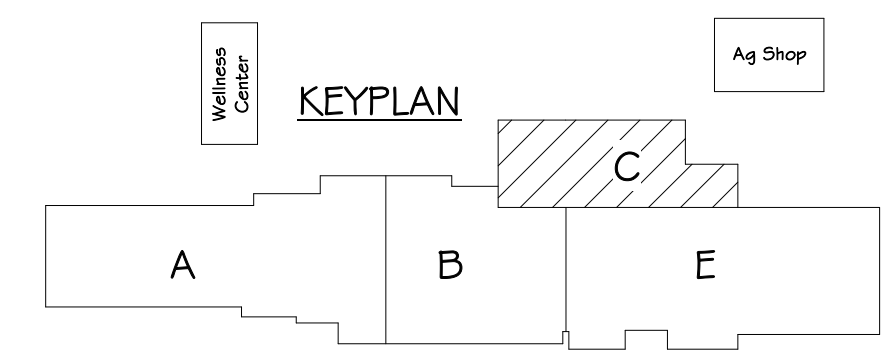
- CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES, INCLUDING ANY NECESSARY DEMOLITION.
- REMOVE MECHANICAL EQUIPMENT IN THE AREAS SHOWN ON THE PLAN, DISCONNECT SERVICES AND REMOVE TO A POINT OUT OF THE WAY OF THE GENERAL DEMOLITION. MARK ON THE PLAN TO CLEARLY SHOW WHERE THESE SERVICES ARE STOPPED. DEMOLITION WORK SHALL BE COORDINATED WITH THE OWNER. SHOULD QUESTIONS ARISE REGARDING THE REMOVAL OF EQUIPMENT, CONFER WITH THE OWNER BEFORE SUCH EQUIPMENT IS DEMOLISHED. MATERIALS REMOVED BY DEMOLITION SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE SPECIFICALLY NOTED. MATERIAL THE OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
- EQUIPMENT SHOWN ON DRAWINGS AS EXISTING IS BASED ON EXISTING PLANS AND LIMITED FIELD INVESTIGATION. THE FIELD SURVEY WAS CONDUCTED TO VERIFY, AS MUCH AS POSSIBLE, THE ACCURACY OF THE LOCATIONS SHOWN. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THE "EXISTING CONDITIONS" AS SHOWN ON THE DRAWINGS AS THE DEMOLITION WORK PROGRESSES. PERFORM MODIFICATIONS AND ADDITIONS AS NECESSARY TO CORRECT FOR THESE HIDDEN CONDITIONS AND ALLOW FOR THE COMPLETION OF THE NEW WORK.
- THE EXISTING BUILDING WILL BE IN USE DURING THIS CONSTRUCTION. SCHEDULE AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTIONS. TEMPORARY SERVICES SHALL BE INSTALLED IF ONE PHASE OF CONSTRUCTION DISRUPTS SERVICE TO ANOTHER AREA OF THE BUILDING OR IF EQUIPMENT HAS TO BE RELOCATED TO ALLOW CONSTRUCTION TO PROGRESS. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER'S SITE REPRESENTATIVE. AFTER SERVICE HAS BEEN RESTORED FOLLOWING AN INTERRUPTION, INSPECT AREAS AFFECTED BY THE INTERRUPTION AND BE RESPONSIBLE FOR RETURNING AUTOMATICALLY CONTROLLED EQUIPMENT TO THE SAME OPERATING CONDITION, WHICH EXISTED PRIOR TO THE INTERRUPTION.
- PROVIDE PENETRATIONS TO THE BUILDING STRUCTURE AS REQUIRED FOR INSTALLATION. WHERE EXISTING OR TEMPORARY SYSTEMS ARE BEING DEMOLISHED, WHICH LEAVE OPENINGS IN THE EXISTING BUILDING STRUCTURE, THE BUILDING STRUCTURE SHALL BE PATCHED TO MATCH THE EXISTING CONSTRUCTION AND MAINTAIN THE EXISTING BUILDING FIRE RATINGS. ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
- ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
- THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE TESTING & CLEANING OF EACH RESPECTIVE SYSTEM IN ACCORDANCE WITH APPLICABLE STATE & LOCAL CODES. TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION. WRITTEN NOTIFICATION OF TEST, DATE, AND RESULTS SHALL BE FURNISHED TO THE ENGINEER BEFORE CONCEALING OR COVERING THE INSTALLATION. TESTS SHALL BE REPEATED UNTIL EACH SYSTEM IS PROVEN ACCEPTABLE.

KEYNOTES

- EXISTING GRADE ELEVATIONS WILL CHANGE. EXISTING GAS METERFIT WILL HAVE TO BE RAISED BY UTILITY TO ACCOMMODATE PROPOSED GRADE CHANGES. EXISTING NORTHWESTERN ENERGY NATURAL GAS METER #23464. PLUMBING CONTRACTOR TO COORDINATE WITH KIRBY WICKS OF NWE AT 605-353-7609 FOR ANY UTILITY REQUIRED CHANGES TO THE METER FIT (ANY NWE COSTS ASSOCIATED WITH THE NATURAL GAS METERFIT WILL BE BILLED DIRECTLY TO THE OWNER). PC TO MODIFY EXISTING NATURAL GAS PIPING AFTER NWE METERFIT TO ACCOMMODATE THE ADDITIONAL NATURAL GAS PIPING. SEE MODIFICATIONS TO EXISTING NATURAL GAS PIPING DIAGRAM.
- PC TO DISCONNECT AND REMOVE EXISTING PLUMBING FIXTURE, DOMESTIC WATER AND INSTALL CAP NEAR MAIN.
- PC TO PROVIDE & INSTALL UH-1T, REZNOR UDX-400 WITH 332 MBH OUTPUT, POWER VENTING, WITH HANGING VIBRATION ISOLATION, AND LOW VOLTAGE NON-PROGRAMMABLE T-STAT, CLEAR LOCKABLE COVER, AND CONTROL WIRING.
- PC TO DEMO ALL WASTE, VENT, AND WATER PIPING IN WALL TO BE DEMO'D. DEMO WASTE BELOW GRADE TO THE SOUTH TO ALLOW FOR TEMPORARY EXTERIOR WALL INSTALLATION.
- TEMPORARY WASTE, VENT, COLD AND HOT WATER TO BE ROUTED UNINSULATED SURFACE MOUNTED TO TEMPORARY WALL. NO PIPING WILL BE ALLOWED IN EXTERIOR WALL. DEMO AND PATCHING OF CONCRETE FLOOR BY OTHERS. ROUTE HOT, COLD, AND VENT PIPING DOWN WEST OF THE COUNTERTOP, AND ROUTE UNDER COUNTERTOP TO EACH LAV. TEMPORARILY REINSTALL EXISTING LAVS.
- REMOVE AND SALVAGE LAVS AFTER TEMPORARY WALL IS TAKEN DOWN. DEMO ALL TEMPORARY WASTE, VENT, AND WATER PIPING. SEE PROPOSED TO REINSTALL LAVS IN FINAL WALL.



AREA C - PLUMBING & HYDRONICS DEMOLITION PLAN  
1/8" = 1'-0"



1108 S. Main St. 102  
Aberdeen, SD 57401  
Phone: 605-725-4852

601 Kansas City St. 7  
Rapid City, SD 57701  
Phone: 605-716-3652

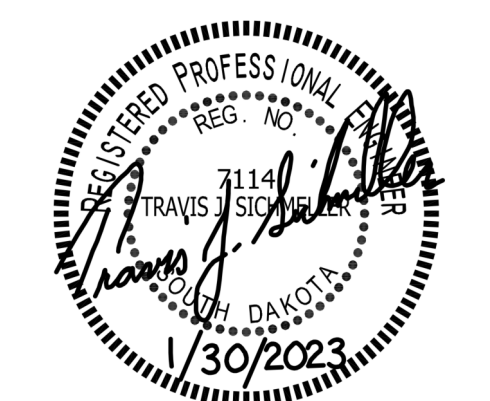
440 E. 8th St 221  
Sioux Falls, SD 57103  
Phone: 605-334-9999

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**SICHMELLER  
ENGINEERING**  
Mechanical & Electrical Engineering

801 Railroad Ave. SE  
Aberdeen, SD 57401  
Phone: 605-225-4344  
www.siceng.biz

SE PROJECT NO: 220900771



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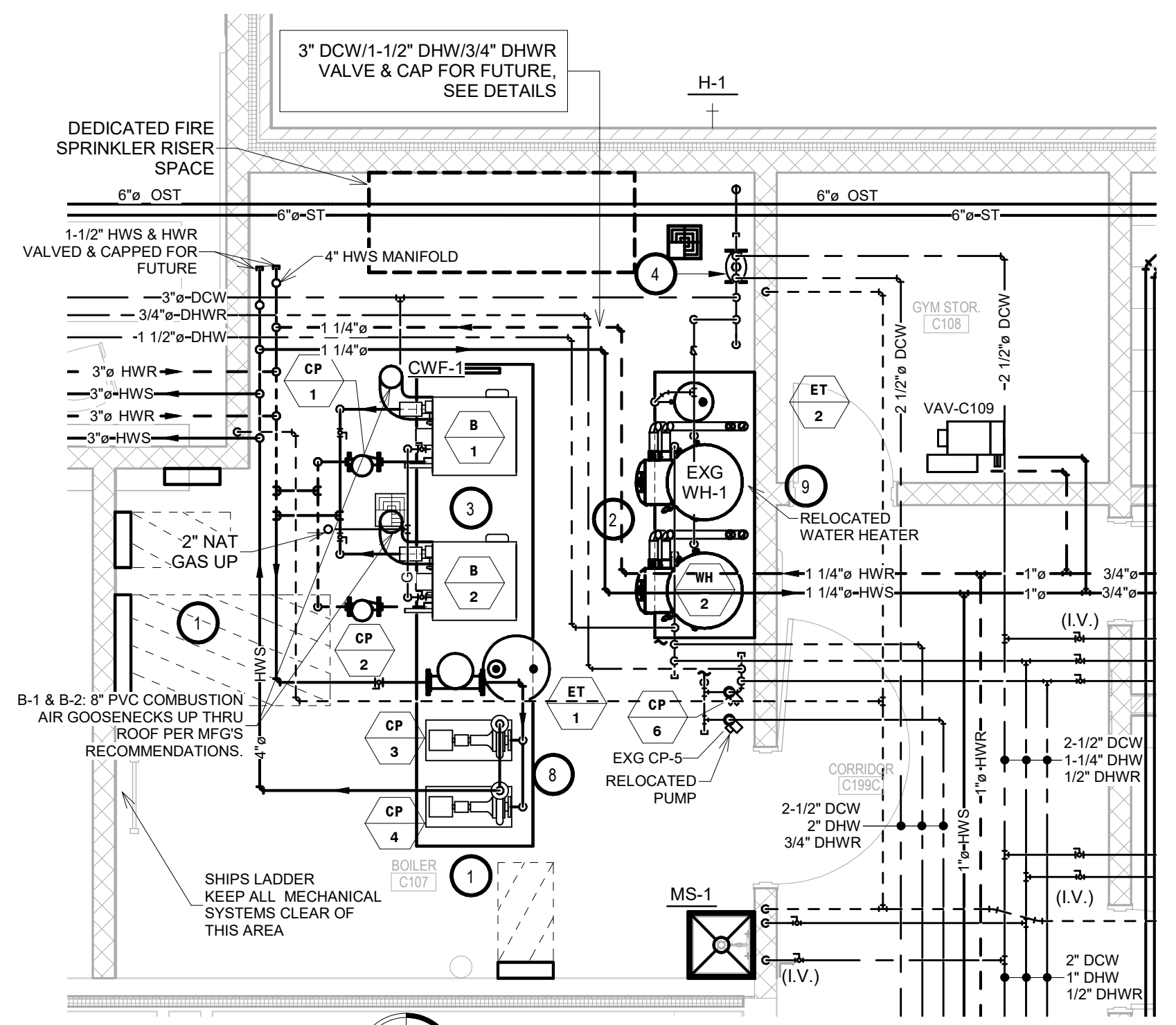
REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	Addendum ME 1	02-16-23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
AREA C - PLUMBING &  
HYDRONICS DEMOLITION PLAN

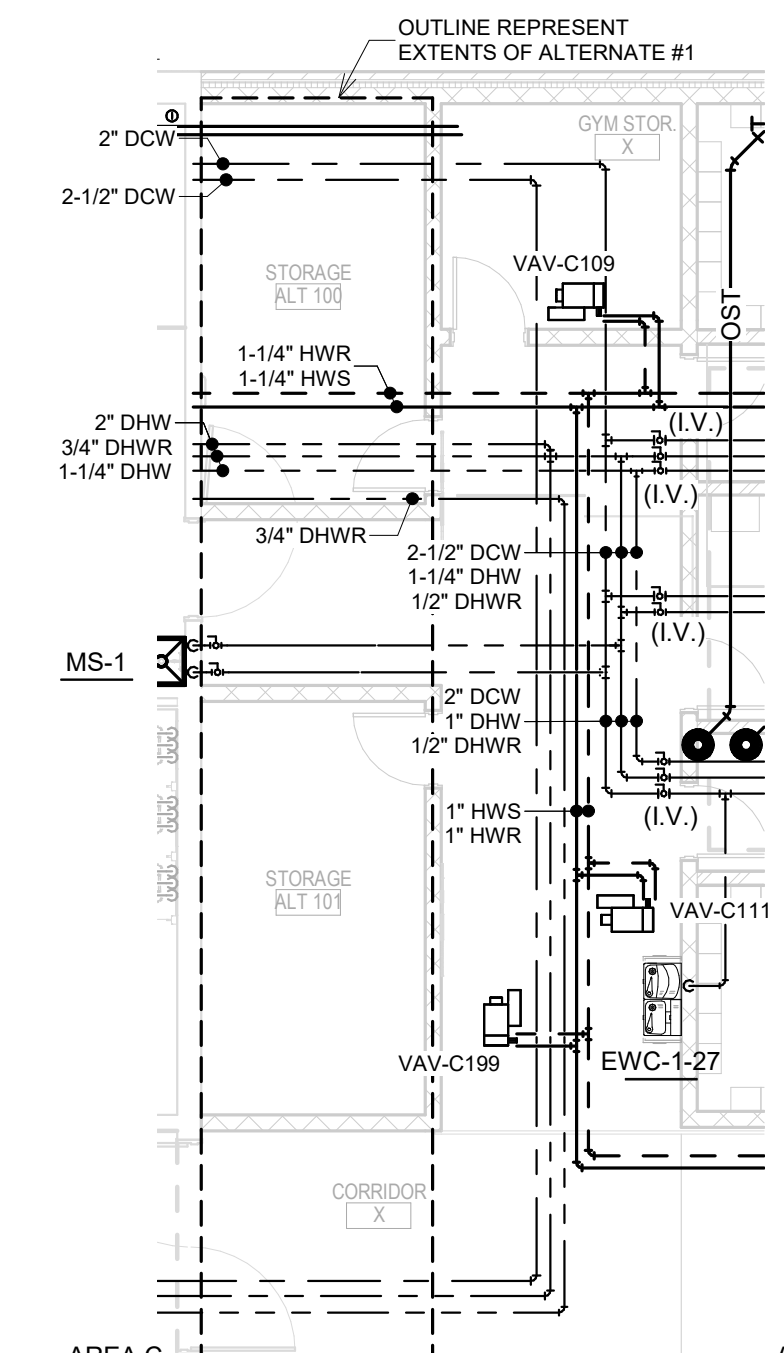
**M202C**



AREA C - ENLARGED BOILER ROOM PLAN  
1/4" = 1'-0"

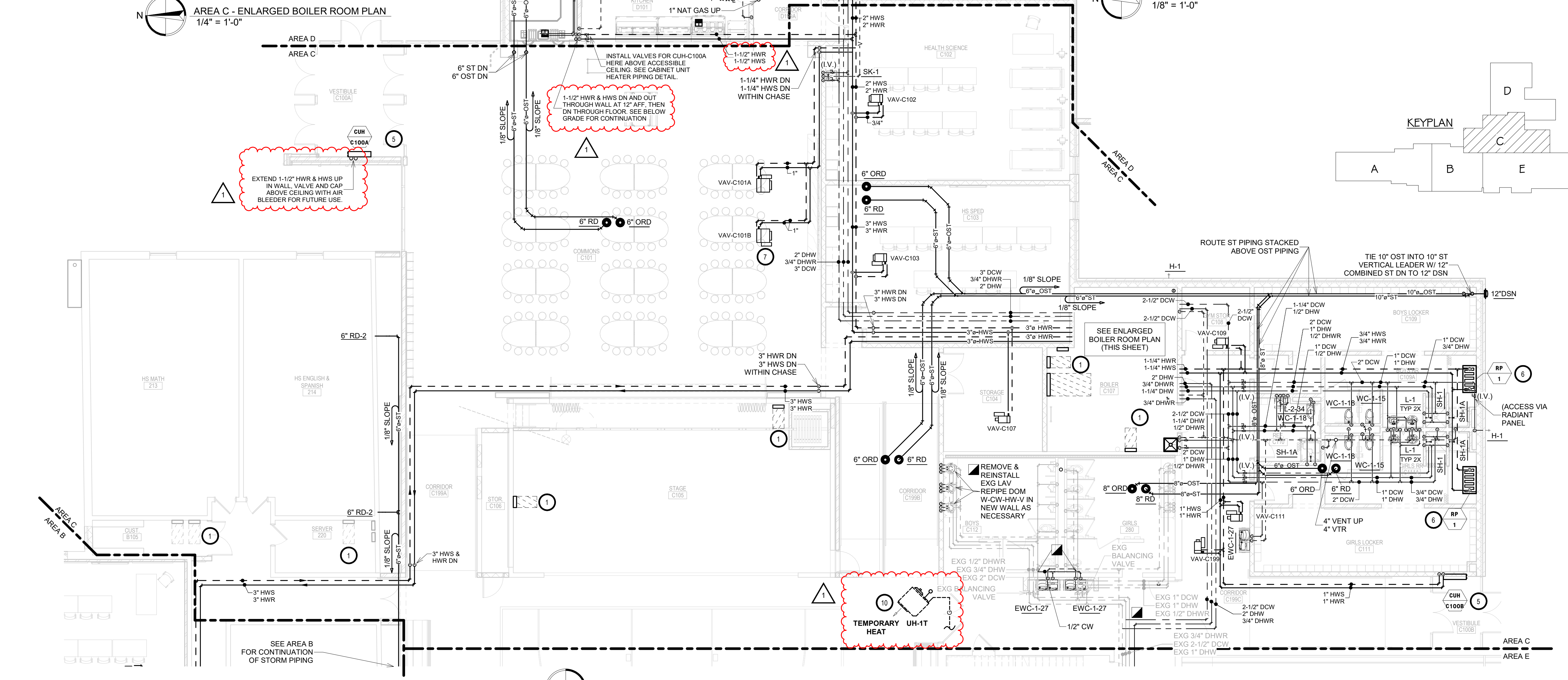
- KEYNOTES:**
- THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.
  - SEE MODIFICATIONS TO EXISTING NATURAL GAS WATER HEATER PIPING DIAGRAM.
  - SEE HEATING WATER SYSTEM PIPING DIAGRAM INCLUDING 3-WAY DDC TEMPERATURE CONTROL VALVE NOT SHOWN ON THIS PLAN VIEW FOR SIMPLICITY.
  - SEE WATER HEADER PIPING DIAGRAM.
  - SEE CABINET UNIT HEATER PIPING DETAIL.
  - SEE RADIANT PANEL PIPING DETAIL.
  - TYPICAL - SEE VAV HEATING COIL PIPING DETAIL.
  - SEE END SUCTION PUMP DETAIL.
  - RWH-1 AND WH-2 VENTING & COMBUSTION AIR THRU ROOF, WITH SPACING, HEIGHTS, & TERMINATIONS PER MFG'S REQUIREMENTS. CONCENTRIC KITS ARE NOT ACCEPTABLE.
  - ONCE ADDITION IS COMPLETE, PC TO DISCONNECT AND REMOVE TEMPORARY HEAT UH-1T, INSTALL INSULATED WEATHER TIGHT CAP ON VENTING, REMOVE LOW VOLTAGE NON-PROGRAMMABLE T-STAT, CLEAR LOCKABLE COVER, CONTROL WIRING, AND GAS PIPING BACK TO MAIN AND CAP.

- GENERAL NOTES:**
- ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
  - THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.
  - ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
  - ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
  - THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.
  - CONTRACTOR SHALL COORDINATE ALL PLUMBING WITH LIGHT FIXTURES, HVAC, FIRE SPRINKLER, AND STRUCTURAL TO ACCOMMODATE LIMITED CEILING SPACE.
  - FRESH AIR INTAKES TO BE MINIMUM 10' FROM ANY EXHAUST TERMINATION.
  - CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES.
  - COORDINATE NEW SERVICES WITH LOCAL UTILITIES.
  - PLUMBING CONTRACTOR TO PROVIDE VENTING FOR ALL FLOOR DRAINS, TRENCH DRAINS, AND FLOOR SINKS AS SHOWN OR AS REQUIRED BY CODE.

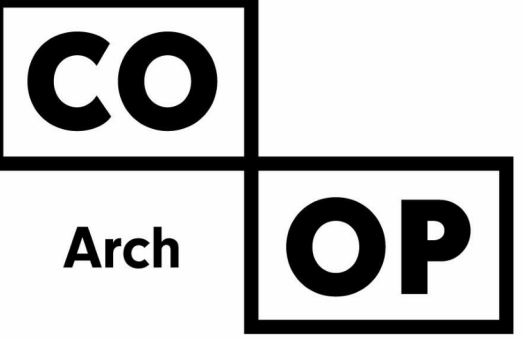
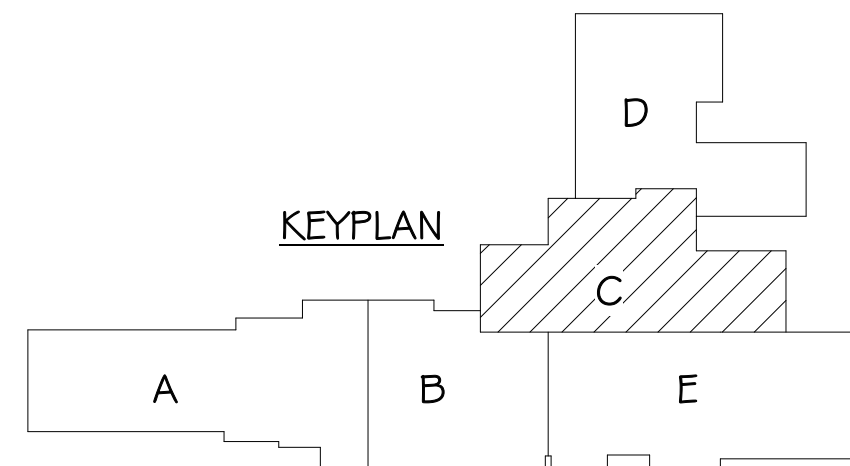


AREA C - ABOVE GRADE PLUMBING & HYDRONICS PLAN - ADD ALTERNATE #1  
1/8" = 1'-0"

- SPECIAL NOTES:**
- ALL MECHANICAL SYSTEMS, EXCLUDING DROPS, TO BE INSTALLED AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.
  - FLOOR DRAINS & SINK LOCATIONS SHALL BE INSTALLED IN LOCATIONS PROPER TO ACCEPT INDIRECT DRAIN PIPING FROM BOILERS, WATER HEATER, RELIEFS, ETC. (TRIP HAZARDS FROM PIPING WILL NOT BE ACCEPTABLE).
  - ALL FLOOR CLEANOUTS TO BE LOCATED IN INCONSPICUOUS LOCATIONS. CLEANOUTS LOCATED IN DOORWAYS AND MIDDLE OF HALLWAYS WILL NOT BE ACCEPTABLE.
  - ALL STORM DRAINAGE TO BE 1/8" SLOPE UNLESS OTHERWISE SPECIFIED.



AREA C - ABOVE GRADE PLUMBING & HYDRONICS PLAN  
1/8" = 1'-0"



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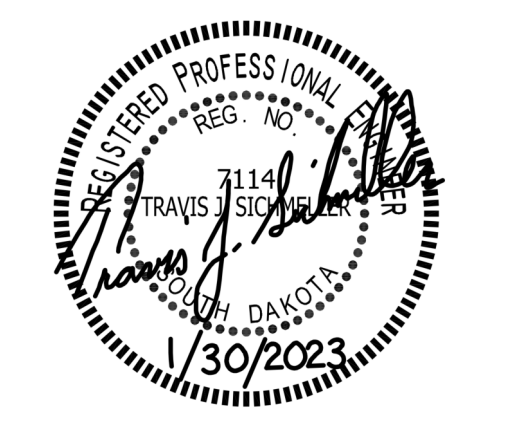
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SE PROJECT NO: 220900771



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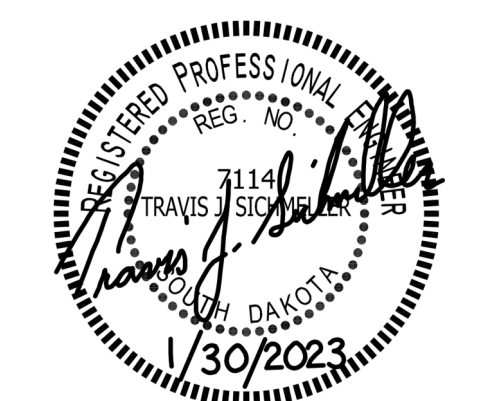
**REVISION SCHEDULE:**

REV. #	REV. DSC.	REV. DATE
1	Addendum ME 1	02-16-23

**PROJECT:**  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

**SHEET TITLE:**  
AREA C - ABOVE GRADE  
PLUMBING & HYDRONICS PLAN

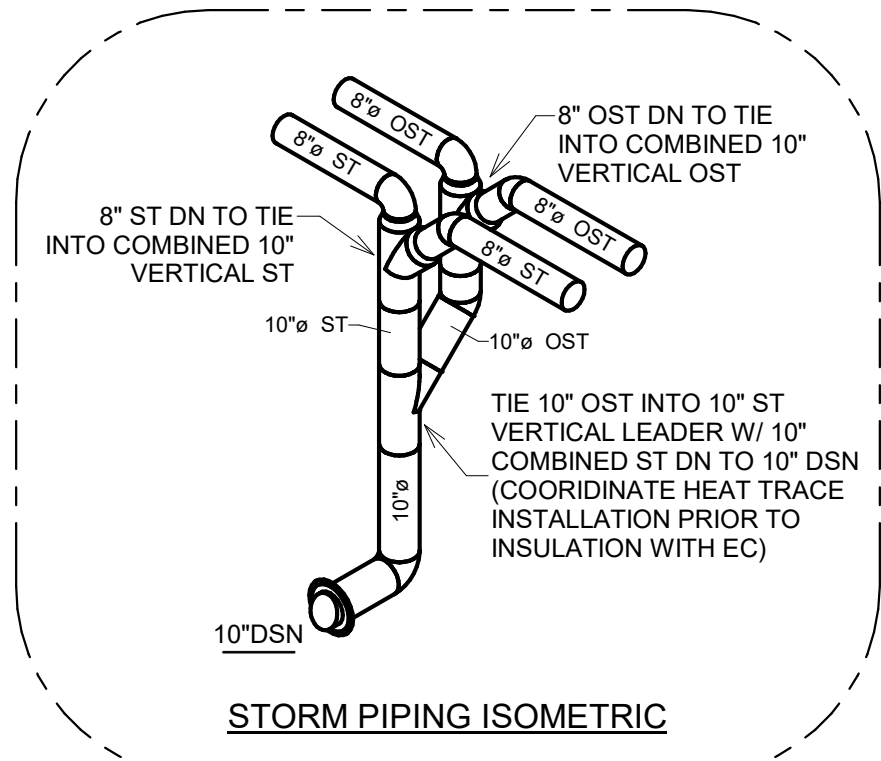
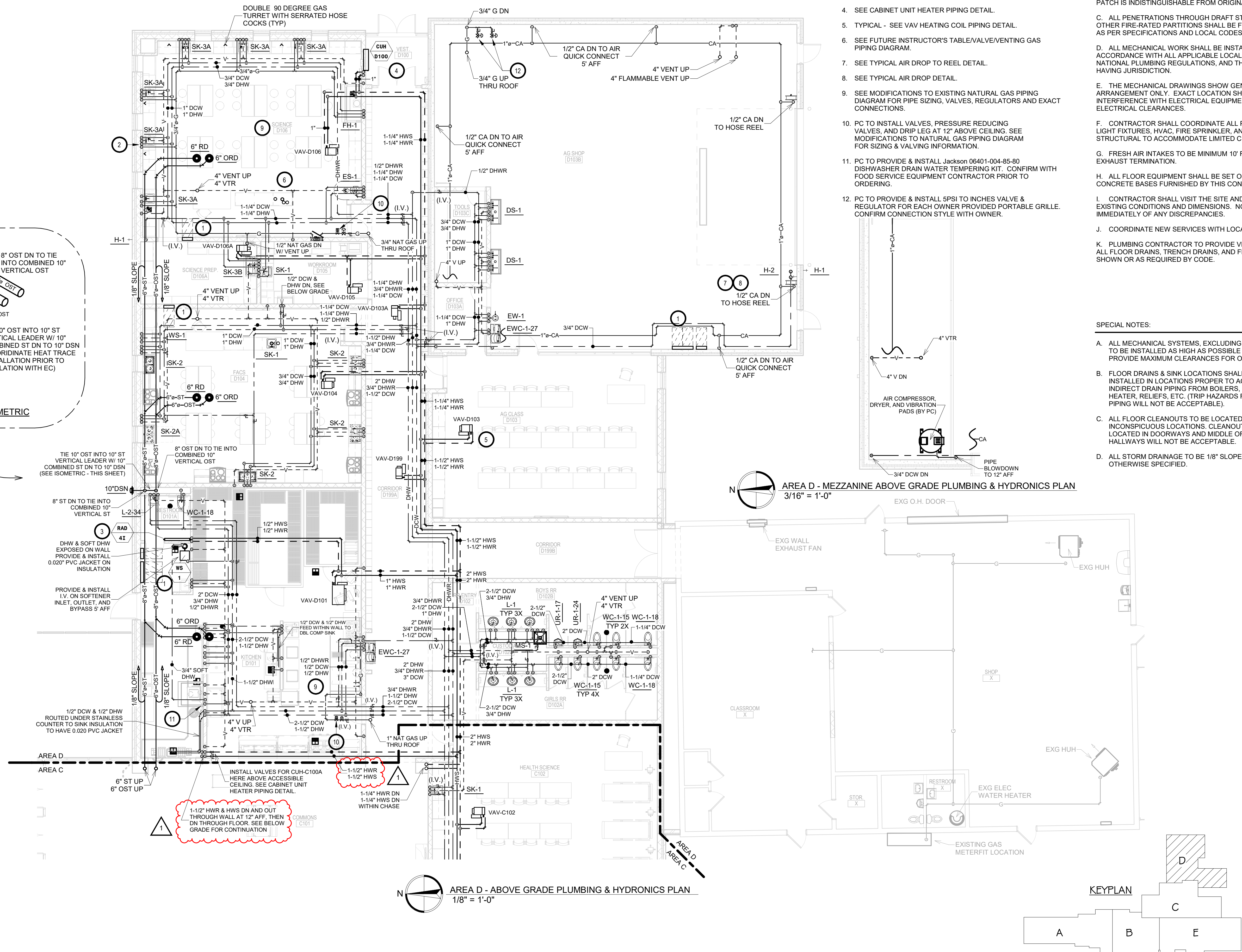
**M502C**

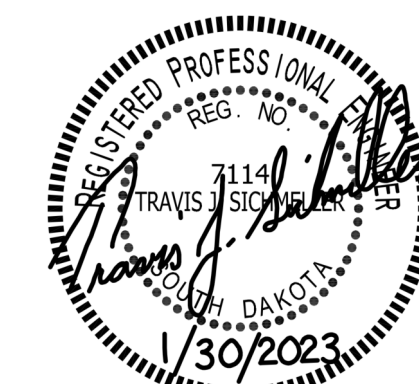


- KEYNOTES:**
- THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.
  - TYPICAL - 1/2" WELDED NAT GAS DN TO GAS TURRET, SEE MODIFICATIONS TO EXISTING NATURAL GAS PIPING DIAGRAM.
  - SEE INVERTED FIN TUBE RADIATION PIPING DETAIL.
  - SEE CABINET UNIT HEATER PIPING DETAIL.
  - TYPICAL - SEE VAV HEATING COIL PIPING DETAIL.
  - SEE FUTURE INSTRUCTOR'S TABLE/VALVE/VENTING GAS PIPING DIAGRAM.
  - SEE TYPICAL AIR DROP TO REEL DETAIL.
  - SEE TYPICAL AIR DROP DETAIL.
  - SEE MODIFICATIONS TO EXISTING NATURAL GAS PIPING DIAGRAM FOR PIPE SIZING, VALVES, REGULATORS AND EXACT CONNECTIONS.
  - PC TO INSTALL VALVES, PRESSURE REDUCING VALVES, AND DRIP LEG AT 12" ABOVE CEILING. SEE MODIFICATIONS TO NATURAL GAS PIPING DIAGRAM FOR SIZING & VALVING INFORMATION.
  - PC TO PROVIDE & INSTALL Jackson 06401-004-85-80 DISHWASHER DRAIN WATER TEMPERING KIT. CONFIRM WITH FOOD SERVICE EQUIPMENT CONTRACTOR PRIOR TO ORDERING.
  - PC TO PROVIDE & INSTALL 5PSI TO INCHES VALVE & REGULATOR FOR EACH OWNER PROVIDED PORTABLE GRILLE. CONFIRM CONNECTION STYLE WITH OWNER.

- GENERAL NOTES:**
- ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
  - THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.
  - ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
  - ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
  - THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.
  - CONTRACTOR SHALL COORDINATE ALL PLUMBING WITH LIGHT FIXTURES, HVAC, FIRE SPRINKLER, AND STRUCTURAL TO ACCOMMODATE LIMITED CEILING SPACE.
  - FRESH AIR INTAKES TO BE MINIMUM 10' FROM ANY EXHAUST TERMINATION.
  - ALL FLOOR EQUIPMENT SHALL BE SET ON 4" HIGH CONCRETE BASES FURNISHED BY THIS CONTRACTOR.
  - CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES.
  - COORDINATE NEW SERVICES WITH LOCAL UTILITIES.
  - PLUMBING CONTRACTOR TO PROVIDE VENTING FOR ALL FLOOR DRAINS, TRENCH DRAINS, AND FLOOR SINKS AS SHOWN OR AS REQUIRED BY CODE.

- SPECIAL NOTES:**
- ALL MECHANICAL SYSTEMS, EXCLUDING DROPS, TO BE INSTALLED AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.
  - FLOOR DRAINS & SINK LOCATIONS SHALL BE INSTALLED IN LOCATIONS PROPER TO ACCEPT INDIRECT DRAIN PIPING FROM BOILERS, WATER HEATER, RELIEFS, ETC. (TRIP HAZARDS FROM PIPING WILL NOT BE ACCEPTABLE).
  - ALL FLOOR CLEANOUTS TO BE LOCATED IN INCONSPICUOUS LOCATIONS. CLEANOUTS LOCATED IN DOORWAYS AND MIDDLE OF HALLWAYS WILL NOT BE ACCEPTABLE.
  - ALL STORM DRAINAGE TO BE 1/8" SLOPE UNLESS OTHERWISE SPECIFIED.





GENERAL NOTES:

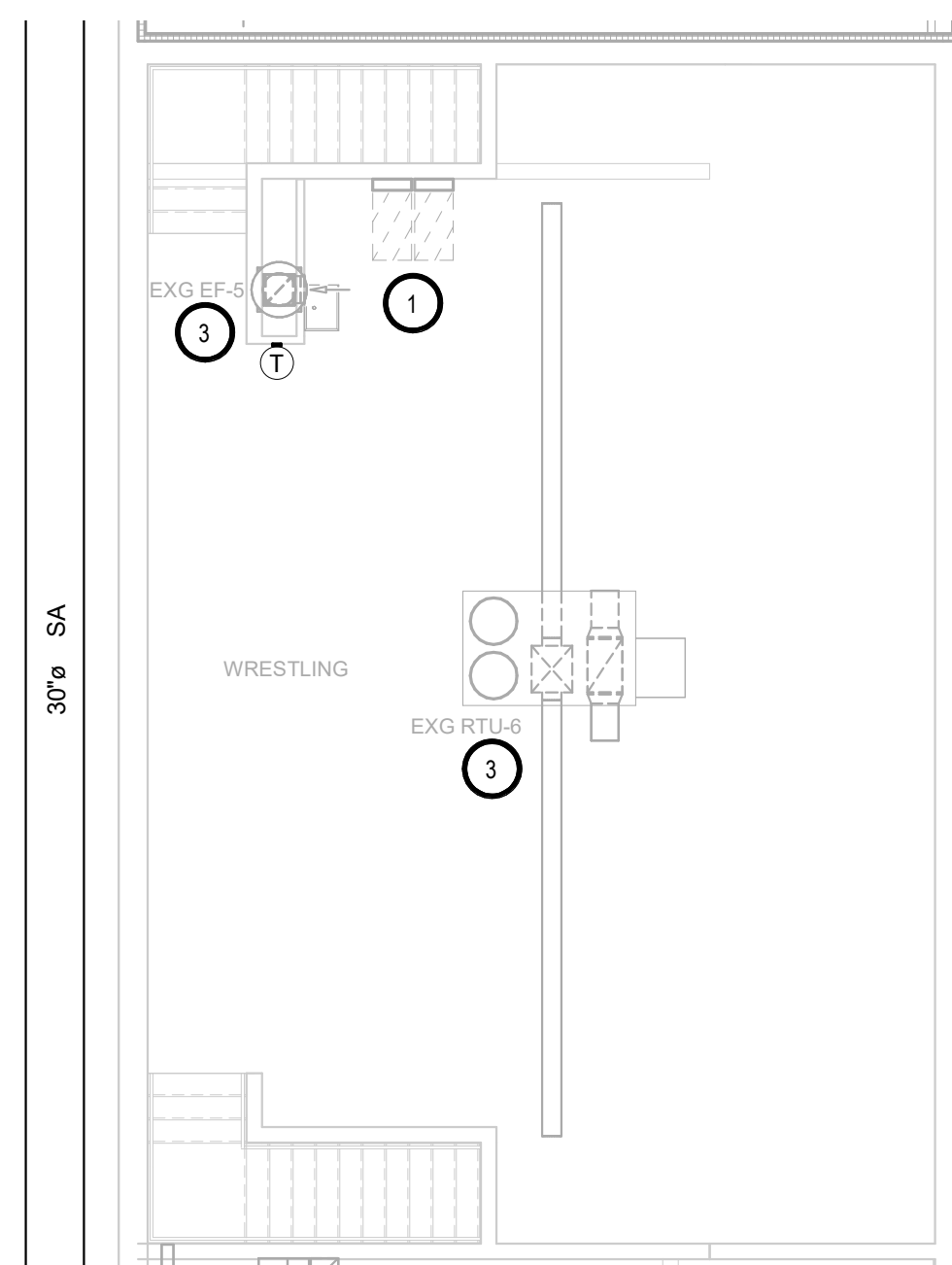
- A. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
- B. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.
- C. ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
- D. ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
- E. THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.
- F. COORDINATE INSTALLATION OF ALL HVAC WITH PLUMBING, FIRE SPRINKLER, LIGHT FIXTURES, AND STRUCTURE TO ACCOMMODATE LIMITED CEILING SPACE.
- G. FOR SIMPLICITY DUCT INSULATION NOT SHOWN, DUCT SIZES INDICATED ON DRAWING ARE INTERNAL DIMENSIONS. AS NEEDED ADJUST ACTUAL SIZE FOR INSULATION THICKNESS AS SPECIFIED.
- H. ALL FLEXIBLE DUCTWORK AND CONNECTORS BETWEEN THE LOW PRESSURE DUCTWORK AND THE DIFFUSERS SHALL BE THE SIZE OF THE DIFFUSER INLET.
- I. PROVIDE & INSTALL VIBRATION ISOLATION ON ALL HANGING EQUIPMENT. PROVIDE & INSTALL VIBRATION ABSORPTION MOUNTING PADS ON ALL EQUIPMENT MOUNTED ON FLOOR.
- K. ALL DUCTWORK TO BE SEALED AIRTIGHT.

KEYNOTES:

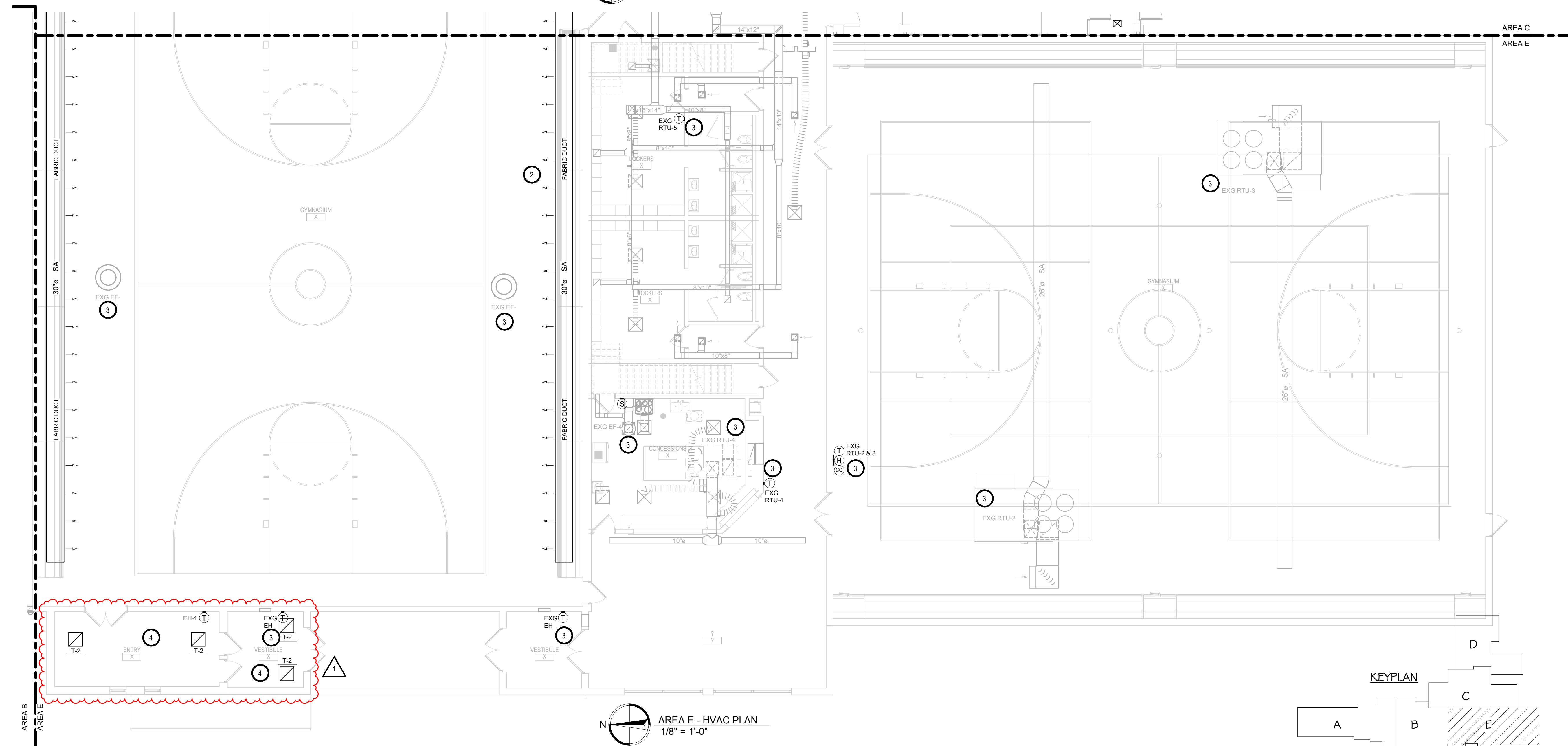
- 1. THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.
- 2. VENTILATION CONTRACTOR TO PROVIDE AND INSTALL 30"ø FABRIC DUCT.
- 3. TYP - TC TO PROVIDE NEW T-STATS, CONTROL CABLING, AND DDC TEMPERATURE CONTROL SYSTEM FOR EXISTING EQUIPMENT. SEE SPECS.
- 4. CONTROLS WORK AND TRANSFER REGISTERS WORK TO BE COMPLETED PRIOR TO HEATING SEASON OF 2023/2024.

SPECIAL NOTES:

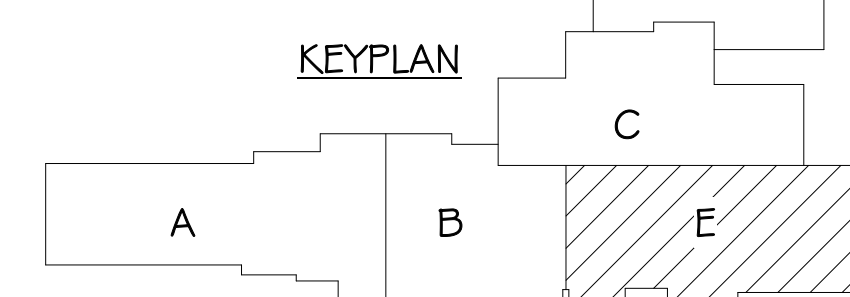
- A. ALL MECHANICAL SYSTEMS, EXCLUDING DROPS, TO BE INSTALLED AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.



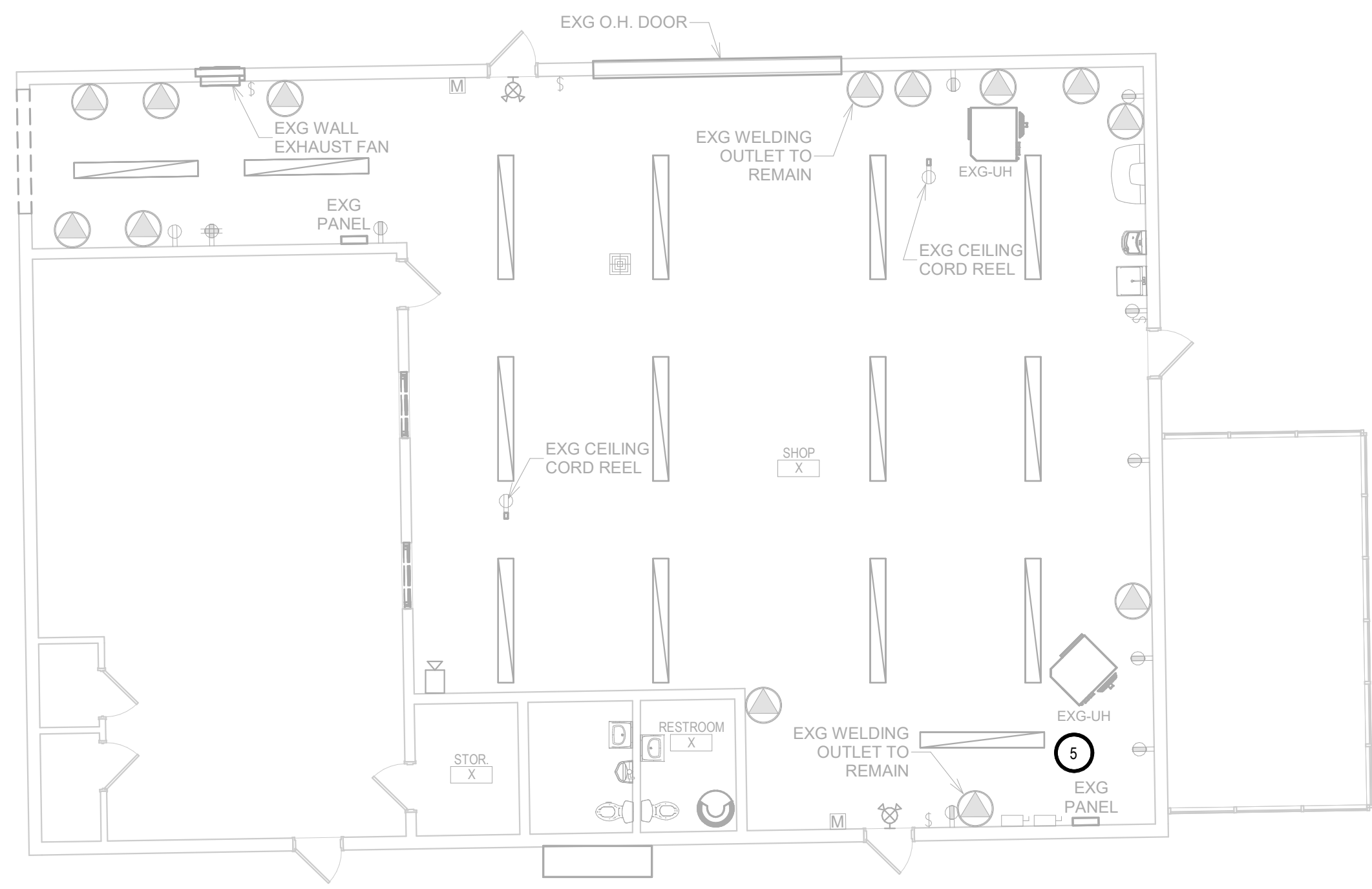
AREA E - MEZZANINE HVAC PLAN  
1/8" = 1'-0"



AREA E - HVAC PLAN  
1/8" = 1'-0"







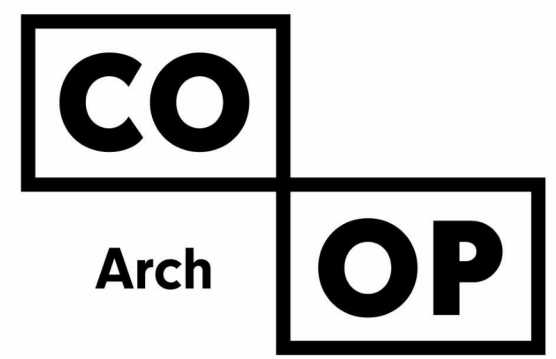
AREA D - ELECTRICAL DEMOLITION PLAN  
1/8" = 1'-0"

KEYNOTES

1. ELECTRICAL CONTRACTOR SHALL SURVEY EXISTING ELECTRICAL RACEWAYS FOR UTILIZATION. IF DEEMED TO REMAIN BY OWNER PROVIDE RELOCATION OF CONDUITS AROUND CONSTRUCTION AREAS AND PROTECTION OF CIRCUITS DURING CONSTRUCTION PHASES.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE REMOVAL AND REINSTALLATION OF SPEAKER AS REQUIRED FOR CONSTRUCTION IN AREA, PROVIDE PROTECTION OF CIRCUIT AND DEVICE DURING CONSTRUCTION PHASES.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE REMOVAL OF 200 AMP DISCONNECT AND UNDERGROUND FEEDER BACK TO MAIN DISTRIBUTION PANEL. VERIFY EXISTING BRANCH CIRCUITS ARE BEING DEMOED UNDER CURRENT CONSTRUCTION. PROVIDE EXTENSION OF ANY SMALL BRANCH CIRCUITS TO PANEL IN NEW ADDITION.
4. PROVIDE REMOVAL OF EXISTING FACP FOR INSTALLATION OF NEW FACP WITH VOICE NOTIFICATION. VERIFY FINAL REQUIREMENTS WITH SIEMENS FIRE ALARM SUPPLIER AND SYSTEMS PLANS.
5. EXISTING AG SHOP ELECTRICAL TO REMAIN IN WORKING ORDER FOR SCHOOL USE DURING CONSTRUCTION. PROVIDE PROTECTION OF EXISTING FEEDER FROM MAIN SWB. SEE SITE PLAN EM101 FOR ADDITIONAL INFORMATION.
6. STAGE PANEL: PROVIDE REMOVAL AND REPLACEMENT OF EXISTING STAGE PANELS. SEE PANEL SCHEDULE AND POWER PLAN FOR ADDITIONAL INFORMATION. PROVIDE EXTENSION OF ALL BRANCH CIRCUITING AS REQUIRED FOR CONNECTION TO NEW PANEL.
7. TEMPORARY GYM HEAT: PROVIDE 120 VOLT, 20 AMP CONNECTION FROM EXG PNL 'L3' OR NEAREST DEDICATED 120 VOLT BRANCH CIRCUIT. PROVIDE 20 AMP RATED TOGGLE DISCONNECT AT HEATER.

ELECTRICAL GENERAL NOTES

- A. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES, INCLUDING ANY NECESSARY DEMOLITION.
- B. REMOVE ELECTRICAL EQUIPMENT IN THE AREAS SHOWN ON THE PLAN. DISCONNECT CIRCUITS AND CONDUITS AND REMOVE TO A POINT OUT OF THE WAY OF THE GENERAL DEMOLITION. MARK ON THE PLAN TO CLEARLY SHOW WHERE THESE CIRCUITS ARE STOPPED. DISCONNECT THE POWER AND LIGHTING CIRCUITS IN THE PANELS TO ASSURE THAT THERE IS NO DANGER FROM ELECTRICAL SHOCK HAZARD PRESENT. DEMOLITION WORK SHALL BE COORDINATED WITH THE OWNER. SHOULD QUESTIONS ARISE REGARDING THE REMOVAL OF EQUIPMENT, CONFER WITH THE OWNER BEFORE SUCH EQUIPMENT IS DEMOLISHED. MATERIALS REMOVED BY DEMOLITION SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE SPECIFICALLY NOTED. MATERIAL THE OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
- C. EQUIPMENT SHOWN ON DRAWINGS AS EXISTING IS BASED ON EXISTING PLANS AND LIMITED FIELD INVESTIGATION. THE FIELD SURVEY WAS CONDUCTED TO VERIFY, AS MUCH AS POSSIBLE, THE ACCURACY OF THE LOCATIONS SHOWN. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THE "EXISTING CONDITIONS" AS SHOWN ON THE DRAWINGS AS THE DEMOLITION WORK PROGRESSES. PERFORM MODIFICATIONS AND ADDITIONS AS NECESSARY TO CORRECT FOR THESE HIDDEN CONDITIONS AND ALLOW FOR THE COMPLETION OF THE NEW WORK.
- D. THE EXISTING BUILDING WILL BE IN USE DURING THIS CONSTRUCTION. SCHEDULE AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTIONS. TEMPORARY SERVICES SHALL BE INSTALLED IF ONE PHASE OF CONSTRUCTION DISRUPTS SERVICE TO ANOTHER AREA OF THE BUILDING OR IF EQUIPMENT HAS TO BE RELOCATED TO ALLOW CONSTRUCTION TO PROGRESS. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER'S SITE REPRESENTATIVE. AFTER SERVICE HAS BEEN RESTORED FOLLOWING AN INTERRUPTION, INSPECT AREAS AFFECTED BY THE INTERRUPTION AND BE RESPONSIBLE FOR RETURNING AUTOMATICALLY CONTROLLED EQUIPMENT TO THE SAME OPERATING CONDITION, WHICH EXISTED PRIOR TO THE INTERRUPTION.
- E. PROVIDE PENETRATIONS TO THE BUILDING STRUCTURE AS REQUIRED FOR INSTALLATION. WHERE EXISTING OR TEMPORARY SYSTEMS ARE BEING DEMOLISHED, WHICH LEAVE OPENINGS IN THE EXISTING BUILDING STRUCTURE, THE BUILDING STRUCTURE SHALL BE PATCHED TO MATCH THE EXISTING CONSTRUCTION AND MAINTAIN THE EXISTING BUILDING FIRE RATINGS.
- F. ALL ELECTRICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NFPA AND NEC CODES, AND THE AUTHORITY HAVING JURISDICTION.



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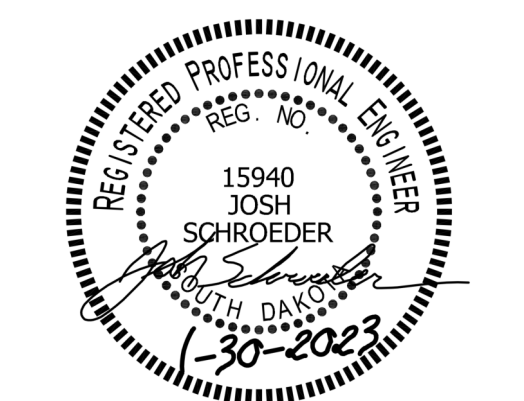
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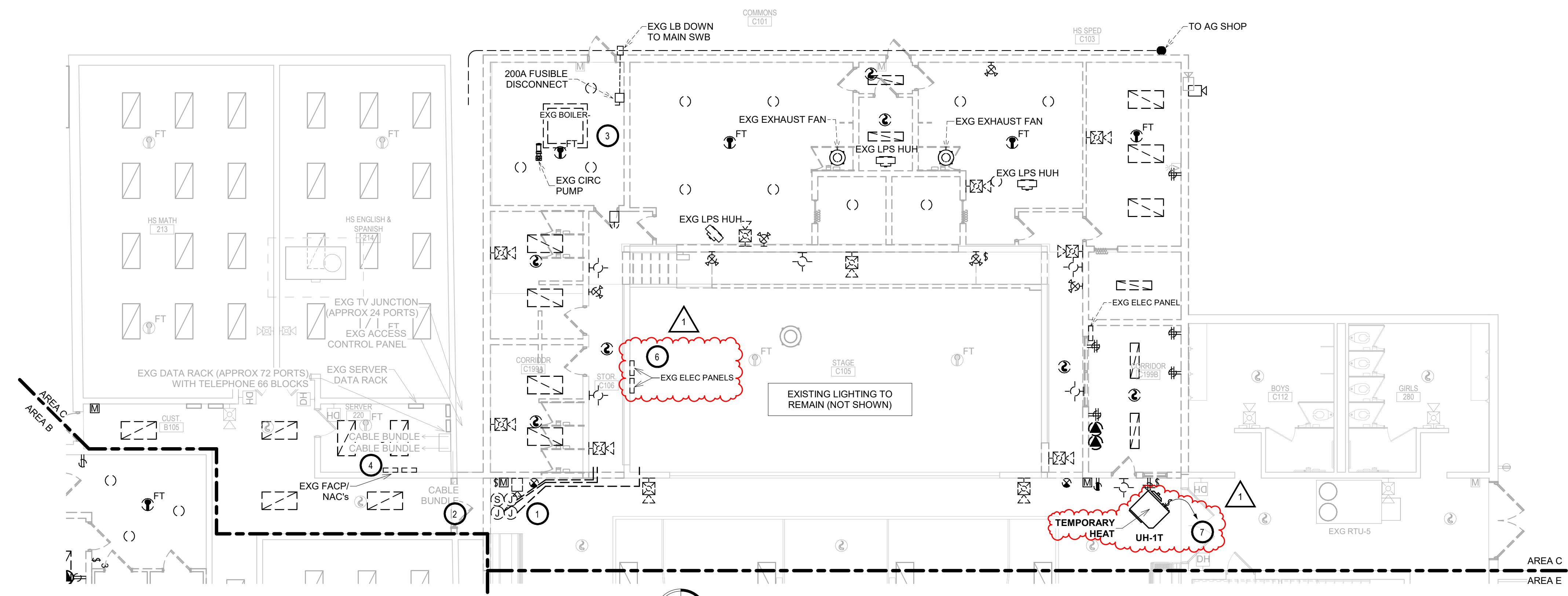
ISSUE:  
1/30/23 CONSTRUCTION DOCUMENTS

REVISION SCHEDULE:

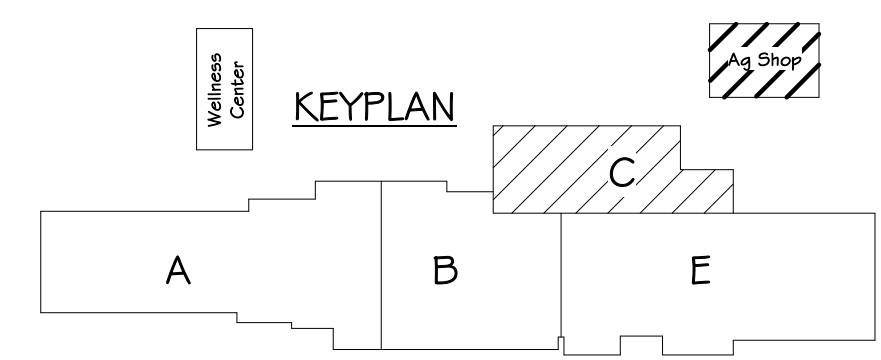
REV. #	REV. DSC.	REV. DATE
1	Addendum ME 1	02-16-23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
AREA C & D - ELECTRICAL  
DEMOLITION PLAN

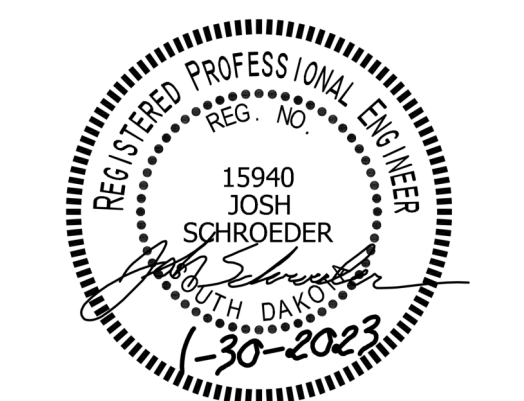


AREA C - ELECTRICAL DEMOLITION PLAN  
1/8" = 1'-0"



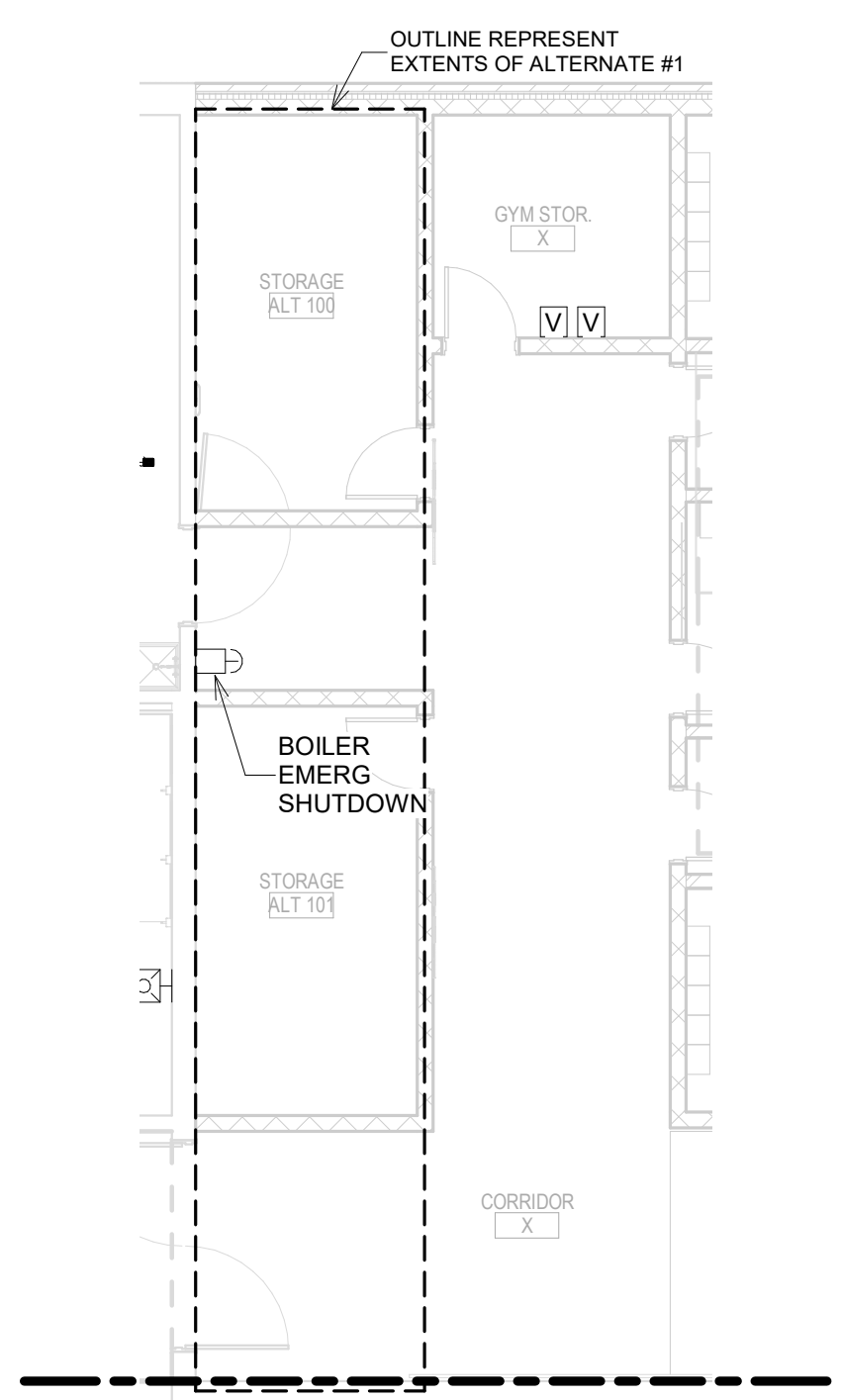
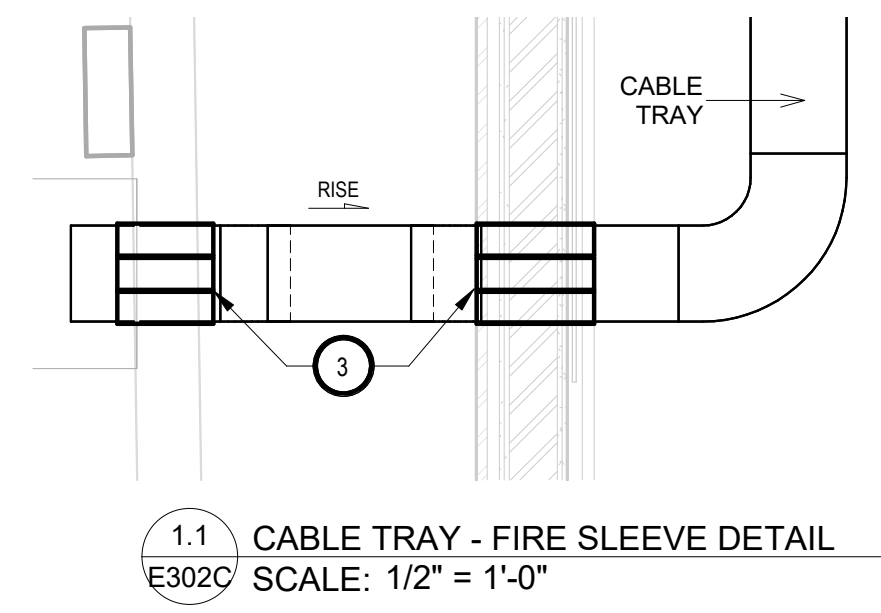
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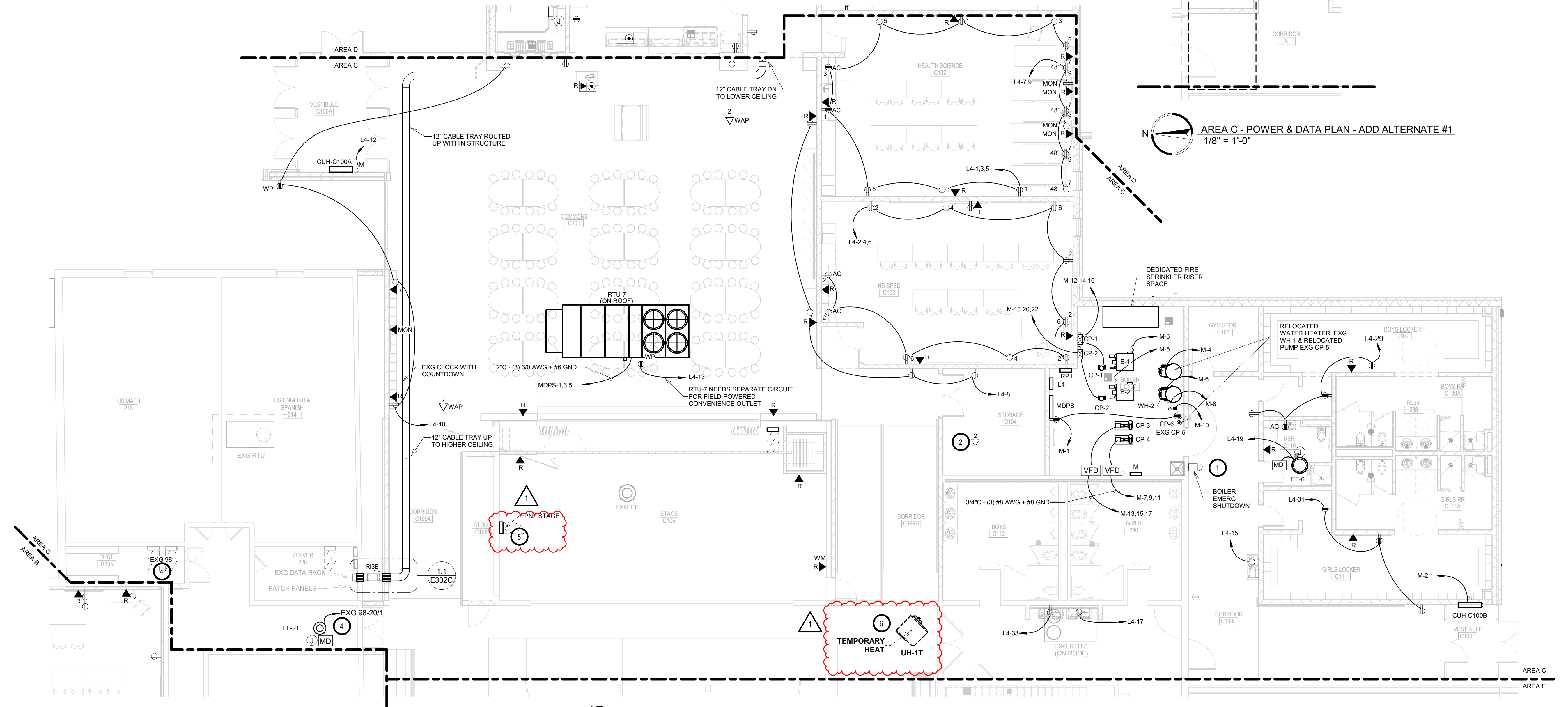


**KEYNOTES**

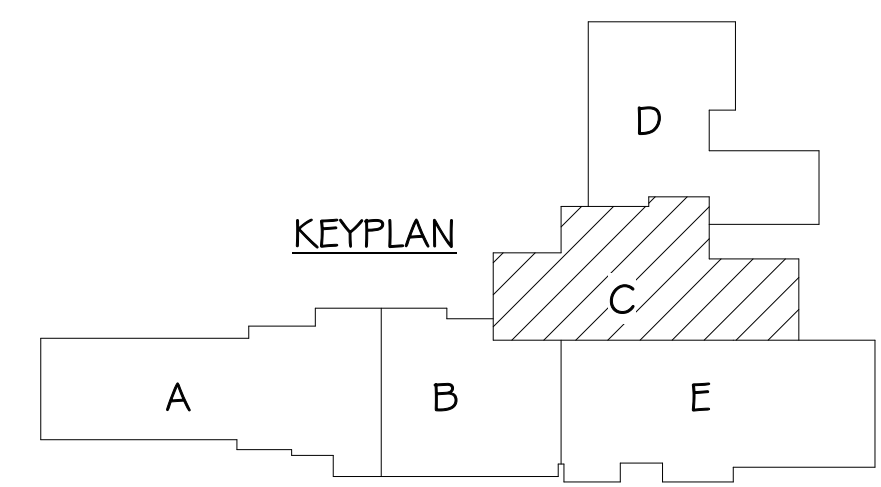
1. INSTALL STOPPER STATION SS22A1ZA-EN WITH TEXT "BOILER SHUTDOWN". SHUT DOWN ALL BOILERS AT THE SAME TIME. SWITCH TO BE MOUNTED AT 60" AFF.
2. PROVIDE 2 DATA CABLES ABOVE CEILING FOR FUTURE USE. PROVIDE 30' OF ADDITIONAL CABLING FOR ROUTING TO FUTURE LOCATION. NEATLY COIL AND TIE ABOVE CEILING SPACE, TERMINATE AND TEST CABLES.
3. FIRE SLEEVE: PROVIDE HILTI FIRE SLEEVES THROUGH FIRE WALLS FOR TELECOMMUNICATION CABLING. PROVIDE TOTAL OF (6) 4 INCH HILTI SPEED SLEEVES MODEL CFS-SL-GA-L.
4. PROVIDE 120 VOLT, 20 AMP CONNECTION TO EF-21 FROM CORRIDOR PANEL. PANEL INFO: SQUARE D, 208/120 VOLT, 400 AMP, NQOD PANELBOARD.
5. PROVIDE RECONNECTION OF ALL BRANCH CIRCUITS FROM EXISTING PANELS SALVAGED DURING CONSTRUCTION. PANEL SHALL BE OPERATIONAL PRIOR TO DEMOLITION OF EXISTING BOILER ROOM AND LOCKER ROOMS. PROVIDE UNI-STRUT STRUCTURE AND 3/4 INCH, GRAY PAINTED, FIRE RATED PLYWOOD FOR MOUNTING OF PANEL AS REQUIRED.
6. ONCE ADDITION IS COMPLETE, TEMPORARY HEATER TO BE REMOVED BY OTHERS. DISCONNECT AND REMOVE CIRCUIT BACK TO PANEL.

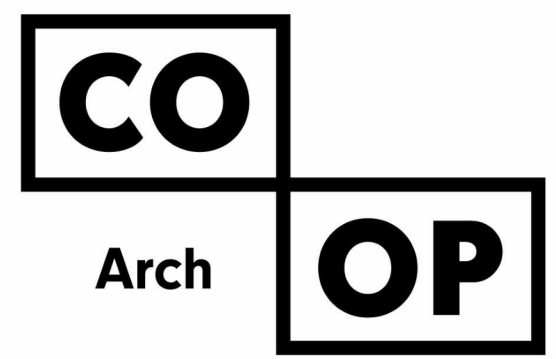


AREA C - POWER & DATA PLAN - ADD ALTERNATE #1  
1/8" = 1'-0"



AREA C - POWER & DATA PLAN  
1/8" = 1'-0"





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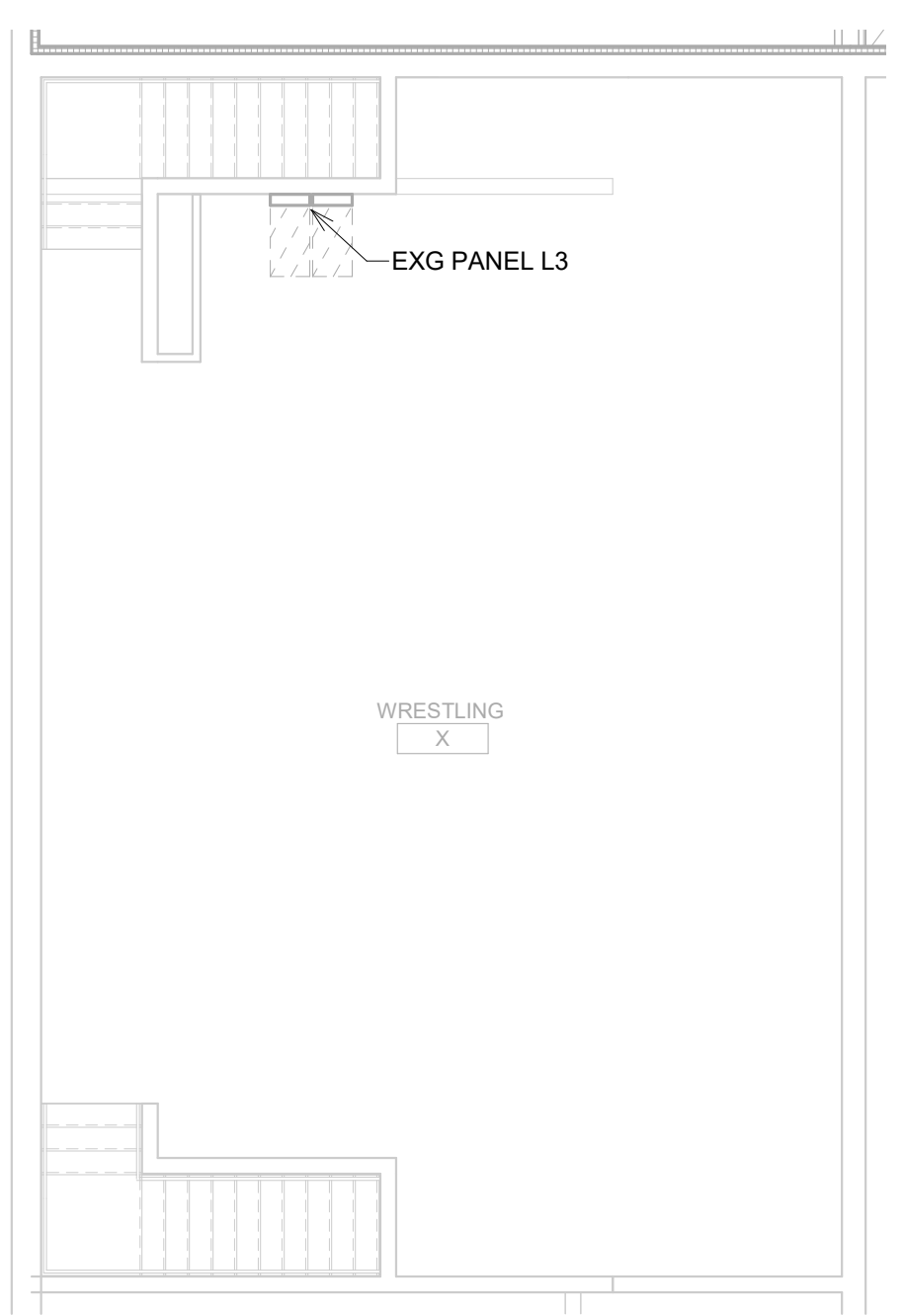
PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
AREA E - POWER & DATA PLAN

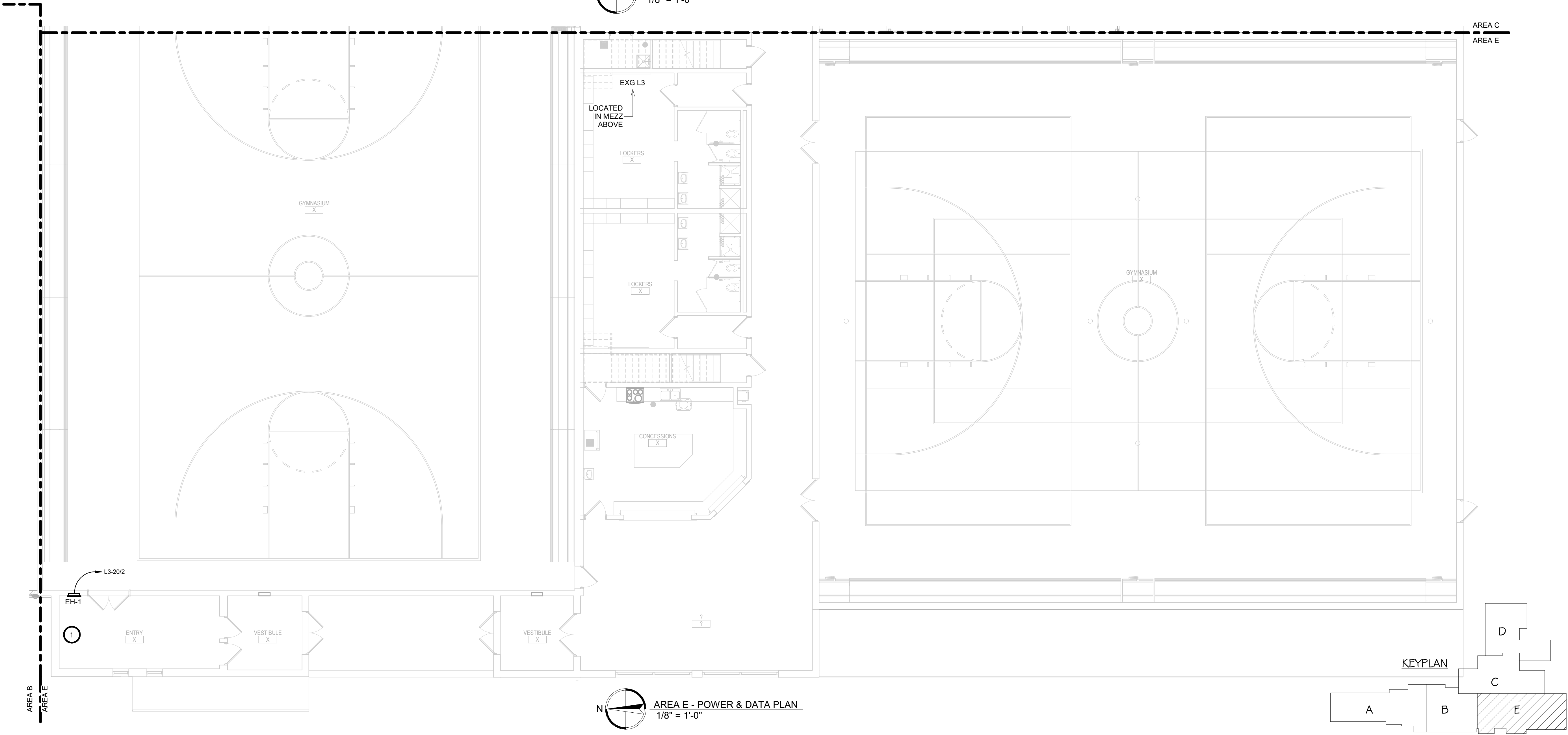
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**KEYNOTES**

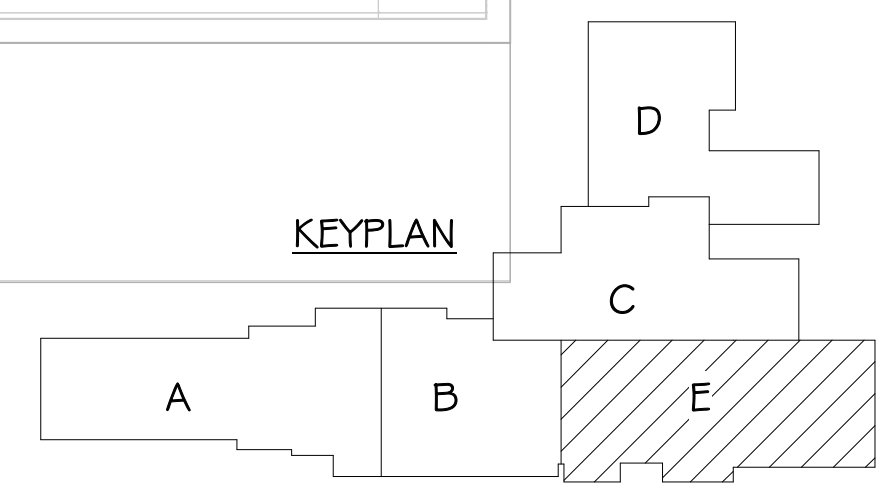
1. TYPICAL FOR EH-1. EC TO PROVIDE & INSTALL ELECTRIC HEATER, USE BERKO FRA4020 WITH A RELAY SO TC CAN CONTROL THE HEAT. PROVIDE NEW 20 AMP, 2 POLE CIRCUIT BREAKER IN EXISTING PANEL 'L3'. WORK TO BE COMPLETED PRIOR TO HEATING SEASON OF 2023/2024.



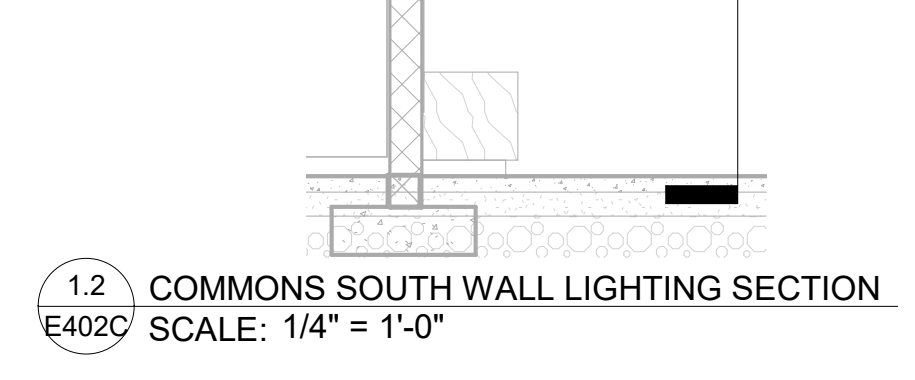
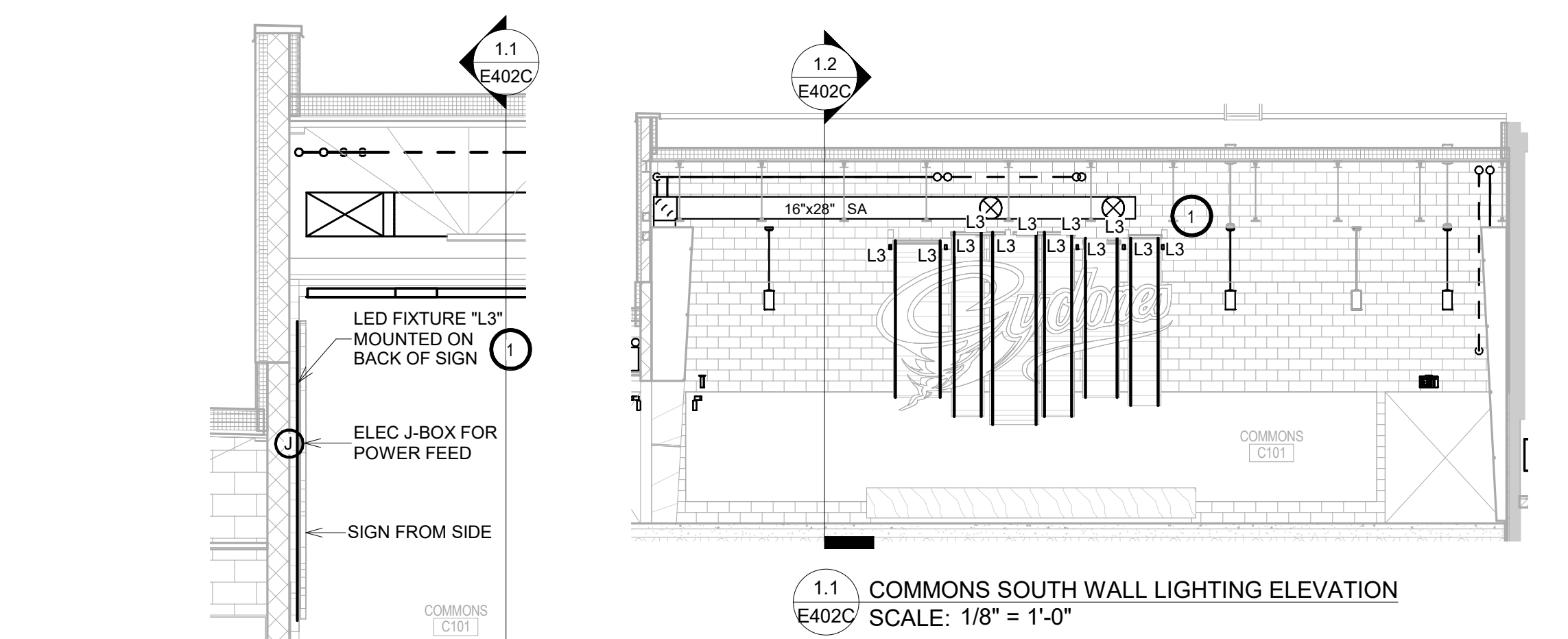
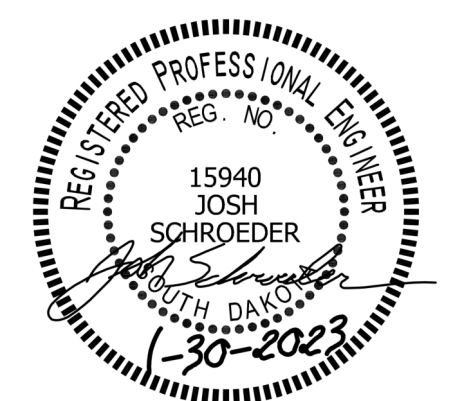
**AREA E - MEZZANINE POWER & DATA PLAN**  
1/8" = 1'-0"



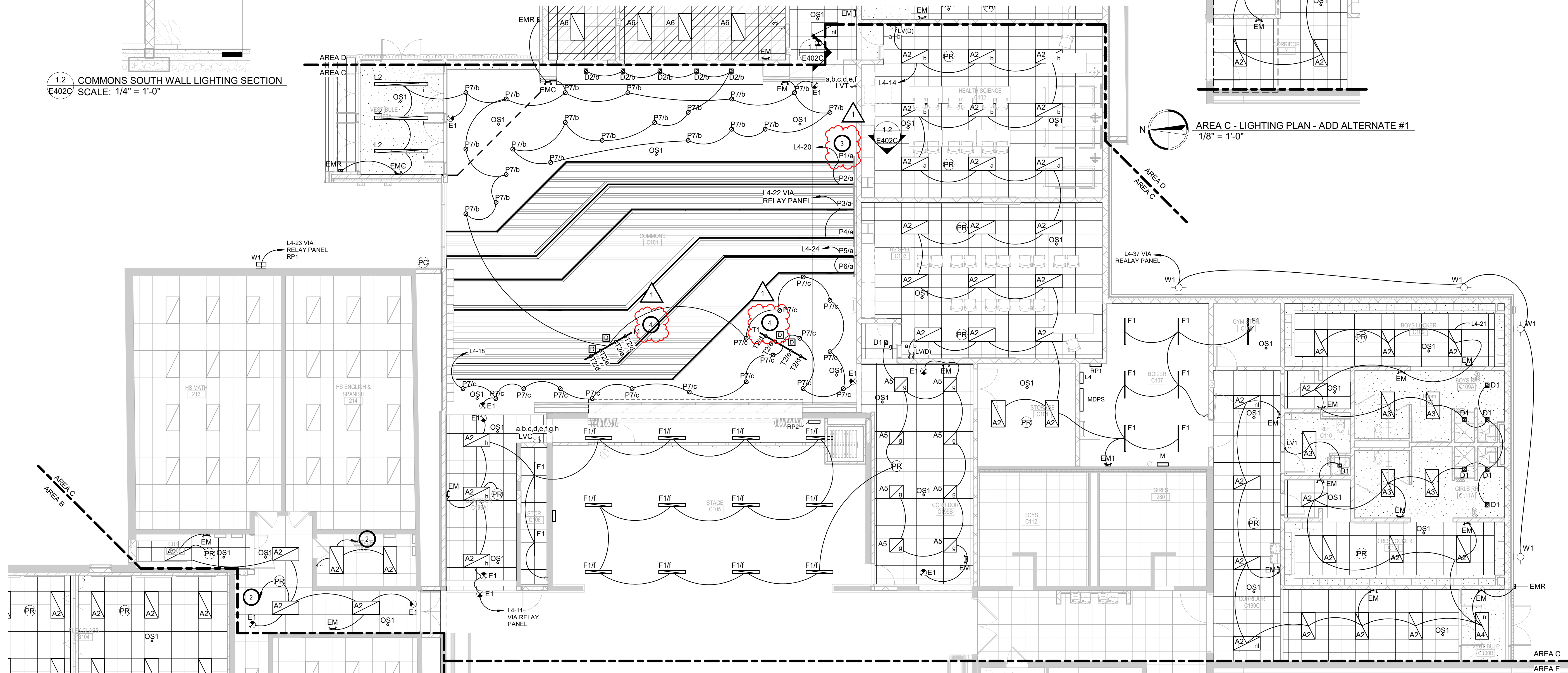
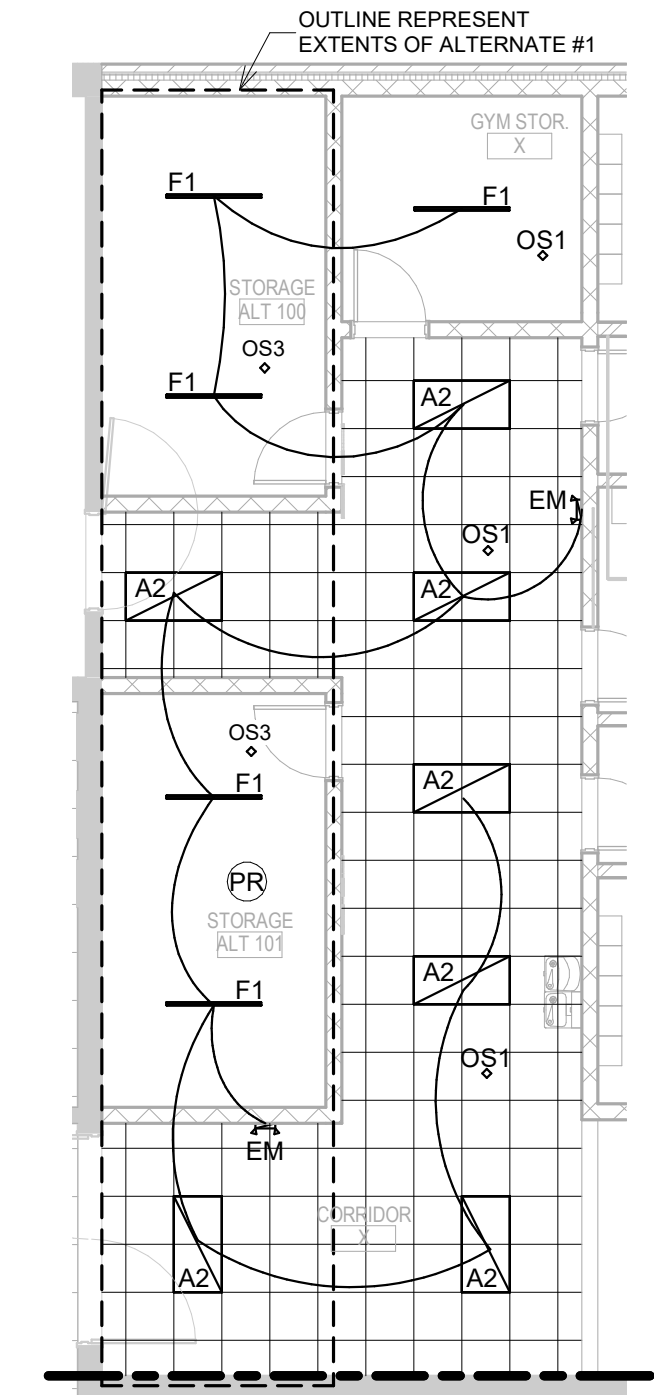
**AREA E - POWER & DATA PLAN**  
1/8" = 1'-0"



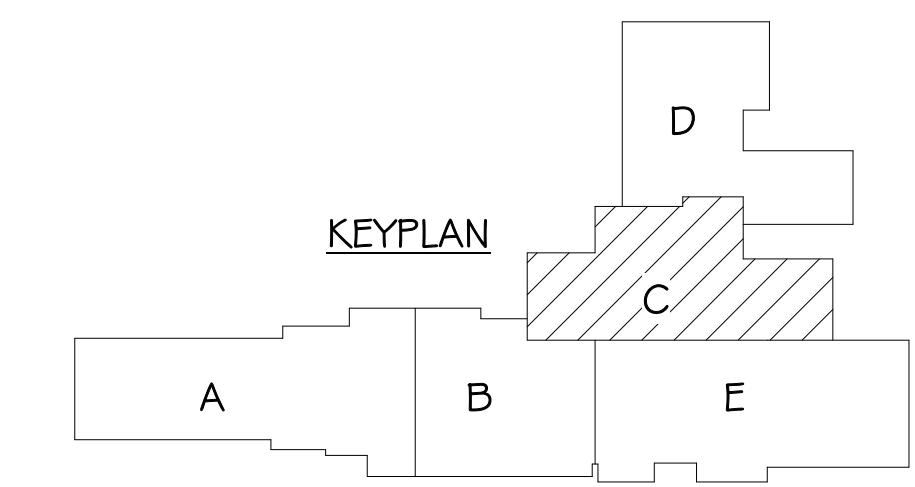
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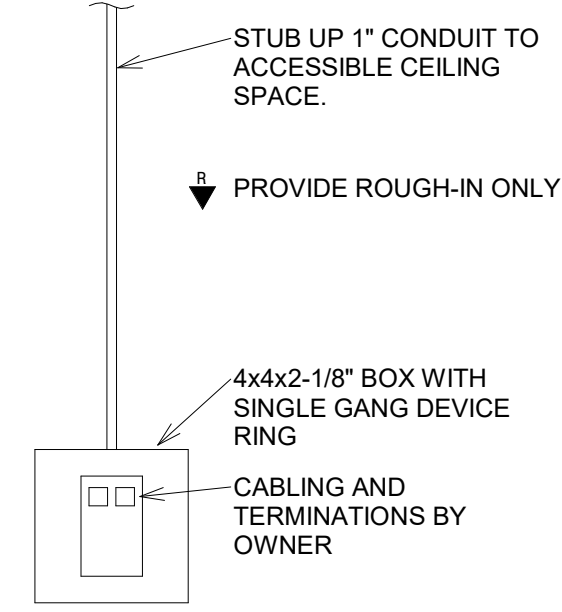


- KEYNOTES**
1. PROVIDE MONTING OF LINEAR LED FIXTURE TYPE 'L3' TO THE REAR OF CYCLONES SIGNAGE. COORDINATE FINAL REQUIREMENTS IN FIELD AND PROVIDE.
  2. PROVIDE BRANCH CIRCUIT CONNECTION TO EXISTING LIGHTING BRANCH CIRCUIT FOR ROOM SALVAGED DURING DEMOLITION. VERIFY EXISTING BRANCH CIRCUIT LOADING IN FIELD AND NOTIFY ENGINEER OF ANY OVERLOAD CONDITIONS.
  3. PROVIDE COORDINATION OF TYPE P1-P6 FIXTURES WITH GENERAL CONTRACTOR AND CEILING SUPPLIER FOR INSTALLATION.
  4. TRACK: DO NOT SUPPORT TRACK LIGHTING FROM CLOUD SYSTEM. PROVIDE PENDANT MOUNTING FROM DECK ABOVE.

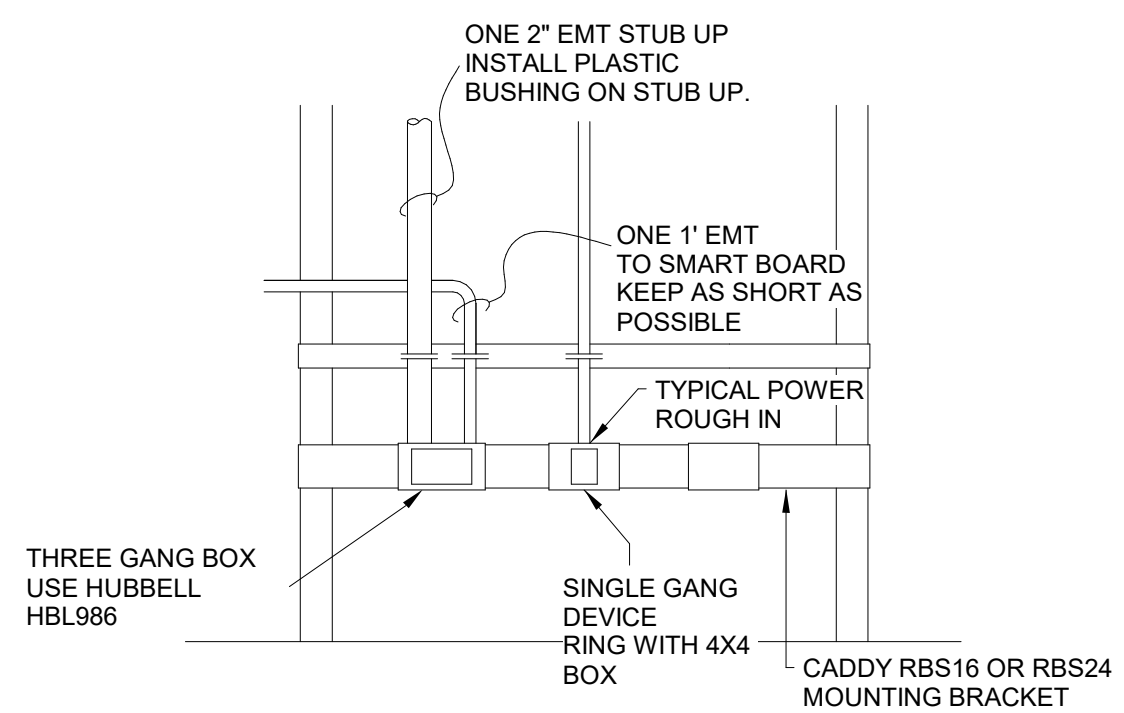


AREA C - LIGHTING PLAN  
1/8" = 1'-0"

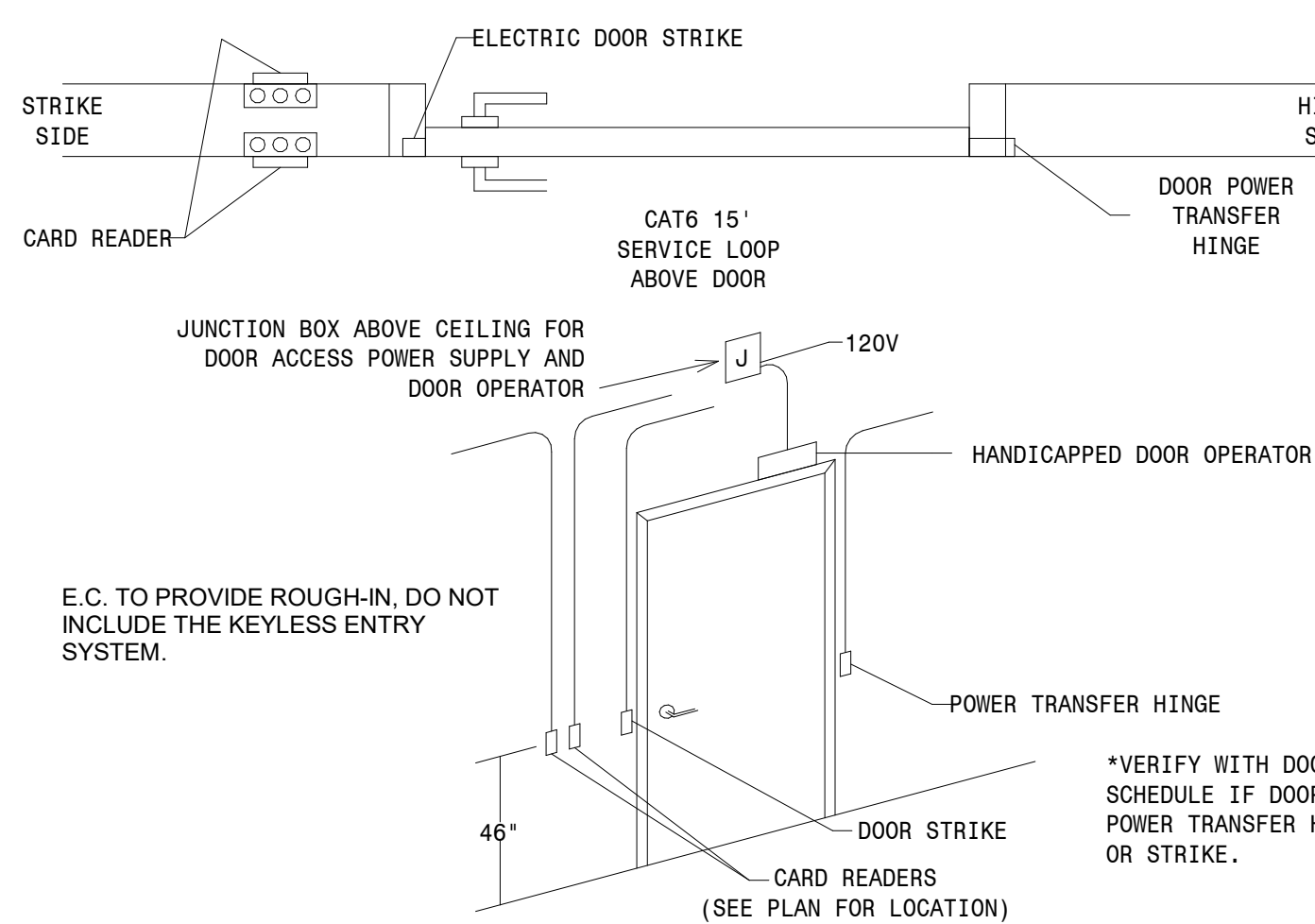




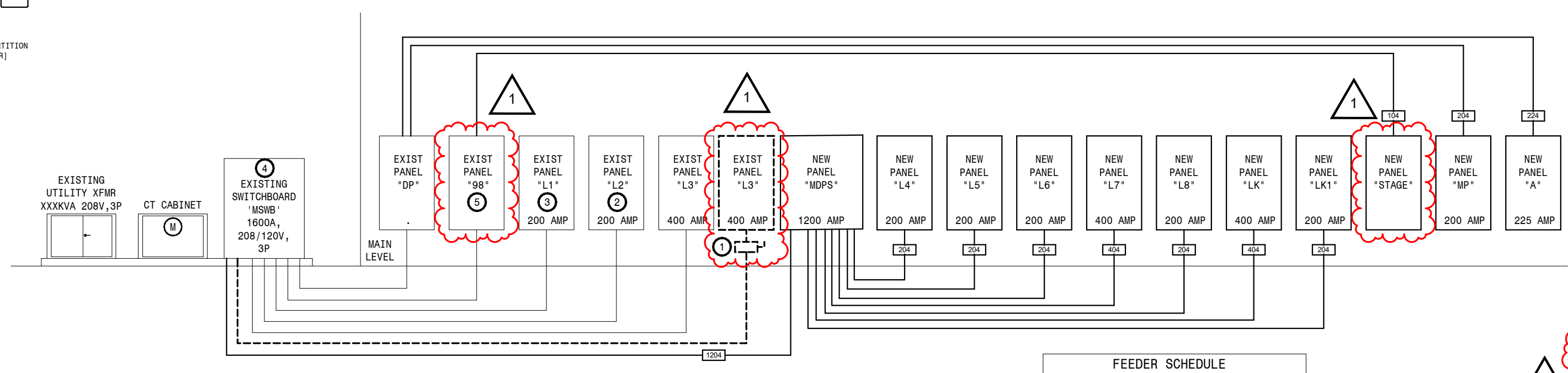
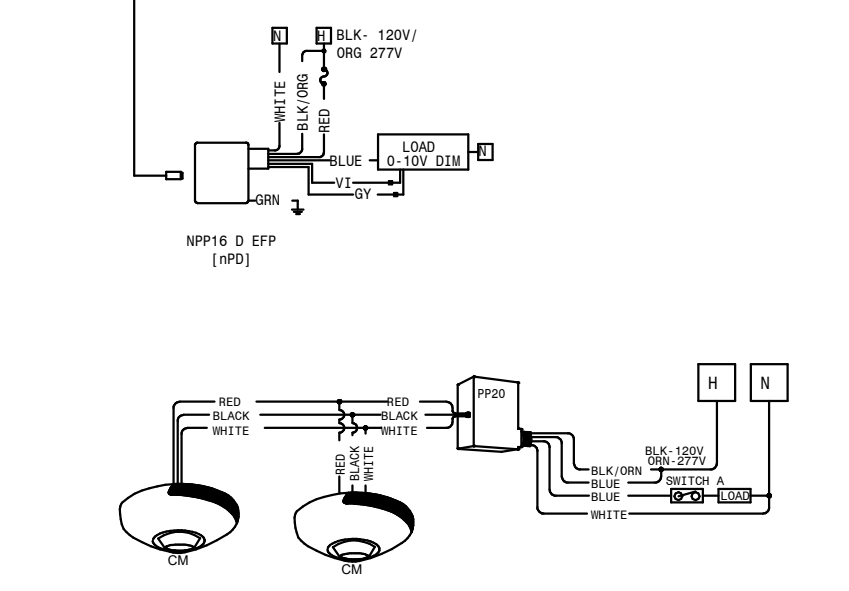
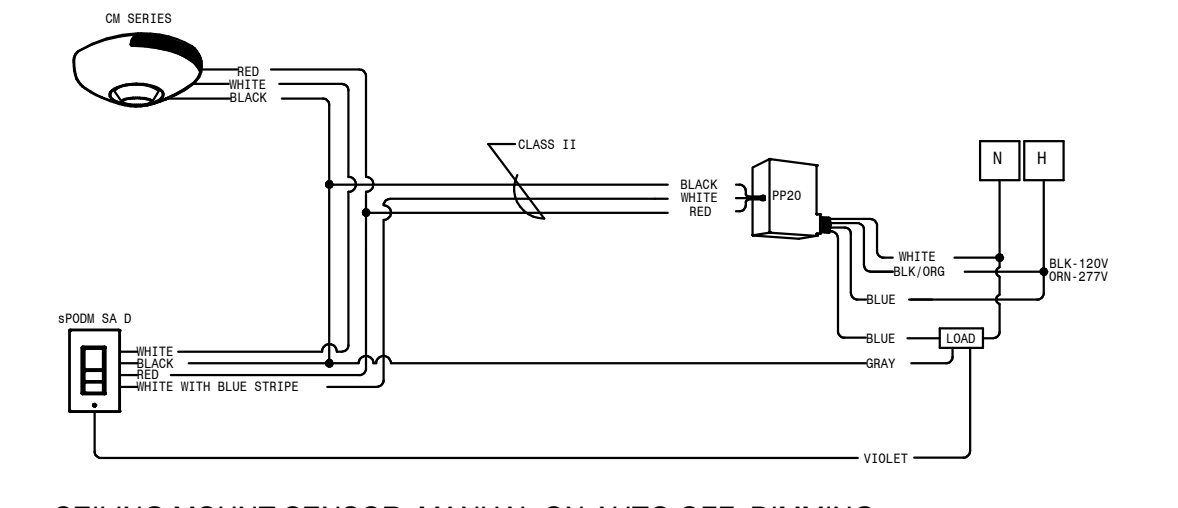
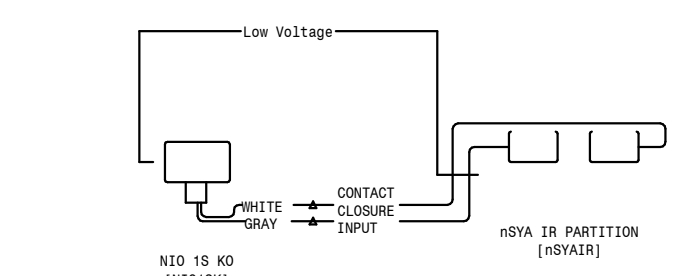
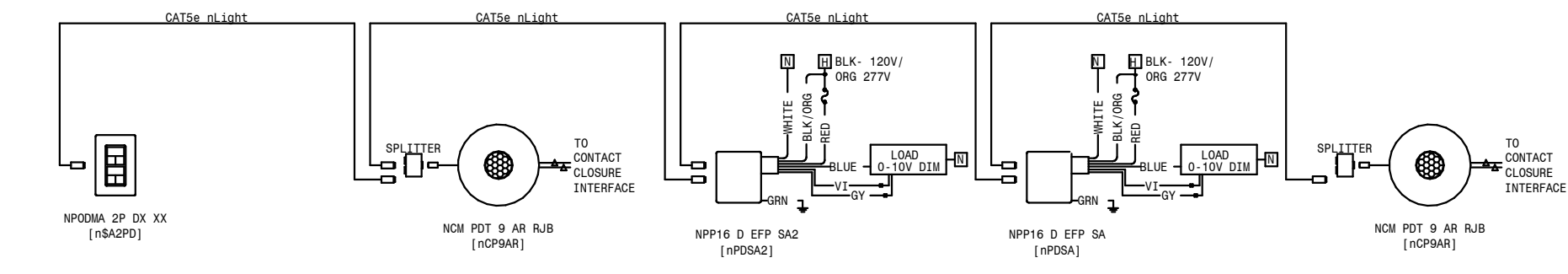
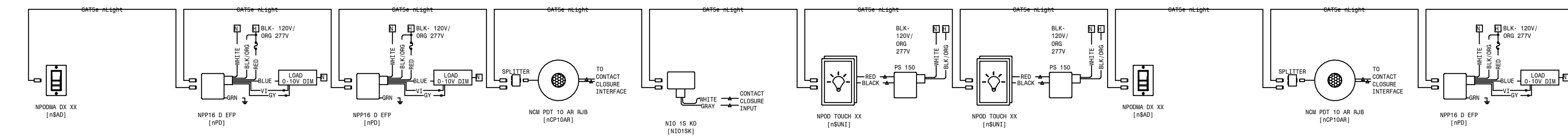
**Typical Data Location Detail**  
No Scale



**Typical T/S Detail**  
NOT TO SCALE



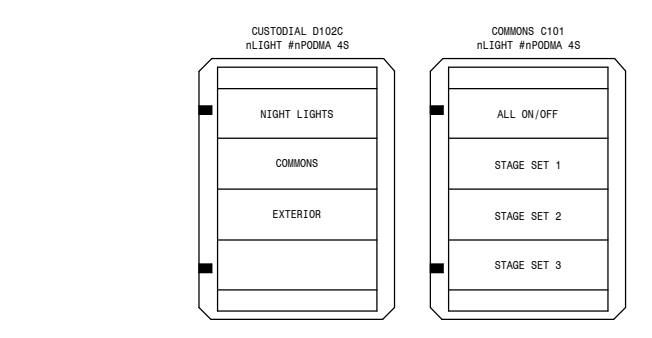
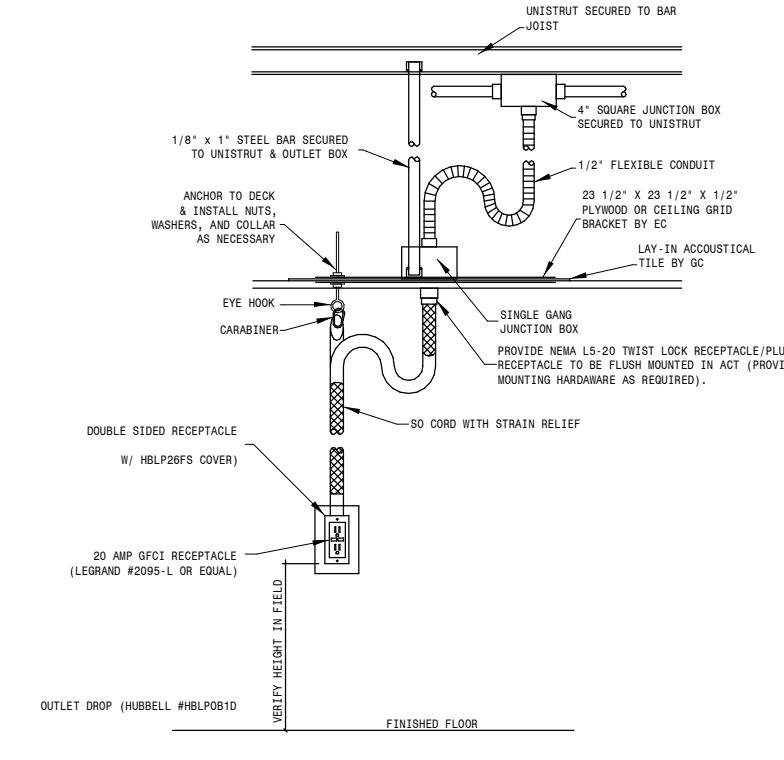
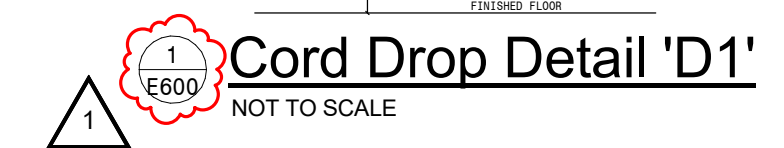
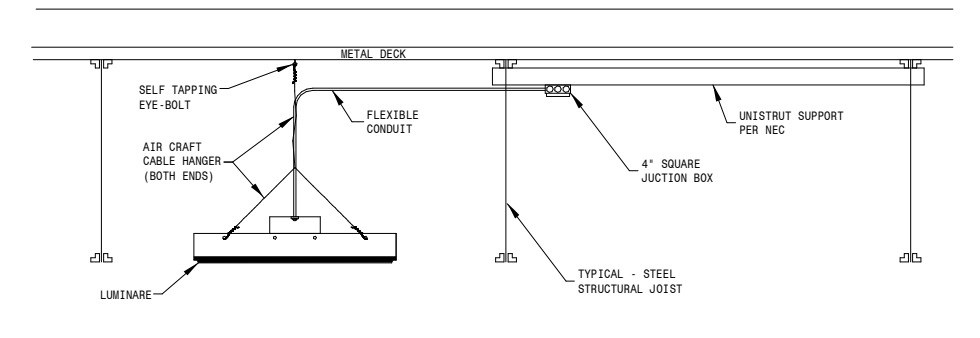
DEVICE	EC PROVIDE
DOOR STRIKE	1/2" CONDUIT FROM STRIKE TO ACCESSIBLE CEILING ABOVE DOOR
CARD READERS	3/4" CONDUIT TO ACCESSIBLE CEILING, 4X4X2 1/8 BOX WITH SINGLE GANG DEVICE RING
DOOR OPERATOR	120V CONNECTION TO OPERATOR, AND EMPTY 1/2" CONDUIT TO ABOVE CEILING FOR SECURITY CONTRACTOR
JUNCTION BOX	120V CIRCUIT TO J-BOX ABOVE DOOR FOR SECURITY/DOOR LOCK POWER SUPPLY
POWER TRANSFER HINGE	1/2" CONDUIT FROM FRAME TO ACCESSIBLE CEILING ABOVE DOOR



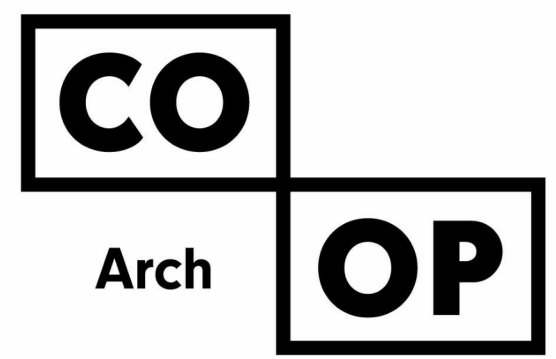
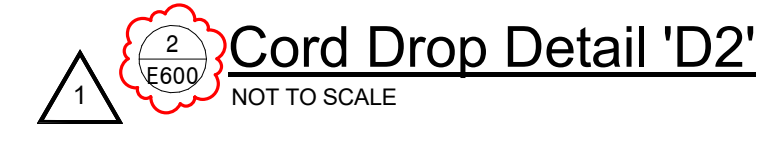
- RISER DIAGRAM NOTES:**
- PROVIDE DEMOLITION AND REMOVAL OF EXISTING 200 AMP DISCONNECT AND FEEDER LOCATED IN AREA C BOILER ROOM.
  - EXISTING PANEL 'L2': PROVIDE (2) NEW 30 AMP, 2 POLE CIRCUIT BREAKERS IN PANEL FOR CONNECTION OF DSC-10, DSC-11. PANEL INFO - SQUARE D SERIES NO, 225 MAX AMP, 208Y/120V, 3 PHASE, 4 WIRE, 10KAIC, CAT#45367625680040001.
  - EXISTING PANEL 'L1': PROVIDE NEW (1) 40 AMP, 2 POLE CIRCUIT BREAKERS, AND (1) 15 AMP SINGLE POLE CIRCUIT BREAKER IN PANEL FOR CONNECTION OF FC-A103 AND CU-A103. PANEL INFO - SQUARE D SERIES NO, 225 MAX AMP, 208Y/120V, 3 PHASE, 4 WIRE, 10KAIC, CAT#12367625680030001.
  - EXISTING MAIN SWD 'MDP': PROVIDE NEW (1) 1200AMP, 3 POLE CIRCUIT BREAKER AND (1) 100 AMP, 3 POLE CIRCUIT BREAKER IN SWB FOR CONNECTION OF PANEL 'MDPS' AND RTU-10. PANEL INFO - SQUARE D GED SERIES 2, 1000 AMP, 208Y/120V, 3 PHASE, 4 WIRE, CAT#36762568-00, PLANT 44.
  - EXISTING PANEL '9B': PROVIDE 100 AMP, 3 POLE CIRCUIT BREAKER IN EXISTING PANEL FOR CONNECTION OF NEW STAGE PANEL. PANEL INFO: SQUARE D, NODD PANELBOARD, 400 AMP, 208Y/120V, 3 PHASE, 4 WIRE, PERU PLANT F.G. 12-1064792P-001.

**FEEDER SCHEDULE**

FEEDER TAG	AMPACITY	CONDUIT AND THIN WIRE (75 DEG C USE)
10A	100	1-1/2" C - 4 #10 & 1 #6 GND
10B	100	2" C - 4 #10 & 1 #6 GND
20A	200	2-1/2" C - 4 #10 & 1 #6 GND
20B	200	2-1/2" C - 4 #10 & 1 #6 GND
40A	400	4" C - 4 #10 & 1 #6 GND
100A	1000	4" C - 3-1/2" C - 4 #10 & 1 #6 GND



- NOTES:**
- PROVIDE ENGRAVED BUTTONS AS INDICATED, LABELS WILL NOT BE ACCEPTED.
  - "ALL ON/OFF" SHALL TURN ON ALL LIGHTING COMMONS C101, OFF SHALL TURN OFF THE SAME LIGHT FIXTURES EXCEPT NIGHT LIGHTING CIRCUIT (NL) FOR ALL AREAS.
  - "NIGHT LIGHTS" SHALL CONTROL ALL CORRIDOR NIGHT LIGHTS INCLUDING MAIN ENTRY FIXTURES.
  - "COMMONS" SHALL TURN ON/OFF ALL LIGHT FIXTURE IN COMMONS EXCEPT TRACK LIGHTING.
  - "EXTERIOR" SHALL CONTROL ALL EXTERIOR BUILDING LIGHT FIXTURES.
  - "STAGE SET 1" PROGRAM TYPICAL STAGE LIGHTING FOR FLOODS ONLY.
  - "STAGE SET 2" PROGRAM TYPICAL STAGE LIGHTING FOR FLOODS ONLY AND SPOT LIGHTS ON/OFF WITH SET DIMMING POINTS.
  - "STAGE SET 3" PROGRAM TYPICAL STAGE LIGHTING PER OWNER REQUEST.



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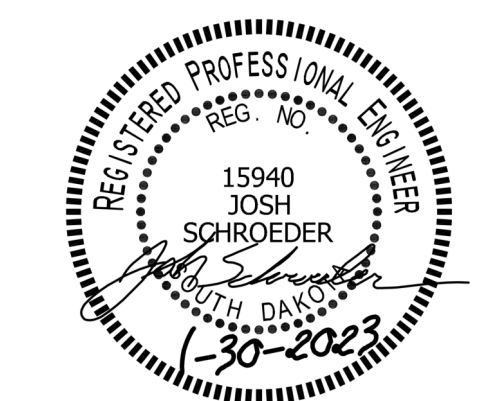
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REVISION SCHEDULE:

REV. #	REV. DSC.	REV. DATE
1	Addendum ME 1	02-16-23

PROJECT:  
WILLOW LAKE SCHOOL ADDITION  
WILLOW LAKESCHOOL DISTRICT  
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:  
ELECTRICAL DETAILS

**E600**



PANEL 'A'
VOLTAGE: 208/120, 3P, 4W
BUS RATING: 225 AMP
ENCL. TYPE: NEMA 1
LOCATION: WRK RM
TYPE: MCB 200A
AIC RATING: 22,000
MOUNTING: SURFACE
FED FROM: EXST PNL 'DP'

PANEL 'M'
VOLTAGE: 208/120, 3P, 4W
BUS RATING: 225 AMP
ENCL. TYPE: NEMA 1
LOCATION: BOILER RM
TYPE: MCB
AIC RATING: 22,000
MOUNTING: SURFACE
FED FROM: MDPS

LOAD CALCULATIONS
TYPE VA / PHASE CONN. LOAD DEMAND DIVERSIFIED LOAD
LIGHTING 0 0 0 0 1.00 0
MOTORS 7392 7392 7392 22176 0.90 19958
HVAC 450 1700 1450 3600 0.75 2700
KITCHEN EQUIP. 0 0 0 0 0.65 0
RECEPTACLES 400 0 0 400 0.60 240
TOTAL AMPS: 64 TOTAL VA: 22898

LOAD CALCULATIONS
TYPE VA / PHASE CONN. LOAD DEMAND DIVERSIFIED LOAD
LIGHTING 2400 3600 6600 12600 1.00 12600
MOTORS 6000 4800 2400 13200 0.90 11880
HVAC 0 0 0 0 0.75 0
KITCHEN EQUIP. 0 0 0 0 0.65 0
RECEPTACLES 5700 5900 6550 18150 0.60 10890
TOTAL AMPS: TBD BY EC TOTAL VA: TBD BY EC

LUMINAIRE SCHEDULE

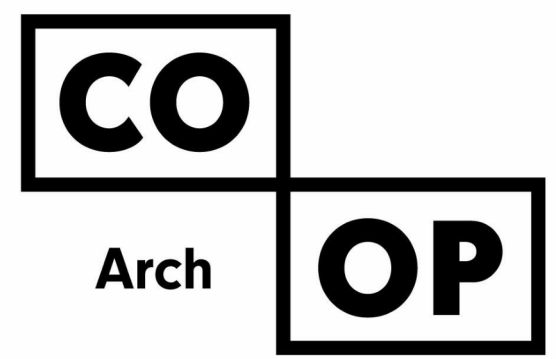
Table with columns: TYPE, MANUFACTURERS, CATALOG SERIES, FIXTURE DESCRIPTION, MOUNTING, VOLTAGE, LED DATA (LUMENS, CCT, CRI), DRIVER DATA (DIMMING/CNTRL, INPUT WATTS), NOTES. Includes items A1 through W2.

PANEL 'MP'
VOLTAGE: 208/120, 3P, 4W
BUS RATING: 225 AMP
ENCL. TYPE: NEMA 1
LOCATION: MUSIC
TYPE: MCB 200A
AIC RATING: 22,000
MOUNTING: RECESSED
FED FROM: EXST PNL 'DP'

Table with columns: CRKT BRKR, AMPS, POLE, LIGHTING, MOTORS, HVAC, KITCHEN, RECP, DESCRIPTION, PH, DESCRIPTION, RECP, KITCHEN, HVAC, MOTORS, LIGHTING, AMPS, POLE, #. Includes items 1 through 41.

LOAD CALCULATIONS
TYPE VA / PHASE CONN. LOAD DEMAND DIVERSIFIED LOAD
LIGHTING 0 0 0 0 1.00 0
MOTORS 0 0 0 0 0.90 0
HVAC 3000 3000 0 6000 0.75 4500
KITCHEN EQUIP. 0 0 0 0 0.65 0
RECEPTACLES 5400 5600 3400 14400 0.60 8640
TOTAL AMPS: TBD BY EC TOTAL VA: TBD BY EC

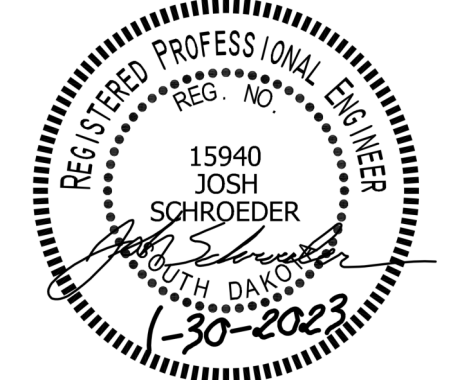
NOTES:
1. PROVIDE CONNECTION TO PNL 'DP' VIA EXIST 200/3 CIRCUIT BREAKER.
2. PROVIDE NEW CIRCUIT BREAKER IN PNL 'DP' FOR CONNECTION
3. BREAKERS NOTED WITH \* SHALL BE GFCI
4. PROVIDE 1/2 HOUR OF CIRCUIT TRACING FOR IDENTIFICATION OF EXIST BRANCH CIRCUITS NOTED.
5. BREAKERS NOTED WITH + SHALL BE BREAKER LOCKED ON.



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SE PROJECT NO: 220900771



ISSUE:
1/30/23 CONSTRUCTION DOCUMENTS
REVISION SCHEDULE:
REV. # REV. DSC. REV. DATE
1 Addendum ME 1 02-16-23

PROJECT:
WILLOW LAKE SCHOOL ADDITION
WILLOW LAKESCHOOL DISTRICT
WILLOW LAKE, SOUTH DAKOTA

SHEET TITLE:
ELECTRICAL SCHEDULES -
CONTINUED 2

E702



16/ FEB / 2023

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**ADDENDUM NO. 2**  
**Feb 16, 2023**

Project: Willow Lake School Addition

Section 114000 Food Service Equipment

The following modifications shall become a part of the Contract Documents.  
Bidders are to acknowledge this addendum on the bid form.

**APPROVED SUBSTITUTIONS:**

**SECTION 3.05 ITEMIZED EQUIPMENT**

ITEM 28.1 - Dispoer  
Salvajor Model 200-SA-3-ARSSLD  
208 volts 3 phase

ITEM 45 – Disposer  
Salvajor Model 200-CA-18-ARSSLD  
208 volts 3 phase

**REVISIONS TO SPECIFICATIONS:**

**SECTION 3.05 ITEMIZED EQUIPMENT**

ITEM 54 – Mop Sink  
Replace with Model 9-OP-48  
Splash shield – replace with model K-290R, 16” splash on right & back.  
Furnished with service faucet, model K-240

**END OF ADDENDUM**