

# Addendum 02

DOCUMENT 00 91 00

**DATE:** May 6, 2026

**PROJECT:** North Union Schools Art Room Expansion Addition  
401 N Franklin Street  
Richwood, OH 43344

**PROJECT #:** 25091.00

**OWNER:** North Union Local Schools  
Contact: Justin Ufferman  
12920 OH-739  
Richwood, OH 43344

**ARCHITECT:** Garmann Miller  
38 South Lincoln Drive  
P.O. Box 71  
Minster, Ohio 45865

**TO:** Prospective Bidders

This addendum form is a part of the Contract Documents and modifies the Construction Documents dated April 16, 2026 with amendments and additions noted below.

Acknowledge receipt of this Addendum on the Bid Form. Failure to do so may disqualify the Bidder.

This addendum consists of 2 pages, 7 specification sections, 4 re-issued drawing sheets.

## FOR INFORMATION ONLY

The **bid date** has been extended to **Thursday, May 14<sup>th</sup> at 2 PM.**

The **substantial completion** date for the addition has been extended to **Tuesday, December 1<sup>st</sup>**. Substantial completion date for the renovation remains as noted in the project documents.

## CHANGES TO THE PROJECT MANUAL

1. Section 00 21 13 – Instruction to Bidders ITB-3, Item C Project, Paragraph 3 Procurement Schedule – Deadline for Submission of Bids per Section G.5 change date to Thursday, May 14<sup>th</sup>, 2026, time 2:00 PM.



2. Section 04 20 00 – Unit Masonry, Paragraph 2.02,B,3, Add Bowerston Shale as basis of design manufacturer.
3. Section 07 21 13 – Board Insulation, Paragraph 2.02,B,3, Options for cavity wall board insulation system clarified. Fluid applied air barrier products for use with XPS board products other than Cavitymate Ultra have been added.
4. Section 07 22 16 – Roof Board Insulation, Paragraph 3.05,A, Revised to mechanically attach all layers of insulation to deck.
5. Section 07 54 19 – PVC Thermoplastic Single-Ply Roofing, Paragraph 2.02,B,6, Added Versico VersiFlex PVC Membrane as an approved product.
6. Section 07 71 00 – Roof Specialties:
  - a. Paragraph 2.02, L, removed the word “welded” from coping accessories description. Coping corners do not need to be welded, but they still need to be factory fabricated and sealed water tight.
  - b. Paragraph 2.03,B, Material for scuppers changed to be minimum 0.050 inch aluminum, welded watertight.
7. Section 08 71 00 – Door Hardware
  - a. Add specification section to documents.

### **CHANGES TO THE DRAWINGS**

1. Drawing Sheet A1.1 First Floor Demo Plan and Plan – Unit E
  - a. Detail 1 First Floor Demolition Plan – Unit E: Add scope of demolition of existing casework.
2. Drawing Sheet A5.1 Demolition Roof Plan and Roof Plan:
  - a. Detail 2 Roof Plan: Remove keynote calling for new membrane roof on existing kiln room.
  - b. Detail 4 Roof Detail: Change keynote 07 54 19.F to indicate existing built-up roofing system.
3. Drawing Sheet A6.1 Door Schedule and Door and Window Types and Frames
  - a. Door Schedule: Adjust size description of E101b.
  - b. Detail 7 Window Types: Add detail call outs to W2.
  - c. Details 13, 14 and 15: Add details for window replacement.
4. Drawing Sheet E5.1 One-Line Diagram, Panel Schedule, and Luminaire Schedule:
  - a. Luminaire schedule updated with additional manufacturer information.

### **ATTACHMENTS**

The following attachments are included and are part of this addendum:

Specification Sections: 04 20 00, 07 21 13, 07 22 16, 07 54,19, 07 71 00, 08 71 00

Drawing Sheets: A1.1, A5.1, A6.1, E5.1

### **END OF ADDENDUM**



**SECTION 04 20 00  
UNIT MASONRY**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Concrete block.
- B. Clay facing brick.

**1.02 RELATED REQUIREMENTS**

- A. Section 04 05 13 - Masonry Mortaring
- B. Section 04 05 16 - Masonry Grouting
- C. Section 04 05 19 - Masonry Anchorage & Reinforcing
- D. Section 04 05 23 - Masonry Accessories
- E. Section 05 50 00 - Metal Fabrications: Steel lintels.
- F. Section 06 10 00 - Rough Carpentry: Nailing strips built into masonry.
- G. Section 07 21 13 - Board Insulation: Insulation for cavity spaces.
- H. Section 07 84 00 - Firestopping: Firestopping at penetrations of fire-rated masonry and at top of fire-rated walls.
- I. Section 07 92 00 - Joint Sealants: Sealing control and expansion joints.

**1.03 REFERENCE STANDARDS**

- A. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units; 2021.
- B. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2017.
- C. ASTM C140/C140M - Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units; 2026.
- D. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale); 2021.
- E. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2019a, with Editorial Revision.
- F. ASTM C1148 - Standard Test Method for Measuring the Drying Shrinkage of Masonry Mortar; 1992a (Reapproved 2014).
- G. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2022, with Errata (2024).

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene a preinstallation meeting two weeks before starting work of this section; require attendance by all relevant installers, architect and structural engineer.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for specified items.
- C. Shop Drawings: Include bar schedules, shapes of bent bars, spacing of bars, and location of splices.
  - 1. Provide elevations of shear wall reinforcing.
- D. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.

## 1.06 QUALITY ASSURANCE

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.
- B. Protection of Masonry: During erection, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
  - 1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
  - 2. Where one wythe of multi wythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe and hold cover in place

## 1.07 DELIVERY, STORAGE, AND HANDLING

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

## 1.08 ENVIRONMENTAL REQUIREMENTS

- A. Maintain materials and surrounding air temperature to minimum 40 degrees F prior to, during, and 48 hours after completion of masonry work.
- B. Hot Weather Requirements: Comply with IMIAWC (HW).

## PART 2 PRODUCTS

### 2.01 CONCRETE MASONRY UNITS

- A. Manufacturer: The concrete block manufacturer shall be a member of the National Concrete Masonry Association.
  - 1. Obtain masonry units from one manufacturer to provide uniform texture and color for each kind required for each continuous area and visually related area.
  - 2. All concrete masonry units in fire rated partitions shall be equal to UL Classification D-2 (2 hour)
- B. Concrete Block: Comply with referenced standards and as follows:
  - 1. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depths as indicated on drawings for specific locations.
  - 2. Special Shapes: Provide non-standard blocks configured for corners, lintels, control joint edges, and other detailed conditions.
    - a. Use bullnose units at all exposed corners, window jambs and sills.
    - b. Use special 45 degree corner units.
  - 3. Load-Bearing Units: ASTM C 90, normal weight.
    - a. Normal weight, density 125 pcf or greater
    - b. Hollow block, as indicated.
    - c. Type II - Nonmoisture controlled
    - d. Compressive Strength: 2600 psi. minimum average net area compressive strength.
    - e. Exposed Faces: Manufacturer's standard color and texture where indicated.
  - 4. Non-Loadbearing Units: ASTM C 90, normal weight
    - a. Normal weight, density 125 pcf or greater
    - b. Both hollow and solid block, as indicated.
    - c. Compressive Strength: 2600 psi. minimum average net area compressive strength.
    - d. Exposed faces: Manufacturer's standard color and texture.

### 2.02 BRICK UNITS

- A. ~~Manufacturers:~~
- B. Facing Brick: ASTM C216, Type FBS Smooth, Grade SW.

1. Efflorescence: ASTM C67, "non effloresced"
  2. Special shapes: Molded units as required by conditions indicated, unless standard units can be sawn to produce equivalent effect.
  3. **Basis of Design: Bowerston Shale Company**
    - a. **Size: Modular - 3 5/8" x 2 1/4" x 7 5/8"****Texture: Wire cut**
    - b. **Texture: Wire cut**
    - c. **Color: As selected by Garmann/Miller Associates Inc., to match existing brick color.**
- C. Substitutions: See section 01 60 00-Product Requirements.

## **2.03 MORTAR AND GROUT MATERIALS**

- A. Masonry Mortaring: Refer to Section 04 05 13
- B. Masonry Grouting: Refer to Section 04 05 16

## **2.04 MORTAR AND GROUT MIXING**

- A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

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

### **3.02 PREPARATION**

- A. Direct and coordinate placement of metal anchors supplied for installation under other sections.
- B. Clean reinforcement of loose rust
- C. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

### **3.03 COLD AND HOT WEATHER REQUIREMENTS**

- A. Cold Weather Construction: Comply with whichever is the more stringent:
  1. The cold weather construction provisions of TMS 602/ACI 530.1/ASCE 6, Article 1.8 C, shall be implemented when the ambient temperature falls below 40 degrees F (4 degrees C)
  2. Maintain materials and surrounding air temperature to minimum 40 degrees F prior to, during, and 48 hours after completion of masonry work.
  3. Frozen Materials and Work:
    - a. Do not use frozen materials mixed or coated with ice or frost.
    - b. Do not build on frozen work.
    - c. Remove and replace masonry work damaged by frost or freezing.
- B. Hot Weather Construction: Comply with whichever is the more stringent:
  1. Hot Weather Construction: The cold weather construction provisions of TMS 602/ACI 530.1/ASCE 6, Article 1.8 C, shall be implemented when the ambient temperature exceeds 100 degrees F (37.8 degrees C), or 90 degrees F (32.2 degrees C) with a wind velocity greater than 8 mph (3.58 m/s).
  2. Maintain materials and surrounding air temperature to maximum 90 degrees F prior to, during, and 48 hours after completion of masonry work.

### **3.04 INSTALLATION GENERAL**

- A. Layout walls in advance for accurate spacing of surface bond patterns with uniform joint widths and to properly locate openings, movement type joints, returns, and offsets.
  - 1. Avoid the use of less than half size units at corners, jambs, returns, offsets and where ever possible.
- B. Thickness: Build masonry walls to the full thickness shown except single width walls to be nominal unit thickness.
- C. Cut masonry units with motor driven saw designed to cut masonry with clean sharp unchipped edges.

### **3.05 COURSING**

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

### **3.06 PLACING AND BONDING**

- A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
- B. Lay hollow masonry units with face shell bedding on head and bed joints.
- C. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- D. Remove excess mortar and mortar smears as work progresses.
- E. Interlock intersections and external corners.
- F. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- G. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.
  - 1. Cut masonry units with a motor -driven saw designed to cut masonry.
- H. Cut mortar joints flush where wall tile is scheduled, resilient base is scheduled, or cavity insulation vapor barrier adhesive is applied.
- I. Isolate masonry partitions from vertical structural framing members with a control joint as indicated.
- J. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.

### **3.07 CONTROL AND EXPANSION JOINTS**

- A. Install control and expansion joints
  - 1. Where shown on the drawings
  - 2. In accordance with the National Concrete Masonry Association (NCMA) recommendations.

- B. Do not continue horizontal joint reinforcement through control or expansion joints.
- C. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with manufacturer's instructions.
- D. Size control joints as indicated on drawings; if not shown, 3/8 inch wide and deep.
- E. Column Isolation from Masonry: Continuously wrap steel columns or structural supports within masonry walls with expansion joint filler sheets (column isolation). Secure sheets with light gauge wire.

### **3.08 BUILT-IN WORK**

- A. As work progresses, install built-in metal door frames and glazed frames and other items to be built into the work and furnished under other sections.
- B. Install built-in items plumb, level, and true to line.
- C. Bed anchors of metal door and glazed frames in adjacent mortar joints. Fill frame voids solid with grout.
  - 1. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.
- D. Fill cores in hollow concrete masonry units with grout 3 course (24 inches) under bearing plates beams posts and similar items, unless otherwise indicated.
- E. Do not build into masonry construction organic materials that are subject to deterioration.

### **3.09 TOLERANCES**

- A. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.
- B. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.
- C. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.
- D. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.

### **3.10 CUTTING AND FITTING**

- A. Cut and fit for built in items and built in items. Coordinate with other sections of work to provide correct size, shape, and location.
- B. Obtain approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

### **3.11 SOURCE QUALITY CONTROL**

- A. Masonry Contractor shall water test cavity to verify all water is draining to the exterior through the weeps before continuing with exterior wythe before capping wall.
  - 1. Contractor shall perform tests in the presence of, A/E, testing lab representative, and General Contractor.
    - a. Do not proceed more than 3 veneer courses above flashing without testing, observation, and picture documentation by testing lab representative.
  - 2. Contractor shall hold water hose and with standard water pressure force water into the cavity at a cell vent so water can be observed coming out adjacent weeps for a period of at least 5 minutes. Contractor shall continue down the wall to the next cell vent where a weep did not indicate water wicking out and continue this process until the entire length of flashing is tested.
  - 3. Where water is observed inside the building or outside the building away from the weeps, masonry units shall be removed and flashing re-inspected and repaired.
  - 4. Water test shall be re-performed where flashing was repaired.

### **3.12 FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 43 00 - Quality Assurance.
  - 1. The owner is to engage and compensate the on site testing agency.
- B. Concrete Masonry Unit Tests: Test each variety of concrete unit masonry in accordance with ASTM C140/C140M for compliance with requirements of this specification.
- C. Masonry Inspection
  - 1. Provide masonry inspection of concrete or brick masonry walls as required to insure that masonry construction is in conformance with the Contract Documents.
  - 2. The masonry inspector shall prepare a written report or reports for each day of inspection. Masonry Inspection report that follows Section 01 45 25 shall be used for the reports.
  - 3. The masonry inspector shall be present and observe all grouting operations in wall requiring inspection. The masonry inspector shall be present at the project site with in sufficient time, in advance of grouting operations, to inspect the construction to insure its conformance to the Contract Documents and that grouting may proceed. Periodically the masonry inspector shall be present during the placement of masonry units and reinforcement.
  - 4. No grouting shall be permitted unless the masonry inspector is present and has indicated that the masonry construction is properly prepared for grouting operation.

### **3.13 CLEANING**

- A. Remove excess mortar and mortar droppings.
- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.
- D. Use non-metallic tools in cleaning operations.

### **3.14 PROTECTION**

- A. Protect installed units from splashing, stains, mortar, and other damage.
- B. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

**END OF SECTION**

**SECTION 07 21 13  
BOARD INSULATION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Board insulation at foundation perimeter and inside masonry cavity walls.
- B. Integral air and vapor barrier wall system with board insulation, foamed in place insulation, adhesive, flashing, and tape.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete
- B. Section 04 20 00 - Unit Masonry
- C. Section 07 21 19 - Foamed-In-Place Insulation: Plastic foam insulation other than boards.

**1.03 REFERENCE STANDARDS**

- A. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2021.
- B. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023.
- C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2012.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026.
- E. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- F. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C; 2026.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.
- C. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

**1.05 QUALITY ASSURANCE**

**1.06 FIELD CONDITIONS**

- A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

**PART 2 PRODUCTS**

**2.01 APPLICATIONS**

- A. Insulation at Perimeter of Foundation: Extruded polystyrene (XPS) board.
- B. Insulation inside masonry cavity walls: Extruded polystyrene (XPS) board

**2.02 FOAM BOARD INSULATION MATERIALS**

- A. Extruded Polystyrene (XPS) Board Insulation: Complies with ASTM C578 with either natural skin or cut cell surfaces.
  - 1. Application: Perimeter foundation insulation.

2. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
  3. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
  4. Type and Thermal Resistance, R-value: Type IV, 5.0 (0.88) per 1 inch thickness at 75 degrees F mean temperature.
  5. Board Size: 24 x 96 inch.
  6. Board Thickness: 2 1/2 inches.
  7. Board Edges: Square.
  8. Thermal Resistance: R-value of 5.0 per 1 inch at 75 degrees F mean temperature.
  9. Compressive Resistance: 25 psi.
  10. Water Absorption, Maximum: 0.3 percent, by volume.
  11. Manufacturers:
    - a. DuPont: Styrofoam Brand Square Edge XPS; [www.dupont.com](http://www.dupont.com).
    - b. Kingspan Insulation LLC: GreenGuard XPS Type IV, 25 psi; [www.kingspan.com](http://www.kingspan.com).
    - c. Owens Corning Corporation: FOAMULAR 250 Extruded Polystyrene (XPS) Insulation; [www.ocbuildingspec.com](http://www.ocbuildingspec.com).
    - d. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Extruded Polystyrene (XPS) Continuous Insulation Board
1. Application: Masonry cavity wall insulation.
  2. Extruded-Polystyrene Board Insulation: ASTM C 578
    - a. Compressive resistance 25 psi (ASTM D1621)
    - b. Thermal resistance: R-value of 5.0 per inch at 75 °F (ASTM C518).
    - c. Water absorption: Max. 0.1% by volume (ASTM C272).
    - d. Surface Burning Characteristics (ASTM E84)
      - 1) Flame spread: less than 25
      - 2) Smoke Developed: less than 450.
    - e. Panel dimensions:
      - 1) Board thickness: 2 1/2"
      - 2) Board size: 15 3/4" x 96" square edge.
  3. Cavity Wall Insulation System Options: Provide one of the following
    - a. Option 1: DuPont Styrofoam Brand Cavitymate Ultra **installed per Dupont Cavitymate Ultra Wall System** with foam insulation joints and penetration filler as noted below in accessories.
      - 1) 3-in-1 continuous thermal, air and water barrier system.
    - b. Option 2: XPS Continuous Insulation Board with Fluid Applied Air Barrier.
      - 1) ~~Reference section 07 27 26 Fluid Applied Membrane Air Barrier for product requirements.~~
      - 2) **Board Insulation Products:Manufacturers:**
        - (a) Kingspan; GG25-LG XPS: [www.kingspan.com](http://www.kingspan.com).
        - (b) Owens Corning; Formular NGX 250 XPS: [www.owenscorning.com](http://www.owenscorning.com).
      - 3) **Fluid Applied Air Barrier Products:**
        - (a) **Carlisle Coatings & Waterproofing, Inc; MiraSEAL: [www.carlisleccw.com](http://www.carlisleccw.com).**
        - (b) **Henry Company; Henry CM100: [www.henry.com](http://www.henry.com).**
        - (c) **Soprema; COLPHENE LM BARR: [www.soprema.us](http://www.soprema.us). W. R. Meadows, Inc; HYDRALASTIC 836: [www.wrmeadows.com](http://www.wrmeadows.com).**

### 2.03 ACCESSORIES

- A. Provide all accessories that are approved per manufacturers installation instructions.
- B. Adhesive: Provide insulation manufacturer's recommended adhesive.

1. Product: The Dow Chemical Company GREAT STUFF PRO™ Gaps & Cracks single component insulating foam sealant where necessary
- C. Joint and Penetration Filler: Provide insulated sheathing manufacturer's recommended polyurethane foam for sealing penetrations of insulated sheathing.
  1. Products:
    - a. The Dow Chemical Company "GREAT STUFF PRO™ Gaps & Cracks" single component polyurethane insulating foam sealant.
    - b. The Dow Chemical Company "GREAT STUFF PRO™ Window & Door" single component polyurethane low-pressure foam sealant.
- D. Gap Air Infiltration Filler: Two Component, Quick Cure Polyurethane Foam
  1. NFPA 286 approval for exposed use to the interior of the building without the need for a 15-min thermal barrier.
  2. ASTM E-84 Class A
  3. Product: The Dow Chemical Company FROTH-PAK™ Foam Insulation two component, quick-cure polyurethane foam

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
- B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

### **3.02 BOARD INSTALLATION AT FOUNDATION PERIMETER**

- A. Apply adhesive to back of boards:
  1. Three continuous beads per board length.
- B. Install boards vertically on foundation perimeter.
  1. Place boards to maximize adhesive contact.
  2. Butt edges and ends tightly to adjacent boards and to protrusions.
- C. Extend boards over expansion joints, unbonded to foundation on one side of joint.
- D. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

### **3.03 BOARD INSTALLATION AT CAVITY WALLS**

- A. Install in accordance to manufacturer's recommendations
- B. Adhere a 6 inch wide strip of polyethylene sheet over expansion joints with double beads of adhesive each side of joint.
  1. Foam seal joints between sheets.
  2. Extend sheet full height of joint.
- C. Apply foam adhesive to back of boards:
  1. Three continuous beads per board length.
- D. Install boards to fit snugly between wall ties.
- E. Install boards horizontally on walls.
  1. Place boards to maximize adhesive contact.
  2. Install in running bond pattern.
  3. Butt edges and ends tightly to adjacent boards and to protrusions.
- F. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

- G. Foam seal insulation board joints and protrusions or interruptions to the insulation plane to maintain continuity of air barrier.
- H. Joint Sealant: For joints, gaps, and openings less than ½ inch (13 mm) wide, install continuous bead of joint sealant. Provide backer rod as required to prohibit joint sealant from bonding to a third surface.
- I. Expanding Foam Sealant: For joints, gaps, and openings greater than ½ inch (13 mm) wide, install sealant in a continuous ribbon between adjacent board edges, working sealant in to joint for a full depth bead of sealant.
- J. Place 6 inch wide polyethylene sheet at perimeter of wall openings, from adhesive vapor retarder bed to window and door frames, and tape seal in place to ensure continuity of vapor retarder and air seal.

### **3.04 PROTECTION**

- A. Do not permit installed insulation to be damaged prior to its concealment.

**END OF SECTION**

**SECTION 07 22 16  
ROOF BOARD INSULATION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Polyiso board insulation, flat and tapered.
- B. Accessories.

**1.02 RELATED SECTIONS**

- A. Section 05 31 00 - Steel Decking
- B. Section 06 10 00 - Rough Carpentry: Wood nailers, curbs, and cant strips.
- C. Section 07 54 19 - PVC Thermoplastic Roofing
- D. Section 07 71 00 - Roof Specialties: Prefinished metal fascias, copings, reglets, and counter flashings.
- E. Section 07 72 00 - Roof Accessories: Integral curbs for roof hatches.

**1.03 REFERENCE STANDARDS**

- A. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2025.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for insulation, vapor retarder, fasteners, and adhesive.
- C. Shop Drawings: Indicate joint or termination detail conditions, conditions of interface with other materials, setting plan for tapered insulation, and mechanical fastener layout.
- D. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

**1.05 QUALITY ASSURANCE**

- A. Perform work in accordance with NRCA Roofing and Waterproofing Manual and manufacturer's instructions.
- B. Fire-Test-Response Characteristics
  - 1. Surface-Burning Characteristics: Maximum flame-spread and smoke-developed indexes of 75 and 450, respectively.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

**1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. General Warranty: The warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents

**1.07 PRODUCT DELIVERY, STORAGE AND HANDLING PROCEDURES**

- A. Deliver materials in original unopened packaging.
- B. Containers labeled with manufacturer's name, brand name, and identification of various items.

- C. Store materials in a dry area and protect from inclement weather. Damaged materials shall be replaced at contractor's expense.
- D. Do not allow roofing membrane to come in contact or be exposed to any materials that would be detrimental to or cause degradation of the roofing membrane.

## **PART 2 PRODUCTS**

### **2.01 INSULATION**

- A. Polyisocyanurate Board Insulation: Rigid cellular foam, complying with ASTM C1289, Type II, Class 1, Grade 2 with the following characteristics:
  - 1. Compressive Strength: 20 psi.
  - 2. Facing: Glass fiber reinforced cellulosic facers both faces.
  - 3. Board Size: 48 x 96 inch.
  - 4. Board Thickness: As indicated on Drawings.
  - 5. Long-Term Thermal Resistance (LTTR): R-value of 5.7 per inch.
  - 6. Board Edges: Square.
  - 7. Insulation must be compatible with roof membrane.
  - 8. Manufacturers:
    - a. Atlas Roofing Corporation; AC Foam-II: [www.atlasroofing.com](http://www.atlasroofing.com).
    - b. Carlisle Syntec; InsulBase: [www.carlisesyntec.com](http://www.carlisesyntec.com).
    - c. Duro-Last; Duro-Guard ISO II: [www.duro-last.com](http://www.duro-last.com).
    - d. Elevate; ISOGARD GL: [www.holcimelevate.com](http://www.holcimelevate.com).
    - e. GAF Materials Corporation; EnergyGuard: [www.gaf.com](http://www.gaf.com).
    - f. Hunter Panels; H-Shield: [www.hpanels.com](http://www.hpanels.com).
    - g. Johns Manville; ENRGY3: [www.jm.com](http://www.jm.com).
    - h. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Tapered Polyisocyanurate Board Insulation: Rigid cellular foam, complying with ASTM C1289, Type II, Class 1, cellulose felt or glass fiber mat both faces; Grade 2 and with the following characteristics:
  - 1. Compressive Strength: 20 psi
  - 2. Facing: Glass fiber reinforced cellulosic facers both faces.
  - 3. Board Size: 48 x 96 inch.
  - 4. First layer; Board Thickness: 2 inch.
  - 5. Second layer; Tapered Board: Slope 1/4 inch per foot; minimum thickness 1/2 in; fabricate of fewest layers possible.
  - 6. Long-Term Thermal Resistance (LTTR): R-value of 5.7 per inch thickness.
  - 7. Board Edges: Square.
  - 8. Insulation must be compatible with roof membrane.
  - 9. Manufacturers:
    - a. Atlas Roofing Corporation; Tapered AC Foam-II: [www.atlasroofing.com](http://www.atlasroofing.com).
    - b. Carlisle Syntec; InsulBase: [www.carlisesyntec.com](http://www.carlisesyntec.com)
    - c. Duro-Last; Duro-Guard ISO II: [www.duro-last.com](http://www.duro-last.com).
    - d. Elevate; ISOGARD GL: [www.holcimelevate.com](http://www.holcimelevate.com).
    - e. GAF Materials Corporation; EnergyGuard Tapered: [www.gaf.com](http://www.gaf.com).
    - f. Hunter Panels; Tapered H-Shield: [www.hpanels.com](http://www.hpanels.com).
    - g. Johns Manville; Tapered ENRGY3: [www.jm.com](http://www.jm.com).
    - h. Substitutions: See Section 01 60 00 - Product Requirements.

### **2.02 ACCESSORIES**

- A. Adhesive: As approved by roof board insulation manufacturer.

- B. Fasteners: As approved by roof board insulation manufacturer.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Inspect all surfaces to receive roofing for any condition that will adversely affect execution, performance, or quality of work.
- B. Verify that surfaces and site conditions are ready to receive work.
- C. Verify deck is supported and secure.
- D. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- E. Verify deck surfaces are dry and free of snow or ice.
- F. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.
- G. All roof surfaces and all sloped surfaces to drains and outlets shall be checked and approved by the roofing contractor prior to the start of the roofing work.
- H. Install roofing material only under satisfactory conditions as specified by the membrane manufacturer.

#### **3.02 GENERAL REQUIREMENTS**

- A. Do not lay out or expose any insulation on the deck that cannot be covered by membrane on the same day.
- B. In making all field heat welds, make sure all edges are clean and free of tar, mastic or other foreign items.
- C. Do not expose membrane and accessories to a constant temperature in excess of 110 degrees Fahrenheit.
- D. Sealants and adhesives should be applied according to the manufacturer's specifications and all containers shall be disposed of properly.
- E. Start securing the membrane at the highest point and work towards the drains.
- F. Weather precautions: Proceed with roofing work when existing and forecasted weather conditions permit work performance in compliance with manufacturer's recommendations.
- G. Roofing system shall not be applied when the surrounding air, surface temperature, relative humidity or wind velocity is not within the range acceptable under the manufacturer's recommendations.
- H. Prior to starting work, protect all work in an approved manner including all paving and faces of building walls. Provide special protection of the face of the building wall adjacent to hoist.

#### **3.03 METAL DECK PREPARATION**

- A. Install preformed sound absorbing glass fiber insulation strips supplied by Section 05 31 00 in acoustic deck flutes. Install in accordance with manufacturer's instructions.

#### **3.04 VAPOR RETARDER INSTALLATION**

- A. At acoustical metal deck, install acoustical insulation in roof deck flutes first.
- B. Loosely lay vapor retarder over entire roof area extending to roof edges and to adjacent walls.
- C. Side and end laps of each sheet a minimum of 6 inches.

- D. Seal laps at seams with continuous strip of tape recommended by the vapor retarder manufacturer. Seal at penetrations and at roof edges with manufacturer recommended butyl tape or sealant.
- E. Vapor retarder shall be positively sealed at all edges, penetrations and wall utilizing manufacturer vapor retarder accessories.
- F. Seal at penetrations and at roof edges with manufacturer recommended butyl tape or sealant.

### **3.05 INSULATION BOARD INSTALLATION**

- A. Attach insulation in accordance with insulation manufacturer's instructions.
  - 1. Mechanically attach ~~first layer~~ **all layers** of insulation to deck.
  - 2. ~~Fully adhere subsequent layers of insulation to first layer.~~
- B. On metal deck, place boards perpendicular to flutes with insulation board edges bearing on deck flutes.
- C. The ends of the insulation boards shall be staggered 50% from row to row.
- D. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- E. Lay subsequent layers of insulation with joints staggered minimum 12 inch from joints of preceding layer.
- F. Place tapered insulation to the required slope pattern in accordance with manufacturer's instructions.
- G. Do not apply more insulation than can be covered with membrane in same day.

### **3.06 CLEAN-UP**

- A. Upon completion of installation, the contractor shall remove all foreign matter, rubbish and scrap material from the roof.
- B. Repair or replace defaced or damaged finishes caused by work of this section.

### **3.07 FIELD QUALITY CONTROL**

- A. See Section 01 43 00 - Quality Assurance, for general requirements for field quality control and inspection.
- B. Inspection: Roofing manufacturer's technical representative and roofing contractor shall conduct all required inspections. Submit all required drawings, details, and completed questionnaires to the roofing manufacturer before obtaining the specified warranty. After an authorized Technical Representative has inspected the roof for determining acceptability for warranty issuance, any deficiencies on the final inspection report shall be corrected by the contractor/applicator and made ready for reinspection within five (5) working days.
- C. Warranty: Upon receipt of required materials, certifying inspection, and acceptance of the roofing system by the roofing manufacturer, the warranty shall be duly executed and issued to the Owner. Date of Warranty will be the date of Substantial Completion.

### **3.08 PROTECTION OF FINISHED WORK**

- A. Protect installed roofing and flashings from construction operations.
- B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

**END OF SECTION**

**SECTION 07 54 19**  
**PVC THERMOPLASTIC SINGLE-PLY ROOFING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Fully adhered system with PVC thermoplastic roofing membrane.
- B. Roofing accessories: stack boots and walkway pads.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements
- B. Section 07 22 16 - Roof Board Insulation
- C. Section 07 71 00 - Roof Specialties: Counterflashings and copings.

**1.03 REFERENCE STANDARDS**

- A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- B. ASTM D4434/D4434M - Standard Specification for Poly(Vinyl Chloride) Sheet Roofing; 2021.
- C. NRCA (RM) - The NRCA Roofing Manual; 2017.
- D. UL 790 - Standard for Standard Test Methods for Fire Tests of Roof Coverings; Current Edition, Including All Revisions.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene one week before starting work of this section.
  - 1. Review preparation and installation procedures and coordinating and scheduling required with related work.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide manufacturer's written information listed below.
  - 1. Product data indicating membrane materials, flashing materials, fasteners, and adhesive.
  - 2. Preparation instructions and recommendations.
- C. Samples for Selection: Submit two samples 12 by 12 inches in size illustrating colored coating.
- D. Manufacturer's Installation Instructions: Indicate membrane seaming precautions and perimeter conditions requiring special attention.
- E. Warranty:
  - 1. Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
  - 2. Submit installer's certification that installation complies with all warranty conditions for the waterproof membrane.

**1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum twenty (20) years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section:
  - 1. Approved by membrane manufacturer.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.

- B. Protect products in weather protected environment, clear of ground and moisture.

#### **1.08 FIELD CONDITIONS**

- A. Do not apply roofing membrane during unsuitable weather.
- B. Do not apply roofing membrane when ambient temperature is below 40 degrees F.
- C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

#### **1.09 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Material Warranty: Provide membrane manufacturer's warranty agreeing to replace material that shows manufacturing defects within 20 years after installation.
- C. System Warranty: Provide manufacturer's system warranty agreeing to repair or replace roofing that leaks or is damaged due to wind with wind speeds up to 55 mph or other natural causes.
  - 1. Warranty Term: 20 years.
  - 2. For repair and replacement include costs of both material and labor in warranty.
- D. Roofing Contractor Warranty: Contractor shall guarantee for 2 years, from the date of substantial completion, at their cost to make necessary repairs to the roof system resulting from faults or defects caused due to workmanship. Guarantee shall include but is not limited to the following: roof membrane, flashings, insulation, fasteners, walkways, expansion joints, pipe flashings and boots.

### **PART 2 PRODUCTS**

#### **2.01 ROOFING APPLICATIONS**

- A. PVC Membrane Roofing: Single-ply membrane, fully adhered, over insulation.
- B. Roofing Assembly Performance Requirements and Design Criteria:
  - 1. Roof Covering External Fire Resistance Classification: Class A when tested per UL 790.
  - 2. Wind Uplift:
    - a. Designed to withstand wind uplift forces calculated with ASCE 7.

#### **2.02 ROOFING MEMBRANE AND ASSOCIATED MATERIALS**

- A. Single Source Responsibility: Provide and install products from single source.
- B. Membrane:
  - 1. Material: Polyvinyl chloride (PVC) complying with ASTM D4434/D4434M, Type III, fabric reinforced.
  - 2. Reinforcing: Internal fabric.
  - 3. Thickness: 60 mils (0.060 inch), minimum.
  - 4. Sheet Width: Factory fabricated into largest sheets possible.
  - 5. Color: White.
  - 6. Products:
    - a. Carlisle; SureFlex PVC: [www.carlisesyntec.com](http://www.carlisesyntec.com).
    - b. Duro-Last; Duro-Tuff: [www.duro-last.com](http://www.duro-last.com).
    - c. Elevate; PVC Membrane: [www.holcimelevate.com](http://www.holcimelevate.com).
    - d. GAF; EverGuard PVC Smooth Membrane: [www.gaf.com](http://www.gaf.com).
    - e. Johns Manville; JM PVC SD Plus: [www.jm.com](http://www.jm.com).
    - f. Mulehide; SureFlex PVC: [www.mulehide.com](http://www.mulehide.com).

- g. Sika Sarnafil; S 237-60 EnergySmart: [www.usa.sika.com](http://www.usa.sika.com).
  - h. **Versico; VersiFlex PVC Membrane: [www.versico.com](http://www.versico.com)**
- C. Seaming Materials: As recommended by membrane manufacturer.
  - D. Flexible Flashing Material: Same material as membrane.

### **2.03 INSULATION**

- A. See Section 07 22 16 - Roof Board Insulation for roofing insulation.

### **2.04 ACCESSORIES**

- A. Prefabricated Roofing Expansion Joint Flashing: Sheet butyl over closed cell foam backing seamed to galvanized steel flanges.
- B. Prefabricated Flashing Accessories:
  - 1. Corners and Seams: Same material as membrane, in manufacturer's standard thicknesses.
  - 2. Penetrations: Same material as membrane, with manufacturer's standard cut-outs, rigid inserts, clamping rings, and flanges.
  - 3. Walkway Rolls: Heat Weldable Walkway Rolls; 80 mils (0.080 inch) thick; gray membrane.
  - 4. Miscellaneous Flashing: Non-reinforced PVC membrane; 80 mils (0.080 inch) thick, in manufacturer's standard lengths and widths.
- C. Membrane Adhesive: As recommended by membrane manufacturer.
- D. Surface Conditioner for Adhesives: Compatible with membrane and adhesives.
- E. Sealants: As recommended by membrane manufacturer.
- F. Cleaner: Manufacturer's standard, clear, solvent-based cleaner.
- G. Primer: Manufacturer's recommended product.
- H. Edgings and Terminations: As specified in Section 07 71 00 - Roof Specialties.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck is supported and secure.
- C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- D. Verify deck surfaces are dry and free of snow or ice.
- E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

### **3.02 PREPARATION, GENERAL**

- A. Clean substrate thoroughly prior to roof application.

### **3.03 INSTALLATION - GENERAL**

- A. Perform work in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Do not apply roofing membrane during unsuitable weather.
- C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.
- D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

- E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

### **3.04 MEMBRANE APPLICATION**

- A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
- B. Shingle joints on sloped substrate in direction of drainage.
- C. Fully Adhered Application:
  - 1. Fully embed membrane in adhesive except in areas directly over or within 3 inches of expansion joints.
  - 2. Fully adhere one roll before proceeding to adjacent rolls.
- D. Seam Welding:
  - 1. Overlap edges and ends and seal seams by heat welding, minimum 2 inches.
  - 2. Cover all seams with manufacturer's recommended joint covers.
  - 3. Probe all seams once welds have thoroughly cooled. (Approximately 30 minutes.)
  - 4. Repair all deficient seams within the same day.
  - 5. Seal cut edges of reinforced membrane after seam probe is complete.
- E. At intersections with vertical surfaces:
  - 1. Fully adhere flexible flashing over membrane and up to nailing strips.
- F. Install roofing expansion joints where indicated. Make joints watertight.
- G. Install prefabricated joint components in accordance with manufacturer's instructions.
- H. Coordinate installation of roof drains and sumps and related flashings.
- I. Install walkway pads. Space pad joints to permit drainage.
- J. Daily Seal: Install daily seal per manufacturers instructions at the end of each work day. Prevent infiltration of water at incomplete flashings, terminations, and at unfinished membrane edges.

### **3.05 FIELD QUALITY CONTROL**

- A. See Section 01 43 00 - Quality Assurance for general requirements for field quality control and inspection.
- B. Require site attendance of roofing and insulation material manufacturers daily during installation of the Work.

### **3.06 CLEANING**

- A. See Section 01 70 00 - Execution and Closeout Requirements for additional requirements.
- B. Remove wrappings, empty containers, paper, and other debris from the roof daily. Dispose of debris in compliance with local, State, and Federal regulations.
- C. Remove bituminous markings from finished surfaces.
- D. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.
- E. Repair or replace defaced or damaged finishes caused by work of this section.

### **3.07 PROTECTION**

- A. Protect installed roofing and flashings from construction operations.
- B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

**END OF SECTION**

**SECTION 07 71 00  
ROOF SPECIALTIES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Manufactured roof specialties, including copings, fascias, and scuppers.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 54 19 - PVC Thermoplastic Single-Ply Roofing

**1.03 REFERENCE STANDARDS**

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.
- B. ANSI/SPRI/FM 4435/ES-1 - Test Standard for Edge Systems Used with Low Slope Roofing Systems; 2017.
- C. NRCA (RM) - The NRCA Roofing Manual; 2017.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on shape of components, materials and finishes, anchor types and locations.
- C. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.
- D. Samples: Submit two samples, illustrating component shape, finish, and color.
- E. Manufacturer's Installation Instructions: Indicate special procedures, fasteners, supporting members, and perimeter conditions requiring special attention.

**PART 2 PRODUCTS**

**2.01 PREFABRICATED REGLETS AND COUNTERFLASHING**

- A. Manufacturer:
  - 1. Metal Era, Waukesha, Wisconsin:
  - 2. Acceptable Manufacturers:
    - a. MM Systems Company, Tucker, Georgia
    - b. W.P. Hickman, Asheville, North Carolina
    - c. Architectural Products Co
    - d. Substitutions: See Section 01 60 00 - Product Requirements
- B. Product; Two Piece Counterflashing Reglet version
  - 1. Model: CFR2-400, 4 inch face height.
  - 2. Material: 24 gauge galvanized steel.
  - 3. Finish: Kynar 500, fluoropolymer coating
    - a. Color to be selected by the Architect from manufacturer's standard

**2.02 PREFABRICATED COPING SYSTEMS**

- A. Manufacturer:
  - 1. Metal Era, Waukesha, Wisconsin:
  - 2. Acceptable Manufacturers:
    - a. MM Systems Company, Tucker, Georgia
    - b. Architectural Products Co

- c. W.P. Hickman, Asheville, North Carolina
  - d. Substitutions: See Section 01 60 00 - Product Requirements
- B. Perma-Tite Coping: Metal coping cap with snap-on design with 20-gauge, galvanized steel anchor clips and factory-applied stainless steel springs that ensure long-term positive attachment, extruded anchor bar and galvanized steel anchor/support cleats for capping parapet wall. The system shall be watertight, maintenance free, and does not require exposed fasteners. Joints shall be a butt type with concealed splice plates.
- C. Material: 24 gauge galvanized steel.
- D. Finish: Kynar 500, fluoropolymer coating
- 1. Color to be selected by the Architect from manufacturer's standard.
- E. Characteristics:
- 1. Coping sections shall expand and contract freely while locked in place on anchor cleats.
  - 2. Coping sections shall lock to extruded aluminum anchor bar and anchor cleats by mechanical pressure from hardened stainless steel springs factory attached to anchor cleats.
  - 3. All splice plates include factory applied dual non-curing sealant strips capable of providing a watertight seal.
- F. Coping cap: length of 12'-0" (3.65 m), widths manufactured to job requirements.
- G. Coping vertical outside face to be: 6", back leg standard to be 3-1/2" nominal, custom size by request, manufactured to job requirements.
- H. Concealed splice plates: 8" wide. Finish to match finish of coping cap with factory applied dual non-curing sealant strips.
- I. Extruded Anchor Bar: .100" mill extruded aluminum, pre-punched, 12" wide and installed 4'-0" o.c. Integrated with anchor/support cleat.
- J. Anchor/Support Cleat: 20 ga. prepunched galvanized cleat with stainless steel spring mechanically locked to cleat normally 12" (305 mm) wide @ 6'-0" (1525 mm) on center. Mechanically fastened as indicated and detailed. Integrated with extruded anchor bar.
- K. Fasteners: Corrosion resistant fasteners shall be provided by Metal-Era. No exposed fasteners shall be permitted.
- L. Accessories:
- 1. Corners, end caps, pier caps, etc. shall be fabricated by the coping manufacturer.
    - a. ~~Welded assembly~~ **Assembly** shall be used to maintain watertight integrity.

### 2.03 PREFABRICATED SCUPPER

- A. Manufacturer:
- 1. Basis of Design
  - 2. Acceptable Manufacturers:
    - a. MM Systems Company, Tucker, Georgia
    - b. W.P. Hickman, Asheville, North Carolina
    - c. Architectural Products Co
    - d. Substitutions: See Section 01 6000 - Product Requirements
- B. Product: Thru-Wall Scupper with flush collection box.
- 1. ~~Material: 24 gauge galvanized steel.~~
  - 2. **Material: Minimum 0.050" aluminum, welded watertight.**
  - 3. Finish: Kynar 500, fluoropolymer coating
    - a. Color to be selected by the Architect from manufacturer's standards
  - 4. Shape: As shown on the drawings.

5. Fasteners: No exposed fasteners. Fasteners shall provide a minimum pull out resistance of 240 #.

#### **2.04 COMPONENTS**

- A. Copings: Factory fabricated to sizes required; mitered, welded corners; concealed fasteners.
  1. Configuration: Concealed continuous hold down cleat at both legs; internal splice piece at joints of same material, thickness and finish as cap; concealed stainless steel fasteners.
  2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 using test method RE-3 to positive and negative design wind pressure as defined by applicable local building code.

#### **2.05 FINISHES**

- A. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system; color as indicated.

#### **2.06 ACCESSORIES**

- A. Sealant for Joints in Linear Components: As recommended by component manufacturer.
- B. Adhesive for Anchoring to Roof Membrane: Compatible with roof membrane and approved by roof membrane manufacturer.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that deck, curbs, roof membrane, base flashing, and other items affecting work of this Section are in place and positioned correctly.

#### **3.02 INSTALLATION**

- A. Install components in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Coordinate installation of components of this section with installation of roofing membrane and base flashings.
- C. Coordinate installation of sealants and roofing cement with work of this section to ensure water tightness.

**END OF SECTION**

4/14/2026

Garmann Miller  
Attn Lindsay Thobe

Re North Union Schools Art Room

**Set 1**

Opening E101a Pair Exterior 6'0 (each 3'0) 7'-2" ALF x ALD

Each opening to have;

2 Continuous Hinges	CFM SLF HD1 PT	Clear	Pemko
2 Electronic Power Transfer	EL-CEPT		Securitron
1 Keyed Removable Mullion	L980A	Alum	Sargent
1 Exit Device MELR	LC 55 56 PE8804 ETL	32D	Sargent
1 Exit Device MELR	55 56 PE8810 ETL	32D	Sargent
1 Mullion Cylinder Kit	LC 980 C1	32D	Sargent
1 Rim Cylinder	Primus IC	26D	Schlage
1 Mortise Cylinder	Primus IC	26D	Schlage
2 Closers w/hold open	CPS7500R	689	Norton
1 Threshold	171A		Pemko
2 Sweeps	29326CNB		Pemko
2 Electro Lynx	QC1500		McKinney
2 Electro Lynx	QC-3_		McKinney

Card Reader and power supply by Security Vendor

**Set 2**

Opening E101b Single Exterior 3'0 7'-2" ALF x ALD

Each opening to have;

1 Continuous Hinges	CFM SLF HD1 PT	Clear	Pemko
1 Electronic Power Transfer	EL-CEPT		Securitron
1 Exit Device MELR	LC 55 56 PE8804 ETL	32D	Sargent
1 Rim Cylinder	Primus IC	26D	Schlage
1 Closers w/hold open	CPS7500R	689	Norton
1 Threshold	171A		Pemko
1 Sweeps	29326CNB		Pemko
1 Electro Lynx	QC1500		McKinney
1 Electro Lynx	QC-3_		McKinney

Card Reader and power supply by Security Vendor

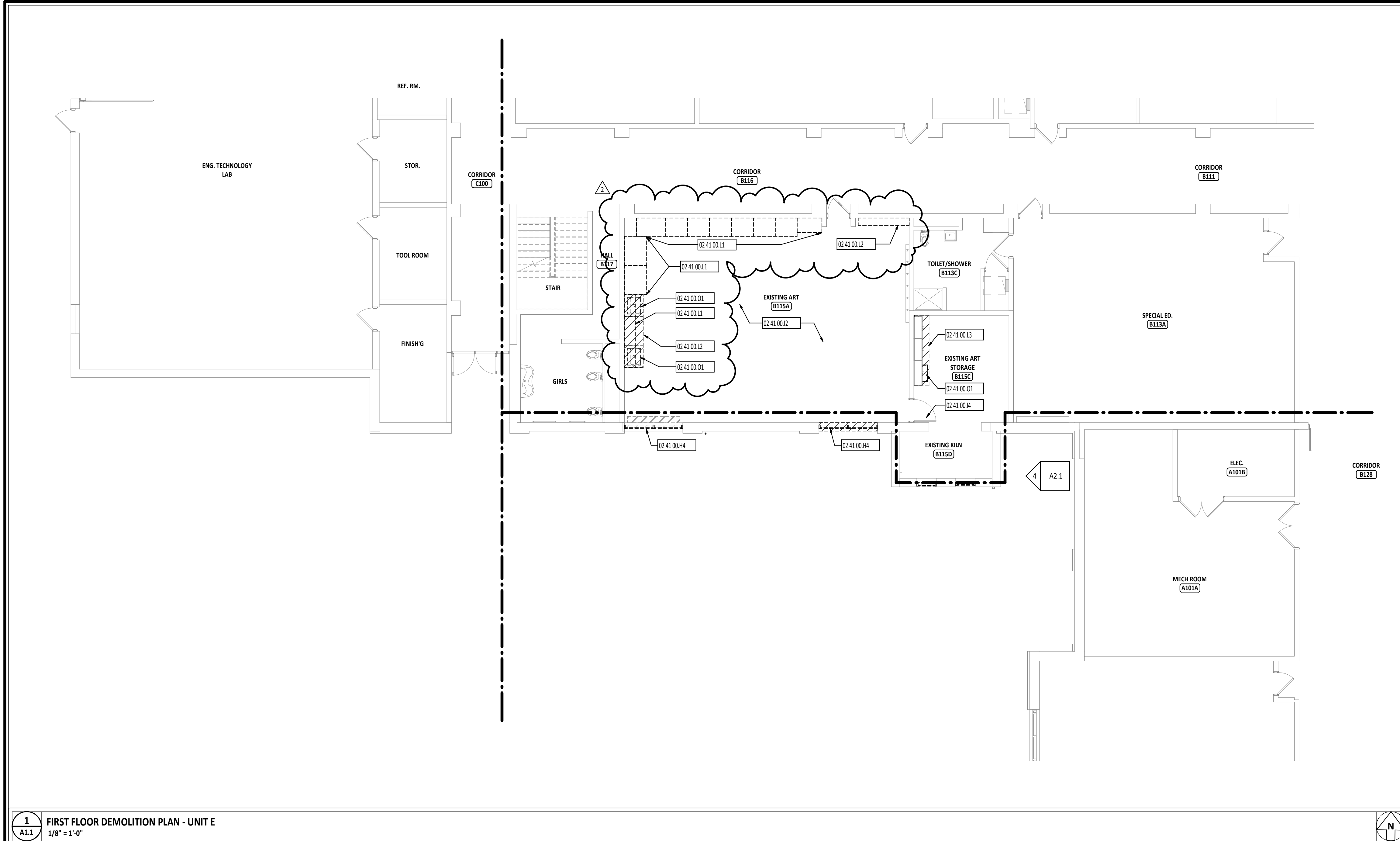
**Set 3**

Opening 102 Pair Interior 6'0 (each 3'0) 7'0 HMF x HMD

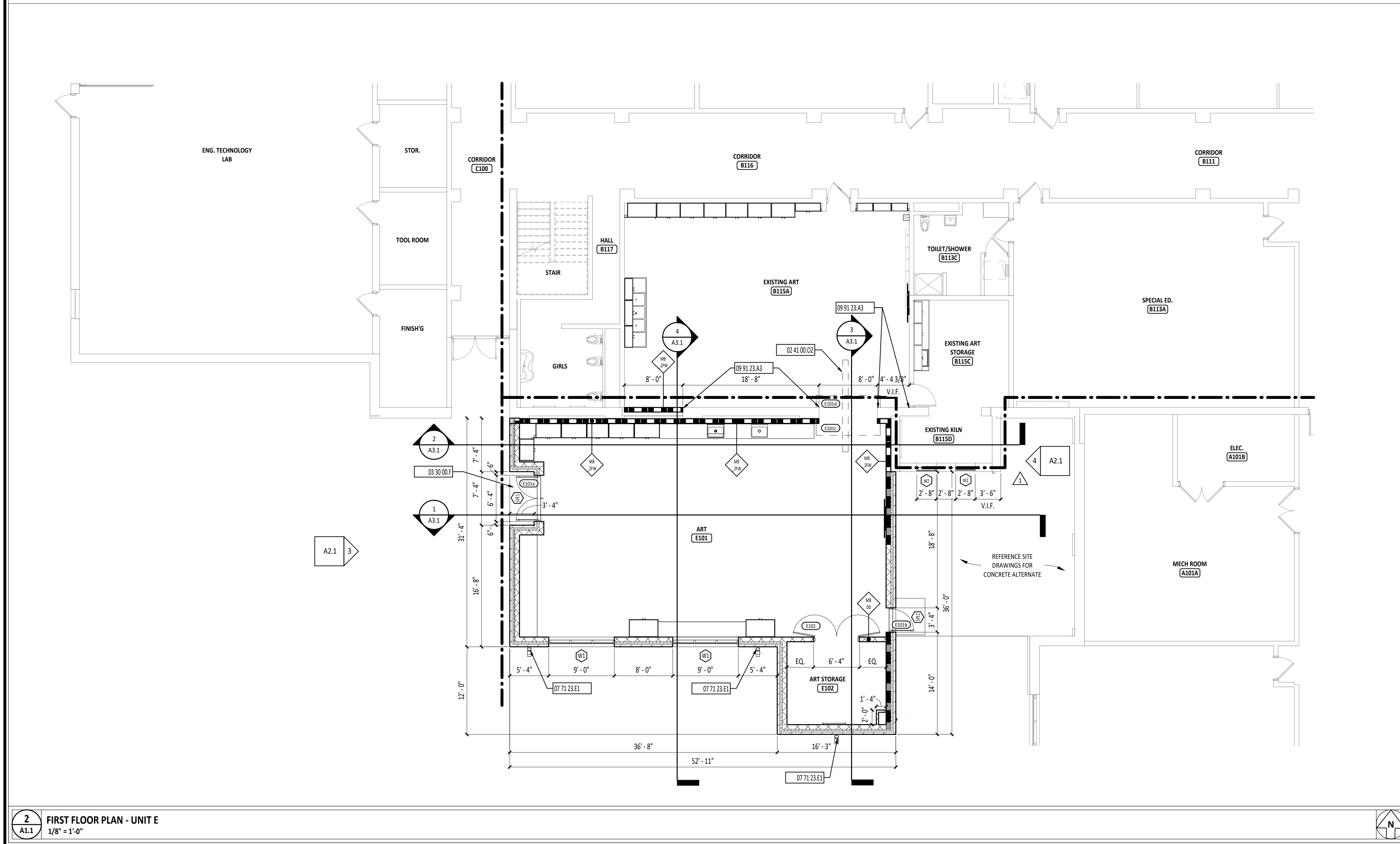
Each opening to have;

6 Hinges	TA2714 4-1/2" x 4-1/2"	26D	McKinney
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2 Flush Pulls	94	32D	Rockwood
2 Ball Catches	592	32D	Rockwood
1 Flush Bolts	555 top only	26D	Rockwood
1 Classroom Deadbolt	LC 4877	26D	Sargent
1 Mortise Cylinder	Primus IC	26D	Schlage
2 Wall Stop/Holder	494	26D	Rockwood



**1**  
A1.1  
**FIRST FLOOR DEMOLITION PLAN - UNIT E**  
1/8" = 1'-0"

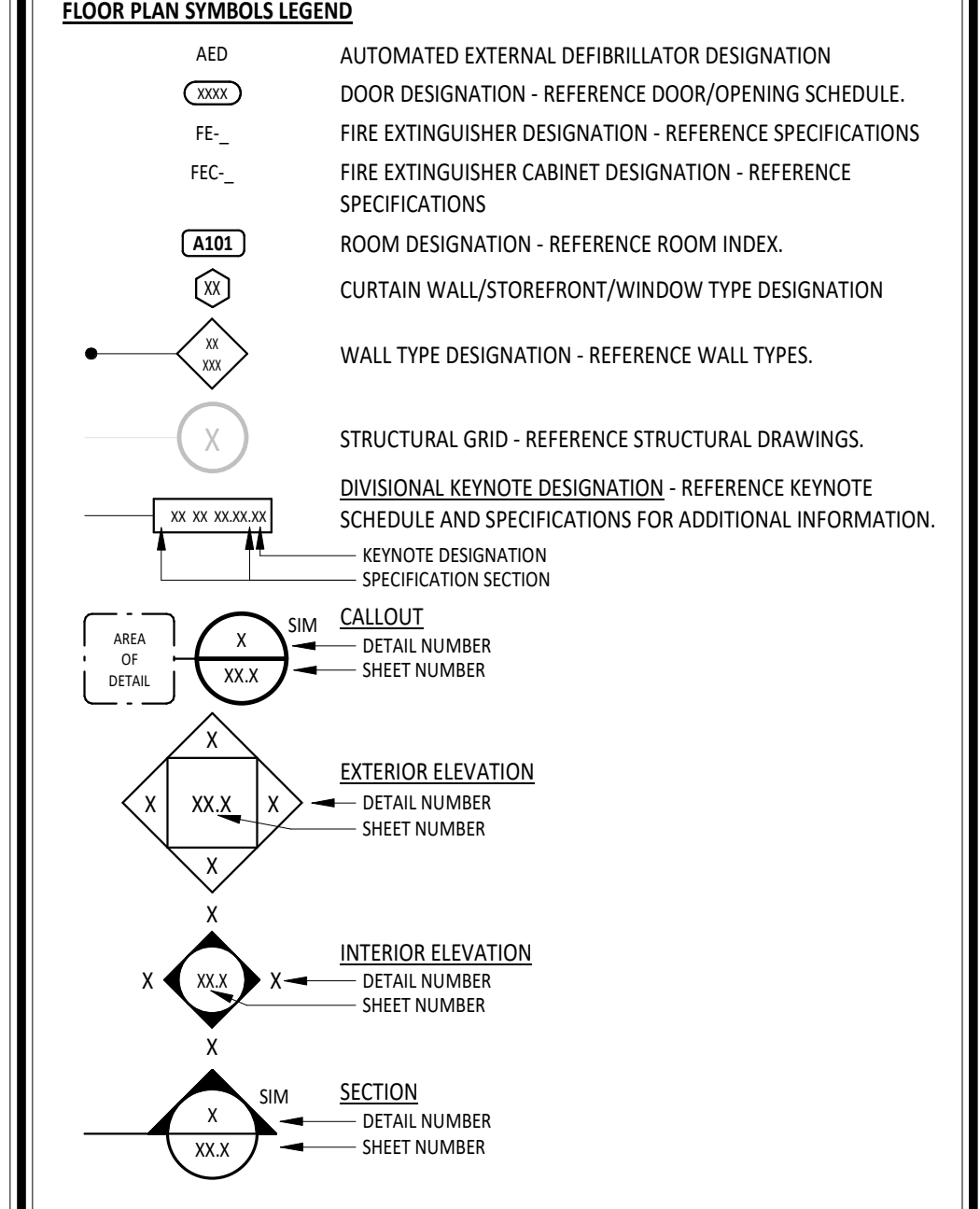


**2**  
A1.1  
**FIRST FLOOR PLAN - UNIT E**  
1/8" = 1'-0"

FIRST FLOOR PLAN ROOM INDEX - UNIT E		
ROOM NUMBER	ROOM NAME	AREA
E101	ART	1,438 SF
E102	ART STORAGE	152 SF

- DEMOLITION FLOOR PLAN GENERAL NOTES**
- A THESE NOTES APPLY TO ALL ARCHITECTURAL DRAWINGS. FOR DEMOLITION NOTES AND SYMBOLS APPLICABLE ONLY TO DRAWINGS OF DISCIPLINE OTHER THAN ARCHITECTURAL, REFER TO SPECIFIC DRAWINGS OF THAT GENERAL DEMOLITION NOTES DISCIPLINE.
  - B FIELD VERIFY CONDITIONS AND COORDINATE DEMOLITION OR REMOVAL WORK WITH CORRESPONDING NEW CONSTRUCTION WORK AND WITH ALL APPROPRIATE TRADES PRIOR TO STARTING DEMOLITION WORK. IF DISCREPANCIES ARE FOUND BETWEEN CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT IMMEDIATELY.
  - C OWNER SHALL REMOVE LOOSE ITEMS, I.E. EQUIPMENT, FURNITURE, ARTWORK, PLAQUES, ETC., PRIOR TO CONTRACTOR'S START OF WORK IN SPECIFIED AREAS. WHERE PARTIAL OCCUPANCY, CONTRACTOR SHALL COORDINATE SCHEDULE WITH OWNER.
  - D REMOVE ITEMS TO BE DEMOLISHED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED. DESCRIPTION OF PRIMARY ITEMS TO BE REMOVED IS GENERAL IN NATURE, AND REMOVAL OF SECONDARY COMPONENTS SUCH AS BLOCKING, SUPPORTS, ANCHORS, TRIM, ADHESIVE, PIPING, WIRING, ETC., RELATED TO PRIMARY ITEMS SHALL BE INCLUDED.
  - E PROTECT EXISTING SURFACES TO REMAIN IN AREAS ADJACENT TO DEMOLITION WORK. CONTRACTOR TO REPAIR EXISTING SURFACES TO REMAIN DAMAGED DURING CONSTRUCTION AND DEMOLITION.
  - F PATCH EXISTING FLOOR, WALL AND CEILING CONSTRUCTION AT ABANDONED PENETRATION LOCATIONS WITH NEW MATERIALS AS REQUIRED TO RECEIVE NEW FINISHES AND TO MAINTAIN ORIGINAL FIRE RATING ASSEMBLY WHERE APPLICABLE.
  - G SELECTIVE DEMOLITION FOR INSTALLATION OF NEW MECHANICAL, PLUMBING, OR ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR TRADE REQUIRING THE DEMOLITION.
  - H DEMOLISHED MATERIALS ARE THE PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE AND SHALL BE PROMPTLY DISPOSED OFF SITE IN A LEGAL MANNER.
  - I REPAIR FINISHES AND SURFACES LEFT EXPOSED BY DEMOLITION OR REMOVAL OF EQUIPMENT USING NEW MATERIALS TO MATCH SURROUNDING SURFACES. REPAIR EXISTING FLOOR, BASE, WALL AND CEILING FINISHES TO CORRECT DEFECTS CAUSED OR EXPOSED BY DEMOLITION WORK OR EQUIPMENT REMOVAL. REPAIRED SURFACES SHALL BE SMOOTH AND UNDETECTABLE UNDER FINAL FINISHES. AREAS NOTED ON THE DWGS. TO BE REPAIRED OR PATCHED ARE GIVEN FOR REFERENCE AND SHALL NOT BE INTERPRETED TO LIMIT THE SCOPE OF WORK.
  - J DIMENSIONAL INFORMATION FOR NEW OPENINGS INDICATED ON DEMOLITION DWGS. ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION AND COORDINATION WITH NEW CONSTRUCTION.
  - K PRIOR TO START OF DEMOLITION, DUST AND SOUND BARRIERS SHALL BE CONSTRUCTED.
  - L PROPER EGRESS AND APPROVED BARRIERS MUST BE MAINTAINED THROUGHOUT THE DEMOLITION AREA AT ALL TIMES.
  - M REMOVE DEBRIS DAILY.

- FLOOR PLAN GENERAL NOTES**
- A ALL DIMENSIONS ARE MEASURED TO THE FACE OF MASONRY OR THE FACE OF METAL STUD UNLESS NOTED OTHERWISE.
  - B ALL CMU CORNERS, HORIZONTAL OR VERTICAL, SHALL BE BULLNOSE UNLESS NOTED OR DETAILED OTHERWISE.
  - C INSTALL TREATED WOOD BLOCKING IN WALLS AS REQUIRED TO SECURE ALL EQUIPMENT, ACCESSORIES, HANDRAILS, CASEWORK, ETC. COORDINATE THIS WORK WITH ALL APPROPRIATE CONTRACTORS, SUPPLIERS AND MANUFACTURERS RECOMMENDATIONS.
  - D REFERENCE A01.1 FOR WALL TO DECK TERMINATION DETAILS.
  - E HINGE SIDE OF DOOR JAMB AT INTERSECTING WALLS TO BE LOCATED 4" FROM ADJACENT WALL UNLESS NOTED OTHERWISE - REFERENCE FLOOR PLANS.
  - F IF WALL TYPE IS NOT IDENTIFIED, WALL IS TO RUN FULL HEIGHT TO DECK.

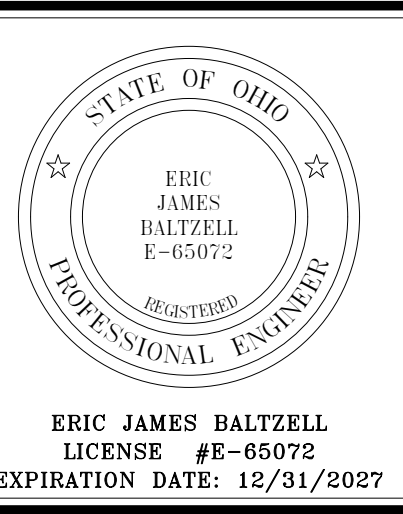
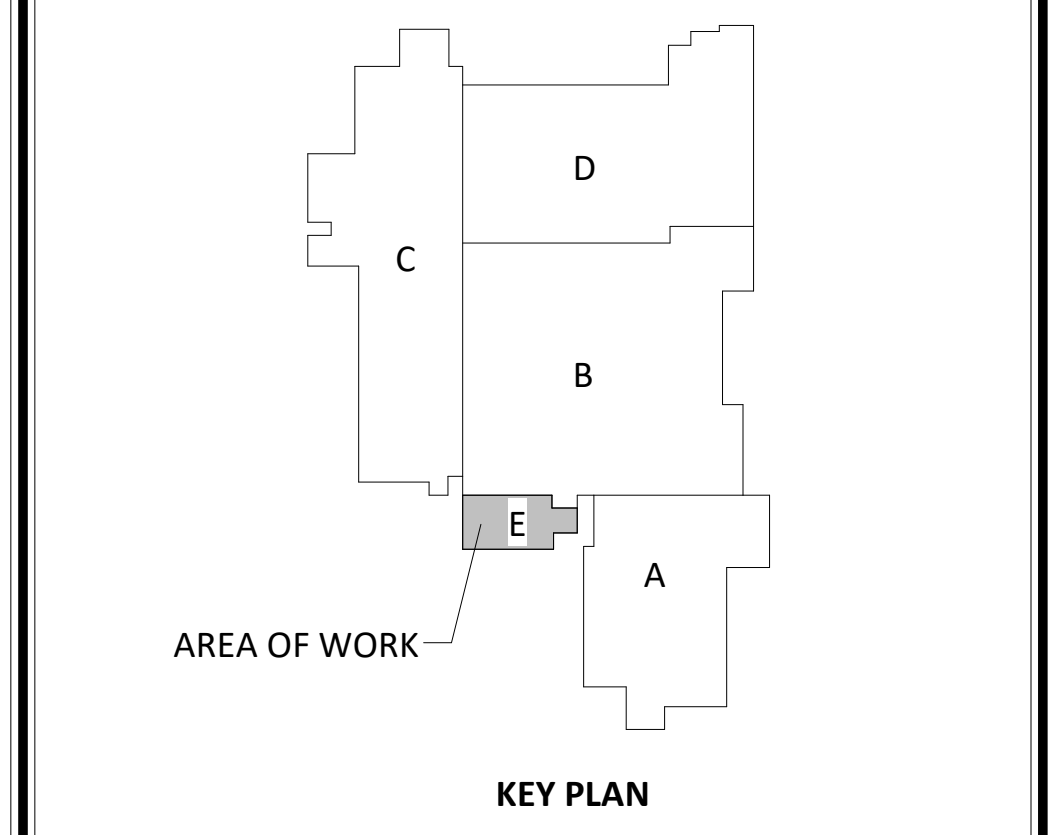


**KEYNOTE DESCRIPTION**

02 41 00.01	REMOVE EXISTING WINDOW FRAME AND NEW WORK
02 41 00.02	REMOVE EXISTING VINYL TILE FLOORING AND BASE
02 41 00.04	REMOVE EXISTING BASE
02 41 00.01	REMOVE EXISTING CASEWORK
02 41 00.02	REMOVE EXISTING COUNTERTOP AND CASEWORK BELOW
02 41 00.03	REMOVE EXISTING COUNTERTOP, CASEWORK ABOVE AND BELOW TO REMAIN
02 41 00.04	REMOVE EXISTING SINK
02 41 00.02	SAWCUT FLOOR AS REQUIRED PER PLUMBING DRAWINGS.
03 30 00.F	ANTI-HEAVE SLAB - REFERENCE STRUCTURAL DRAWINGS.
07 71 23.E1	PREFINISHED METAL SCUPPER WITH 4" X 6" PREFINISHED METAL DOWNSPOUT
09 91 23.A3	MURAL TO REMAIN IN ENTIRETY, VERIFY IN FIELD. DO NOT PAINT. PROTECT DURING DEMOLITION AND CONSTRUCTION.

**FIRE EXTINGUISHER / CABINET SCHEDULE**

MARK	DESCRIPTION	NOTES
FE EXIST.	FIRE EXTINGUISHER - EXISTING TO REMAIN	EXISTING TO REMAIN
FE-10	FIRE EXTINGUISHER - 10.0LB - CLASS A/B/C	FURNISHED AND INSTALLED BY GC.



**NORTH UNION SCHOOLS ART ROOM EXPANSION ADDITION**

401 N HANLIN ST. DEPT. 0001, OH 43134

**ISSUANCES/REVISIONS**

CONSTRUCTION DOCUMENTS	DATE
1 ADDENDUM 01	04/16/2026
2 ADDENDUM 02	05/01/2026
	06/06/2026

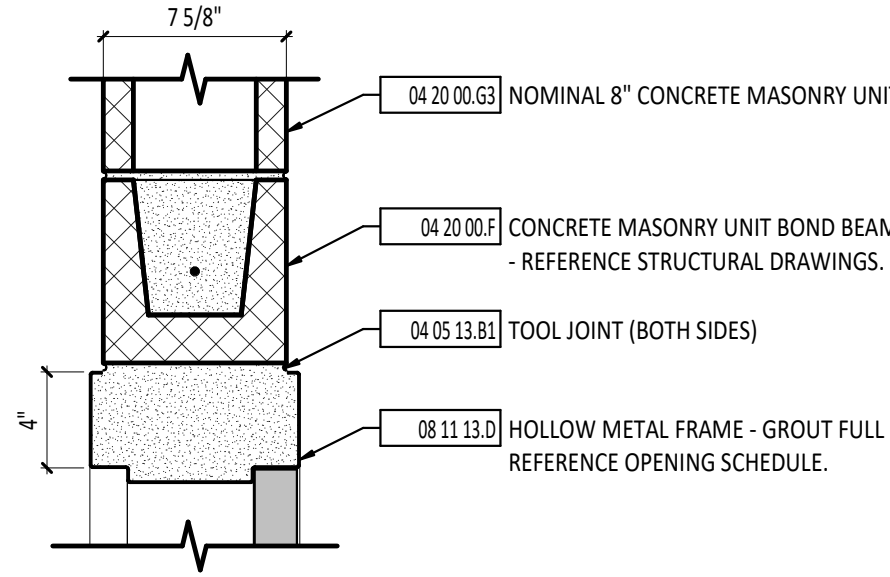
**PROJECT INFORMATION**

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
25091.00	LAT	BCW

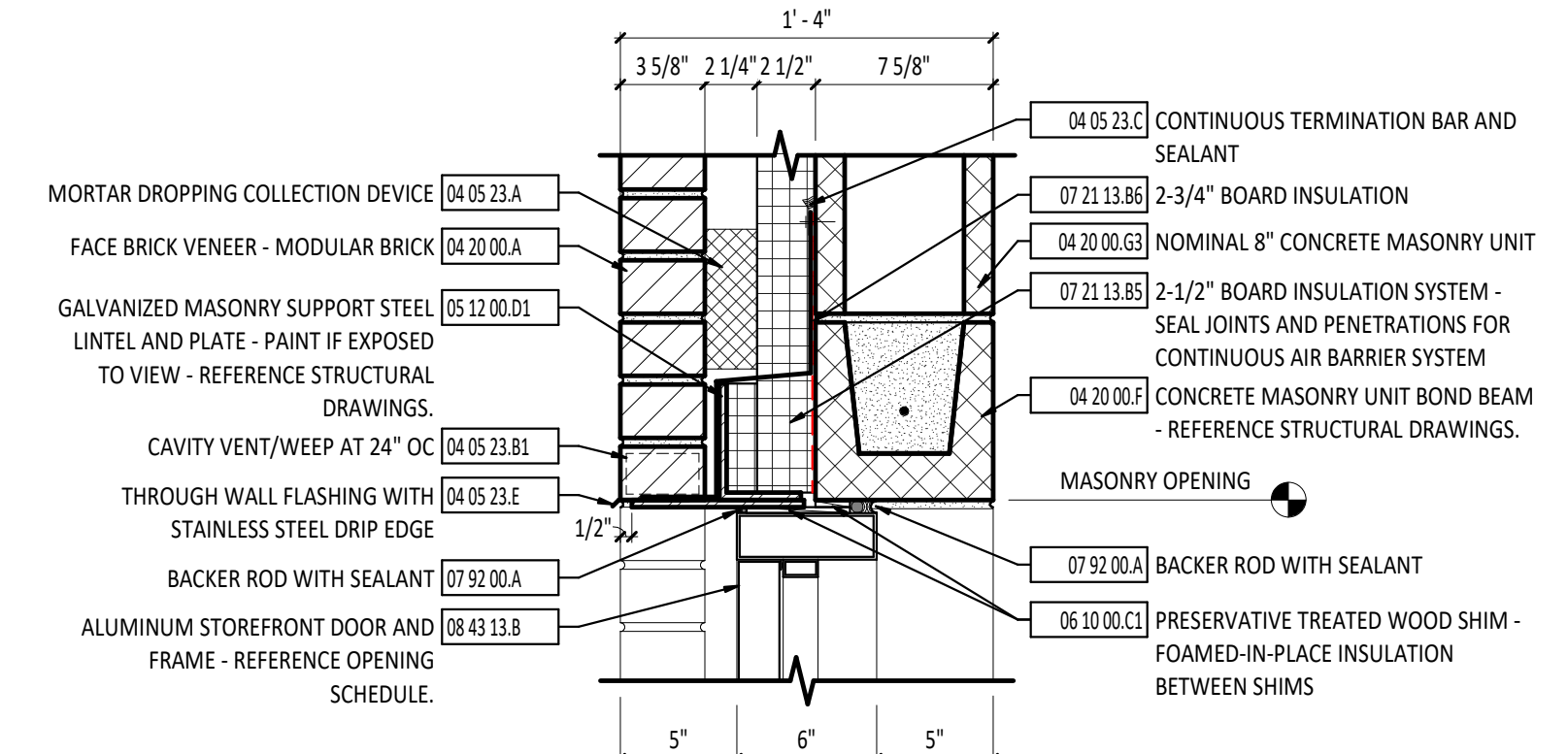
SHEET TITLE:  
**FIRST FLOOR DEMO PLAN AND PLAN - UNIT E**

SHEET NUMBER:  
**A1.1**

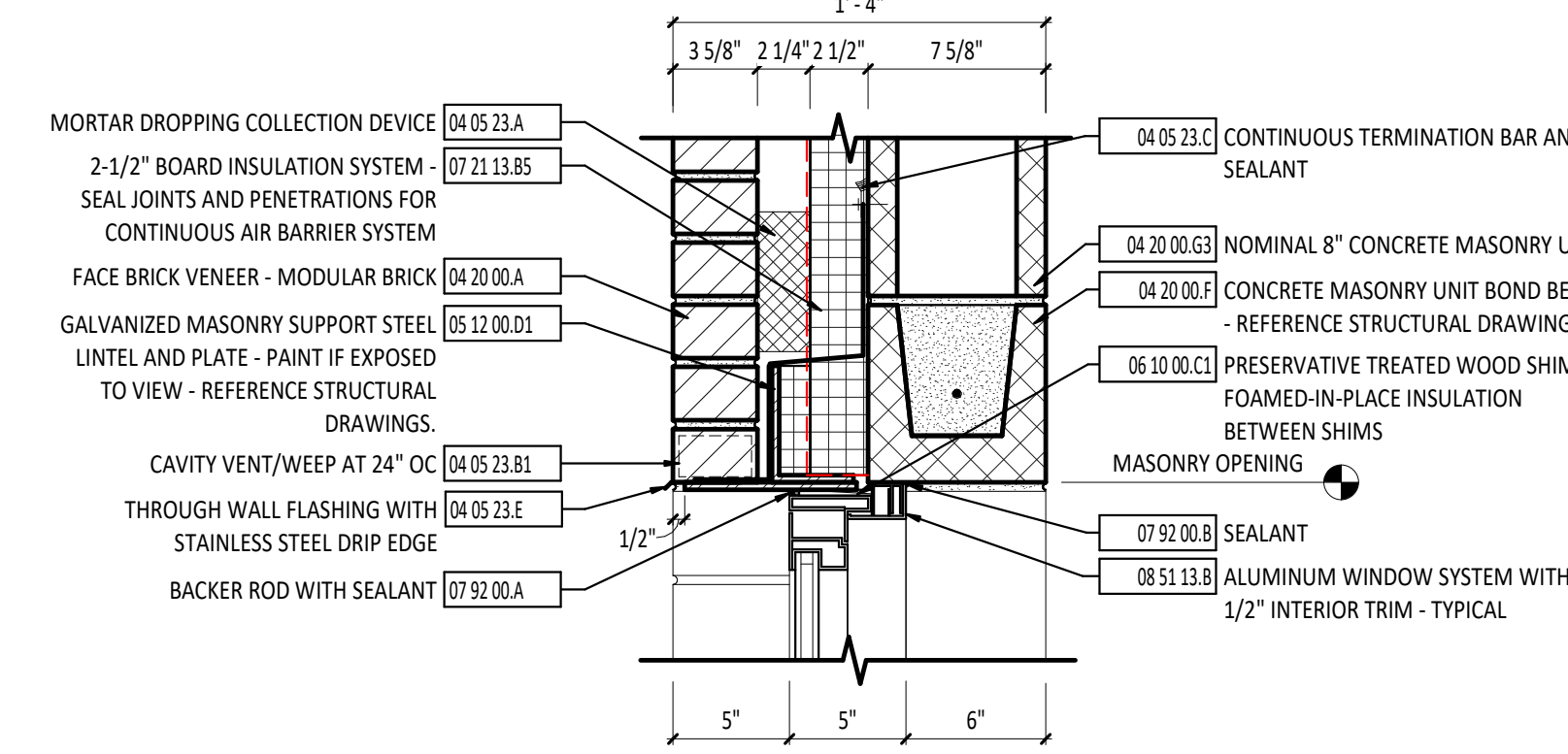




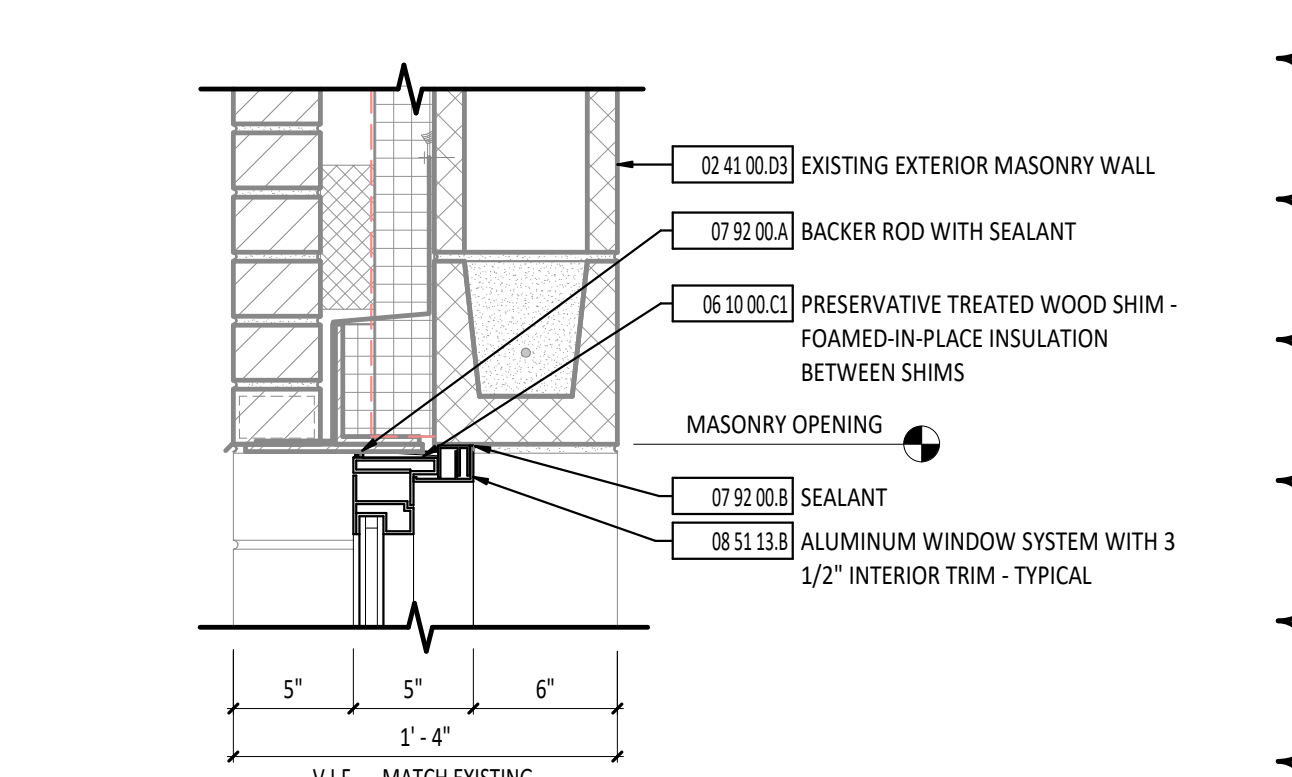
**1 HEAD DETAIL - INTERIOR**  
1 1/2" x 1'-0"



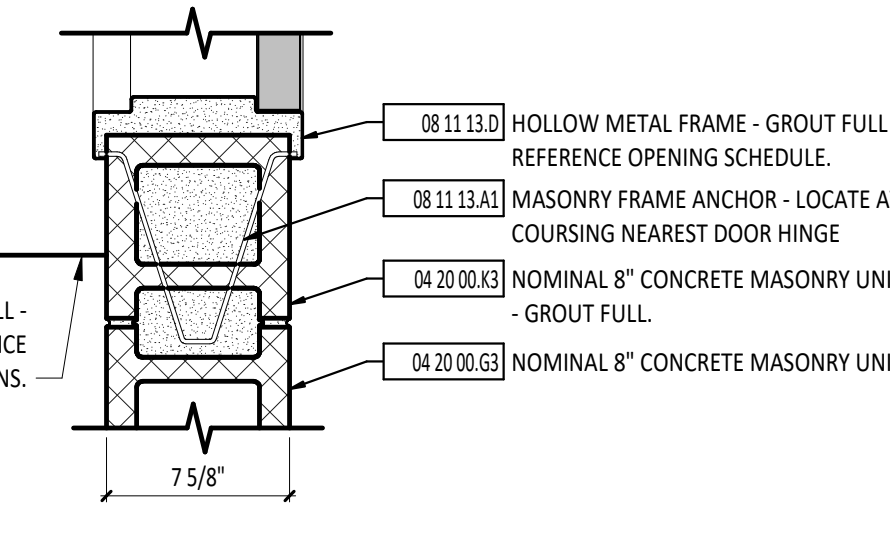
**2 HEAD DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



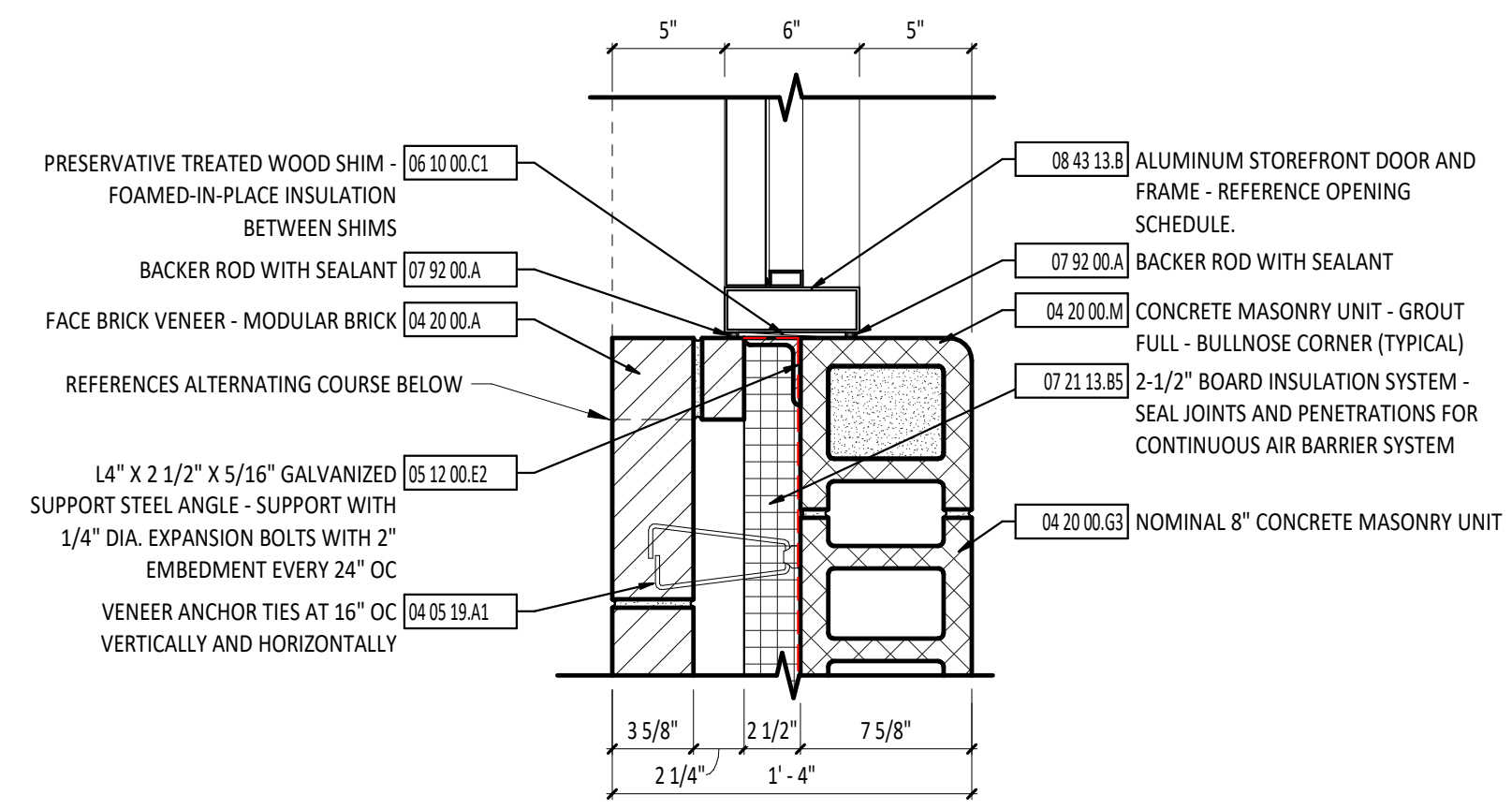
**3 HEAD DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



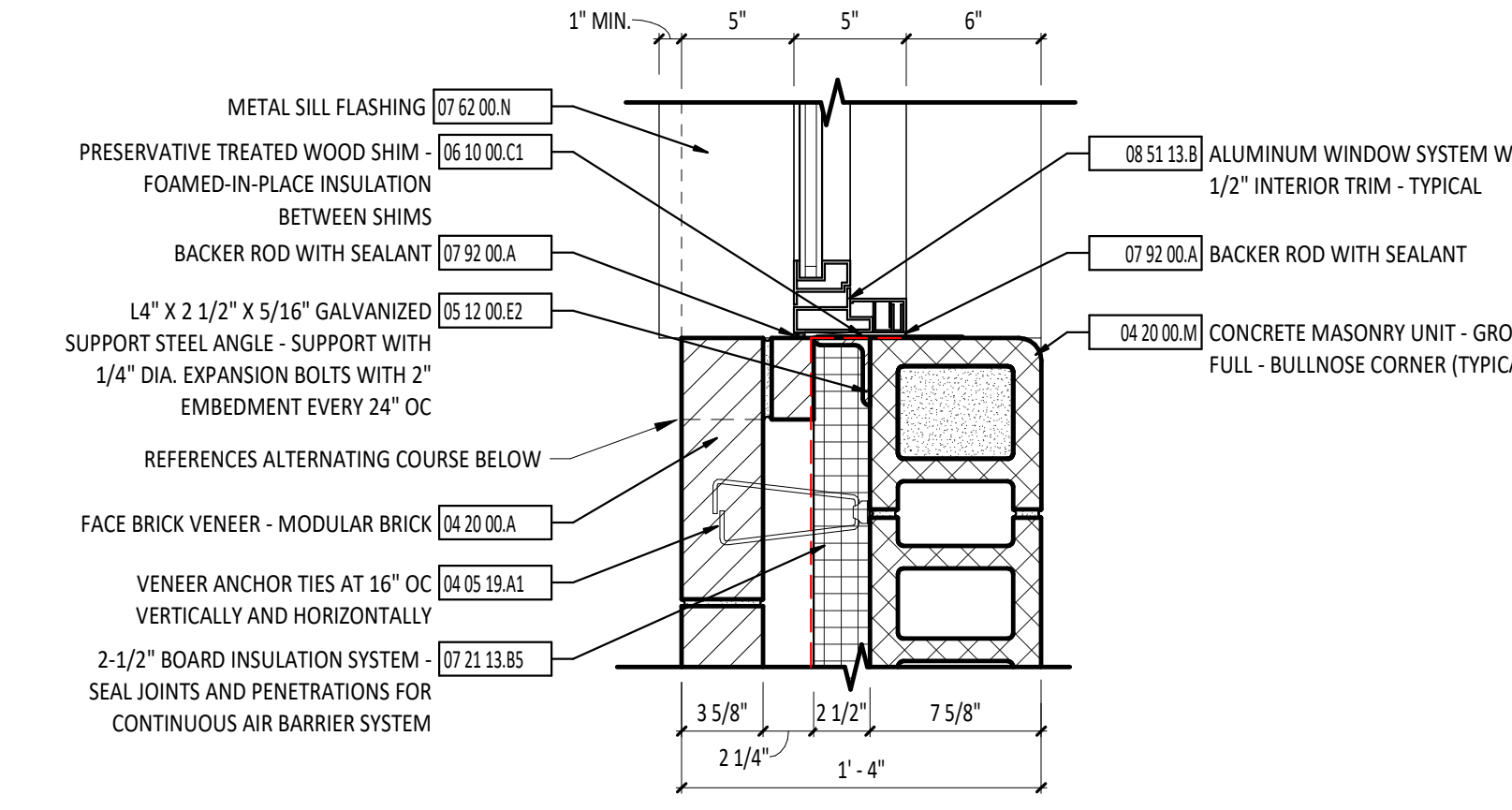
**13 HEAD DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



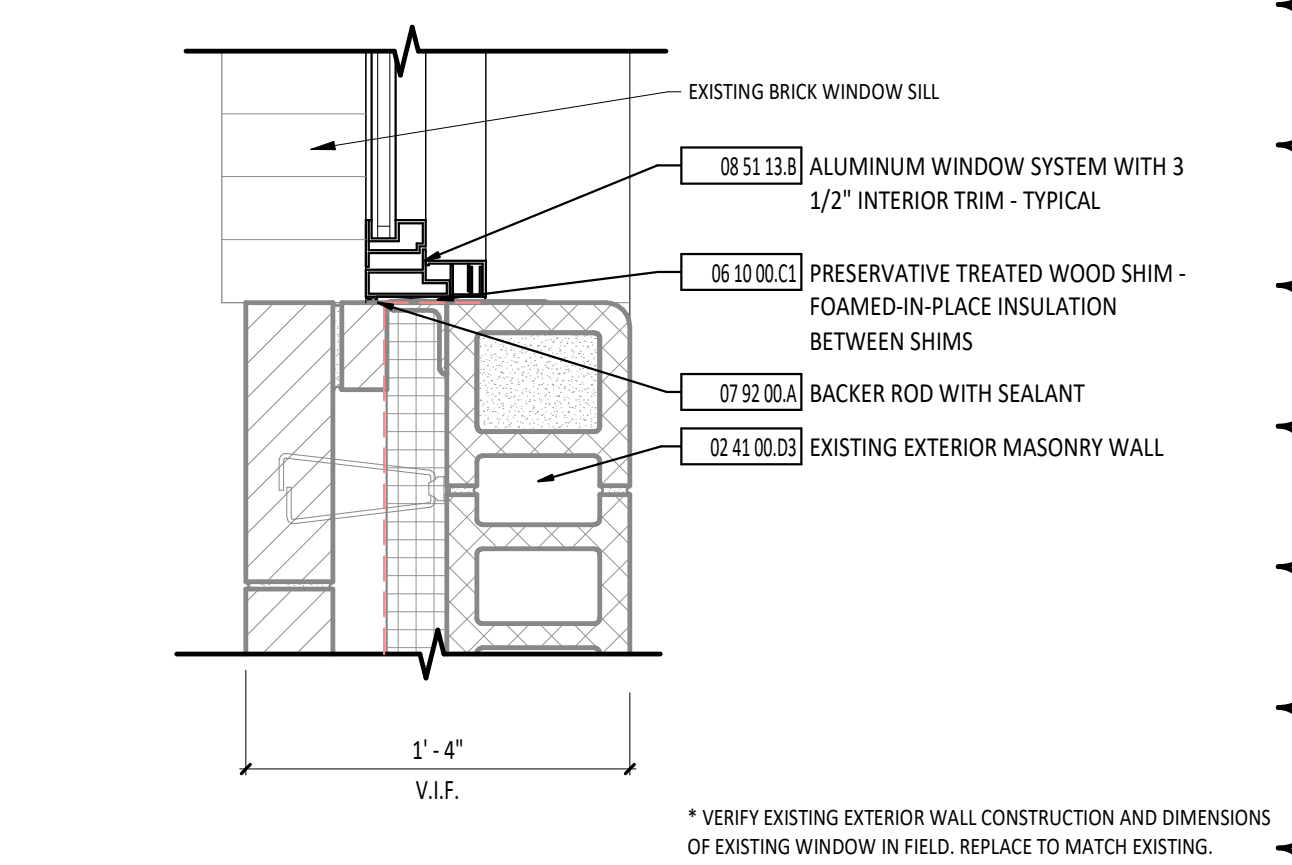
**4 JAMB DETAIL - INTERIOR**  
1 1/2" x 1'-0"



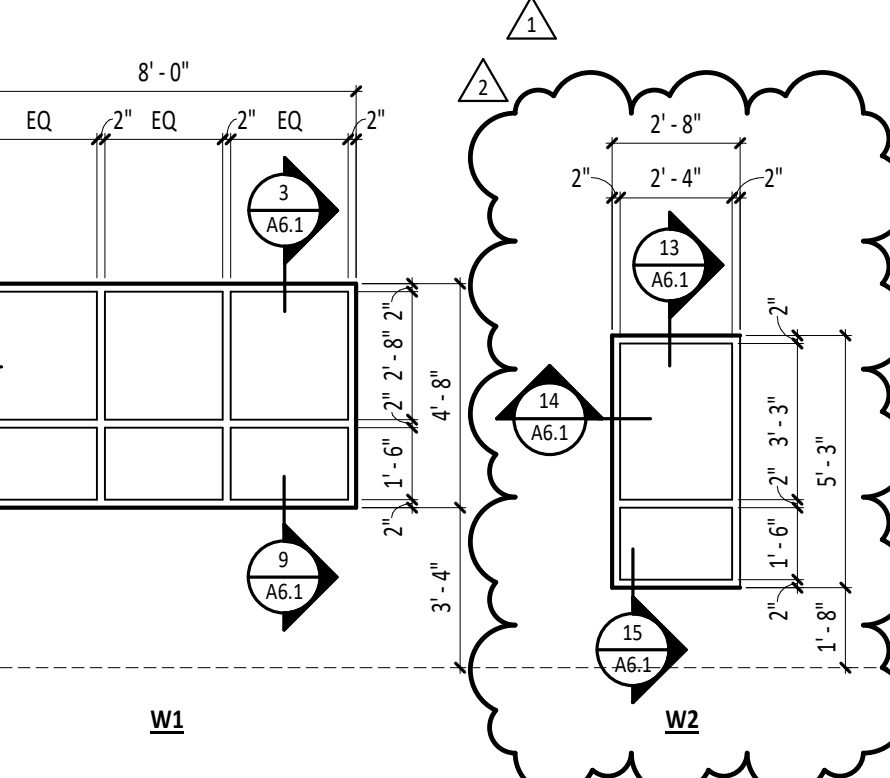
**5 JAMB DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



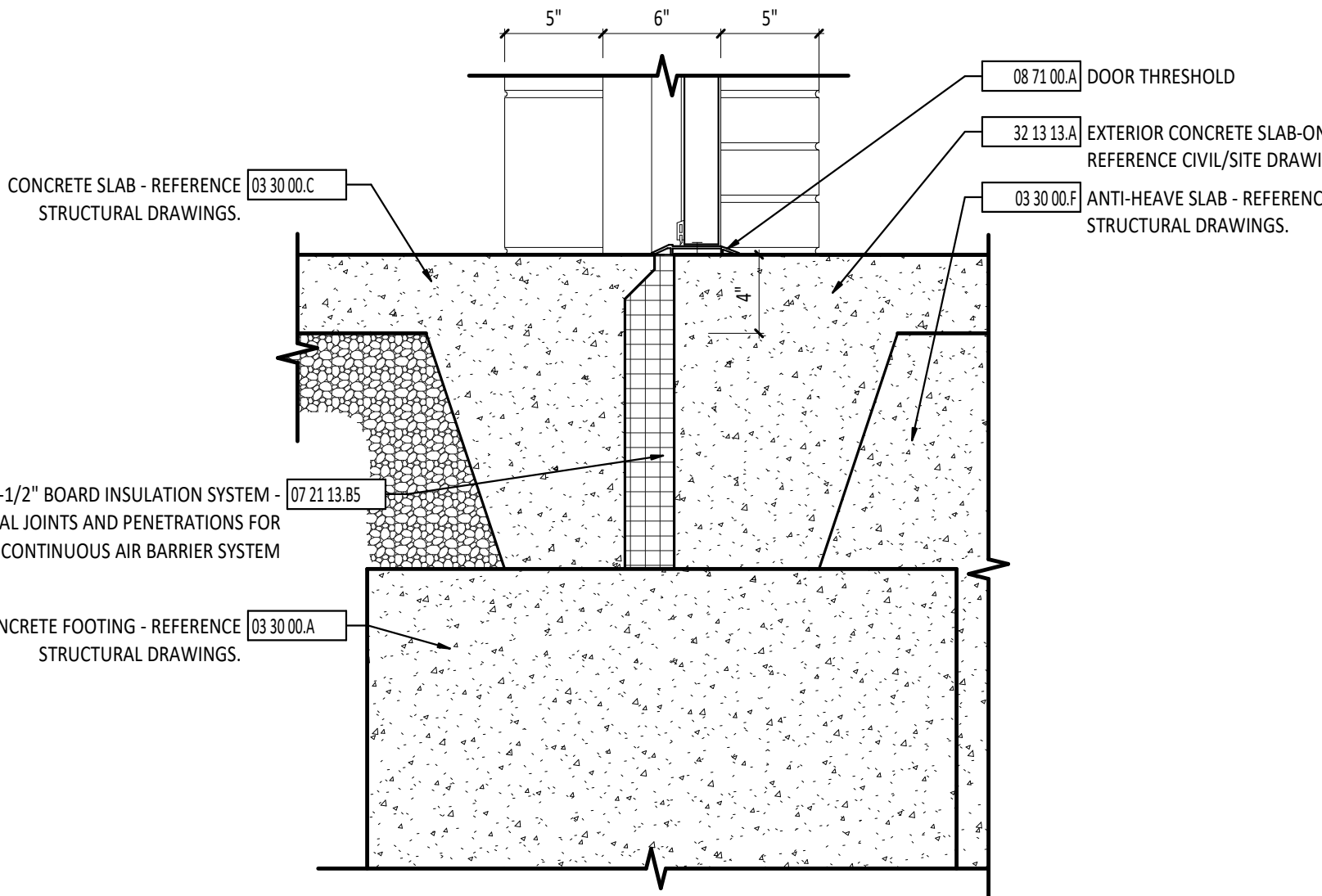
**6 JAMB DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



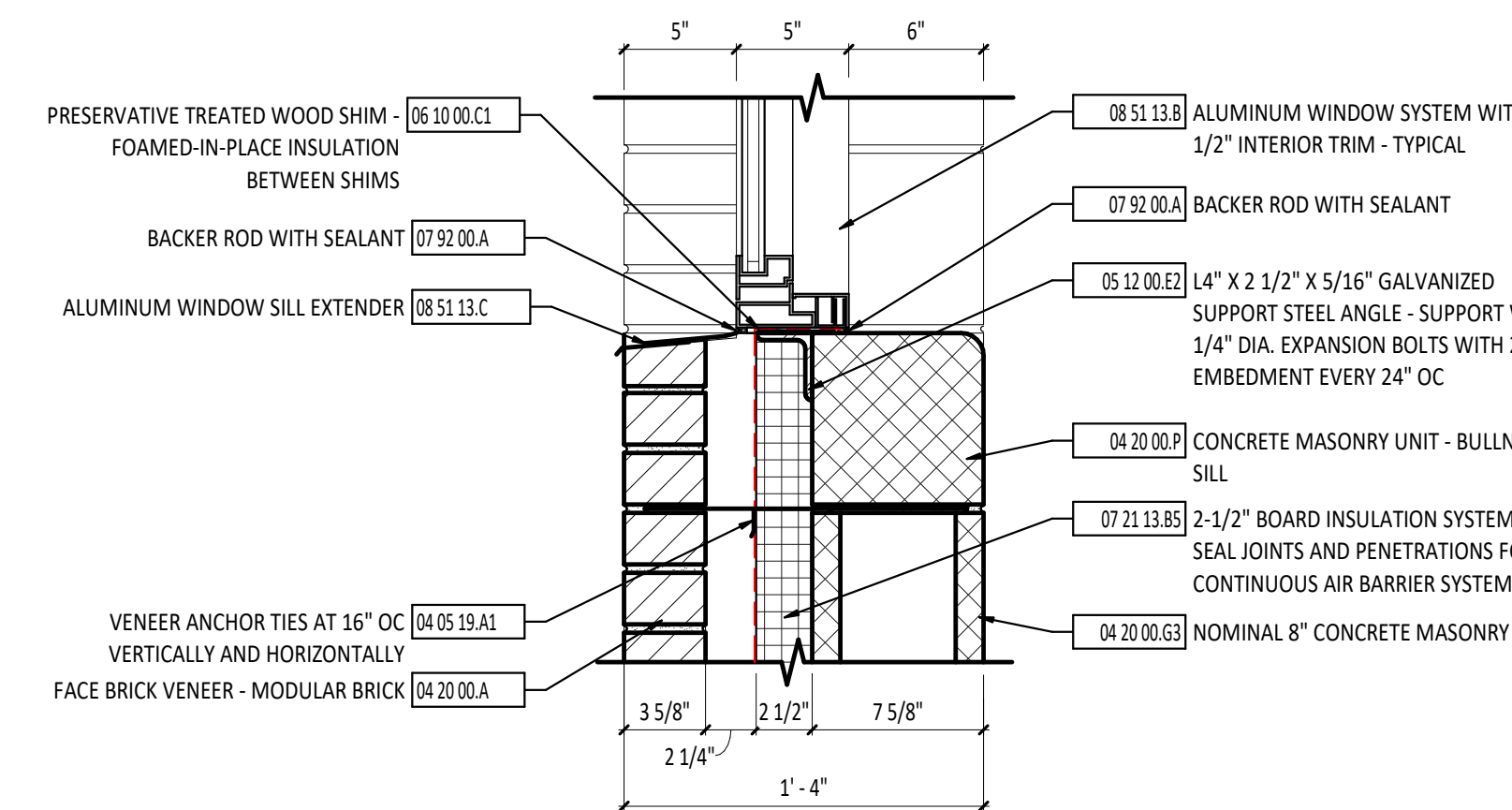
**14 JAMB DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



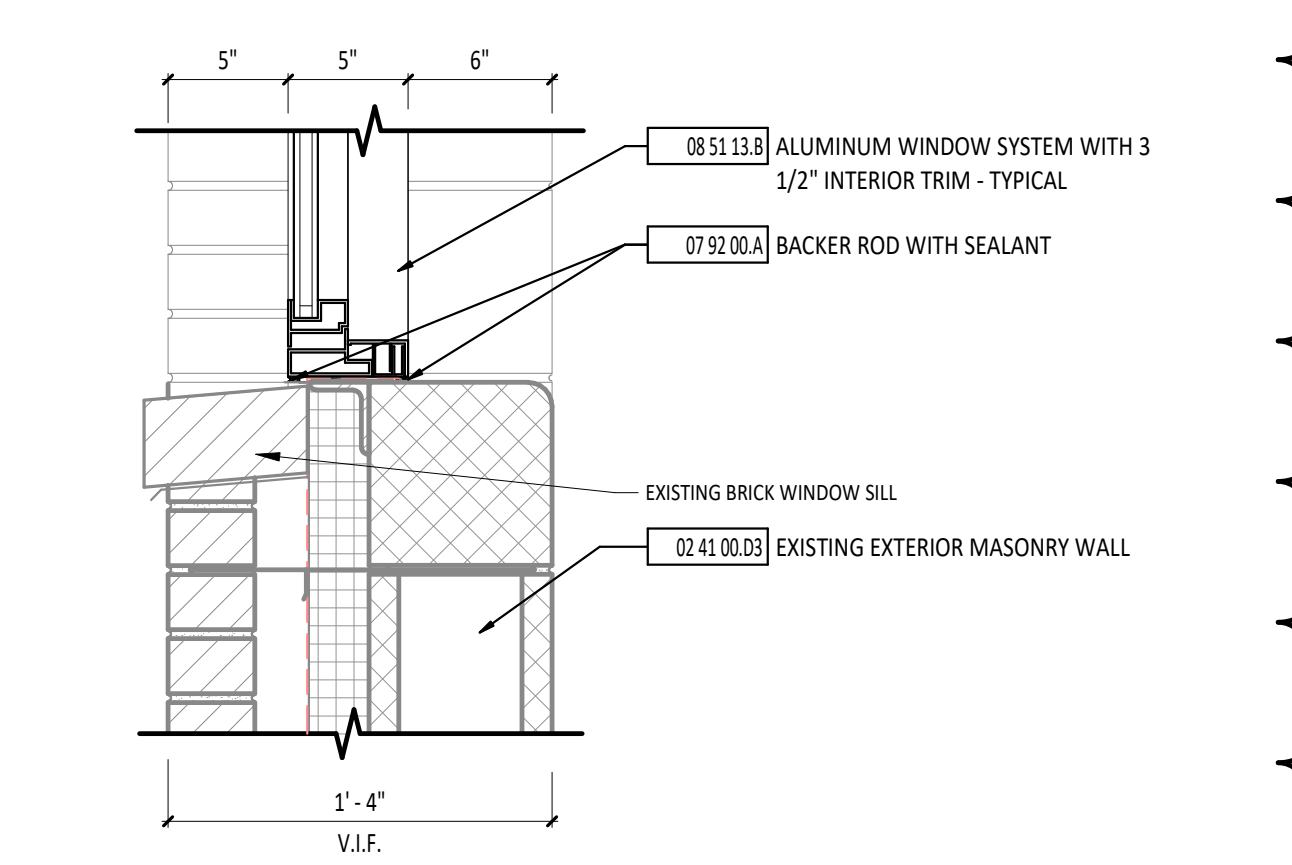
**7 WINDOW TYPES**  
1/4" = 1'-0"



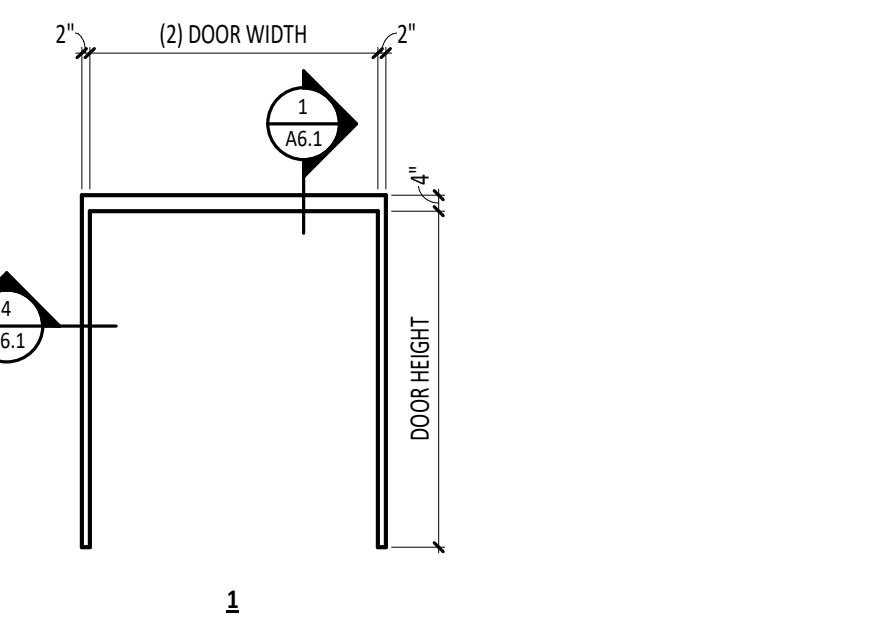
**8 SILL DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



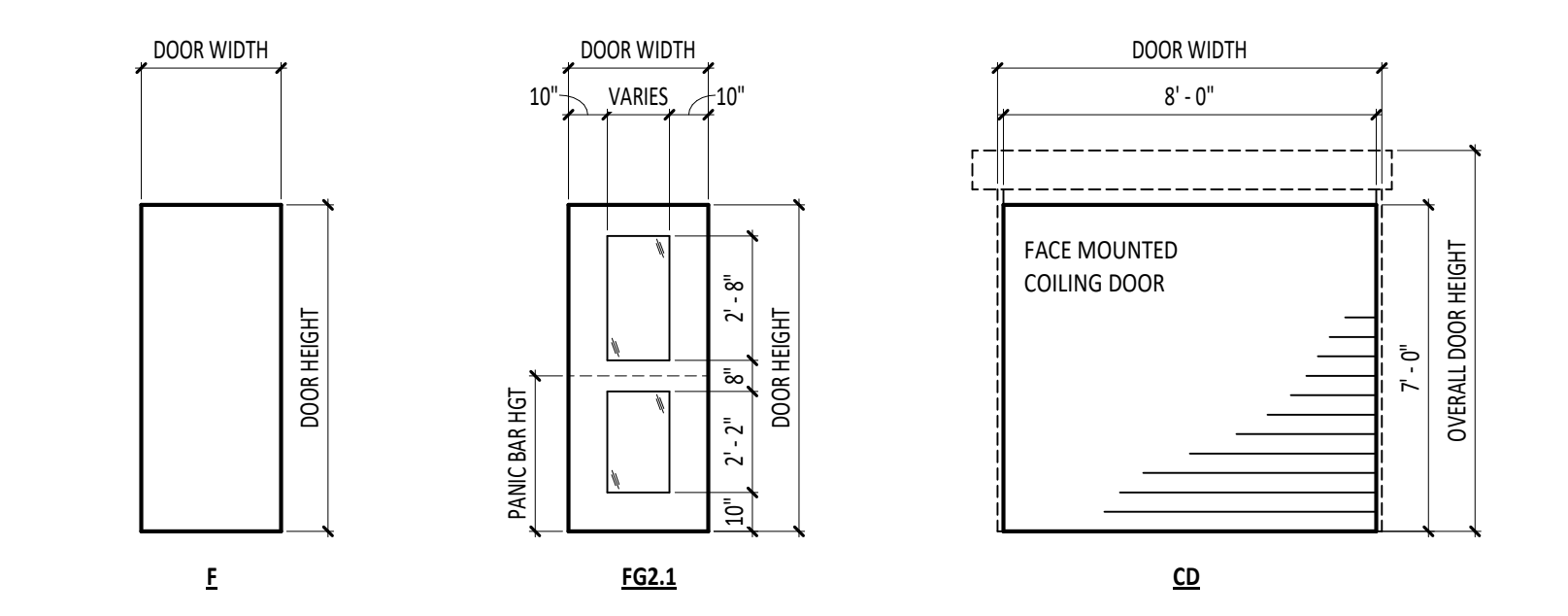
**9 SILL DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



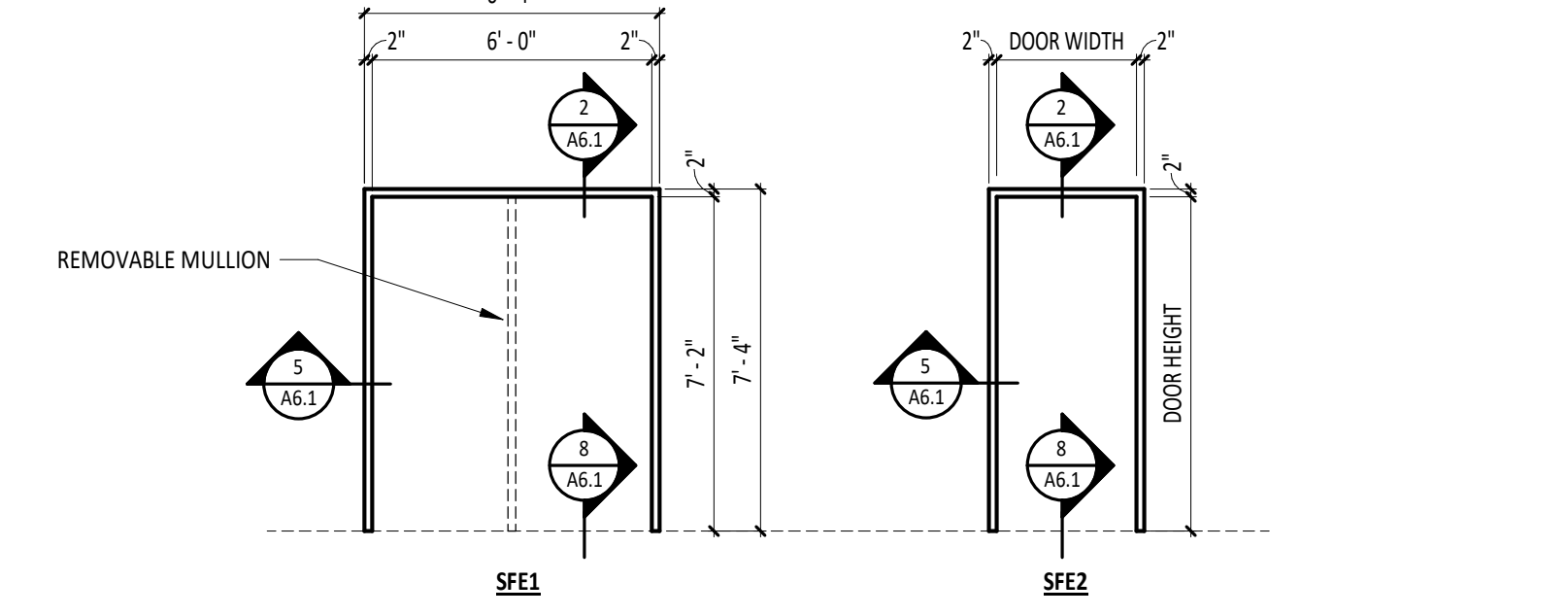
**15 SILL DETAIL - EXTERIOR**  
1 1/2" x 1'-0"



**10 HOLLOW METAL DOOR FRAME TYPES**  
1/4" = 1'-0"



**11 DOOR TYPES**  
1/4" = 1'-0"



**12 STOREFRONT TYPES**  
1/4" = 1'-0"

**DOOR GENERAL NOTES**

A REFERENCE SPECIFICATION SECTION 08 71 00 FOR HARDWARE SETS.

**DOOR/OPENING SCHEDULE ABBREVIATIONS**

**SYMBOL DESCRIPTION**

AL ALUMINUM  
CD COLLING DOOR  
F FLUSH  
FG FULL GLASS  
HM HOLLOW METAL  
W WOOD

**EXTERIOR STOREFRONT SCHEDULE**

MARK	DESCRIPTION	FUNCTION	NOTES
SFE1	2' x 6' - STOREFRONT - FRONT SET	Exterior	
SFE2	2' x 6' - STOREFRONT - FRONT SET	Exterior	

**NOTES:**

1. MANUAL ROLLER SHADE SYSTEM.

**CURTAIN WALL/STOREFRONT AND WINDOW TYPE SYMBOLS LEGEND**

LEVEL ELEVATION LEVEL LINE

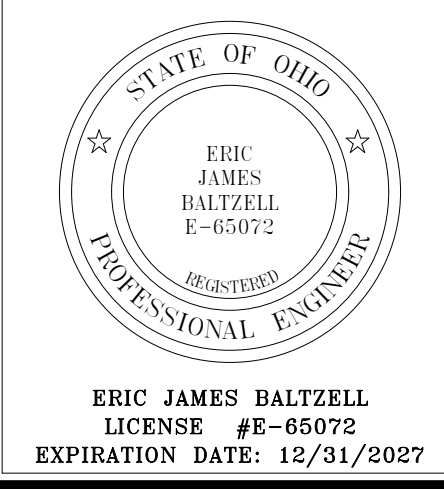
SECTION DETAIL NUMBER SHEET NUMBER

**DOOR HARDWARE SETS**

**Set 1**  
Opening E101a Pair Exterior 6'0" (each 3'0" 2' 2" ALF x ALD)  
Each opening to have:  
2 Continuous Hinges CFM SIF HD1 PT Clear Penko  
2 Electronic Power Transfer EL-CEPT Alum Sargent  
1 Keyed Removable Mullion U86A Alum Sargent  
1 Exit Device MEER LC 55 56 PE8804 ETL 32D Sargent  
1 Exit Device MEER LC 55 56 PE8803 ETL 32D Sargent  
1 Mullion Cylinder Kit LC 980 CC 32D Sargent  
1 Rim Cylinder Primus IC 260 Schlage  
1 Mortise Cylinder Primus IC 260 Schlage  
2 Closers w/hold open CPS500R 689 Norton  
1 Threshold 171A Penko  
2 Sweeps 29326NB Penko  
2 Electro Lynx QC300 McKinney  
2 Electro Lynx QC-3 McKinney  
Card Reader and power supply by Security Vendor

**Set 2**  
Opening E101b Single Exterior 3'0" 2' 2" ALF x ALD  
Each opening to have:  
1 Continuous Hinges CFM SIF HD1 PT Clear Penko  
1 Electronic Power Transfer EL-CEPT Alum Sargent  
1 Exit Device MEER LC 55 56 PE8804 ETL 32D Sargent  
1 Rim Cylinder Primus IC 260 Schlage  
1 Closers w/hold open CPS500R 689 Norton  
1 Threshold 171A Penko  
2 Sweeps 29326NB Penko  
1 Electro Lynx QC300 McKinney  
1 Electro Lynx QC-3 McKinney  
Card Reader and power supply by Security Vendor

**Set 3**  
Opening 102 Pair Interior 6'0" (each 3'0" 2' 0" HM x HMD)  
Each opening to have:  
6 Hinges TA2714 4 1/2" x 4 1/2" 260 McKinney  
2 Flush Pulls 94 320 Rockwood  
2 Ball Catches 592 320 Rockwood  
1 Flush Bolts 555 top only 260 Rockwood  
1 Classroom Deadbolt LC 4877 260 Sargent  
1 Mortise Cylinder Primus IC 260 Schlage  
2 Wall Stop/Holder 494 260 Rockwood



**NORTH UNION SCHOOLS ART ROOM EXPANSION ADDITION**

601 N. HANLIN ST. REHOBOTH, OH 43084

**ISSUANCES/REVISIONS**

CONSTRUCTION DOCUMENTS	DATE
1 ADDENDUM 01	04/16/2024
2 ADDENDUM 02	05/01/2024
	05/06/2024

**PROJECT NUMBER:** 25091.00

**DRAWN BY:** LAT

**CHECKED BY:** BCW

**SHEET TITLE:**

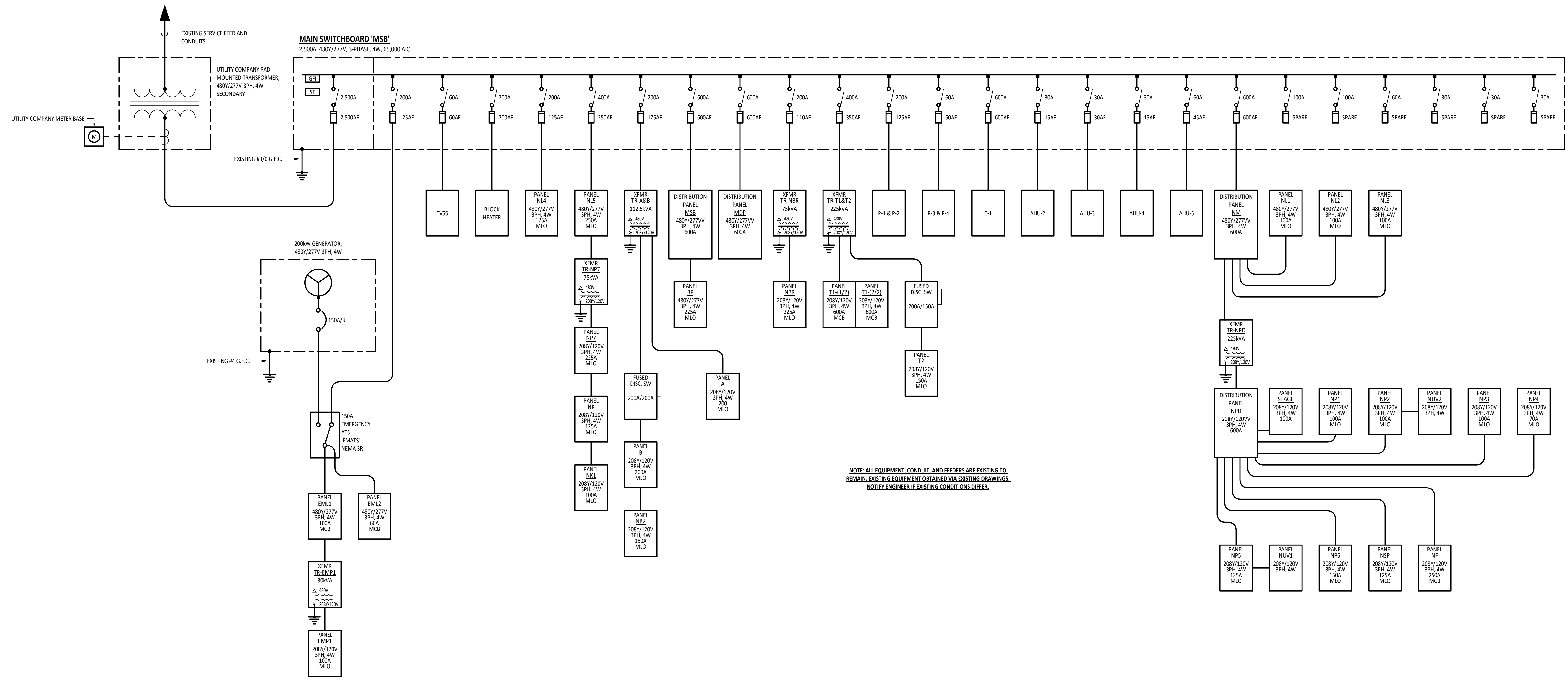
**DOOR SCHEDULE AND DOOR AND WINDOW TYPES AND FRAMES**

**SHEET NUMBER:**

**A6.1**

**DOOR/OPENING SCHEDULE**

NUMBER	SIZE	THK	MATL	TYPE	GLASS	DEPTH	FRAME			HARDWARE SET	FUNCTION	LABEL (MIN)	NOTES			
							MATL	TYPE	GLASS							
E101a	(2) 3'-0" x 7'-2"	1 3/4"	AL	F52.1	5/8" - TG - SG - IG	6"	AL	SFE1	2' - TG - IG	2/A6.1	5/A6.1	8/A6.1	1	EXTERIOR	-	REMOVABLE MULLION
E101b	3'-0" x 7'-2"	1 3/4"	AL	F52.1	5/8" - TG - SG - IG	6"	AL	SFE2	2' - TG - IG	2/A6.1	5/A6.1	8/A6.1	2	EXTERIOR	-	
E101c	8'-0" x 7'-0"	1 3/4"	STL	CD	-	0"	-	-	-	-	-	-	-	INTERIOR	90 MIN	
E101d	8'-0" x 7'-0"	1 3/4"	STL	CD	-	0"	-	-	-	-	-	-	-	INTERIOR	90 MIN	
E102	(2) 3'-0" x 7'-0"	1 3/4"	WD	F	-	8 3/4"	HM	1	-	1/A6.1	4/A6.1	-	3	INTERIOR	-	



NOTE: ALL EQUIPMENT, CONDUIT, AND FEEDERS ARE EXISTING TO REMAIN. EXISTING EQUIPMENT OBTAINED VIA EXISTING DRAWINGS. NOTIFY ENGINEER IF EXISTING CONDITIONS DIFFER.

**1** ELECTRICAL ONE-LINE DIAGRAM  
NO SCALE

MOUNTING: SURFACE FED FROM: NPD ENCLOSURE: NEMA 1 LOCATION: ELECTRICAL CLOSET		PANEL NP2		AIC RATING: EXISTING VOLTAGE: 208Y/120V 3PH 4W MAINS RATING: 100 A MAINS TYPE: MLO OTHER:							
W	CIRCUIT DESCRIPTION	P	C	A	B	C	T	AMP	CIRCUIT DESCRIPTION	N	O
1	SPARE BREAKER	2	60	0 / 750			2	20	1	EXISTING RECEPTACLE	ER
3	SPARE BREAKER	2	40	0 / 900			4	20	1	EXISTING RECEPTACLE	ER
5	SPARE BREAKER	2	40	0 / 900			6	20	1	EXISTING RECEPTACLE	ER
7	SPARE BREAKER	2	40	0 / 900			8	20	1	RECEPTACLE ART E101	ES
9	EXISTING ROOM 109 RECEPTACLES	1	20	9	750 / 1260		10	20	1	RECEPTACLE ART E101	ES
11	EXISTING ROOM 109 RECEPTACLES	1	20	11		750 / 540	12	20	1	TEACHER RECEPTACLES ART E101	ES
13	EXISTING ROOM 109 RECEPTACLES	1	20	13	750 / 500		14	20	1	EF-1	ES
15	SPARE BREAKER	1	20	15		0 / 200	16	20	1	POTTERY WHEEL CHORD REEL	ES
17	SPARE BREAKER	1	20	17		0 / 100	18	20	1	POTTERY WHEEL CHORD REEL	ES
19	SPARE BREAKER	1	20	19		0 / 200	20	20	1	POTTERY WHEEL CHORD REEL	ES
21	SPARE BREAKER	1	20	21		0 / 1440	22	20	1	CORD REELS	ES
23	SPARE BREAKER	1	20	23		0 / 1440	24	20	1	CORD REELS	ES
25	EXISTING KILN	3	20	25	2306 / 1440		26	20	1	CORD REELS	ES
27	EXISTING KILN	2	20	27		2306 / 500	28	15	1	UV-1	N
29	EXISTING KILN	2	20	29		2306 / 500	30	15	1	UV-2	N
31	EXISTING HVAC	1	20	31	2496 / 0		32	-	1	SPACE ONLY	
33	EXISTING HVAC	1	20	33	2496 / 0		34	-	1	SPACE ONLY	
35	EXISTING HVAC	1	20	35	864 / 0		36	-	1	SPACE ONLY	
37	EXISTING HVAC	1	20	37	864 / 0		38	-	1	SPACE ONLY	
39	EXISTING HVAC	1	20	39	864 / 0		40	-	1	SPACE ONLY	
41	SPACE ONLY	1	-	41		0 / 0	42	-	1	SPACE ONLY	
VA SUBTOTALS:		10067 VA		10426 VA		7127 VA					
AMP SUBTOTALS:		88 A		91 A		59 A					
LOAD TYPE:	CONNECTED VA	DEMAND VA	DEMAND VA	DEMAND VA	DEMAND VA	DEMAND VA	PHASE		CIRCUIT NOTES:		
HVAC EQUIPMENT	16001 VA	100.0%	16001 VA	44 A	10067 VA	A			ER   EXISTING CIRCUIT TO REMAIN		
RECEPTACLE	11728 VA	92.6%	10864 VA	30 A	10426 VA	B			ES   UTILIZE EXISTING SPARE BREAKER		
					7127 VA	C			N   PROVIDE NEW CIRCUIT BREAKER		
PANEL TOTALS		27619 VA	CONNECTED								
		26760 VA	DEMAND								
		77 A	CONNECTED								
		74 A	DEMAND								

MARK	MOUNTING	TYPE	LAMPS			BALLAST/DRIVER	VOLTAGE	INPUT WATTS	FIXTURE DESCRIPTION	COMMENTS	BASIS OF DESIGN & APPROVED MANUFACTURERS
			MIN. LUMENS	CCT	CRI						
A1	RECESSED	LED	4000 lm	4000K	80 CRI	0-10V DIMMING DOWN TO 10%	UNV	34 W	2'X4' LED FLAT PANEL, DIRECT LIT, WHITE TRIM, SWITCHABLE LUMEN OUTPUT AND COLOR TEMPERATURE, U.L. LISTED.	LUMEN OUTPUT TO BE SET TO LOW AND COLOR TEMPERATURE TO BE SET TO 4000K.	LITHONIA   CPX 2X4 AL08 80CRI 5WV7 5WV MVLVT DAY-BRITE   2FPZ SERIES COLUMBIA   CB74 SERIES METALUX   CGT SERIES
D1	RECESSED	LED	1200 lm	4000K	90 CRI	0-10V DIMMING DOWN TO 10%	UNV	12 W	7IN SURFACE MOUNTED DOWNLIGHT, SHALL DEPTH, DIFFUSED LENS, U.L. WET LOCATION LISTED.	COLOR TEMPERATURE TO BE SET TO 4000K.	LUNO   JSF 7IN 10LM 5WV5 90CRI MVOLT ZT LIGHTOLIER   SSR SERIES GREEN CREATIVE   3N1 SERIES PACLIGHTS   F5MR SERIES
E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0 W	EXISTING FIXTURE TO REMAIN.		
ED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0 W	EXISTING FIXTURE TO BE DEMOLISHED.		
T1	TRACK	LED	2750 lm	4000K	80 CRI	0-10V DIMMING DOWN TO 10%	UNV	28 W	LED TRACK LIGHT, WHITE FINISH, U.L. LISTED.	PROVIDE TRACK COMPATIBLE WITH TRACK HEAD FIXTURE. REFER TO FLOOR PLAN FOR TRACK LENGTH.	SPECTRUM LIGHTING   STT4PC 40L 40K MD D0102 HOT2D MW LNA4FG LITON   LTD74 SERIES SOLAIS   LCM SERIES
W1	WALL	LED	2000 lm	4000K	80 CRI	0-10V DIMMING DOWN TO 10%	UNV	15 W	LED EXTERIOR WALL PACK, DIE-CAST ALUMINUM HOUSING, WIDE THROW DISTRIBUTION, FULLY GASKETED FRAME, ACRYLIC LENS, DARK BRONZE FINISH, U.L. WET LOCATION LISTED.		LITHONIA   WEDGE 1 LED P1 40K 80CRI VV MVLVT DDBXD GARDCO   GWS SERIES BEACON   VPW2 SERIES MCGRAW-EDISON   GKO SERIES
X1	WALL/CEILING	LED	N/A	RED	N/A	ELECTRONIC DRIVER	UNV	3 W	WHITE THERMOPLASTIC LED EXIT SIGN, RED LETTERING, CEILING OR WALL MOUNT, SINGLE OR DOUBLE FACED, ARROWS AS INDICATED ON DRAWINGS, U.L. LISTED.	MOUNT 4" ABOVE DOOR FOR WALL MOUNTED FIXTURES. CONNECT AHEAD OF LOCAL SWITCHING.	LITHONIA   LQM SERIES CHLORIDE   VERM SERIES COMPASS   CAR SERIES SURELITES   APX7NG SERIES

ISSUANCES/REVISIONS	
CONSTRUCTION DOCUMENTS	04/16/2025
1 ADDENDUM 02	05/06/2025

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
25091.00	CDH	AEH

SHEET TITLE:  
**ONE-LINE DIAGRAM, PANEL SCHEDULE, AND LUMINAIRE SCHEDULE**

SHEET NUMBER:  
**E5.1**