Addendum 07

DOCUMENT 00 9100

DATE: January 16, 2026

PROJECT: Fort Loramie Local Schools Athletic Complex Building & Associated Improvements
600 East Park Street
Fort Loramie, Ohio 45845

PROJECT #: 25041.00

OWNER: Fort Loramie Local School Board of Education
575 Greenback Road
Fort Loramie, Ohio 45845

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 December 11, 2025, 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 3 page addendum, 3 pages of exhibits, 4 specification sections and 5 drawing sheets.

FOR INFORMATION ONLY

GARMANN MILLER

CHANGES TO THE PROJECT MANUAL

1. 07 21 13 – Board Insulation
   a. 1.05 Quality Assurance
      i. Added Air Barrier System in its entirety to be provided by the same manufacturer to ensure compatibility and continuity of air barrier.
   b. 2.02 C. Polyisocyanurate insulation
      i. Added (must be same manufacturer as XPS insulation, when used in
      ii. conjunction, for compatibility and continuity of air barrier system.)
   c. 2.02 C 3. Manufacturers
      i. Change Atlas Energyshield Pro to Energyshield XR
2. 07 42 13.13 – Formed Metal Wall Panels
   a. Add section in its entirety
   b. Section used for Metal panel above locker room storefront – Intent is to match vertical metal panel on High School.
3. 08 71 00 – Door Hardware
   a. Revised set 09 to be for storefront frame
   b. Hardware for A121 to be set 21 (single door)
   c. Door 108 (Locker room) to have door hardware set 19
4. 08 80 00 – Glazing
   a. Revised EG-4 to have 3m Security Film Scotch Shield Ultra Series
5. 12 35 50.13 – Educational Casework – 2.01 Manufacturers – add Robertson Cabinets as an acceptable manufacturer.

CHANGES TO THE DRAWINGS

Locker Room Building

1. A1.1 – Demo Plan/Floor Plan/Details/Door Schedule
   a. Added site concrete demolition and anti heave slab in front of new store front.
   b. Door 108 to remain (no demo and infill) and change hardware set 19

Elementary School Building

1. C2.1 – Utility Plan
   a. Utility Plan sheet added to the set for added downspout piping

Athletic Complex

1. Sheet A0.2 – Wall Types/Mounting Heights
   a. Added S3.2 and S3.5 wall types to detail 2
2. Sheet A6.1 – Door Schedule and Details
   a. Revised door A121
3. Sheet T3.1 – Enlarged Technology Rooms
   a. Added camera NVR.

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ATTACHMENTS

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

Pre-Bid RFI Log

Specification Sections: 07 21 13, 07 42 13.13, 08 71 00, 08 80 00

Drawing Sheets:

Locker Room Building – A1.1

Elementary School Building – C2.1

Athletic Complex – A0.2, A6.1, T3.1

END OF ADDENDUM

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Fort Loramie Pre-Bid RFIs

This document is a running list of Pre-Bid RFI questions. Yellow highlight indicates a received question that does not have a response yet. These items will be addressed in forthcoming addendums.

ADDENDUM 07

1. Sheet A9.2 Calls out spec 09 84 14 A for the panels in the mezzanine and in the keynote it calls out AWP3. So I am assuming awp3 panels are the base bid panels and should be under section 09 84 30? I don't see a section 09 84 14A in the specifications.
    a. **Response: Yes, AWP3 located in Golf Simulator room A202 is base bid. Yes, AWP3 should be under the 09 84 30 spec section.**

2. Sheet A8.2 calls out 09 84 30 F and shows six locations as alternates and 2 as base bid. They look like similar locations to the 09 84 30.G and 09 84 30.H panels shown on page A10.2.
    a. Is it safe to assume that 09 84 30.G is the same as AWP1? **Response: Yes, 09 84 30.G is the same as AWP1.**

    b. Is it safe to assume that 09 84 30.H is the same as AWP2? **Response: Yes, 09 84 30.H is the same as AWP2.**

    c. What is 09 84 30.F called out on sheet A8.2? Are they all alternates or partially base bid? **Response: 09 84 30.F on sheet A8.2 is listing the panel locations of AWP1 and AWP2. Please reference the A10.2 sheet and Finish Material Schedule on sheet A9.0 for further information on exact location for AWP1 and AWP2.**

3. Boring under 705 for water line: It is not clear if this requires a jack and bore with a steel casing or if directional drilling is an acceptable alternate method. Please specify requirements.
    a. **Response: The water line under 705 can be directionally drilled.**

4. Page A7.1 Detail 2 shows 12" CMU, but the walls called out for that area are show as M8 which are 8" block. Just confirming we are using 8" masonry and 4" masonry for the M4 walls?
    a. **Response: All M8 walls indicated on the floor plans are to be 8" Masonry and all M4 walls are to be 4" masonry.**

5. A1.2 Calls out S3.2 and S3.5 walls but there is no Detail on sheet A0.2 detail 2 for S3.2 or S3.5 wall types.
    a. **Response: S3.2 and S3.5 have been added in addendum 07**

6. Locker Room - Are you able to share the type of existing wall finish inside of the restrooms for the two door infills called out?
    a. **Response: Existing wall panels appear to be painted T1-11 Boards. – Verify in field prior to installation.**

7. Locker Room - Plans call for a footer and wall below the new Aluminum Storefront Door and Frame.
    a. How do you intend to pour this footer without removing some of the existing exterior concrete? **Response: Detail updated in Addendum 07.**
    b. Do you not need a new frost slab poured in front of the new doors? **Response: Frost slab added in addendum 07**

8. Elementary - Downspouts stop on the surface or do we need boots and where are the downspouts getting tied into?
    a. **Response: Downspouts to tie into existing system with the parking lot. Locations provided in addendum 07**

9. Do you have specification for the vertical metal panels required to be installed above the aluminum storefront doors on the exterior of the building?
    a. **Response: Specification 07 42 13.13 has been added in addendum 07**

10. Do you have specifications on the soffit and fascia for the elementary school renovation?
    a. **Response: Design intent to match existing soffit and fascia. GC to provide panel and color options for selection by owner.**

11. What is the detail for walls up to roof deck in the PEMB building?
    a. **Response: All walls to deck in the PEMB must have purlin closures**

12. Will the exterior of the split face block be manufactured in white, or is it to be painted?
    a. **Response: Exterior block may <u>not</u> be painted. The Split face is to be integrally colored white.**

13. Is the ceiling decking to be painted, or just the structural steel? Will it be red or white or galvanized with no paint?
    a. **Response: Metal Decking to be painted along with all structural steel and MEPT duct work in the associated space. Color is called out on drawing set per room.**

14. Are stair stringers painted?
    a. **Response: Yes, all exposed steel is to be primed and painted. Previous addendum removed architecturally exposed structural steel but replaced all mentions with painted steel.**

15. Are all sealed concrete locations to be integrally colored concrete as noted on the finish schedule on A9.0? St Henry Tile offers four levels of "gray" integrally colored concrete as noted in the finish schedule on A9.0 (Slate, Smoke, Charcoal, and Onyx), where Slate is the lightest and Onyx is almost black. Which is preferred for pricing? Also, an anti slip additive is called out in section 03 35 11. Where is this to be applied? This additive does not work with sealing products if burnishing is desired. Please confirm location of anti slip additive and if burnished is wanted.
    a. **Response: All areas where there is exposed concrete as the finish floor is to have integrally colored concrete with burnished finish. Slate color is acceptable. No non slip additive required.**

16. Addendum #4 added a note on the elementary school drawings on page A1.1 calling for 09 84 30.B Wood Fiber along the ceiling? Is this panel across the entire ceiling? I don't see it call out in the finish schedule nor in the specifications.
    a. **Response: The acoustical panels added in addendum 4 are to match what is existing in the gymnasium currently. The panels cover the entire exposed roof deck and are painted. Reference spec section 09 84 13 for cementitious wood fiber panels.**

17. In the athletic center, are you planning to fasten the panels directly to the liner panel against the ribs of the liner? I assume you want them on the exterior of the liner panel? Are you requiring any additional furring behind the panels?
    a. **Response: Panels in the athletic complex can be hung directly from the liner panel with no additional furring required.**

18. What are the blocking requirements for the signage?
    a. **All exterior signs, vestibule logo, and mezzanine signage will require ¾" plywood blocking. All blocking and any associated framing is to be provided by the GC.**

SECTION 07 21 13
BOARD INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Board insulation at foundation perimeter, under floor slabs, 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 05 41 00 - Structural Metal Stud Framing: Board insulation as wall sheathing.

D. Section 07 21 19 - Foamed-In-Place Insulation: Plastic foam insulation other than boards.

1.03 REFERENCE STANDARDS

A. ASTM C203 - Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation; 2005a (Reapproved 2012).

B. ASTM C209 - Standard Test Methods for Cellulosic Fiber Insulating Board; 2012.

C. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2021.

D. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023.

E. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2012.

F. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2023a.

G. ASTM D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics; 2016 (Reapproved 2023).

H. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

I. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.

J. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C; 2019a.

K. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2023).

L. ASTM E2357 - Standard Test Method for Determining Air Leakage of Air Barrier Assemblies; 2018.

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

A. **Air Barrier System in its entirety to be provided by the same manufacturer to ensure compatibility and continuity of air barrier.**

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

C. Insulation Over Metal Stud Framed Walls, Continuous: Glass fiber Poly-Iso board 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 below slab.
   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: As indicated on drawings
   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.
      b. Kingspan Insulation LLC: GreenGuard XPS Type IV, 25 psi; www.kingspan.com.
      c. Owens Corning Corporation: FOAMULAR 250 Extruded Polystyrene (XPS) Insulation; 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 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) Manufacturers:
      (a) Kingspan: Greenguard Type IV XPS Insulation Board; www.kingspan.com
      (b) Owens Corning: Foamular CW25; www.owenscorning.com

C. Polyisocyanurate Insulation **(must be same manufacturer as XPS insulation, when used in conjuction, for compatibilty and continuity of air barrier system.)**
   1. Continuous Exterior Insulation: Glass-fiber-reinforced enhanced polyisocyanurate foam core faced with nominal 4 mil embossed acrylic-coated aluminum on the exterior side, complying with ASTM C1289 and meeting the following physical properties:
      a. ASTM C1289, Type 1, Class 2, Grade 3.
      b. Compressive Strength (ASTM D1621): 25 psi, minimum.
      c. Long-Term Thermal Resistance (ASTM C518): measured at Mean Temp of 75 F: R-6.5 at 1 inch, R-15.0 minimum at 2.5 inches.
      d. Flexural Strength (ASTM C203): Minimum 40 psi.
      e. Water Absorption (ASTM C209): Minimum 0.1 percent by volume.
      f. Water Vapor Permeance (ASTM E96/E96M): <0.03 perms.
      g. Maximum Use Temperature: 250 degrees F.
      h. Class A, less than and/or equal to 25 Flame spread Index and less than 450 Smoke Developed Index, classified at Max. thickness per ASTM E84 criteria.
   2. Application: Metal Stud walls with ACM panel
   3. Manufacturers
      a. Atlas; EnergyShield XR: www.atlasrwi.com.
      b. DuPont; Thermax XARMOR (ci) Exterior Insulation: www.dupont.com.
      c. Ox Engineered Products; ISO RED MAX HD: www.oxengineeredproducts.com.
      d. Rmax;ECOMAXci FR Air Barrier: www.rmax.com.
      e. Substitutions: See Section 01 60 00 - Product Requirements.

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 Sealants
   1. LiquidArmor LT(low temp application)
      a. Fluid Applied with Trowel
      b. Installed during low temperature applications
      c. Used to create seamless barriers at rough openings of windows and doors as well as insulation joints.
      d. Can be used in temps as low as -20 degrees F
      e. Will withstand rain within 15 minutes of installation, however do not apply over wet surfaces.
      f. Complies with ASTM E331 and ASTM E2357.
      g. Shall be applied per manufacturers' recommendations and instructions

2. LiquidArmor CM - (warm spray application)
    a. Can be sprayed between 40 degrees and 120 degrees F
    b. Read and follow all manufacturers's instructions
    c. Spray with a max of 3,300 PSI
    d. Apply minimum of four inches wide
    e. Apply at a minimum of 50 wet mills

D. 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.

E. 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 BEHIND METAL PANEL

A. Apply adhesive to back of boards:
    1. Three continuous beads per board length.

B. 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.
        a. Place a continuous bead of adhesive between boards

C. Extend boards over expansion joints, unbonded to wall on one side of joint.

D. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

E. 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.

F. Liquid flashing insulation board joints and protrusion or interruptions to the insulation plane
   1. Ensure insulation board surfaces are clean, free of dust and dry prior to applying.
   2. Apply liquid flashing over exposed board joints using a squeegee or bristle brush. Ensure liquid flashing adheres to embossed surface.

3.04 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.
   1. Place membrane surface against foam adhesive.

E. Install boards vertically 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.
      a. Place a continuous bead of adhesive between boards

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 that 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.

3.05 BOARD INSTALLATION UNDER CONCRETE SLABS

A. Place insulation under slabs on grade after base for slab has been compacted.

B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

C. Prevent insulation from being displaced or damaged while placing vapor retarder and placing slab.

3.06 PROTECTION

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

END OF SECTION 07 21 13

SECTION 07 42 13.13
FORMED METAL WALL PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Manufactured metal panels for exterior wall panels, interior liner panels, soffit panels, and subgirt framing assembly, with related flashings and accessory components.

B. Sub Framing

1.02 RELATED REQUIREMENTS

A. Section 01 30 00 - Administrative Requirements

B. Section 04 2000 - Unit Masonry: Wall panel substrate

C. Section 07 21 13 - Board Insulation.

D. Section 07 2199 - Foam in Place Insulation

E. Section 07 92 00 - Joint Sealants: Sealing joints between metal wall panel system and adjacent construction.

1.03 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

B. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.

C. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2014.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate dimensions, layout, joints, construction details, and methods of anchorage.

C. Shop Drawing: Sub framing system: Indicate dimensions, layout, construction details, method of anchorage

D. Samples: Submit two samples of wall panel and soffit panel, 12 inch by 12 inch in size illustrating finish color, sheen, and texture.

1.05 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Wall system manufacturer has been engaged in the fabrication of metal wall systems for at least ten years.
   1. The Manufacturer shall be a member of the Metal Building Manufacturer's Association (MBNA).
   2. The American Institute of Steel Construction (AISC) currently certifies the Manufacturer for Category MB.
   3. The Manufacturer maintains a certified installer program for its products and maintains an up to date authorized roofing contractor list.
   4. The Manufacturer has a written warranty covering durability, color and weather tightness of its roof system.
   5. Manufacturer shall produce the metal panels on fixed equipment operated by the manufacturer.

B. Installer Qualifications: Company specializing in performing sheet metal installations with minimum 5 years of experience on projects of similar size and scope.
   1. Contractor shall follow the Manufacturer's installation details without exception unless written authorization from the manufacturer and architect are provided on an installation detail revision.

1.06 PRE-INSTALLATION MEETING

A. Convene two weeks before staring work of this section.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver system components to the project site in Manufacturer's unopened original containers.

B. Protect system components during shipment, storage, handling and erection from mechanical abuse, stains, discoloration and corrosion.

C. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.

D. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.

E. Prevent contact with materials that may cause discoloration or staining of products.

F. Damaged materials will be rejected and removed from the site.

1.08 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

C. Standard Manufacturer Warranty: Provide a written warranty, with monetary limitation, signed by manufacturer agreeing to promptly repair leaks resulting from defects in materials or workmanship for the following warranty period:
   1. Warranty Period: 20 Years from the date of Substantial Completion

D. Finish Warranty: Furnish panel manufacturer's written warranty for twenty (20) years covering the finish of exposed coated metal surfaces against blistering, peeling, cracking, flaking, checking, chipping, rusting, and chalking and color change during the warranty period.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design: Flush Panel manufactured by Dimensional Metals.
   1. Product: Flush Panel FR1012
   2. Location: Locker Room Building

B. Other Acceptable Manufacturers:
   1. Architectural Metal Systems, Alpharetta Ga
   2. Berridge Manufacturing, Houston Tx
   3. Centria.
   4. McElroy Metal, Inc. Bossier City La
   5. MBCI.
   6. Petersen, Pac-Clad

2.02 MANUFACTURED METAL PANELS

A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.

1. Provide exterior wall panels, interior liner panels, soffit panels, and subgirt framing assembly.
2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
3. Design Pressure: In accordance with applicable codes.
4. Maximum Allowable Deflection of Panel: L/180 for length(L) of span.
5. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
6. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
7. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.
8. Corners: Factory-fabricated in one continuous piece with minimum 2 inch returns.

B. Flush Reveal Panel (FR):
1. Profile: Vertical; style as indicated.
   a. 12 inch wide panel, 1 inch deep,
2. Side Seams: Double-interlocked, tight-fitting, sealed with continuous gaskets.
3. Material: Precoated steel sheet, 22 gage, 0.0299 inch minimum thickness.
4. Panel Width: 12 inches.
5. Color: As selected by Architect from manufacturer's standard line.

C. Internal and External Corners: Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut and factory mitered to required angles.

D. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

E. Anchors: Stainless steel.

2.03 MATERIALS

A. Precoated Steel Sheet: Hot-dipped galvanized steel sheet, ASTM A653/A653M, Structural Steel (SS) or Forming Steel (FS), with G90/Z275 coating; continuous coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

B. Precoated Aluminum Sheet: ASTM B209 (ASTM B209M), 3105 alloy, O temper, smooth surface texture; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

2.04 SUB FRAMING

A. Manufacturer:
1. Cascadia Windows LTD: Cascadia Clip; www.cascadia.com
2. Acceptable Manufacturer/System:
   a. Knight Wall System MFI-Systems; www.knightwallsystems.com
   b. Substitutions: See Section 01 60 00 - Product Requirements.

B. Girts
1. Z-Girts: 18 gauge galvalume G60, 1 inch by 1 1/2 inch
2. Hat Channel: 18 gauge galvalume G60, 7/8 inch with slotted flanges

2.05 ACCESSORIES

A. Gaskets: Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.

B. Sealants:
   1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
   2. Concealed Sealant: Non-curing butyl sealant or tape sealant.

C. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized. Fastener cap same color as exterior panel.
   1. Metal-to-Metal Fasteners: Self-drilling, self-tapping screws.

D. Field Touch-up Paint: As recommended by panel manufacturer.

2.06 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.

B. Form pieces in longest practicable lengths.

C. Fabricate corners in one continuous piece with minimum 18 inch returns.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that building framing members are ready to receive panels.

3.02 PREPARATION

A. Install sub framing perpendicular to panel length, securely fastened to substrates and shimmed and leveled to uniform plane. Space at intervals indicated.
   1. Install in accordance to manufacturers recommendations.
   2. Thermal Spacer Installation: Clip thermal spacer to girt and fasten girt directly to substrate.
   3. Installation sequence for spacers, sub-framing, and insulation
      a. Pre-punch or pre-drill holes in Z-girts and tracks to accommodate fasteners.
      b. Position Z-girts directly over thermal spacer before installation of fasteners.
      c. Completely install spacers, screws and sub-framing, prior to installing insulation.
      d. Friction fit insulation in place.

3.03 INSTALLATION

A. Install panels on walls in accordance with manufacturer's instructions.

B. Protect surfaces in contact with cementitious materials and dissimilar metals with bituminous paint. Allow to dry prior to installation.

C. Fasten panels to structural supports; aligned, level, and plumb.

D. Locate joints over supports.

E. Provide expansion and control joints where indicated by manufacturer.

F. Use concealed fasteners unless otherwise approved by Architect.

G. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

3.04 CLEANING

A. Remove site cuttings from finish surfaces.

B. Remove protective material from wall panel surfaces.

C. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.

END OF SECTION 07 42 13.13

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes commercial door hardware for the following:

1. Swinging doors.
2. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Electromechanical door hardware.
3. Automatic operators.

C. Related Sections:

1. Division 08 Section "Hollow Metal Doors and Frames".
2. Division 08 Section "Flush Wood Doors".
3. Division 08 Section "Aluminum-Framed Entrances and Storefronts".
4. Division 28 Section "Access Control Hardware Devices".

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. UL/ULC and CSA C22.2 - Standards for Automatic Door Operators Used on Fire and Smoke Barrier Doors and Systems of Doors.
8. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:

1. ANSI/BHMA Certified Product Standards - A156 Series.
2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
3. ANSI/UL 294 - Access Control System Units.
4. UL 305 - Panic Hardware.
5. ANSI/UL 437- Key Locks.

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing, fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
3. Content: Include the following information:

    a. Type, style, function, size, label, hand, and finish of each door hardware item.
    b. Manufacturer of each item.
    c. Fastenings and other pertinent information.
    d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    e. Explanation of abbreviations, symbols, and codes contained in schedule.
    f. Mounting locations for door hardware.
    g. Door and frame sizes and materials.
    h. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Shop Drawings: Details of electrified access control hardware indicating the following:

1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:

a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
b. Complete (risers, point-to-point) access control system block wiring diagrams.
c. Wiring instructions for each electronic component scheduled herein.

2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.

D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

E. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

1.4 CLOSEOUT SUBMITTALS

A. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

B. Project Record Documents: Provide record documentation of as-built door hardware sets in digital format (.pdf, .docx, .xlsx, .csv) and as required in Division 01, Project Record Documents.

1.5 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

F. Each unit to bear third party permanent label indicating compliance with the referenced testing standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.

2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

I. At completion of installation, provide written documentation that components were applied according to manufacturer's instructions and recommendations and according to approved schedule.

1.6 DELIVERY, STORAGE AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.7 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.8 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Warranty Period: Unless otherwise indicated, warranty shall be one year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Hardware shall not have any visible manufacturer names on exposed materials, except cylinders, when the door is in a closed position.

2.2 BUTT HINGES

A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.

1. Quantity: Provide the following hinge quantity:

a. Two Hinges: For doors with heights up to 60 inches.
b. Three Hinges: For doors with heights 61 to 90 inches.
c. Four Hinges: For doors with heights 91 to 120 inches.
d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.

3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:

   a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for all out-swinging lockable doors.

5. Manufacturers:

   a. Hager Companies (HA) - BB Series, 5-knuckle.
   b. McKinney (MK) - TA/T4A Series, 5-knuckle.
   c. dormakaba BEST (ST) - F/FBB Series, 5-knuckle.

2.3 CONTINUOUS HINGES

A. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 continuous geared hinge. with minimum 0.120-inch thick extruded 6063-T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.

1. Manufacturers:.

   a. Hager Companies (HA).
   b. Pemko (PE).
   c. dormakaba BEST (ST).

2.4 POWER TRANSFER DEVICES

A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:

   a. Pemko (PE) - EL-CEPT Series.
   b. Securitron (SU) - EL-CEPT Series.
   c. Von Duprin (VD) - EPT-10 Series.

B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to

junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

1. Manufacturers:

    a. Hager Companies (HA) - Quick Connect.
    b. McKinney (MK) - QC-C Series.
    c. dormakaba BEST (ST) - WH Series.

2.5 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: Provide products conforming to ANSI/BHMA A156.3 and A156.16, Grade 1.

1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
5. Manufacturers:

    a. Burns Manufacturing (BU).
    b. Rockwood (RO).
    c. Trimco (TC).

B. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Pulls shall be provided with a 10" clearance from the finished floor on the push side to accommodate wheelchair accessibility.
5. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets. When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.
6. Manufacturers:

a. Burns Manufacturing (BU).
b. Rockwood (RO).
c. Trimco (TC).

2.6 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

1. Manufacturers:

a. Corbin Russwin Hardware (RU).
b. Sargent Manufacturing (SA).
c. Schlage (SC).

B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:

1. Threaded mortise cylinders with rings and cams to suit hardware application.
2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
4. Tubular deadlocks and other auxiliary locks.
5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
6. Keyway: Match Facility Standard LFIC x Schlage "C" keyway.

C. Large Format Interchangeable Cores: Provide removable cores (LFIC) as specified, core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.

D. Keying System: Each type of lock and cylinders to be factory keyed.

1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. Existing System: Field verify and key cylinders to match Owner's existing system.

E. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).
4. Construction Control Keys (where required): Two (2).
5. Permanent Control Keys (where required): Two (2).

F. Construction Keying: Provide temporary keyed construction cores.

G. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.7 MORTISE LOCKS AND LATCHING DEVICES

A. Mortise Locksets with Occupancy Indicator, Grade 1 (Heavy Duty): Provide ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed mortise locksets. Listed manufacturers shall meet all functions and features as specified herein.

1. Manufacturers:

a. Corbin Russwin Hardware (RU) - ML2000 Series.
b. Sargent Manufacturing (SA) - 8200 Series.
c. Schlage (SC) - L9000 Series.

2.8 CYLINDRICAL LOCKS AND LATCHING DEVICES

A. Cylindrical Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed cylindrical locksets. Listed manufacturers shall meet all functions and features as specified herein.

1. Manufacturers:

a. Corbin Russwin Hardware (RU) - CLX3300 Series.
b. Sargent Manufacturing (SA) - 10X Line.
c. Schlage (SC) - ND Series.

2.9 DEADLOCKS AND LATCHES

A. Mortise Deadlocks, Small Case: ANSI/BHMA A156.36, Grade 1, small case mortise type deadlocks constructed of heavy gauge wrought corrosion resistant steel. Steel or stainless steel bolts with a 1" throw and hardened steel roller pins. Deadlocks to be products of the same source manufacturer and keyway as other specified locksets.

1. Manufacturers:

a. Corbin Russwin Hardware (RU) - DL4000 Series.
b. Sargent Manufacturing (SA) - 4870 Series.
c. Schlage (SC) - L460 Series.

2.10 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.11 ELECTRIC STRIKES

A. Standard Electric Strikes: Electric strikes conforming to ANSI/BHMA A156.31, Grade 1, for use on non-rated or fire rated openings. Strikes shall be tested to a minimum of 1500 pounds of static strength and 70 foot-pounds of dynamic strength with a minimum endurance of 500,000 operating cycles. Provide strikes with 12 or 24 VDC capability with field selectable fail-secure/fail-safe. Where specified provide latchbolt monitoring indicating both the position of the latchbolt and locked condition of the strike.

1. Manufacturers:

a. HES (HS) - 5000/5200 Series.
b. Trine Access Technology (TR) - 2000/2600/4200 Series.
c. Von Duprin (VD) - 4200/5100 Series.

B. Provide electric strikes with in-line power controller and surge suppressor by the same manufacturer as the strike with the combined products having a five year warranty.

2.12 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. Exit devices shall have a five-year warranty.

2. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
3. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
4. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
5. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.

    a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
    b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.

7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
10. Rail Sizing: Provide exit device rails factory sized for proper door width application.
11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed exit devices. Listed manufacturers shall meet all functions and features as specified herein.

1. Provide exit devices with functions and features as follows:

    a. Where required by code, provide knurling or abrasive coating on all levers leading to hazardous areas.
    b. Meets UL and CUL Standard 10C Positive Pressure, Fire Test of Door Assemblies with levers that meet A117.1 Accessibility Code.
    c. No catch points: addition of applied deflectors or other added components are not allowed.
    d. No visible plastic.
    e. Heavy duty end caps with flush and overlapping options made of stainless steel, brass, or bronze with architectural finishes.
    f. Constructed of all stainless steel.

g. Stainless steel pullman type latch with deadlock feature.
h. Narrow or wide style exterior trim as specified in the hardware sets.
i. Center case adjustability on concealed vertical rod exit devices; single operation with hex key individually adjusts top or bottom latches. No retainer screws or clips required to maintain adjustment.
j. Ten-year limited warranty for mechanical features.

2. Electromechanical exit devices shall have the following functions and features:

a. Universal Molex plug-in connectors that have standardized color-coded wiring and are field configurable in fail safe or fail secure and operate from 12vdc to 24vdc regulated.
b. Wire routing for all non-access control electromechanical functions and EcoFlex trim to be contained within the carrier of the device eliminating the need for cavities in doors to be drilled. Include a protective film so that wires don't get damaged if the rail needs to be removed.
c. EcoFlex or equivalent technology that reduces energy consumption up to 92% as certified by GreenCircle.
d. Options to be available for request-to-exit or enter signaling, latchbolt and touchbar monitoring.
e. Field configurable electrified trim to fail-safe or fail-secure that operates from 12-24VDC.

3. Manufacturers:

a. Corbin Russwin Hardware (RU) - PED4000 / PED5000 Series.
b. Sargent Manufacturing (SA) - PE80 Series.
c. Von Duprin (VD) - 35A/98 XP Series.

2.13 SURFACE DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

1. Heavy duty surface mounted door closers shall have a 30-year warranty.

2. Manufacturers:

a. Corbin Russwin Hardware (RU) - DC6000 Series.
b. Norton Rixson (NO) - 7500 Series.
c. Sargent Manufacturing (SA) - 351 Series.

2.14 ELECTROHYDRAULIC DOOR OPERATORS

A. Electrohydraulic Door Operators (High Traffic): Provide ANSI/BHMA A156.19 Certified Products Directory (CPD) listed low energy operators that meet ANSI/BHMA A156.4 requirements and are UL listed for use on fire rated doors and UL10C certified that comply with requirements for the Americans with Disabilities Act (ADA). Operators shall be verified by GreenCircle to offer energy savings of 19% when compared to similar products to accommodate openings up 250 pounds and 48" wide. Provide accessories such as custom templates, special mounting brackets, spacers and drop plates as needed for proper installation. Operators shall accommodate openings up to 200 pounds and 48" wide. Listed manufacturers shall meet all functions and features as specified herein.

1. Provide operators with features as follows:

a. Non-handed with push and pull side mounting.
b. Operates as mechanical surface closer during close cycles, when door is opened manually or if power is off.
c. Activation by push button, hands-free or radio frequency devices.
d. On board electronics to collect usage and cycle count data to facilitate preventative maintenance/diagnostics.
e. Two-year limited warranty.
f. Wi-Fi interface where the operator is a secure, password protected WiFi hot spot with no connection to building's IT required.
   1) Simple setup with no app required.
   2) View status and make adjustments without removing the cover.
   3) Built-in logic to support single use restroom applications with no external relay boards, logic modules, position switches required.

g. Mounting backplate to simplify and speed up installation.

2. Operators shall have the following functionality:

a. Adjustable Hold Open: Amount of time a door will stay in the full open position after an activation.
b. Blow Open for Smoke Ventilation: Door opens when signal is received from alarm system allowing air or smoke to flow through opening. Door will stay open until signal from alarm system is stopped.
c. Infinite Hold Open: Door will hold open at set position until power is turned off.
d. Obstruction Detection: Door closes if it hits an obstruction while opening; door will reverse to open position if it hits an obstruction while closing. Door will stop once it hits an obstruction and will rest against the obstruction until removed.
e. Open Delay: Delays operator opening for locking hardware.
f. Overload Safety Shut-Off: After two minutes of receiving a door activation signal, inverter times out and door closes to prevent motor/inverter damage.
g. Presence Detector Input: Input for external sensor to detect presence at door open or close position only.
h. Push & Go: As the door is manually opened, the operator "senses" movement and opens door to the full-open position.
i. Selector Mode Switch: Off disables the signal inputs unless Blow Open is activated, on activates the signal inputs, hold open activates the unit (unless Blow Closed is activated) to the hold open position.
j. Vestibule Delay: When the wall switch is pressed, first door in vestibule will open. Second door will open once vestibule door delay has expired. Delay is adjustable.

3. Manufacturers:

a. Gyrotech Nabco - GT500 Series.
b. LCN (LC) - 4630/4640 Series.
c. Norton Rixson (NO) - 6000 Series.

2.15 ARCHITECTURAL TRIM AND ACCESSORIES

A. Door Protective Trim:

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.

4. Protection Plates: ANSI/BHMA A156.6 protection plates (kick, armor, or mop), fabricated from the following:

    a. Stainless Steel: 300 grade, 050-inch thick.

5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:

    a. Burns Manufacturing (BU).
    b. Rockwood (RO).
    c. Trimco (TC).

2.16 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

1. Manufacturers:

    a. Hager Companies (HA).
    b. Rockwood (RO).
    c. Trimco (TC).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.

1. Manufacturers:

    a. Norton Rixson (RF).
    b. Rockwood (RO).
    c. Sargent Manufacturing (SA).

2.17 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and

provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NFPA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:

1. National Guard Products (NG).
2. Pemko (PE).
3. Zero (ZE).

2.18 ELECTRONIC ACCESSORIES

A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.

1. Manufacturers:

a. Alarm Controls (AK) - CP1-1026 Series.
b. Security Door Controls (SD) - DPS Series.
c. Securitron (SU) - DPS Series.

B. Switching Power Supplies: Provide the least number of power supplies at the appropriate amperage level sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.

1. Power supplies shall meet all functions and features as specified herein.

    a. UL listed dual voltage 12 or 24 VDC field selectable continuous output.
    b. Tolerates brownout or overvoltage input ± 15% of nominal voltage.
    c. Thermal shutdown protection with auto restart.
    d. Circuit breaker protection against overcurrent and reverse battery faults.
    e. Integrated battery charging circuit to prevent overvoltage on locking devices.
    f. Available with a single relay fire trigger or individually triggered relayed outputs.
    g. Monitoring options as specified.

2. Manufacturers:

    a. Securitron (SU) - AQD Series.

2.19 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.20 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Push Plates and Door Pulls: When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.

E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handing and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.

B. Manufacturer's Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. SU - Securitron
4. RO - Rockwood
5. SA - SARGENT
6. HS - HES
7. RF - Rixson
8. NO - Norton
9. OT - Other

Hardware Sets

Set: 1.0

Doors: A100a

Description: Exterior Aluminum - Panic Egress Pair - Active Leaf x Access Control Function x Auto-Door

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Keyed Removable Mullion	L980	PC	SA
1	Elec Rim Exit Device, EL/RX/LX/CD/NL Pull	16 53 55 56 64 PE8504 862	US32D	SA
1	Mullion Cylinder Kit	64 980C	US26D	SA
3	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Conc Overhead Stop	6-336	630	RF
1	Automatic Opener	6061 (D)	689	NO
1	Threshold	253x3AFG FHSL14SS		PE
1	Access Control Reader	By Security Contractor		OT
1	Wiring Harness Frame	QC-C3000P		MK
1	Wiring Harness Door	QC-Cx00 for door width		MK

2	ADA Switch	5xx as req'd	NO
1	Door Position Switch	DPS-M-GY	SU
1	Power Supply (Consolidate)	AQ Series (coordinate qtys & options with Security Contractor)	SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.	OT

Notes: Size threshold for door pair.
Entry by valid input at reader to retract latch or manual key when locked. Free egress at all times.
Push / Pull operation as needed by timed unlock via access control system or mechanically with lock cylinder in panic bar.
Door contact to monitor opening status. Exit device has RX option to signal egress.
Auto-Door system must be integrated with electronic latching hardware.
Exterior ADA switch is controlled by latch monitor in exit device and is active only when door is unlocked.
Vestibule ADA switch will always trigger latch retraction for assisted egress when locked.
Coordinate with electrical and security contractors.

Set: 2.0

Doors: 111a

Description: Exterior Aluminum - Panic Egress Pair - Active Leaf x Access Control Function

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Keyed Removable Mullion	L980	PC	SA
1	Elec Rim Exit Device, EL/RX/CD NL Pull	16 55 56 64 PE8504 862	US32D	SA
1	Mullion Cylinder Kit	64 980C	US26D	SA
3	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Threshold	253x3AFG FHSL14SS		PE
1	Access Control Reader	By Security Contractor		OT
1	Wiring Harness Frame	QC-C3000P		MK
1	Wiring Harness Door	QC-Cx00 for door width		MK
1	Door Position Switch	DPS-M-GY		SU
1	Power Supply (Consolidate)	AQ Series (coordinate qtys & options with Security Contractor)		SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes: Size threshold for door pair.
Entry by valid input at reader to retract latch or manual key when locked. Free egress at all times.
Push / Pull operation as needed by timed unlock via access control system or mechanically with lock cylinder in panic bar.
Door contact to monitor opening status. Exit device has RX option to signal egress.
Coordinate with electrical and security contractors.

Set: 3.0

Doors: 111b, A100b

Description: Exterior Aluminum - Panic Egress Pair - Inactive Leaf x Exit Only Function

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Rim Exit Device, RX/Exit Only	LD 55 PE8510 EO	US32D	SA
1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Wiring Harness Frame	QC-C3000P		MK
1	Wiring Harness Door	QC-Cx00 for door width		MK
1	Door Position Switch	DPS-M-GY		SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
No entry when locked. Free egress at all times.
Door contact to monitor opening status. Exit device has RX option to signal egress.
Coordinate with electrical and security contractors.

Set: 4.0

Doors: A100c

Description: Exterior Aluminum - Panic Egress Pair - Active Leaf x Exit Only Function

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Keyed Removable Mullion	L980	PC	SA
1	Rim Exit Device, RX/Exit Only	LD 55 PE8510 EO	US32D	SA
1	Mullion Cylinder Kit	64 980C	US26D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA

1 Closer w/ Stop	CPS7500	689	NO
1 Closer Stop Spacer	6891	689	NO
1 Closer Mtg Plate	7788 as req'd	689	NO
1 Threshold	253x3AFG FHSL14SS		PE
1 Wiring Harness Frame	QC-C3000P		MK
1 Wiring Harness Door	QC-Cx00 for door width		MK
1 Door Position Switch	DPS-M-GY		SU
1 Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes: Size threshold for door pair.
No entry when locked. Free egress at all times.
Door contact to monitor opening status. Exit device has RX option to signal egress.
Coordinate with electrical and security contractors.

Set: 5.0

Doors: A100d

Description: Exterior Aluminum - Panic Egress Pair - Inactive Leaf x Exit Only Function

1 Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1 Electric Power Transfer	EL-CEPT	630	SU
1 Rim Exit Device, RX/Exit Only	LD 55 PE8510 EO	US32D	SA
1 Closer w/ Stop	CPS7500	689	NO
1 Closer Stop Spacer	6891	689	NO
1 Closer Mtg Plate	7788 as req'd	689	NO
1 Wiring Harness Frame	QC-C3000P		MK
1 Wiring Harness Door	QC-Cx00 for door width		MK
1 Door Position Switch	DPS-M-GY		SU
1 Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
No entry when locked. Free egress at all times.
Door contact to monitor opening status. Exit device has RX option to signal egress.
Coordinate with electrical and security contractors.

Set: 6.0

Doors: A105h

Description: Exterior Aluminum - Panic Egress - Access Control Function

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Elec Rim Exit Device, EL/RX/NL Pull	LD 55 56 64 PE8504 862	US32D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Threshold	253x3AFG FHSL14SS		PE
1	Access Control Reader	By Security Contractor		OT
1	Wiring Harness Frame	QC-C3000P		MK
1	Wiring Harness Door	QC-Cx00 for door width		MK
1	Door Position Switch	DPS-M-GY		SU
1	Power Supply (Consolidate)	AQ Series (coordinate qtys & options with Security Contractor)		SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
Entry by valid input at reader to retract latch or manual key. Free egress at all times.
Push / Pull operation as needed by timed unlock via access control system.
Door contact to monitor opening status. Exit device has RX option to signal egress.
Coordinate with electrical and security contractors.

Set: 7.0

Doors: A105g

Description: Exterior Aluminum - Panic Egress - Exit Only Function

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Rim Exit Device, RX/Exit Only	LD 55 PE8510 EO	US32D	SA
1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Threshold	253x3AFG FHSL14SS		PE
1	Wiring Harness Frame	QC-C3000P		MK
1	Wiring Harness Door	QC-Cx00 for door width		MK
1	Door Position Switch	DPS-M-GY		SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
No entry. Free egress at all times.
Door position switch to monitor opening status. Exit device has RX option to signal egress.
Coordinate with electrical and security contractors.

Set: 8.0

Doors: A106a

Description: Exterior Aluminum - Panic Egress - Locking Push/Pull Function

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Rim Exit Device, RX/CD/NL Pull	16 18 55 64 PE8504 862	US32D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Threshold	253x3AFG FHSL14SS		PE
1	Wiring Harness Frame	QC-C3000P		MK
1	Wiring Harness Door	QC-Cx00 for door width		MK
1	Door Position Switch	DPS-M-GY		SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
Entry by manual key when locked. Free egress at all times.
Push / Pull operation as needed by exit devive dogging with lock cylinder in panic bar.
Interior visual indicator shows locking status.
Door contact to monitor opening status. Exit device has RX option to signal egress.
Coordinate with electrical and security contractors.

Set: 9.0

Doors: A106c, A119a, A120b

Description: Exterior Aluminum - Panic Egress - NL Function x Pull

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Rim Exit Device, RX/NL Pull	LD 55 64 PE8504 862	US32D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA

1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Threshold	253x3AFG FHSL14SS		PE
1	Wiring Harness Frame	QC-C3000P		MK
1	Wiring Harness Door	QC-Cx00 for door width		MK
1	Door Position Switch	DPS-M-GY		SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
Entry by manual key only. Free egress at all times.
Door contact to monitor opening status. Exit device has RX option to signal egress.
Coordinate with electrical and security contractors.

Set: 10.0

Doors: A101a

Description: Aluminum - Panic Pgress Pair - Active Leaf - Lockable Push / Pull Function x Future Access Control

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Elec CVR Exit Device, EL/RX/CD/NL Pull	NB 16 55 56 64 ADPE8610 P106 x 862	US32D	SA
2	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Closer w/ Stop & Hold-Open	CPS7500T	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Interior Threshold	271A FHSL14SS		PE
2	Wiring Harness Frame	QC-C3000P		MK
2	Wiring Harness Door	QC-Cx00 for door width		MK
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes: Size threshold for pair of doors.
Entry by manual key when locked. Free egress at all times.
Push / Pull operation as needed by exit device dogging with keyed lock cylinder in panic bar.
Hardware set includes electronic exit device and power transfer components for future access control upgrade.
Coordinate with electrical and security contractors.

Set: 11.0

Doors: A101b

Description: Aluminum - Panic Pgress Pair - Inactive Leaf - Lockable Push / Pull Function

1	Continuous Hinge	CFMxxSL-HD1 for door hgt		PE
1	CVR Exit Device, CD/DT Pull	NB 16 64 ADPE8610 862	US32D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Closer w/ Stop & Hold-Open	CPS7500T	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
No entry when locked. Free egress at all times.
Push / Pull operation as needed by exit device dogging with keyed lock cylinder in panic bar.

Set: 12.0

Doors: A105a

Description: Aluminum - Panic Egress - Access Control Function

1	Continuous Hinge	CFMxxSL-HD1 PT for door hgt		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	Elec Rim Exit Device, EL/CD/NL Pull	16 56 64 PE8504 862	US32D	SA
2	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Access Control Reader	By Security Contractor		OT
1	Wiring Harness Frame	QC-C3000P		MK
1	Wiring Harness Door	QC-Cx00 for door width		MK
1	Door Position Switch	DPS-M-GY		SU
1	Power Supply (Consolidate)	AQ Series (coordinate qtys & options with Security Contractor)		SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
Entry by valid input at reader to retract latch or manual key. Free egress at all times.

Push / Pull operation as needed by timed unlock via access control system or manually with lock cylinder in panic bar.
Coordinate with electrical and security contractors.

Set: 13.0

Doors: A105b
Description: Aluminum - Panic Egress - Locking Push / Pull Function

1	Continuous Hinge	CFMxxSL-HD1 for door hgt		PE
1	Rim Exit Device, CD/DT Pull	16 64 PE8510 862	US32D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
No entry when locked. Free egress at all times.
Push/Pull operation as needed by exit device dogging with lock cylinder in panic bar.
Coordinate with electrical and security contractors.

Set: 14.0

Doors: A105f
Description: Aluminum - Access Control Function x Closer w/ Stop

1	Continuous Hinge	CFMxxSL-HD1 for door hgt		PE
1	Storeroom Lock (ALSF)	20 64 10XG04 LL	US26D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Electric Strike	5000C	630	HS
1	Bridge Rectifier	2005M3		HS
1	Closer w/ Stop	CPS7500	689	NO
1	Closer Stop Spacer	6891	689	NO
1	Closer Mtg Plate	7788 as req'd	689	NO
1	Access Control Reader	By Security Contractor		OT
1	Wiring Harness Frame	QC-C3000P		MK
1	Power Supply (Consolidate)	AQ Series (coordinate qtys & options with Security Contractor)		SU
1	Seals, Sweeps & Astragal	By Aluminum Door Mfr.		OT

Notes:
Entry to Weight Room by valid input at reader to release electric strike or manual key.
Free egress at all times.
Coordinate with electrical and security contractors.

Set: 15.0

Doors: A202a

Description: Access Control Function x Closer

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Storeroom Lock	64 10XG04 LL	US26D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Electric Strike	5000C	630	HS
1	Bridge Rectifier	2005M3		HS
1	Closer	7500/PR7500 as req'd	689	NO
1	Door Stop	400 series as req'd	US26D	RO
3	Silencer	608/609		RO
1	Access Control Reader	By Security Contractor		OT
1	Wiring Harness Frame	QC-C3000P		MK
1	Power Supply (Consolidate)	AQ Series (coordinate qtys & options with Security Contractor)		SU

Notes:
Entry when locked by valid credential to reader to release electric strike or manual key.
Free egress at all times.
Coordinate with electrical and security contractors.

Set: 16.0

Doors: A103

Description: Access Control Function

3	Hinge	TA2714 NRP 4-1/2" x 4-1/2"	US26D	MK
1	Storeroom Lock	64 10XG04 LL	US26D	SA
1	Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1	Electric Strike	5000C	630	HS
1	Bridge Rectifier	2005M3		HS
1	Door Stop	400 series as req'd	US26D	RO

3 Silencer	608/609	RO
1 Access Control Reader	By Security Contractor	OT
1 Wiring Harness Frame	QC-C3000P	MK
1 Power Supply (Consolidate)	AQ Series (coordinate qtys & options with Security Contractor)	SU

Notes:
Entry by valid input at reader to release electric strike or manual key. Free egress at all times. Coordinate with electrical and security contractors.

Set: 17.0

Doors: A118a, A203

Description: Storeroom Function Pair - Outswing

6 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	US26D	MK
1 Flush Bolt	555/557 for door type	US26D	RO
1 Storeroom Lock	64 10XG04 LL	US26D	SA
1 Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
2 Door Stop	400 series as req'd	US26D	RO
2 Silencer	608/609		RO

Set: 18.0

Doors: A118b

Description: Storeroom Function Pair - Inswing

6 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Flush Bolt	555/557 for door type	US26D	RO
1 Storeroom Lock	64 10XG04 LL	US26D	SA
1 Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
2 Door Stop	400 series as req'd	US26D	RO
2 Silencer	608/609		RO

Set: 19.0

Doors: A104, A115, 108 - Locker Room

Description: Storeroom Function x Closer

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK

1 Storeroom Lock	64 10XG04 LL	US26D	SA
1 Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1 Closer	7500/PR7500 as req'd	689	NO
1 Door Stop	400 series as req'd	US26D	RO
3 Silencer	608/609		RO

Set: 20.0

Doors: A105j, A107b
Description: Storeroom Function x Overhead Stop

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Storeroom Lock	64 10XG04 LL	US26D	SA
1 Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1 Conc Overhead Stop	1-336	652	RF
1 Interior Threshold	271A FHSL14SS		PE
3 Silencer	608/609		RO

Notes: Entry to Weight Room by key only. Free egress fo Field at all times

Set: 21.0

Doors: A116, A117, A121
Description: Storeroom Function

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Storeroom Lock	64 10XG04 LL	US26D	SA
1 Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1 Door Stop	400 series as req'd	US26D	RO
3 Silencer	608/609		RO

Set: 22.0

Doors: A102
Description: Office Function

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	US26D	MK
1 Entry/Office Lock	64 10XG05 LL	US26D	SA
1 Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1 Door Stop	400 series as req'd	US26D	RO

3 Silencer	608/609		RO
1 Coat Hook	RM828	US32D	RO

Set: 23.0

Doors: A108, A109
Description: Privacy Function w/ Indicator x Closer

3 Hinge	TA2314 4-1/2" x 4-1/2"	US26D	MK
1 Privacy Lock w/ Indicator	V20 8265 LNL	US26D	SA
1 Closer	7500/PR7500 as req'd	689	NO
1 Kick Plate	K1050 10" HGT x BEV x CSK	US32D	RO
1 Door Stop	400 series as req'd	US26D	RO
3 Silencer	608/609		RO
1 Coat Hook	RM828	US32D	RO

Set: 24.0

Doors: A114
Description: Push / Pull Function - Lockable

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	US26D	MK
1 Public Toilet Deadlock	64 4878	US26D	SA
1 Permanent IC Core	6300 SC (Schlage C keyway)	US15	SA
1 Pull Plate	BF 123x70C CFTT/CFC as req'd	US32D	RO
1 Push Plate	70E CFTT/CFC as req'd	US32D	RO
1 Closer	7500/PR7500 as req'd	689	NO
1 Kick Plate	K1050 10" HGT x BEV x CSK	US32D	RO
1 Door Stop	400 series as req'd	US26D	RO
1 Interior Threshold	271A FHSL14SS		PE
3 Silencer	608/609		RO

Set: 25.0

Doors: A110a, A110b, A112a, A112b
Description: Push / Pull Function - Restrooms

3 Hinge	TA2314 4-1/2" x 4-1/2"	US26D	MK
1 Pull Plate	BF 123x70C	US32D	RO
1 Push Plate	70E	US32D	RO

1	Closer	7500/PR7500 as req'd	689	NO
1	Kick Plate	K1050 10" HGT x BEV x CSK	US32D	RO
1	Door Stop	400 series as req'd	US26D	RO
3	Silencer	608/609		RO

Set: 26.0

Doors: A105c, A105d, A106b, A107a, A119b, A120c, A202b
Description: Miscellaneous Doors

1	All Hardware	By Door System Mfr.		OT

END OF SECTION 087100

SECTION 08 80 00
GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insulating glass units.

B. Glass-Based Light Diffusing Insulating Glazing Units (TGUs)

C. Glazing units.

D. Plastic films.

E. Glazing compounds and accessories.

1.02 RELATED REQUIREMENTS

A. Section 07 92 00 - Joint Sealants: Sealants for other than glazing purposes.

B. Section 08 11 13 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.

C. Section 08 14 16 - Flush Wood Doors: Glazed lites in doors.

D. Section 08 43 13 - Aluminum-Framed Storefronts: Glazing furnished as part of storefront assembly.

E. Section 08 44 13 - Glazed Aluminum Curtain Walls: Glazing furnished as part of wall assembly.

F. Section 08 51 13 - Aluminum Windows: Glazing furnished by window manufacturer.

G. Section 08 83 00 - Mirrors.

1.03 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.

B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).

C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2011).

D. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2019.

E. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).

F. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.

G. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.

H. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.

I. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.

J. GANA (GM) - GANA Glazing Manual; 2022.

K. GANA (SM) - GANA Sealant Manual; 2008.

L. GANA (LGRM) - Laminated Glazing Reference Manual; 2009.

M. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.

N. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

O. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2023.

P. UL 263 - Standard for Fire Tests of Building Construction and Materials; Current Edition, Including All Revisions.

Q. UL 972 - Standard for Burglary Resisting Glazing Material; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting two weeks before starting work of this section; require attendance by each of the affected installers.

1.05 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data on Insulating Glass Unit and Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.

C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.

D. Samples: Submit two samples 12 by 12 inch in sizeof glass units.

E. Certificates: Certify that products meet or exceed specified requirements.

F. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

A. Perform Work in accordance with GANA (GM), GANA (SM), and GANA (LGRM) for glazing installation methods. Maintain one copy on site.

B. Provide labels showing glass manufacturer's , type of glass, thickness, and quality. Labels shall remain on glass until it has been se an approved by the Architect.

C. Thermal Performance Properties:
   1. Solar Heat Gain Coefficient : NFCR 200 <= 0.40.

D. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

1.07 FIELD CONDITIONS

A. Do not install glazing when ambient temperature is less than 40 degrees F.

B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.08 WARRANTY

A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.

C. Laminated Glass: Provide a five (5) year manufacturer warranty to include coverage for delamination, including providing products to replace failed units.

D. Polycarbonate Sheet Glazing: Provide a one (1) year manufacturer warranty to include coverage for breakage, coating failure, abrasion resistance, including providing products to replace failed units.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Glass Fabricators:
   1. AGC Glass North Americawww.agcglass.com
   2. Cardinal Glass Industries, www.cardinalcorp.com
   3. GGI - General Glass International: www.generalglass.com/
   4. Guardian Glass, LLC, www.guardianglass.com
   5. JE Berkowitz, LP: www.jeberkowitz.com/
   6. Pilkington North America, www.pilkington.com
   7. Standard Bent Glass Corp: www.standardbent.com/
   8. Trulite Glass & Aluminum Solutions, LLC: www.trulite.com/
   9. Viracon, Inc: www.viracon.com/
   10. Vitro Architectural Glass, www.vitroglazing.com
   11. Substitutions: See Section 01 60 00 - Product Requirements.

B. Translucent Glazing Unit Manufacturers:
   1. Advanced Glazings Limited, P.O. Box 1460 Station "A" , Sydney, N.S. Canada, B1P 6R7, phone (902)794-2899, email info@advancedglazings.com

C. Plastic Films Manufacturers:
   1. 3M Window Film; ____: solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/#sle.
   2. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
   1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
   2. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
   3. Glass thicknesses listed are minimum.

B. Vapor Retarder and Air Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure vapor retarder and air barrier.
   1. In conjunction with vapor retarder and joint sealer materials described in other sections.

C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
   1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
   2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
   3. Solar Optical Properties: Comply with NFRC 300 test method.

2.03 GLASS MATERIALS

A. Float Glass: Provide float glass based glazing unless otherwise indicated.
   1. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.

B. Laminated Glass: Float glass laminated in accordance with ASTM C1172.
   1. Laminated Safety Glass: Complies with ANSI Z97.1 - Class B or 16 CFR 1201 - Category I impact test requirements.
   2. Polyvinyl Butyral (PVB) Interlayer: 0.060 inch thick, minimum.

2.04 TRANSLUCENT GLAZING UNITS (TGU)

A. TGU Design and Appearance:
   1. The Translucent Glazing Unit shall be of a design such as to present a monolithic glass section without visible internal framing, support or other solid member inside of the perimeter spacer. The ability to use nearly any type or manufacture of architectural flat glass shall enable the visual integration of translucent surfaces with those of nearby vision glass as well as ensuring that the appearance of the translucent glazing surfaces does not deteriorate over the life of the building. The employment of separate technologies for thermal insulation and light diffusion shall be such as to ensure that different thermal insulation specifications do not affect light transmission.

B. TGU Description:
   1. Air filled preassembled units consisting of:
      a. Two lites of glass;
      b. Honeycomb transparent insulation core aligned perpendicular to glazing, for TGU thermal insulation;
      c. Translucent, non-woven veils permanently bonded to internal glass surfaces;
      d. Continuous perimeter metal spacer bar separated from glass surfaces with foam thermal break;
      e. Glass lites connected together with spacer bar using structural silicone sealant.
      f. Airspace within TGU filled with air pressure equalized to atmospheric pressure with stainless steel capillary pressure equalization (vent) tube.
      g. Glazing unit shall not contain in excess of .01 parts per million by weight each of Volatile Organic Compounds, asbestos, resorcinol-formaldehyde, pheono-resorcinol formaldehyde, urea formaldehyde, CFC, HFC, HCFC, Halon, Benzene, Cadmium (and compounds, Carbon tetrachloride, Cyanide (and compounds) Toluene, Xylenes, Lead. 1,1,1,Trichlorethane, Trichlorethylene, MEK, and MIK
   2. Overall thickness and size:
      a. Thickness: 1/2" plus glass lites.
      b. Maximum overall size, edge of glass: 60" x 144" (1524mm X 3658mm)
   3. Frame Compatibility: Solera S R3.
   4. TGU performance
      a. Thermal insulation (U-value): 0.33 (Btu/hr·ft²·°F)
      b. Daylight transmittance: 31 %
      c. Light Diffusion Power (LDP): moderate
      d. Daylight to solar heat gain ratio: LSG=0.88
      e. Solar heat gain coefficient (no shade): SHGC=0.35
      f. Sound transmittance class (STC) (ASTM E 70-97): 35
      g. Maximum color shift: [2 Δ E] over 10 years.
      h. Flame spread (ASTM E 84-05e1): 5.

i. Smoke developed (ASTM E 84-054e1): 10.
j. Spacer resistance to crushing: 500 lbs/lineal Ft.

C. Glass:
1. Outboard lite: 6mm tempered Standard Gray as noted below.
2. Inboard lite: 4mm/.060PVB/4mm tempered Clear

D. Veil set:
1. AGL401 exterior, AGL401 interior

E. Capillary pressure equalization (vent) tube: stainless steel, diameter to allow for pressure equalization while also preventing uptake of particulate matter.

F. Daylighting study: Visible light transmittance shall be as agreed upon between the Architect and the manufacturer and will be based on "Radiance" studies as provided by the manufacturer as a part of this work. Studies will demonstrate the improvement of light distribution and light levels from the use of diffuse light from translucent glazings. Study will include modelling results of light levels throughout the space to be analyzed. (Radiance is a program developed by Lawrence Berkeley National Laboratory.)

G. ELASTOMERIC GLAZING SEALANTS AND PREFORMED GLAZING TAPES
1. General: Provide products of type indicated and complying with following requirements:
a. Glazing sealants and glazing tapes: to glazing frame manufacturer's standards.
b. Compatibility: Select glazing sealants and tapes of proven compatibility with other materials with which they will come into contact, including glass products, seals of insulating glass units, and glazing channel substrates, under conditions of installation and service, as demonstrated by testing and field experience.
c. Suitability: Comply with recommendations of sealant and glass manufacturers for selection of glazing sealants and tapes which have performance characteristics suitable for applications indicated and conditions at time of installation.
d. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C 920-05 requirements, including those for Type, Grade, Class and Uses.
e. Colors: Provide color of exposed sealants indicated or, if not otherwise indicated, as selected by Owner's Representative from manufacturer's standard colors.

H. MISCELLANEOUS GLAZING MATERIALS
1. Compatibility: Provide materials with proven record of compatibility with surfaces contacted in installation.
2. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
3. Setting Blocks, Spacers: must be compatible with TGU sealant.

2.05 INSULATING / EXTERIOR GLASS UNITS

A. Insulating Glass Units: Types as indicated.
1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
3. Spacer Color: Black.
4. Edge Seal:
a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
b. Color: Black.

5. Purge interpane space with dry air, hermetically sealed.

B. EG-1: Insulating Glass Units: Vision glass, double glazed.
   1. Applications: Exterior glazing unless otherwise indicated.
   2. Space between lites filled with argon.
   3. Outboard Lite: Outboard lite: 6mm tempered Standard Gray as noted below.
      a. Tint: Gray.
      b. Coating: Low-E (solar control type), on #2 surface.
         1) Vitro Architectural Glass; Solarban 70
         2) Substitutions; See Section 01 60 00 - Product Requirements
   4. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
      a. Tint: Clear.
   5. Total Thickness: 1 inch.
   6. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.29, nominal.
   7. Visible Light Transmittance (VLT): 32 percent, nominal.
   8. Solar Heat Gain Coefficient (SHGC): 19 percent, nominal.
   9. Glazing Method: Dry glazing method, gasket glazing.

C. EG-2 : Insulating Glass Units: Translucent - Solera
   1. Applications: Ribbon Windows as noted on the drawings..
   2. Space between lites filled with Honeycomb transparent insulation core.
   3. Outboard Lite: 6mm tempered Standard Gray as noted below.
      a. Tint: Gray.
   4. Veil Set: AGL401 exterior, AGL401 interior
      a. Solera
   5. Spacer Bar.
      a. Solera-R5
   6. Inboard Lite: Laminated Glass 4mm/.060PVB/4mm tempered Clear
      a. Tint: Clear.
   7. Total Thickness: 1 inch.

D. EG-3: Insulating Glass Units: Vision glass, double glazed.
   1. Applications: Exterior Sectional Garage doors and where indicated on drawings. .
   2. Space between lites filled with argon.
   3. Outboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
      a. Coating: Low-E (solar control type), on #2 surface.
         1) Vitro Architectural Glass; Solarban 70
         2) Substitutions; See Section 01 60 00 - Product Requirements
   4. Inboard Lite: Laminated Glass 4mm/.060PVB/4mm tempered Clear
   5. Total Thickness: 1 inch.
   6. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.29, nominal.
   7. Visible Light Transmittance (VLT): 32 percent, nominal.
   8. Solar Heat Gain Coefficient (SHGC): 19 percent, nominal.
   9. Glazing Method: Dry glazing method, gasket glazing.

E. EG-4: Insulating Glass Units: Delayed Entry Security Film, double glazed. (Film Applied)
   1. Applications: Locker Room Building as indicated on drawings..
   2. Space between lites filled with argon.
   3. Outboard Lite: Fully Tempered float glass, 1/4 inch thick, mininum
      a. Tint: Gray.
      b. Coating: Low-E (solar control type), on #2 surface.

1) Vitro Architectural Glass; Solarban 70
2) Substitutions; See Section01 60 00-Product Requirements

4. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum
   a. Tint: Clear.
5. Total Thickness: 1 inch.
6. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.29, nominal.
7. Visible Light Transmittance (VLT): 32 percent, nominal.
8. Solar Heat Gain Coefficient (SHGC): 19 percent, nominal.
9. Glazing Method: Dry glazing method, gasket glazing.
10. Accessories:
    a. Security Plastic Film - 3M Scotchshield School Safety and Security Window Film Ultra Series, Film on all panes of storefront

2.06 GLAZING UNITS

A. G-1: Monolithic Interior Vision Glazing:
   1. Applications: Interior glazing unless otherwise indicated.
   2. Glass Type: Fully tempered float glass.
   3. Tint: Clear.
   4. Thickness: 1/4 inch, nominal.

B. G-2: Security Glazing: Laminated glass, 2-Ply.
   1. Applications: Locations as indicated on drawings.
   2. Tint: Clear.
   3. Thickness: 1/4 inch.
   4. Outer Lite: Tempered glass.
   5. Interlayer: Polyvinyl butyral (PVB), 0.030 inch thickness
   6. Interlayer: Polyvinyl butyral (PVB), thickness as required to meet performance criteria.
   7. Inside Lite: Tempered glass.
   8. Performance Criteria:
      a. Burglary Resistance: Pass UL 972 tests in compliance with level of burglary and forced-entry resistance indicated; Multiple Impact.

2.07 ACCESSORIES

A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.

B. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.

B. Verify that the minimum required face and edge clearances are being provided.

C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

D. Verify that sealing between joints of glass framing members has been completed effectively.

E. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.

B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.

B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.

D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.05 INSTALLATION - PRESSURE GLAZED SYSTEMS

A. Application - Exterior Glazed: Set glazing infills from exterior side of building.

B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.

D. Install pressure plates without displacing glazing gasket; exert pressure for full continuous contact.

3.06 FIELD QUALITY CONTROL

A. Glass and Glazing product manufacturers to provide field surveillance of the installation of their products.

B. Monitor and report installation procedures and unacceptable conditions.

3.07 CLEANING

A. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.

B. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.

C. Remove non-permanent labels immediately after glazing installation is complete.

D. Clean glass and adjacent surfaces after sealants are fully cured.

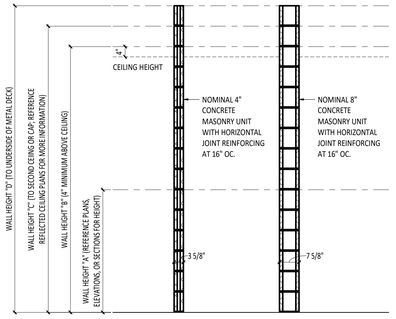
E. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.08 PROTECTION

A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

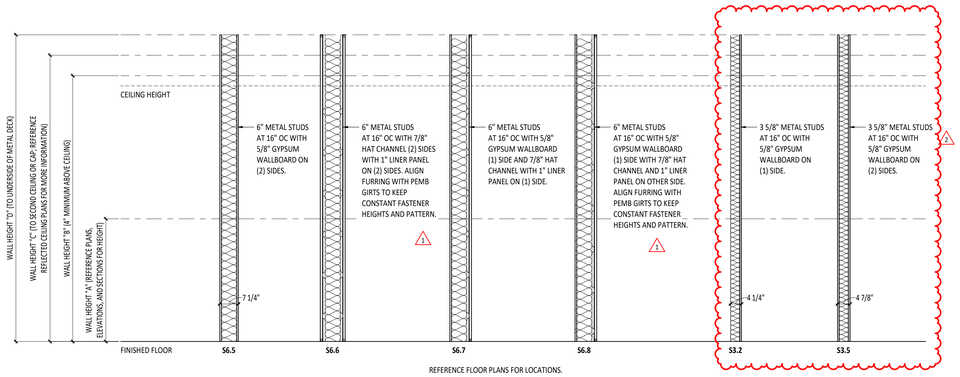
B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION 08 80 00



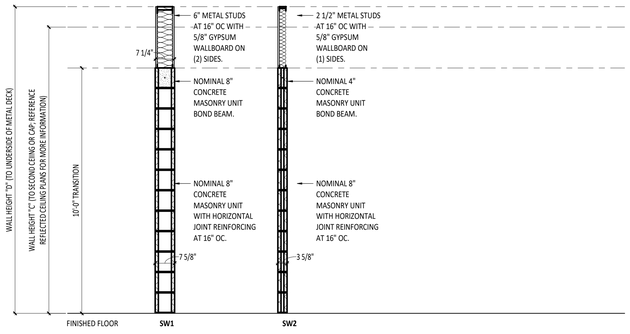
REFERENCE FLOOR PLANS FOR LOCATIONS.

1 A0.2 CONCRETE MASONRY WALL TYPES (M)
1/2" = 1'-0"



REFERENCE FLOOR PLANS FOR LOCATIONS.

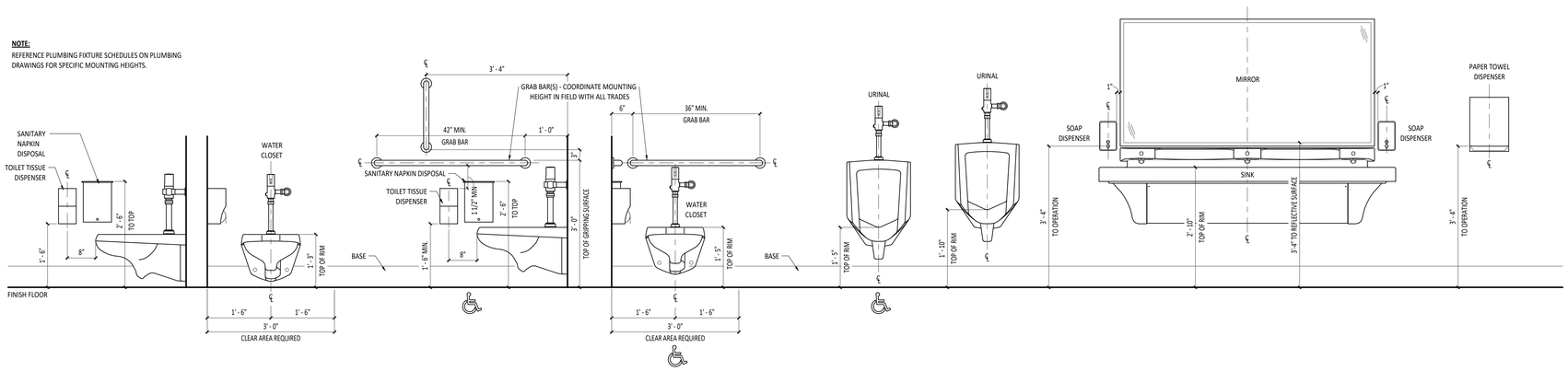
2 A0.2 STUD WALL TYPES (S)
1/2" = 1'-0"

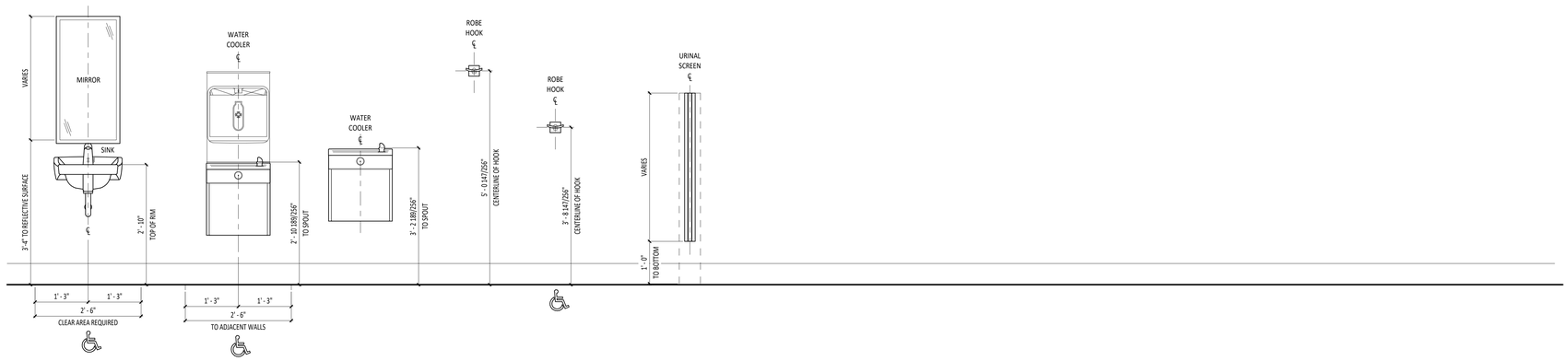


REFERENCE FLOOR PLANS FOR LOCATIONS.

3 A0.2 STACKED WALL TYPES (SW)
1/2" = 1'-0"

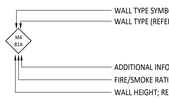
NOTE:
REFERENCE PLUMBING FIXTURE SCHEDULES ON PLUMBING DRAWINGS FOR SPECIFIC MOUNTING HEIGHTS.





4 A0.2 MOUNTING HEIGHTS (7-ADULT)
3/4" = 1'-0"

WALL TYPE INFORMATION



ADDITIONAL INFORMATION

A = ACOUSTICAL BATT INSULATION
FW = FIRE RATED WALL
FB = FIRE BARRIER WALL
G = GROUT WALL FULL

STATE OF OHIO
MATTHEW R. HIBNER
14160552
REGISTERED ARCHITECT

MATTHEW R. HIBNER
LICENSE #14160552
EXPIRATION DATE: 12/31/2027

GARMANN MILLER
MARION, OHIO | COLUMBUS, OHIO | INDIANAPOLIS, INDIANA | FORT WAYNE, INDIANA
mmhgroup.com

NEW BUILDING FOR:
FORT LORAMIE LOCAL SCHOOLS ATHLETIC COMPLEX BUILDING
600 EAST PARK STREET, FORT LORAMIE, OHIO 45845

ISSUANCES/REVISIONS

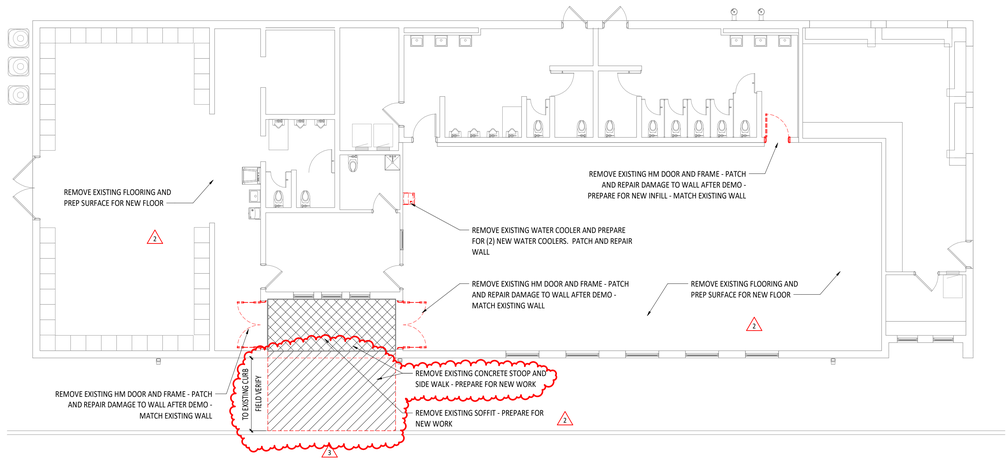
	CONSTRUCTION DOCUMENTS	12/11/2025
1	ADDENDUM 05	01/08/2026
2	ADDENDUM 07	01/16/2026

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
25041.00	MDB	JCR

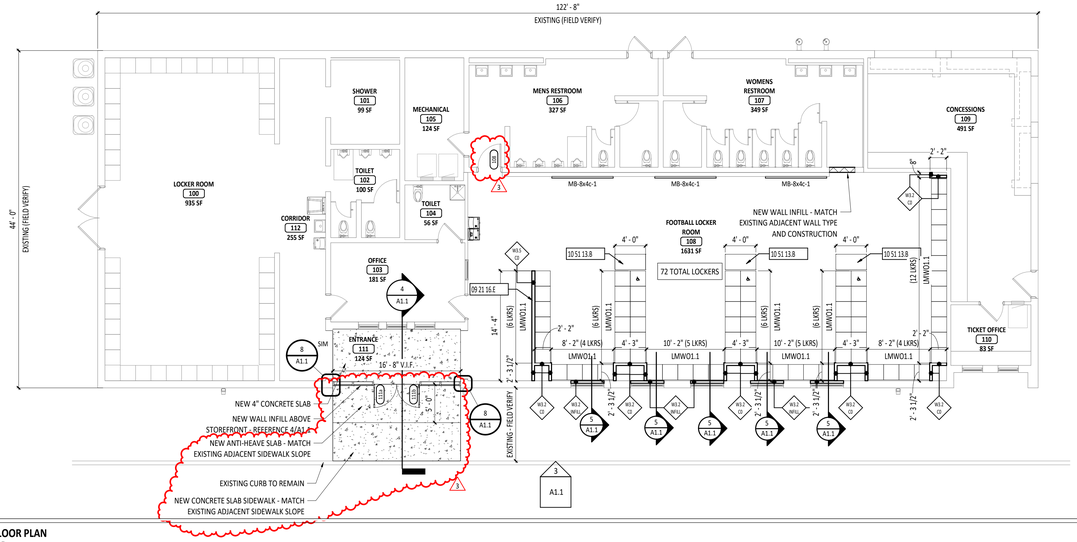
SHEET TITLE:
WALL TYPES / MOUNTING HEIGHTS

SHEET NUMBER:
A0.2

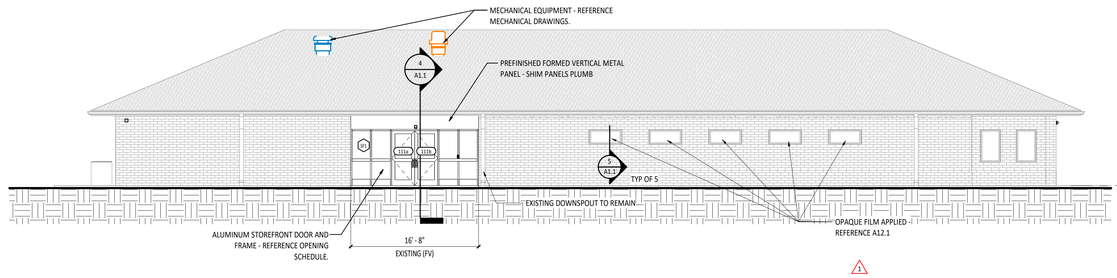
PRINTED ON: 1/15/2026 9:15:42 AM



1 A1.1 DEMOLITION FLOOR PLAN
1/8" = 1'-0"



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



3 A1.1 EAST BUILDING ELEVATION
1/8" = 1'-0"

DOOR/OPENING SCHEDULE

NUMBER	DOOR SIZE	DOOR THK	DOOR MATL	DOOR TYPE	DOOR GLASS	FRAME DEPTH	FRAME MATL	FRAME TYPE	FRAME GLASS	DETAIL NUMBER HEAD	DETAIL NUMBER JAMB	DETAIL NUMBER SILL	HARDWARE SET	ROOM KEY SIDE	FUNCTION	LABEL (MIN)	NOTES
108	3'-0" x 7'-0" (EXISTING)	1 3/4"	HM	2	-	4 3/4"	HM	-	-	-	-	-	19.0	-	Interior	-	1
111a	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	EG4	4 1/2"	AL	SF1	EG4	-	-	-	2.0	-	Interior	-	
111b	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	EG4	4 1/2"	AL	SF1	EG4	-	-	-	3.0	-	Interior	-	

DOOR/OPENING SCHEDULE NOTES:
1. EXISTING DOOR TO REMAIN - NEW HARDWARE PER SCHEDULE

METAL LOCKER SCHEDULE

MARK	DESCRIPTION	NOTES
LMWO 1.1	METAL LOCKER - WELDED - OPEN (NO DOOR) - 24IN WIDE x 24IN DEEP x 72IN HIGH STADIUM LOCKER WITH FOOTLOCKER	

FLOOR PLAN SYMBOLS LEGEND

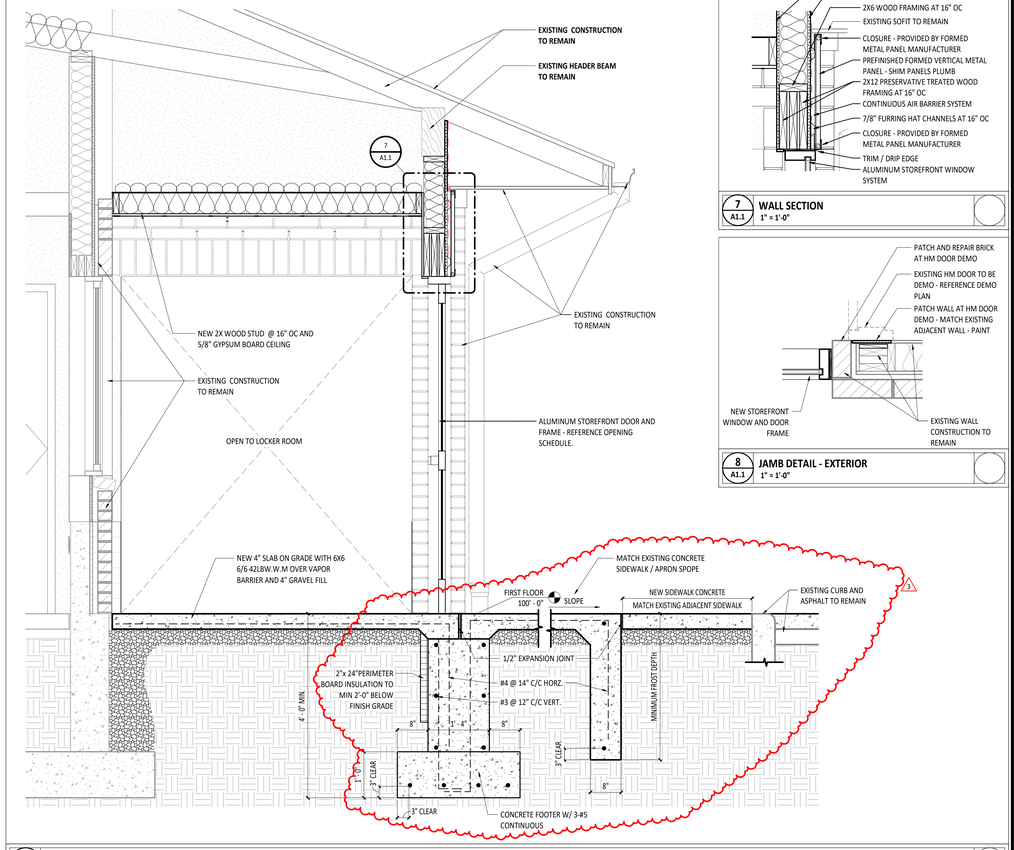
A101 — ROOM DESIGNATION - REFERENCE ROOM INDEX.

EXTERIOR ELEVATION — DETAIL NUMBER / SHEET NUMBER

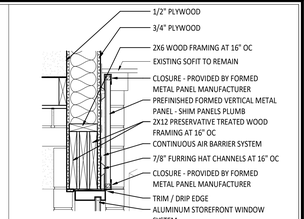
SECTION — DETAIL NUMBER / SHEET NUMBER

WALL TYPE INFORMATION

WALL TYPE SYMBOL
WALL TYPE (REFERENCE PLAN AND TYPE DETAILS)
ADDITIONAL INFORMATION; SEE BELOW
FIRE/SMOKE RATING: 0,1,2,3, OR S (SMOKE)
WALL HEIGHT; REFERENCE WALL TYPE DETAILS

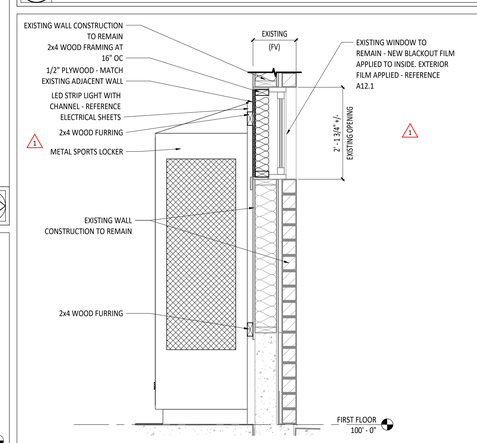


4 A1.1 WALL SECTION
3/4" = 1'-0"

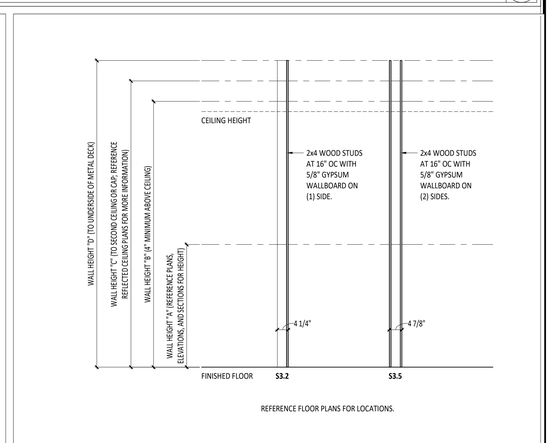


7 A1.1 WALL SECTION
1" = 1'-0"

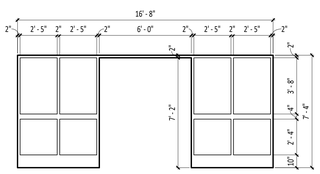
8 A1.1 JAMB DETAIL - EXTERIOR
1" = 1'-0"



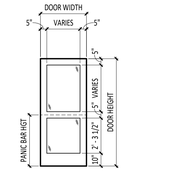
5 A1.1 WALL SECTION
3/4" = 1'-0"



6 A1.1 STUD WALL TYPES (S)
1/2" = 1'-0"



9 A1.1 HOLLOW METAL DOOR FRAME TYPES
1/4" = 1'-0"



10 A1.1 DOOR TYPES
1/4" = 1'-0"

FIRST FLOOR PLAN ROOM INDEX

ROOM NUMBER	ROOM NAME	AREA
100	LOCKER ROOM	935 SF
101	SHOWER	99 SF
102	TOILET	100 SF
103	OFFICE	181 SF
104	TOILET	56 SF
105	MECHANICAL	124 SF
106	MENS RESTROOM	327 SF
107	WOMENS RESTROOM	349 SF
108	FOOTBALL LOCKER ROOM	1,631 SF
109	CONCESSIONS	491 SF
110	TICKET OFFICE	83 SF
111	ENTRANCE	124 SF
112	CORRIDOR	255 SF

STATE OF OHIO
MATTHEW R. HIBNER 1416052
REGISTERED ARCHITECT
MATTHEW R. HIBNER
LICENSE #1416052
EXPIRATION DATE: 12/31/2027

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mmmgroup.com

BUILDING RENOVATION FOR

FORT LORAMIE LOCAL SCHOOLS
LOCKER ROOM BUILDING

600 EAST PARK STREET, FORT LORAMIE, OHIO

ISSUANCES/REVISIONS

	CONSTRUCTION DOCUMENTS	12/15/2025
1	ADDENDUM 02	12/19/2025
2	ADDENDUM 04	01/05/2026
3	ADDENDUM 07	01/16/2026

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
25041.00	MDB	JCR

SHEET TITLE:

DEMO PLAN / FLOOR PLAN / DETAILS / DOOR SCHEDULE

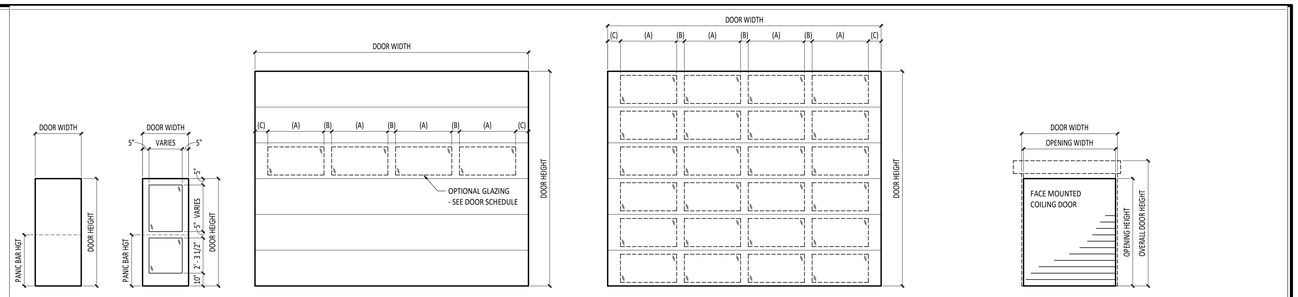
SHEET NUMBER:

A1.1

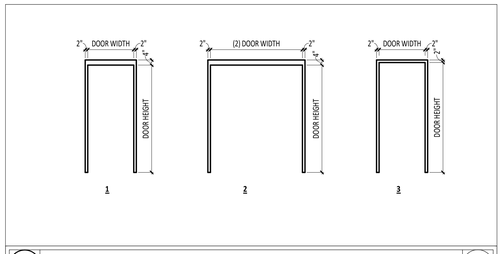
PRINTED ON: 1/15/2026 10:21:28 AM

DOOR/OPENING SCHEDULE

NUMBER	DOOR SIZE	DOOR THK	DOOR MATL	DOOR TYPE	DOOR GLASS	FRAME DEPTH	FRAME MATL	FRAME TYPE	FRAME GLASS	DETAIL NUMBER HEAD	DETAIL NUMBER JAMB	DETAIL NUMBER SILL	HARDWARE SET	ROOM KEY SIDE	FUNCTION	LABEL (MIN)	NOTES
A100a	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	EG1	6"	AL	SFE1	EG1	5/A6.2	7/A6.2	11/A6.1	1.0	EXT	Exterior	-	3
A100b	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	EG1	6"	AL	SFE1	EG1	5/A6.2	7/A6.2	11/A6.1	3.0	EXT	Exterior	-	3
A100c	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	EG1	6"	AL	SFE1	EG1	5/A6.2	7/A6.2	11/A6.1	4.0	EXT	Exterior	-	3
A100d	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	EG1	6"	AL	SFE1	EG1	5/A6.2	7/A6.2	11/A6.1	5.0	EXT	Exterior	-	3
A101a	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	G2	4 1/2"	AL	SF4	-	9/A6.2	11/A6.2	-	10.0	A101	Interior	-	
A101b	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	G2	4 1/2"	AL	SF4	-	9/A6.2	11/A6.2	-	11.0	A101	Interior	-	
A102	3'-0" x 7'-0"	1 3/4"	HM	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1		22.0	A101	Interior	-	
A103	3'-0" x 7'-0"	1 3/4"	HM	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1		16.0	A101	Interior	-	
A104	3'-0" x 7'-0"	1 3/4"	HM	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1		19.0	A101	Interior	-	
A105a	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	G1	4 1/2"	AL	SF1	G1	9/A6.2	11/A6.2	-	12.0	A101	Interior	-	
A105b	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	G1	4 1/2"	AL	SF1	G1	9/A6.2	11/A6.2	-	13.0	A101	Interior	-	
A105c	10'-0" x 8'-0"	2 1/8"	AL	OHD2	G2	2"	STL	-	-	17/A6.2	18/A6.2		26.0	-	Interior	-	
A105d	10'-0" x 8'-0"	2 1/8"	AL	OHD2	G2	2"	STL	-	-	17/A6.2	18/A6.2		26.0	-	Interior	-	
A105e	4'-0" x 7'-10"	1 3/4"	AL	FG2.1	G2	4 1/2"	AL	SF6	G2	9/A6.2	11/A6.2	-	14.0	A107	Interior	-	
A105g	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	EG1	6"	AL	SFE6	EG1	5/A6.2	7/A6.2	11/A6.1	7.0	EXT	Exterior	-	
A105h	3'-0" x 7'-10"	1 3/4"	AL	FG2.1	EG1	6"	AL	SFE6	EG1	5/A6.2	7/A6.2	11/A6.1	6.0	EXT	Exterior	-	
A105j	3'-0" x 7'-10"	1 3/4"	FRP	F	-	8 3/4"	HM	3	-	9/A6.1	10/A6.1		20.0	A106	Interior	-	
A106a	3'-0" x 7'-2"	1 3/4"	FRP	F	-	6"	AL	SFE9	-	3/A6.1	4/A6.1	5/A6.1	8.0	-	Exterior	-	
A106b	10'-0" x 10'-0"	2 1/8"	AL	OHD	G2	2"	STL		-	6/A6.1	7/A6.1	8/A6.1	26.0	-	Exterior	-	
A106c	3'-0" x 7'-2"	1 3/4"	FRP	F		6"	AL	SFE9		3/A6.1	4/A6.1	5/A6.1	9.0	-	Exterior	-	
A107a	8'-0" x 8'-0"	3/4"	AL	CD	-	3 3/4"	STL	-	-	12/A6.1	13/A6.1		26.0	-	Interior	-	
A107b	2'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	20.0	A107	Interior	-	
A108	3'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	23.0	A107	Interior	-	
A109	3'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	23.0	A107	Interior	-	
A110a	3'-0" x 7'-0"	1 3/4"	HM	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	25.0	-	Interior	-	
A110b	3'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	25.0	-	Interior	-	
A112a	3'-0" x 7'-0"	1 3/4"	HM	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	25.0	-	Interior	-	
A112b	3'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	25.0	-	Interior	-	
A114	3'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	24.0	-	Interior	-	
A115	3'-0" x 7'-0"	1 3/4"	HM	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	19.0	A114	Interior	-	
A116	3'-0" x 7'-0"	1 3/4"	HM	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	21.0	A114	Interior	-	
A117	3'-0" x 7'-0"	1 3/4"	HM	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	21.0	A114	Interior	-	
A118a	(2) 3'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	2	-	9/A6.1	10/A6.1	-	17.0	A106	Interior	-	
A118b	(2) 3'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	2	-	9/A6.1	10/A6.1	-	18.0	A120	Interior	-	
A119a	3'-0" x 7'-2"	1 3/4"	FRP	F	-	6"	AL	SFE9	-	3/A6.1	4/A6.1	5/A6.1	9.0	-	Exterior	-	
A119b	10'-0" x 8'-0"	3/4"	AL	CD	-	3 3/4"	STL	-	-	12/A6.1	13/A6.1		26.0	-	Interior	-	
A120b	3'-0" x 7'-2"	1 3/4"	FRP	F	-	6"	AL	SFE9	-	3/A6.1	4/A6.1	5/A6.1	9.0	-	Exterior	-	
A120c	10'-0" x 10'-0"	2 1/8"	AL	OHD	G2	2"	STL	-	-	6/A6.1	7/A6.1	8/A6.1	26.0	-	Exterior	-	
A121	3'-0" x 7'-0"	1 3/4"	FRP	F	-	8 3/4"	HM	1	-	9/A6.1	10/A6.1	-	21.0	A120	Interior	-	
A202a	3'-0" x 7'-0"	1 3/4"	FRP	F	-	7 5/8"	HM	1	-	14/A6.1	15/A6.1		17.0	A201	Interior	-	
A202b	10'-0" x 8'-0"	2 1/8"	AL	OHD2	G2	3 3/4"	STL	-	-	15/A6.2	16/A6.2		26.0	-	Interior	-	
A203	(2) 3'-0" x 7'-0"	1 3/4"	FRP	F	-	7 5/8"	HM	2	-	14/A6.1	15/A6.1		17.0	A201	Interior	-	



1 DOOR TYPES (A6.1) 1/4" = 1'-0"



2 HOLLOW METAL DOOR FRAME TYPES (A6.1) 1/4" = 1'-0"

DOOR GENERAL NOTES

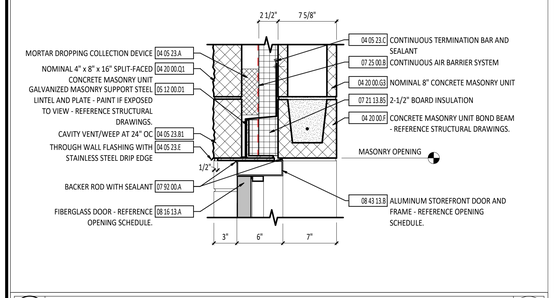
A REFERENCE A6 SHEETS FOR DOOR AND STOREFRONT DETAILS.
B REFERENCE SPECIFICATION SECTION 08 71 00 FOR HARDWARE SETS.
C USE TYPE "X" GYSPUM WALLBOARD WHERE FIRE-RATED WALL ASSEMBLIES ARE CALLED OUT ON THE A1 UNIT PLANS.

DOOR/OPENING SCHEDULE NOTES

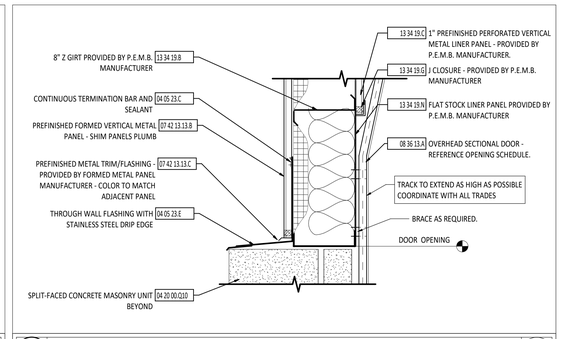
1. DOOR AND FRAME/LOCK BY SECTION 08 80 00.
2. REFERENCE ELECTRONIC SCHEMATIC WIRING DIAGRAM DETAIL ELECTRICAL AND TECHNOLOGY SHEETS
3. REMOVABLE MULLION.

DOOR/OPENING SCHEDULE ABBREVIATIONS

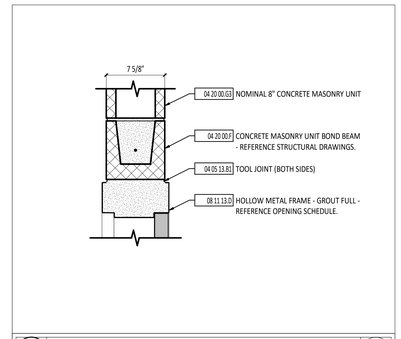
SYMBOL	DESCRIPTION
AL	ALUMINUM
CD	COILING DOOR
DG	DIFFUSING GLASS
F	FLUSH
FG	FULL GLASS
FRG	FIRE RATED GLASS
HG	HALF GLASS
HM	HOLLOW METAL
IG	INSULATED GLASS
LG	LAMINATED GLASS
N	NARROW LITE
OHD	OVERHEAD SECTIONAL DOOR
SG	SAFETY GLASS
TG	TEMPERED GLASS
W	WOOD



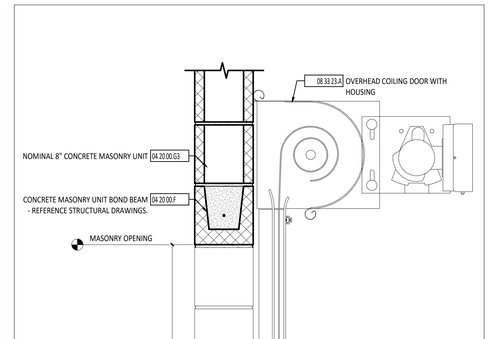
3 HEAD DETAIL - EXTERIOR (A6.1) 1 1/2" = 1'-0"



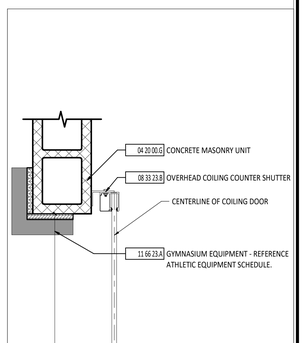
6 HEAD DETAIL - EXTERIOR (A6.1) 1 1/2" = 1'-0"



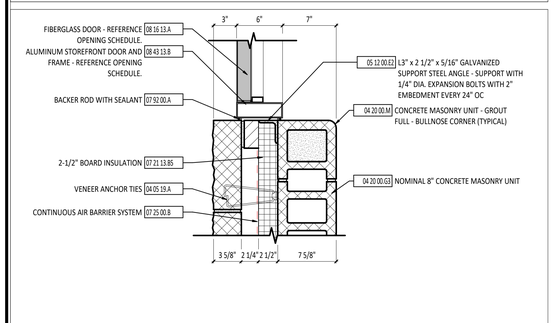
9 HEAD DETAIL - INTERIOR (A6.1) 1 1/2" = 1'-0"



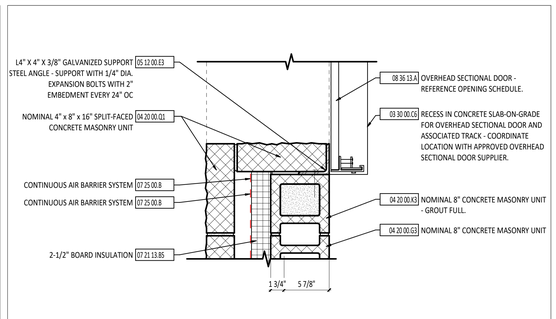
12 HEAD DETAIL - INTERIOR (A6.1) 1 1/2" = 1'-0"



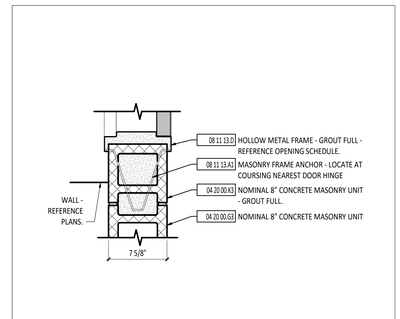
13 JAMB DETAIL - INTERIOR (A6.1) 1 1/2" = 1'-0"



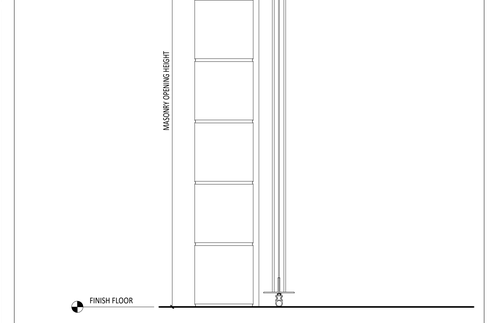
4 JAMB DETAIL - EXTERIOR (A6.1) 1 1/2" = 1'-0"



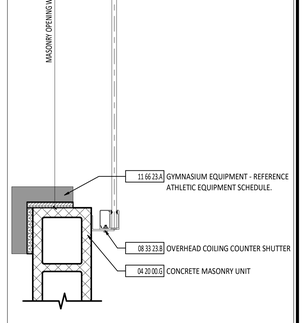
7 JAMB DETAIL - EXTERIOR (A6.1) 1 1/2" = 1'-0"



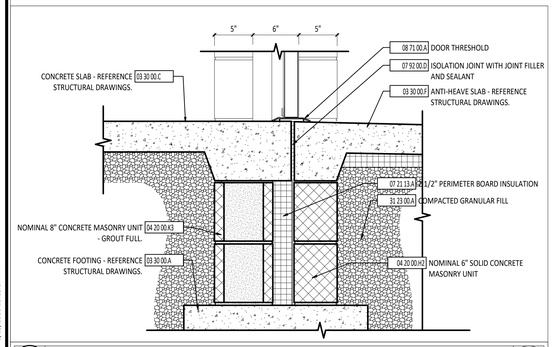
10 JAMB DETAIL - INTERIOR (A6.1) 1 1/2" = 1'-0"



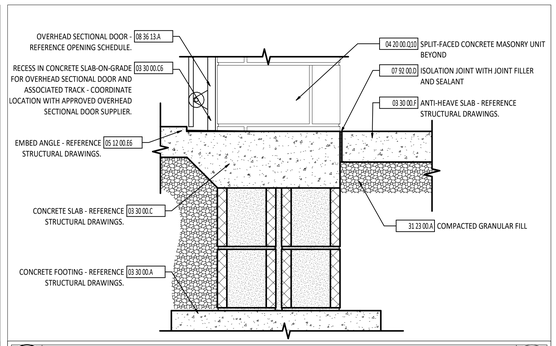
14 HEAD DETAIL - INTERIOR (A6.1) 1 1/2" = 1'-0"



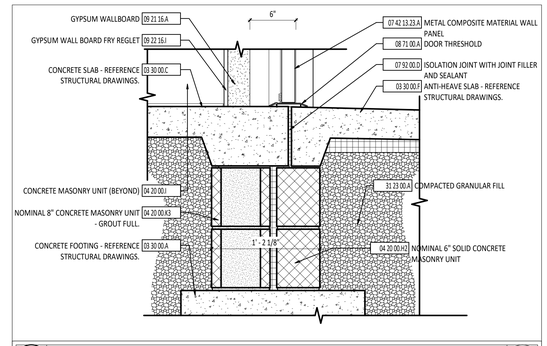
15 JAMB DETAIL - INTERIOR (A6.1) 1 1/2" = 1'-0"



5 SILL DETAIL - EXTERIOR (A6.1) 1 1/2" = 1'-0"



8 SILL DETAIL - EXTERIOR (A6.1) 1 1/2" = 1'-0"



11 SILL DETAIL - EXTERIOR (A6.1) 1 1/2" = 1'-0"

PRINTED ON: 1/15/2026 10:28:07 AM

STATE OF OHIO
MATTHEW R. HIBNER
1416052
REGISTERED ARCHITECT
MATTHEW R. HIBNER
LICENSE #1416052
EXPIRATION DATE: 12/31/2027

GARMANN MILLER
ARCHITECTS, OHIO | COLUMBUS, OHIO | INDIANAPOLIS, INDIANA | FORT WAYNE, INDIANA
omnigm.com

FORT LORAMIE LOCAL SCHOOLS ATHLETIC COMPLEX BUILDING

NEW BUILDING FOR
609 EAST PARK STREET, FORT LORAMIE, OHIO 45845

ISSUANCES/REVISIONS

	CONSTRUCTION DOCUMENTS	12/11/2025
1	ADDENDUM 03	12/30/2025
2	ADDENDUM 05	01/08/2026
3	ADDENDUM 07	01/16/2026

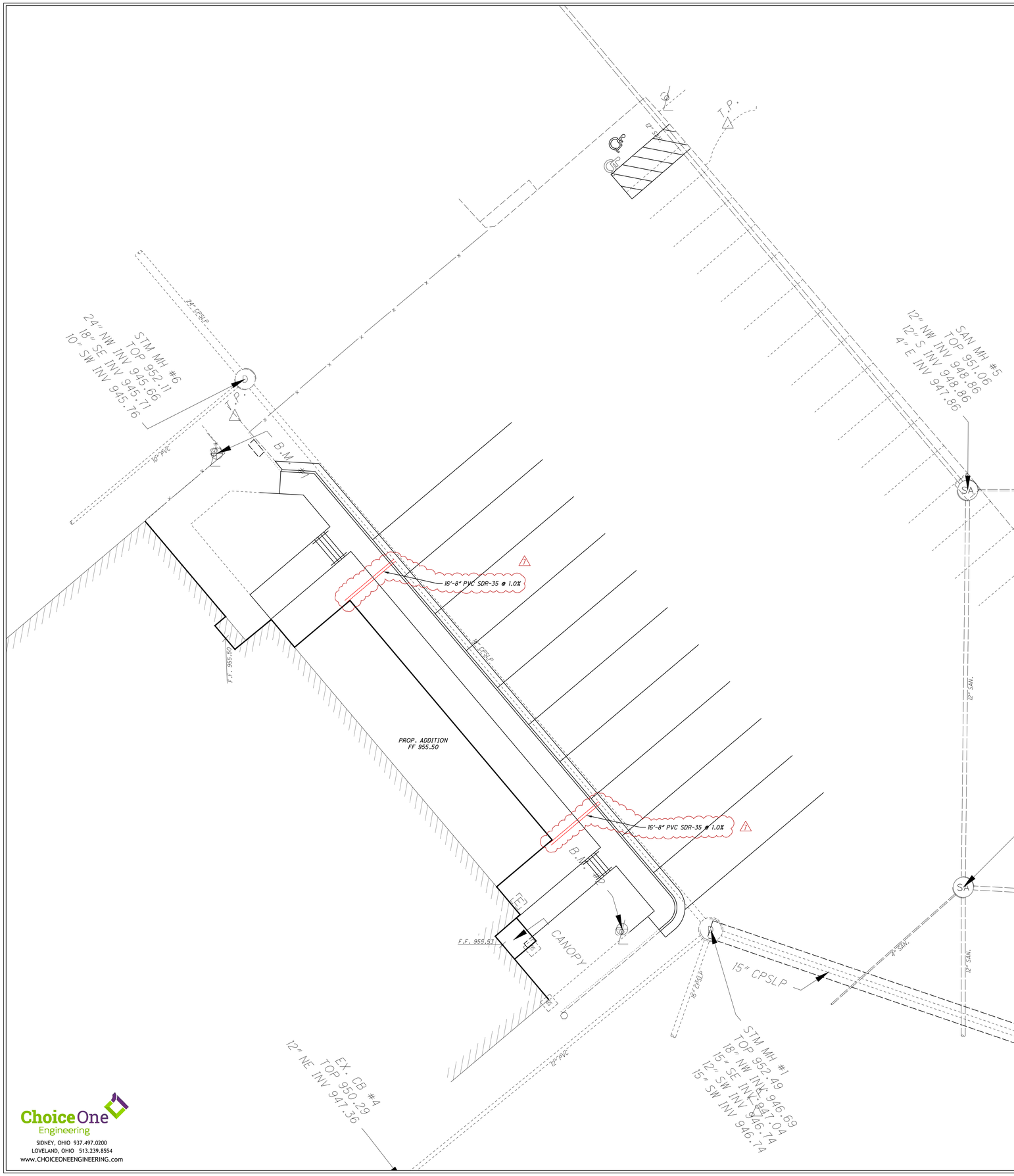
PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
25041.00	MDB	JCR

SHEET TITLE:

DOOR SCHEDULE AND DETAILS

SHEET NUMBER:

A6.1



SCALE IN FEET
0 5 10 20

NOTES:
CONTRACTOR TO VERIFY EXACT LOCATION, DEPTH AND SIZE OF UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OF ANY CONFLICTS PRIOR TO THE INSTALLATION OF UTILITIES.

ALL UTILITIES TO BE INSTALLED PER CITY OF XXXX STANDARDS.

CONTRACTOR TO VERIFY AND LOCATE WHERE STORM, SANITARY, AND WATER LATERALS AND ALL OTHER PROPOSED UTILITY SERVICES TIE INTO THE PROPOSED BUILDING PER BUILDING PLANS. CONTRACTOR SHALL ALSO VERIFY THE SIZES AND TYPES OF ALL LATERALS AND HOW THEY MAY TIE INTO THE PROPOSED BUILDINGS.

CONTRACTOR TO FOLLOW ALL PERMIT REQUIREMENTS AND SPECIFICATIONS TO INSTALL THE PROPOSED UTILITIES INCLUDING COORDINATING THE INSTALLATION WITH LOCAL OFFICIALS AS NEEDED AND/OR REQUIRED.

CONTRACTOR TO COORDINATE ALL WORK WITH THE OWNER AS NEEDED/REQUIRED.

BUILDING DOWNSPOUT/ROOF DRAIN PIPING NOTE:
THE CONTRACTOR SHALL CONNECT ALL DOWNSPOUTS AND ROOF DRAINS AS SHOWN ON THE SITE PLAN OR TO THE CLOSEST STORM PIPING OR CATCH BASINS USING CPSLP OR PVC SDR-35 SEWER OR APPROVED EQUAL. SEE PROPOSED BUILDING PLANS FOR LOCATION OF DOWNSPOUTS AND/OR ROOF DRAINS.

EXISTING UTILITY NOTES:
CONTRACTOR SHALL DETERMINE THE TYPE OF SERVICE FOR ALL EXISTING UNDERGROUND LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION AND SHALL ENSURE THE FOLLOWING:

1. THAT ALL EXISTING STORM LINES OR ANY OTHER EXISTING CLEAN WATER DRAINAGE LINES THAT ARE DISCOVERED AND/OR ENCOUNTERED DURING CONSTRUCTION AND ARE OR NEED TO REMAIN IN SERVICE ARE ROUTED AS NEEDED TO ENSURE THAT THEY ARE CONNECTED INTO THE PROPOSED OR EXISTING STORM SEWER.

2. THAT ALL EXISTING SANITARY LINES THAT ARE DISCOVERED AND/OR ENCOUNTERED DURING CONSTRUCTION AND ARE TO REMAIN IN SERVICE ARE ROUTED AS NEEDED TO ENSURE THAT THEY ARE CONNECTED INTO ACTIVE EXISTING SANITARY SEWER LINES/STRUCTURES OR INTO PROPOSED SANITARY SEWER LINES/STRUCTURES.

3. THAT ALL EXISTING WATER LINES THAT ARE DISCOVERED AND/OR ENCOUNTERED DURING CONSTRUCTION AND ARE TO REMAIN IN SERVICE ARE ROUTED AS NEEDED TO ENSURE THAT THEY ARE CONNECTED INTO ACTIVE EXISTING WATER LINES OR INTO PROPOSED WATER LINES.

ALL WORK TO BE PER AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND TO BE WITNESSED BY THE OWNER'S REP. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S OVERALL LUMP SUM BID FOR THE PROJECT.

LOCATE EXISTING UTILITIES NOTE:
THIS ITEM OF WORK MAY BE PERFORMED ON AS NEEDED BASIS AND SHALL CONSIST OF THE CONTRACTOR FIELD LOCATING THE VARIOUS EXISTING UTILITY LINES LOCATION, SIZE, AND DEPTH PRIOR TO PERFORMING ANY PROPOSED WORK OR ONCE WORK HAS BEGUN. THIS WORK MAY ALSO REQUIRE THE CONTRACTOR TO INSPECT THE LINES BY OTHER METHODS SUCH AS DYE TESTING OR CAMERA/VIDEO TO FIND THE ORIGIN AND LOCATION OF THE LINE. THE CONTRACTOR SHALL COOPERATE AND COORDINATE WITH THE OWNER AS NEEDED TO ENSURE EXISTING FACILITY OPERATIONS ARE MAINTAINED.

ALL WORK TO BE PER AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND TO BE WITNESSED BY THE OWNER'S REPRESENTATIVE. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S OVERALL LUMP SUM BID FOR THE PROJECT.

UNKNOWN EXISTING UNDERGROUND UTILITIES:
CONTRACTOR TO BE AWARE THERE MAY BE OTHER UNKNOWN SERVICES OR UNKNOWN UNDERGROUND UTILITIES OR ITEMS WHICH MAY BE LOCATED WITHIN THE SITE AND MAY REQUIRE REMOVAL OR REROUTING IN ORDER TO PERFORM THE PROPOSED PROJECT. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY OF ANY UNKNOWN UNDERGROUND UTILITIES OR OTHER ITEMS WHICH ARE ENCOUNTERED AND WORK WITH THE OWNER TO DECIDE HOW THESE ITEMS SHOULD BE HANDLED.

GAS, ELECTRIC, COMMUNICATION CONFLICT NOTE:
CONTRACTOR TO LOWER/DIP THESE UTILITIES AS NEEDED TO AVOID CONFLICTS WITH ANY PROPOSED OR EXISTING SANITARY OR STORM OR WATER LINES THEY MAY CONFLICT WITH. IF THESE UTILITY LINES CONFLICT WITH ANY PROPOSED OR EXISTING WATERLINES THEN CONTRACTOR TO DETERMINE WHETHER TO LOWER/DIP THE WATERLINE OR LOWER/DIP THE GAS/ELECTRIC/COMMUNICATION LINE(S). CONTRACTOR MAY NEED TO CONSULT WITH AND OBTAIN OWNER'S APPROVAL AS TO WHICH UTILITY WILL BE LOWERED PRIOR TO PERFORMING THIS WORK. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S OVERALL LUMP SUM BID FOR THE PROJECT.

ELECTRICAL/MECHANICAL NOTE:
CONTRACTOR SHALL REFER TO THE ELECTRICAL/MECHANICAL DRAWINGS FOR DEMOLITION AND/OR INSTALLATION INFO. OF ALL EXISTING AND PROPOSED ELECTRICAL/MECHANICAL ITEMS FOR THE SITE AND/OR HOW THESE ITEMS ARE TO BE HANDLED AND ADDRESSED.

WATER MAIN CROSSING SEPARATION NOTE:
WHENEVER A SANITARY OR STORM SEWER AND WATER LINE MUST CROSS, THE SEWER AND WATER SHALL BE LAID AT SUCH AN ELEVATION THAT THERE IS AT LEAST 18" OF SEPARATION BETWEEN THE OUTSIDE WALLS OF THE TWO PIPES. IF REQUIRED, CONTRACTOR SHALL LOWER/DIP THE WATER MAIN AS NEEDED TO OBTAIN THE 18" MINIMUM SEPARATION DISTANCE. IF IT IS ABSOLUTELY IMPOSSIBLE TO MAINTAIN THE 18" VERTICAL SEPARATION, THE SANITARY SEWER SHALL BE CONSTRUCTED OF WATER LINE TYPE MATERIALS WHICH WOULD BE ABLE TO WITHSTAND A 100 PSI PRESSURE TEST (NOTE: DO NOT PRESSURE TEST SANITARY SEWER TO 100 PSI). THESE REQUIREMENTS WILL EXTEND FOR THE DISTANCE OF THE ENTIRE SPAN. NO CHANGE OF MATERIALS ARE ALLOWED MID-SPAN.

AT CROSSINGS, THE WATER MAIN SHALL HAVE A MINIMUM VERTICAL DISTANCE OF 18" FROM STORM AND SANITARY SEWERS. ALSO ONE FULL LENGTH OF WATER MAIN SHALL BE LOCATED SO THE JOINTS ARE AS FAR FROM THE STORM AND SANITARY SEWERS AS POSSIBLE.

BENCHMARK #1	ELEV. 956.73 MAG NAIL IN POWER POLE ACROSS FROM 521 ELIZABETH CT ALONG THE WEST SIDE OF ST RT 705
BENCHMARK #2	ELEV. 959.51 MAG NAIL IN POWER POLE ACROSS FROM 526 ELIZABETH CT ALONG THE WEST SIDE OF ST RT 705
BENCHMARK #3	ELEV. 961.39 CUT BOX WITH X ON LIGHT POLE BASE AT THE NORTHEAST CORNER OF THE EAST SCHOOL PARKING LOT
BENCHMARK #4	ELEV. 964.38 CUT BOX WITH X ON LIGHT POLE BASE BETWEEN THE MAIN DOORS ON THE NORTH SIDE OF THE HIGH SCHOOL

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BUILDING ADDITION

FT LORAMIE ELEMENTARY SCHOOL RENOVATION

575 GREENBACK ROAD, FORT LORAMIE, OH 45845

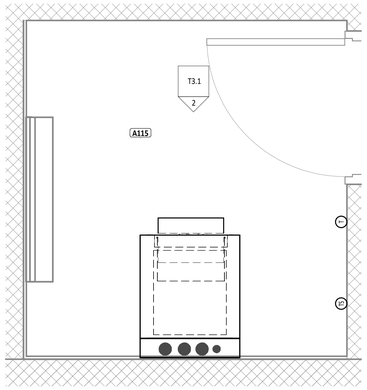
ISSUANCES/REVISIONS

	CONSTRUCTION DOCUMENTS	12/11/2025
7	ADDENDUM 7	1/16/2026

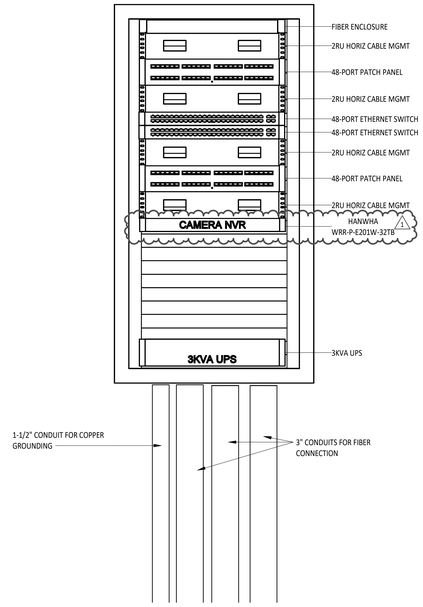
PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
25041.00	JAC	NJS

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C2.1



1 T3.1 **TECHNOLOGY ROOM A115**
3/4" = 1'-0"



2 T3.1 **TECHNOLOGY ROOM A115 RACK 1**
1 1/2" = 1'-0"

STATE OF OHIO
MATTHEW R. HIBNER
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REGISTERED ARCHITECT

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EXPIRATION DATE: 12/31/2027

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NEW BUILDING FOR

FORT LORAMIE LOCAL SCHOOLS ATHLETIC COMPLEX BUILDING

600 EAST PARK STREET, FORT LORAMIE, OHIO 45845

ISSUANCES/REVISIONS		
	CONSTRUCTION DOCUMENTS	12/11/2025
1	CONSTRUCTION DOCUMENTS - ADDENDUM #07	01/16/2026

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
25041.00	CDT	NDL

SHEET TITLE:

ENLARGED TECHNOLOGY ROOMS

SHEET NUMBER:

T3.1

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