STATE OF ALABAMA
No. 7007
RYAN D. VERNON
REGISTERED ARCHITECT

LATHAN · McKEE
ARCHITECTS

300 CHASE PARK SOUTH • SUITE 200 • HOOVER, ALABAMA 35244
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ADDENDUM NO. 4
NEW STORM SHELTER AND CLASSROOM ADDITION TO VINCENT MIDDLE/HIGH SCHOOL
Architect Job No. 25-32
January 12, 2026
DCM #2025910

BIDS DUE:
Thursday, January 15, 2026, until
2:00 p.m., local time, held at
Shelby County Board of Education,
Facilities and Maintenance Building
125 Industrial Parkway
Columbiana, AL 35051

The Plans and Specifications are here by amended. The following supersedes all contrary and/or conflicting information and is made part of the contract documents.

GENERAL

1. **MANDATORY PRE-BID MEETING:** A mandatory pre-bid meeting was held on 1/6/2026, see the attached sign-in sheet for a list of all attendees.

SPECIFICATIONS

2. **DELETE SECTION 08320 – TORNADO RESISTANT WINDOW SYSTEMS:** IN ITS ENTIRETY.

3. **DELETE SECTION 08513 – ALUMINUM WINDOWS:** IN ITS ENTIRETY.

4. **ADD SECTION 08520 – ALUMINUM WINDOWS:** ATTACHED TO REPLACE THE PREVIOUS ALUMINUM WINDOWS SPECIFICATION IN ITS ENTIRETY.

5. **SECTION 08810 – GLASS AND GLAZING: Revise 2.2 Materials as follows:**

DELETE: ~~R. Exterior Glazing shall be **Hurricane Impact Resistant Glazing** and shall be 1" insulated Low-E. Comply with all Local and State Building Codes to meet performance requirements. Glazing shall be equal to Insulgard or Oldcastle Hurricane Impact Resistant Glazing.~~

DRAWINGS

1. ADDED SHEET **LS1.1B** – LIFE SAFETY PLAN.
2. REVISED SHEET **SH1.1A** – TORNADO SHELTER PLANS.
3. REVISED SHEET **C3.0 –** SITE GRADING AND DRAINAGE PLAN – CLASSROOM ADDITION.
4. ADDED SHEET **A2.1.B** – FLOOR PLAN.
5. ADDED SHEET **P0.1A** – PLUMBING SCHEDULES, DETAILS AND NOTES.
6. ADDED SHEET **P1.0A** – NON-PRESSURE PIPING FLOOR PLAN.
7. ADDED SHEET **P2.0A** – PRESSURE PIPING FLOOR PLAN.
8. REVISED SHEET **P1.0B** – PLUMBING FLOOR PLAN – FIELD HOUSE.
9. ADDED SHEET **M0.1A** – MECHANICAL LEGENDS.
10. ADDED SHEET **M0.2A** – MECHANICAL SCHEDULES.
11. ADDED SHEET **M0.3A** – MECHANICAL DETAILS.
12. ADDED SHEET **M0.4A** – MECHANICAL DETAILS AND CONTROLS.
13. ADDED SHEET **M0.5A** – MECHANICAL CALCS.
14. ADDED SHEET **M0.6A** – MECHANICAL CALCS.
15. ADDED SHEET **M1.0A** – MECHANICAL FLOOR PLAN – DEMOLITION.
16. ADDED SHEET **M1.1A** – MECHANICAL FLOOR PLAN.
17. ADDED SHEET **M1.2A** – MECHANICAL FLOOR PLAN – ALT.
18. ADDED SHEET **M2.0A** – MECHANICAL PIPING FLOOR PLAN.
19. ADDED SHEET **M2.1A** – MECHANICAL PIPING FLOOR PLAN – ALT.
20. REVISED SHEET **M0.3B** – MECHANICAL DETAILS.
21. REVISED SHEET **M0.6B** – MECHANICAL CALCS.
22. REVISED SHEET **M1.0B** – MECHANICAL FLOOR PLAN – FIELD HOUSE.
23. REVISED SHEET **E2.1A** – MASTER PLAN AND SINGLE LINE DIAGRAM.
24. REVISED SHEET **E4.1A** – CLASSROOM FLOOR PLAN – POWER.
25. REVISED SHEET **E3.1B** – FIELD HOUSE FLOOR PLAN – LIGHTING.
26. REVISED SHEET **E4.1B** – FIELD HOUSE FLOOR PLAN – POWER.
27. REVISED SHEET **E5.1B** – FIELD HOUSE FLOOR PLAN – AUXILIARIES.

CLARIFICATIONS

1. AISC certification is not required, but the contractor must pay for shop inspection of the steel.

2. The owner shall remove all salvageable items and equipment from the existing greenhouse prior to demolition. Coordinate demolition with owner.

3. Reference Section 12150 – Miscellaneous Furnishings – A chemical toilet is not required for this project.

4. Reference Section 12150 – Miscellaneous Furnishings – Building Letters is not required for this project.

5. Reference Section 12150 – Miscellaneous Furnishings –Cornerstone is not required for this project.

6. Only one (1) project sign will be required for this project.

1.0 - GENERAL

1.1 Work Included

A. Furnish and install aluminum architectural windows complete with hardware and all related components as shown on drawings and specified in this section.

B. All windows shall be Winco (1450) Thermal AW-80 Casement Window. Peerless Windows or EFCO Windows meeting or exceeding this specification are also pre-approved. Other manufacturers requesting approval to bid their product as an equal must submit the following information 10 days prior to bid.

1. A sample window (size and configuration) as per requirements of architect. (Only if requested by the Architect)
2. Detail cuts and product data.
3. Test reports documenting compliance with requirements of section 1.05.

C. Glass and Glazing

1. All units shall be factory glazed.

1.2 Related Work

A. Section 07910 - Caulking and Sealants

1.3 Testing and Performance Requirements

A. Test Units

1. Air, water, and structural test unit shall conform to requirements set forth in ANSI/AAMA/NWWDA 101/I.S.2-97.

B. Test Procedures and Performances

1. All windows shall conform to ANSI/AAMA/NWWDA 101/I.S.2-97requirements for referenced window type in section 1.01B. In addition, the following specific performance requirements shall be met.
2. Air Infiltration Test
   a. With window sash and ventilators closed and locked, test unit in accordance with ASTM E 283 at static air pressure of 6.24 psf.
   b. Air infiltration shall not exceed .1 cfm per square foot.
3. Water Resistance Test
   a. With window sash and ventilators closed and locked, test unit in accordance with ASTM E 331 at static pressure difference of 12 psf.
   b. There shall be no uncontrolled water leakage.
4. Uniform Load Deflection Test
   a. With window sash and ventilators closed and locked, test unit in accordance with ASTM E 330at a static air pressure difference (positive and negative) of 75.0 psf.
   b. During the course of the test, no member shall deflect more than 1/175 of its span.
5. Uniform Load Structural Test
   a. With window sash and ventilators closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 75.0 psf.
   b. At conclusion of test there shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms, nor any other damage, which would cause the window to be inoperable.
6. Condensation Resistance Test (CRF)

a. With window sash closed and locked, test unit in accordance with AAMA 1503.1.

7. Thermal Transmittance Test (Conductive U-Value)
   a. With window sash closed and locked, test unit in accordance with AAMA 1503.1.
   b. Conductive thermal transmittance (U-Value) shall not be more than .59 BTU/hr/sf/ per degrees F. **(U-Factor .59)**
8. Life Cycle Test
   a. Tested in accordance with AAMA 910, there shall be no damage to fasteners, parts, support arms, activating mechanisms, or any other damage, which would make the window inoperable. Subsequent air infiltration and water resistance tests shall not exceed specified requirements
9. Maximum Solar Heat Gain Coefficient **(SHGC) .25**
10. Maximum Visible Transmittance .35.

1.4 Quality Assurance

A. Provide test reports from AAMA accredited laboratory certifying the performance as specified in Section 1.05.

B. Test reports shall be accompanied by the window manufacturer's letter of certification stating that the tested window meets or exceeds the afore mentioned criteria for the appropriate ANSI/AAMA/NWWDA 101/I.S.2-97.

1.5 Submittals

A. Contractor or window manufacturer shall submit shop drawings, finish samples, test reports, and warranties, per requirements of architect.
   1. Shop Drawings: Include typical unit elevations, full- or half-scaled detail sections and typical installation details. Include type of glazing, screening, window finish, test reports, and warranties.
   2. Product Data: Manufacturer's specifications, recommendations and standard details for window units.
   3. Samples of materials may be requested without cost to owner, i.e. frame sections, corner samples, mullions, extrusions, anchors, and glass.
   4. Finish Samples to include full range of colors with bronzes and standard colors. Minimum of 10.

1.6 Delivery, Storage, and Handling

A. Store and handle windows and other components in strict compliance with manufacturer's instructions.

B. Protect units against damage from the elements, construction activities and other hazards before, during, and after installation.

1.7 Warranties

A. Total Window System
   1. The responsible contractor shall assume full responsibility and warrant for three years the satisfactory performance of the total window installation, which includes that of the windows hardware, glass (including insulated units), glazing, anchorage and setting system, sealing, flashing, etc. as it relates to air, water and structural adequacy as called for in the specifications and approved shop drawings.
   2. Warranty for insulated glass seal shall not be less than 10 years.
   3. Finish warranty shall not be less than 15 years.
   4. Warranties shall be issued by the window manufacturer. Prorated warranties are not acceptable.
   5. Any deficiencies due to such elements not meeting the specifications

shall be corrected by the responsible contractor at his expense during the warranty period.

2.0 - PRODUCTS

2.1 Materials

A. Aluminum

1. Extruded aluminum shall be 6063-T6 alloy and temper, with a tensile strength of 24,000 PSI.

B. Hardware

1. Locking handles shall be cam type and manufactured from solid zinc die cast with painted finish.
2. Operating arms shall consist of 4-bar zinc plated steel arms or equal.

C. Weather Strip

1. All weather strip shall be double Santoprene® thermo plastic rubber or equal.

D. Thermal Barrier:

1. Poured-in-place structural thermal barrier shall transfer shear during bending and provide composite action between frame components.
2. Thermal barrier pocket on aluminum extrusions shall be Azo-Braded to create a mechanical lock to improve the adhesion properties between the polyurethane polymer and the surface of the thermal barrier pocket.
3. Window manufacturer must provide a warranty from the manufacturer of the polyurethane thermal barrier that warrants against product failure as a result of thermal shrinkage beyond 1/8 inch (3.2 mm) from each end and fracturing of the polyurethane for a period not to exceed ten years from the date of window manufacture.
4. Thermal barrier's made of crimped in place polyamide (insulbar®) strips are not acceptable unless all strips are covered and tooled with Dow 795 silicone caulking to eliminate water migration.

E. Glass

1. Insulated glass shall be as indicated. See Section 08810.

2.2 Fabrication

A. General

1. All aluminum frame extrusions shall have a minimum wall thickness of .063".
2. All aluminum vent extrusions shall have a minimum wall thickness of .125".
3. Depth of main frame shall not be less than 4".
4. Depth of vent shall not be less than 2".

B. Frame

1. Frame components shall be assembled by means of mechanical fasting with screws. Joinery to be sealed with small joint sealant

C. Exterior and Interior Grid

1. All grid pattern members shall be nominally 3/4" to 1-1/4"" wide in lite patterns shown on the window schedule. Muntin profile shall be a hollow extruded trapezoidal shape and shall be securely pinned to a

full perimeter beveled muntin base which shall be glazed directly into the glass pocket to prevent unauthorized removal. Manufacturer shall submit standard muntin profiles and dimension for architect's selection. At window manufacturer's option, muntin grids may be securely pinned to a perimeter bevel integral to the frame and/or sash. In no event shall the use of clip-on or removable muntins be used on this project.

D. Ventilator
   1. All vent extrusions shall be tubular on all 4 sides.
   2. Each corner shall be mitered and assembled by means mechanical fasting with screws. Joinery is sealed with small joint sealant.
   3. Each vent shall have two rows of Santoprene® weather stripping installed in a specifically designed weather strip pocket for the extrusion.

E. Screens (Applicable only to windows requiring screens).
   1. Extruded screen frames shall be fabricated from aluminum 6063-T6.
      a. Screen mounting holes shall be pre-drilled at the factory.
      b. Screen mesh shall be (enter aluminum, fiberglass, or stainless steel).
      c. Screen mesh shall be so installed that the cloth may be easily replaceable.

F. Glazing
   All units shall be glazed with butyl tape, silicone cap bead on the exterior, with glazing vinyl and extruded snap-in aluminum glazing bead on the interior.

G. Finish:
   Finish all exposed areas of aluminum windows and components with (70% Kynar) AA-M12-C42-R1X & AAMA 2605-98 & ASCA 96.

3.0 - EXECUTION

3.1 Inspection

A. Job Conditions
   1. Verify that openings are dimensionally correct and within allowable tolerances. Openings must be plumb, level, and clean. Provide a solid anchoring surface that is in accordance with approved shop drawings.

3.2 Installation

A. Use only skilled craftsmen for work to be done in accordance with approved shop drawings and specifications.

B. Set square and level aligning window faces in a single plane for each opening. Windows and materials must be set square and level. Adequately anchor window so when subjected to normal thermal movement, specified building movement, and specified wind loads, so windows will maintain a permanent position.

C. Adjust Windows for proper ease of operation after installation has been completed.

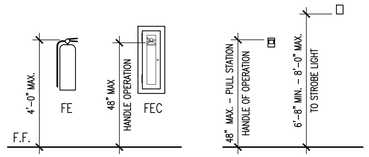
D. Contractor furnish and apply sealant, per manufacturers recommendations, to provide a weather tight installation at all opening perimeters. Wipe off excess material and leave all exposed surfaces and joints clean and smooth.

E. Use window flashings, sub-sills and end dams on all window installations.

3.3 Protection and Cleaning

A. After completion of window installation, windows shall be inspected, adjusted, and left in working order. Windows shall be left clean, free of labels, dirt, etc. Protection from this point shall be the responsibility of the General Contractor under substantial completion.

END OF SECTION



FIRE EXTINGUISHER MOUNTING HEIGHTS

FIRE EQUIPMENT MOUNTING HEIGHTS

NOTE:
1. 4" MAX. PROJECTION FROM WALL
2. MEASURE FROM HANDLE OF EXTINGUISHER NOT CABINET HANDLE

2 FIRE EXTINGUISHER MOUNTING HEIGHTS

SCALE: 3/8" = 1'-0"

CHAPTER 29 - PLUMBING SYSTEMS

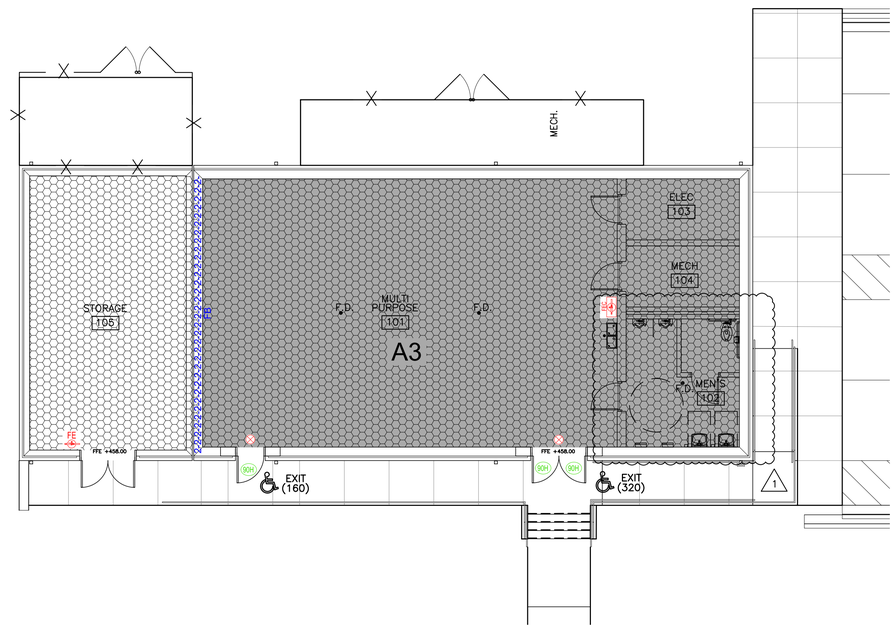
OCCUPANCY		WATERCLOSETS			LAVATORIES			DRINKING FOUNTAINS		SERVICE SINKS
USE	LOAD	RATIO	MALE		RATIO	MALE		RATIO	ALL	ALL
A3	92.58	1/125	.74		1/200	.46		1/500	.19	1
S1,S2	2.48	1/100	.02		1/100	.02		1/1000	0	
REQUIRED TOTALS			.76			.48			.19	1
PROVIDED TOTALS			3			2			2	1

OCCUPANCY USE LEGEND

A3	E
GROUP A3	GROUP E

2021 IBC BUILDING DATA

OCCUPANCY CLASSIFICATION: MIXED SEPARATED	GROUP A3	
TYPE OF CONSTRUCTION: MIXED SEPARATED	TYPE IIB (NS)	
BUILDING AREA:	2,394 S.F.	
TABLE 504.4 ALLOWABLE NUMBER OF STORIES:	ALLOWABLE STORIES: 1	ACTUAL STORIES: 1
TABLE 506.2 ALLOWABLE AREA:	AREA FACTOR: NS	6,000 S.F.
TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS:	CONSTRUCTION TYPE:	VB
	STRUCTURAL FRAME:	0
	BEARING WALLS:	
		0
		0
	NONBEARING WALLS:	
		SEE 705.5
		0
	FLOOR CONSTRUCTION:	0
	ROOF CONSTRUCTION:	0
TABLE 705.5 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS:	OCCUPANCY:	GROUP A3
	SEPARATION DISTANCE:	< 5' : 1
		≥ 5'< 10' : 1
		≥ 10'< 30' : 0
		≥ 30' : 0
TABLE 1020.2 CORRIDOR FIRE-RESISTANCE RATING PARTITIONS AND OPENING PROTECTIVES	GROUP A3 UNSPRINKLERED	1



1 FIELDHOUSE LIFE SAFETY PLAN

SCALE: 1/8" = 1'-0"

WALL TYPE LEGEND

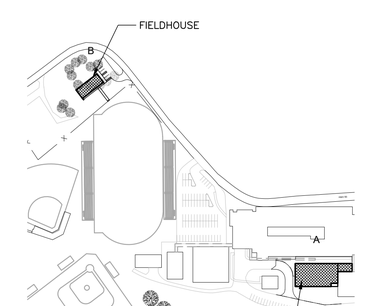
1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	1 HR WALL
2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-	2 HR WALL
4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-	4 HR WALL

LIFE SAFETY NOTES

HE FIRE EXTINGUISHER AND CABINET (PROVIDE FIRE RATED CABINETS IN RATED WALLS.)	
FE FIRE EXTINGUISHER	ACCESSIBLE
FE(K) K-TYPE FIRE EXTINGUISHER	EXIT — EXIT; (320) — EXIT CAPACITY
EXIT SIGN — DIRECTION	
EXTEND AND KEY ALL RATED WALLS TO SHAFT WALL SYSTEM, AND/OR BOTTOM OF ROOF ASSEMBLY	
STENCIL LABEL ALL RATED WALLS & DRAFT STOPS ABOVE CEILING EACH SIDE @ 20'-0" O.C. MAX.	
ALL RATED DOORS AND FRAMES TO BE LABELED WITH EMBOSSED LABELS INDICATING RATING IN MINUTES	
HE - HORIZONTAL EXIT	XHE - EXISTING HORIZONTAL EXIT
FB - FIRE BARRIER	XFB - EXISTING FIRE BARRIER
FP - FIRE PARTITION	XFP - EXISTING FIRE PARTITION
FW - FIRE WALL	XFW - EXISTING FIRE WALL
EGRESS TRAVEL DISTANCE	200' — DISTANCE; START; PATH; DIRECTION
	LOCATION OF TORNADO STORM SHELTER

DOOR/WINDOW RATING LEGEND

20 — 20 MINUTE DOOR AND FRAME	60E — 60 MINUTE WINDOW OR DOOR SYSTEM PER ASTM E119
45 — 45 MINUTE DOOR AND FRAME	90H — 90 MINUTE RATING AND TORNADO IMPACT RATED
60 — 60 MINUTE DOOR AND FRAME	
90 — 90 MINUTE DOOR AND FRAME	



KEY PLAN

SCALE: NOT TO SCALE

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

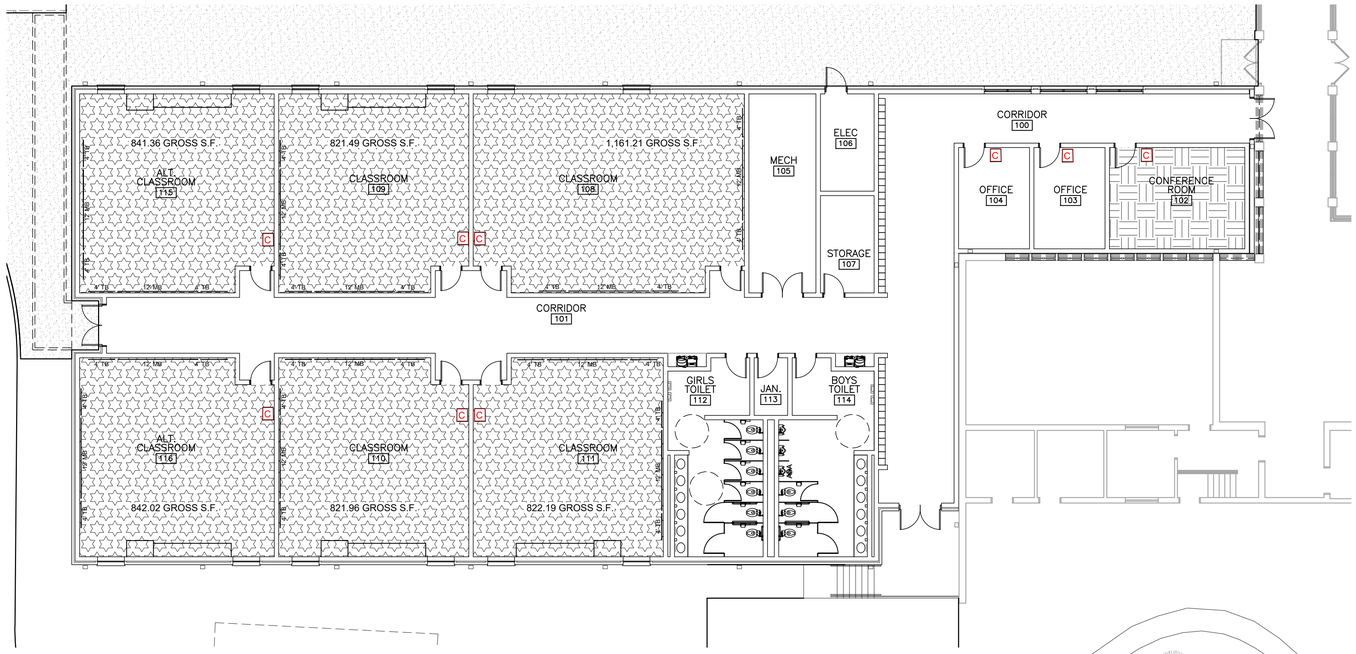
SHEET TITLE:
LIFE SAFETY PLAN

PACKAGE 'B' - STORM SHELTER

STATE OF ALABAMA
No. 7007
RYAN D. VERNON
REGISTERED ARCHITECT

PROJ. MGR.: H. RASCO
DRAWN: HR
DATE: NOVEMBER 7, 2025
REVISIONS
1 — 01.05.2026

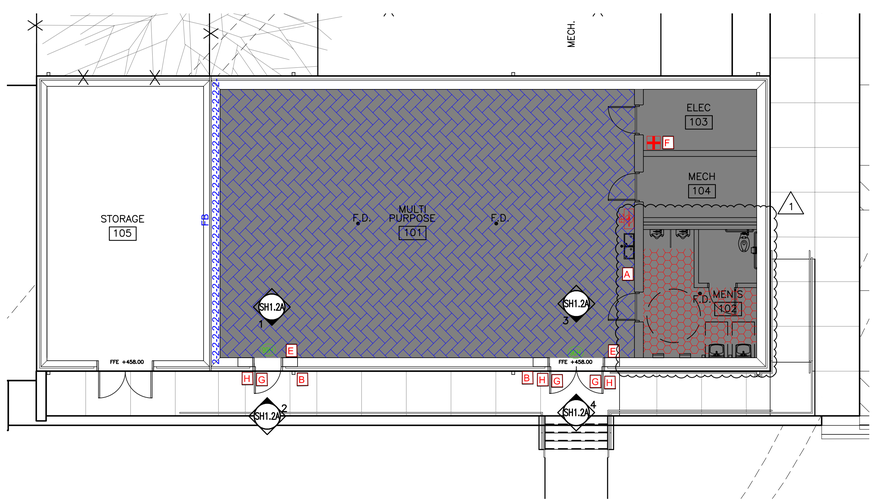
JOB NO. 25-32
SHEET NO:
LS1.1B
1 OF 1



2 CLASSROOM FLOOR PLAN - SHELTER CALCULATION

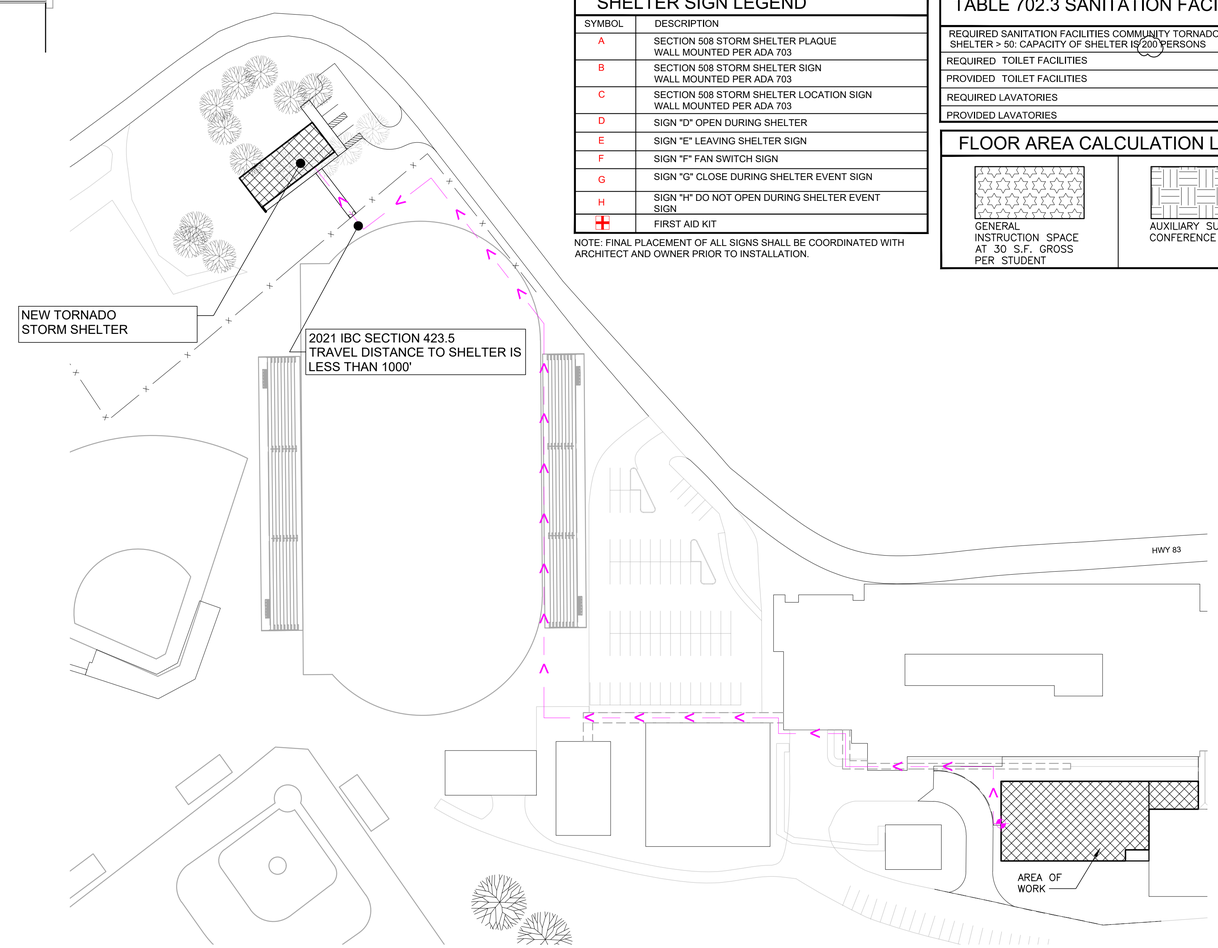
SCALE: 3/32" = 1'-0"

BASE BID AND ALTERNATE



2 TORNADO STORM SHELTER PLAN

SCALE: 1/8" = 1'-0"



PLOT PLAN - SHELTER ACCESS

SCALE: 1/64" = 1'-0"

TORNADO STORM SHELTER CALCULATION

2020 ICC 500 (DCM Bulletin #23-02 Updated Guidance on Tornado Storm Shelter Requirements for Public K-12 School November 22,2022 and Department of Finance DCM Bulletin #23-01 Updated Guidance on Mandatory Tornado Storm Shelters Required by IBC November 21, 2022)

GROSS AREA OF CLASSROOM/INSTRUCTIONAL SPACE:	5,310.23 S.F.
REQUIRED OCCUPANT CAPACITY (STUDENT AND FACULTY) :	5,310.23 / 30 = 177.01 PERSONS + 10% 17.7 = 194.71(195)
REQUIRED USEABLE SHELTER FLOOR AREA:	194(5) = 970 S.F + 10 S.F. (1- WHEELCHAIR) = 980 S.F.
USEABLE SHELTER FLOOR AREA PROVIDED:	MULTI-PURPOSE ROOM MINUS 35% 1,388.77 S.F.-35% = 902.7 S.F. CLEAR FLOOR SPACE (100% USEABLE) = 110.92 S.F. TOTAL USEABLE PROVIDED = 1,013.62 S.F.
ACTUAL CAPACITY OF STORM SHELTER:	200 : 198(5) + 2 WHEELCHAIR (20) = 1,010 S.F.

1

FIRE RATED WALLS:

FIRE RATED WALLS INDICATED ON THIS SHEET ARE TORNADO STORM SHELTER WALLS ONLY. SEE LIFE SAFETY PLANS ON SHEET LS1.1 FOR ALL OTHER REQUIRED FIRE RATED WALLS.

NOTE:
1. ALL PENETRATIONS 2" OR GREATER MUST BE PROTECTED WITH A STORM SHELTER BAFFLE OR STORM SHELTER LOUVER SYSTEM. SEE ENGINEER FOR CONDITIONS AND DETAILS.
2. PROVIDE A COLD JOINT AT ALL AREAS WHERE STORM SHELTER SLAB MEETS THE NORMAL SLAB CONDITION, SEE STRUCTURAL.
3. ALL SIGNS SHALL BE IN ACCORDANCE WITH 2010 ADA STANDARD, VERIFY EXACT PLACEMENT WITH ARCHITECT PRIOR TO INSTALLATION.
4.ALL TORNADO REISTANT DOOR, FRAMES, AND WINDOWS SHALL RECIEVE BOTH FEMA 361/ICC-500 2020 LABEL AND THE 90 MINUTE FIRE LABEL.

USEABLE FLOOR AREA LEGEND

CLEAR USEABLE FLOOR SPACE	GROSS FLOOR AREA MINUS 35%	GROSS FLOOR AREA MINUS 50%

SHELTER LEGEND

LOCATION	DOOR TYPE	TRAVEL DISTANCE
	90M 90 MINUTE TORNADO IMPACT RATED DOOR AND FRAME. TSS TORNADO IMPACT RATED SHUTTER	START PATH DIRECTION
2 HR FIRE BARRIER	2-2-2-2-2-2-2-2-2-2-2-2-2-	
FIRE EXT. & CAB.	FEC	

SHELTER SIGN LEGEND

SYMBOL	DESCRIPTION
A	SECTION 508 STORM SHELTER PLAQUE WALL MOUNTED PER ADA 703
B	SECTION 508 STORM SHELTER SIGN WALL MOUNTED PER ADA 703
C	SECTION 508 STORM SHELTER LOCATION SIGN WALL MOUNTED PER ADA 703
D	SIGN "D" OPEN DURING SHELTER
E	SIGN "E" LEAVING SHELTER SIGN
F	SIGN "F" FAN SWITCH SIGN
G	SIGN "G" CLOSE DURING SHELTER EVENT SIGN
H	SIGN "H" DO NOT OPEN DURING SHELTER EVENT SIGN
	FIRST AID KIT

NOTE: FINAL PLACEMENT OF ALL SIGNS SHALL BE COORDINATED WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.

TABLE 702.3 SANITATION FACILITIES

REQUIRED SANITATION FACILITIES COMMUNITY TORNADO STORM SHELTER > 50: CAPACITY OF SHELTER IS 200 PERSONS	
REQUIRED TOILET FACILITIES	1
PROVIDED TOILET FACILITIES	1
REQUIRED LAVATORIES	1
PROVIDED LAVATORIES	2

1

FLOOR AREA CALCULATION LEGEND

GENERAL INSTRUCTION SPACE AT 30 S.F. GROSS PER STUDENT	AUXILIARY SUPPORT CONFERENCE AREA

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
TORNADO SHELTER PLANS

PACKAGE 'A' - CLASSROOM

STATE OF ALABAMA
No. 7007
RYAN D. VERNON
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PROJ. MGR.: H. RASCO
DRAWN: HR
DATE: NOVEMBER 7, 2025
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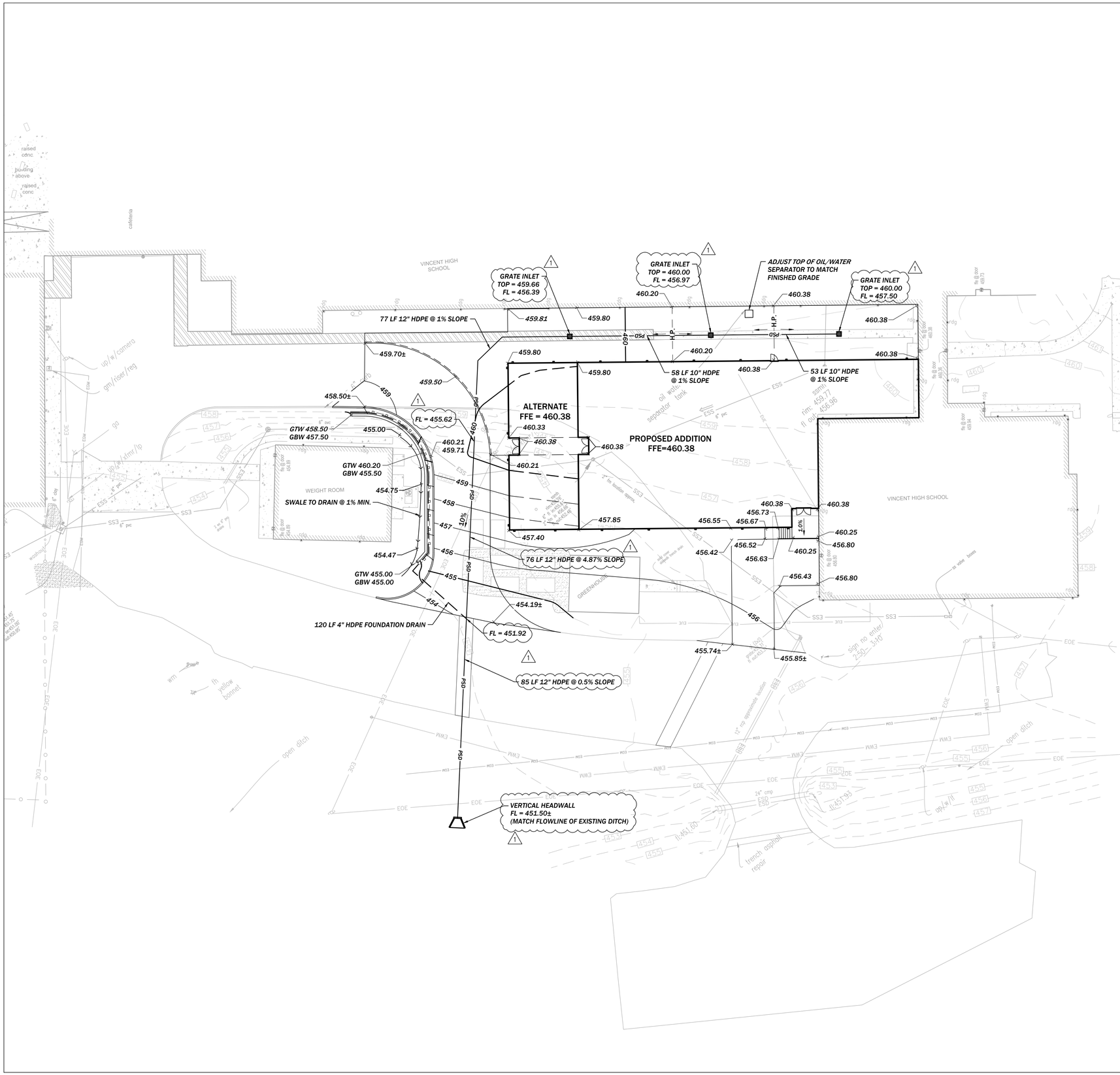
JOB NO. 25-32
SHEET NO:
SH1.1
3 OF 5



TTL

Job No.: 251101748

10 Inverness Center Parkway, Suite 350
Birmingham, AL 35242
205.539.0384 | www.ttlusa.com

LATHAN McKEE ARCHITECTS

GRADING LEGEND

150	REQ'D CONTOUR 5' INTERVAL
149	REQ'D CONTOUR 1' INTERVAL
XXX.XX	REQ'D TOP OF WALL
XXX.XX	REQ'D BOTTOM OF WALL
GTW XXX.XX	REQ'D GRADE TOP OF WALL
GBW XXX.XX	REQ'D GRADE BOTTOM OF WALL

STORM LEGEND

PSD	REQ'D STORM DRAIN
	REQ'D STORM GRATE INLET
	REQ'D STORM VERTICAL HEADWALL

NOTES:

1. SEE SHEET C0.1 FOR ALL APPLICABLE NOTES.

0 20 40 60
1" = 20'

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
SITE GRADING AND DRAINAGE PLAN -CLASSROOM ADDITION

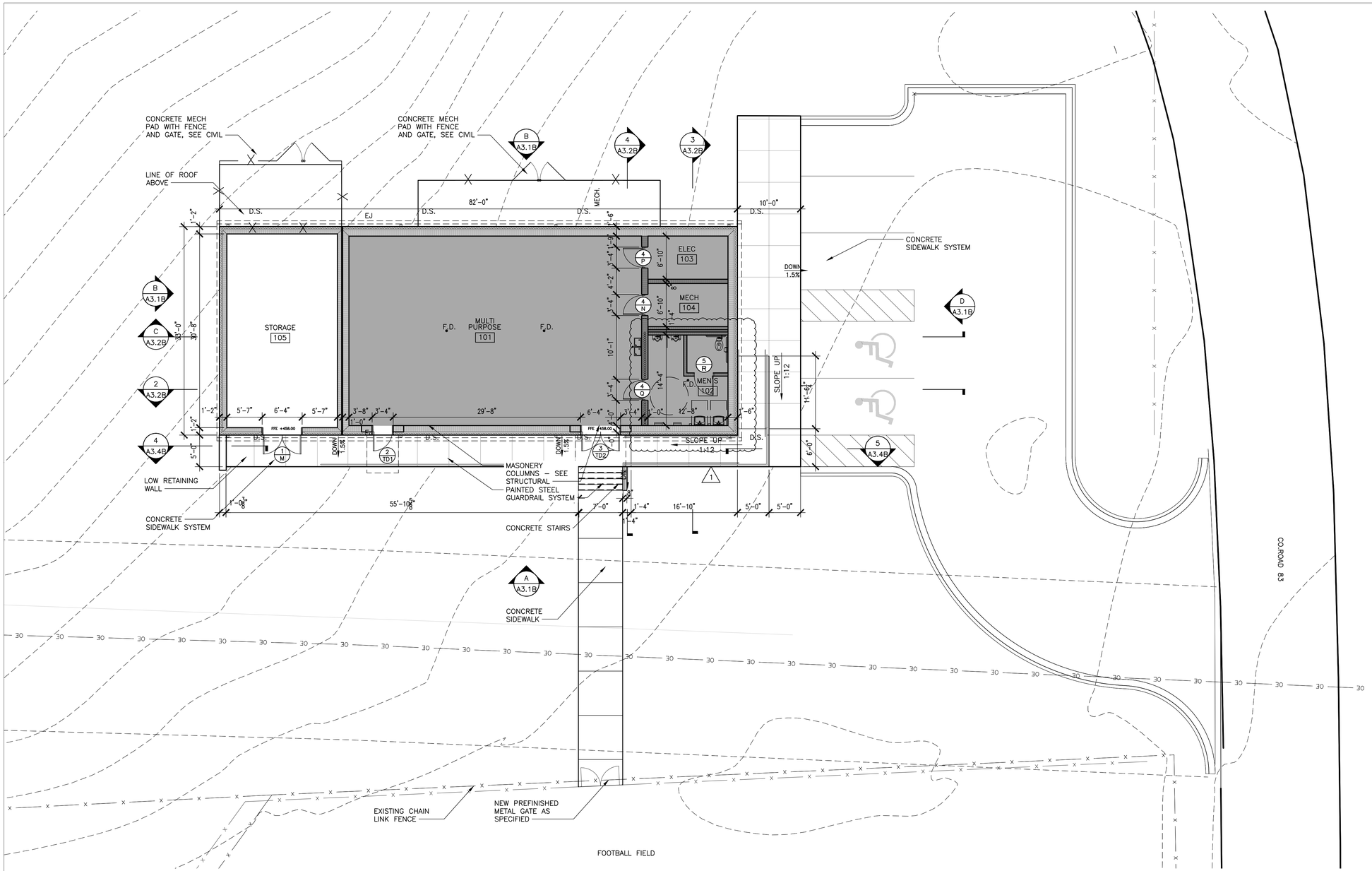
ALABAMA LICENSED No. 24443 PROFESSIONAL ENGINEER CHRISTOPHER ALLEN HAWKINS 1/13/26

PROJ. MGR.: CAH	
DRAWN: LBH	
DATE: NOVEMBER 10, 2025	
REVISIONS	
1	1/13/2026 – ASI #4

JOB NO. 25-32

SHEET NO:
C3.0A

0 1" 2"



1 FLOOR PLAN

SCALE: 1/8" = 1'-0"

GENERAL NOTES

- SEE ARCHITECTURAL FINISH PLANS AND SPECIFICATIONS FOR AREAS REQUIRING THICKSET OR THINSET CERAMIC TILE INSTALLATION. COORDINATE WITH SUBCONTRACTOR AND DROP CONCRETE FLOOR SLAB IN SUCH AREAS AS REQUIRED AND RECOMMENDED BY THE TILE MANUFACTURER AND THE "TILE COUNCIL OF AMERICA." PROVIDE SLOPE FOR POSITIVE DRAINAGE IN AREAS WITH FLOOR DRAINAGE SYSTEM.
- EXTEND & KEY RATED WALLS TO BOTTOM OF FLOOR DECK OR ROOF DECK ABOVE-SEE LIFE SAFETY DRAWINGS FOR RATED WALL LOCATIONS. EXTEND ALL NON-RATED TO MINIMUM 8" ABOVE FINISH ADJACENT CEILING.
- COORDINATE W/ ELECTRICAL & MECHANICAL AND PROVIDE CONCRETE EQUIPMENT PAD AS REQUIRED
- SEE ELEVATIONS AND ROOF PLAN FOR DOWNSPOUT LOCATIONS. PROVIDE DOWNSPOUT BOOTS AT ALL DOWNSPOUTS TO GRADE.
- SEE CIVIL DRAWINGS FOR CONTINUATION OF SIDEWALKS
- ALL WALL DIMENSIONS ARE TO FACE OF CMU
- WINDOWS ARE DIMENSIONED TO THE CENTER LINE
- SLOPE ALL ENTRY SIDEWALKS AWAY FROM ENTRY DOORS
- PAINT ALL EXPOSED CMU SURFACES

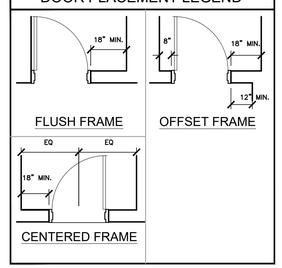
WALL TYPE LEGEND

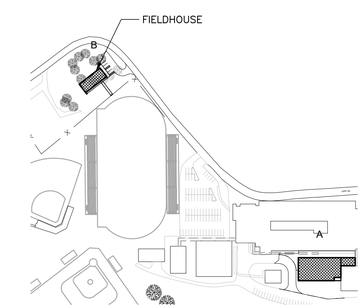
NEW EXTERIOR WALL	NEW 4" BRICK VENEER W/ AIR SPACE AND RIGID INSULATION ON REINFORCED CMU WITH DAMPPROOFING, PROVIDE BRICK WALL TIES @ 16" O.C.
NEW CMU PARTITION	PAINTED 6", 8", OR 12" REINFORCED CONCRETE MASONRY WALL, (CMU). SEE PLAN FOR WALL WIDTH CHANGES AND SEE LIFE SAFETY PLAN FOR FIRE RATING
SOUND ATTENUATION PARTITION	8" CONCRETE MASONRY WALL WITH SOUND ATTENUATION

TYPICAL SYMBOLS LEGEND

A200 ROOM NUMBER	1C DOOR TYPE; DOOR RATING; A HARDWARE SYMBOL
EWC ELECTRIC WATER COOLER	
F PARTITION TYPE	A ELEV. MARK; A1.1 SHEET NUMBER
F.D. FLOOR DRAIN	
1 STOREFRONT	1 SECT. MARK; A1.1 SHEET NUMBER
AREA OF CONCRETE	5 ELEV. MARK; A5.1 SHEET NUMBER; INT. ELEVATION
NEW DOOR AND SWING	

DOOR PLACEMENT LEGEND





KEY PLAN

SCALE: NOT TO SCALE

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

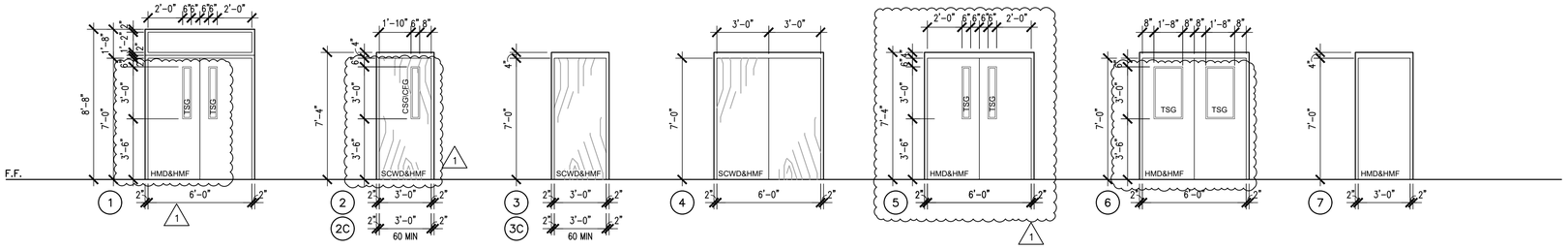
SHEET TITLE:
FLOOR PLAN

PACKAGE 'B' - STORM SHELTER

STATE OF ALABAMA
No. 7007
RYAN D. VERNON
REGISTERED ARCHITECT

PROJ. MGR.: H. RASCO
DRAWN: E.V.
DATE: NOVEMBER 7, 2025
REVISIONS
1 01.05.2026

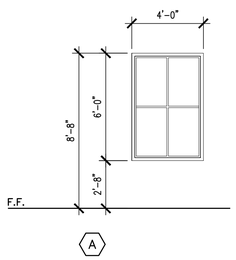
JOB NO. 25-32
SHEET NO:
A2.1.B
2 OF 11



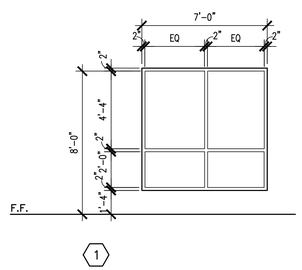
1 DOOR SCHEDULE
SCALE: 1/4" = 1'-0"

DOOR AND WINDOW LEGEND	
AL	PREFINISHED ALUMINUM LOUVER SYSTEM AS SPECIFIED
SCWD	SOLID CORE WOOD DOOR
HMF	HOLLOW METAL FRAME
TSG	1" TINTED INSULATED LOW-E TEMPERED SAFETY GLASS AS SPEC.
R.O.	ROUGH OPENING
F.V.	FIELD VERIFY
EXF	EXISTING FRAME

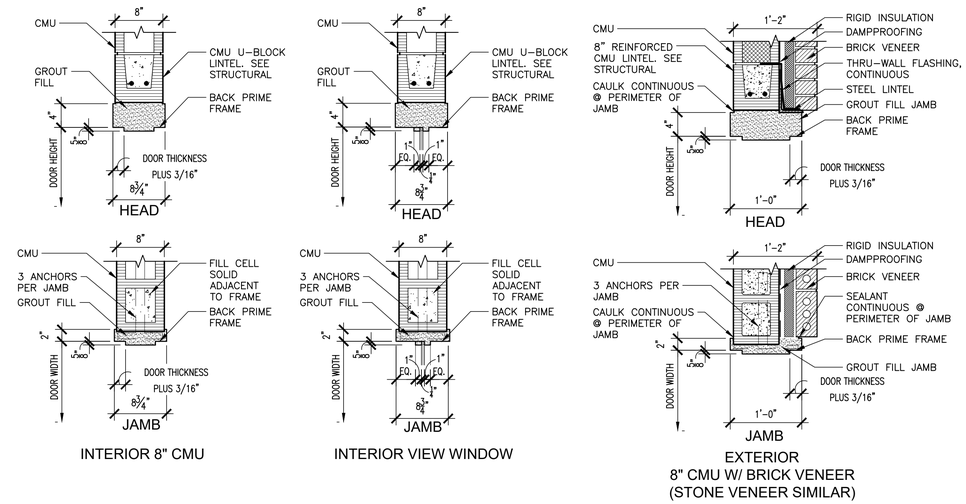
NOTES:
1. FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS.
2. WINDOW WIDTH AND HEIGHT DIMENSIONS ARE ROUGH OPENING.



2 EXT WINDOW SCHEDULE
SCALE: 1/4" = 1'-0"

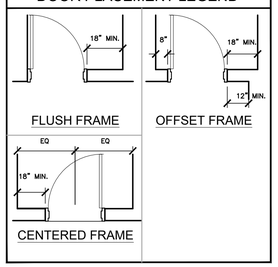


3 STOREFRONT SCHEDULE
SCALE: 1/4" = 1'-0"



4 H.M. FRAME DETAILS
SCALE: 1" = 1'-0"

DOOR PLACEMENT LEGEND



DOOR FIRE RATING LEGEND		
DOOR TYPE	(2)	NO RATING
DOOR TYPE + A	(2A)	20 MINUTE RATING

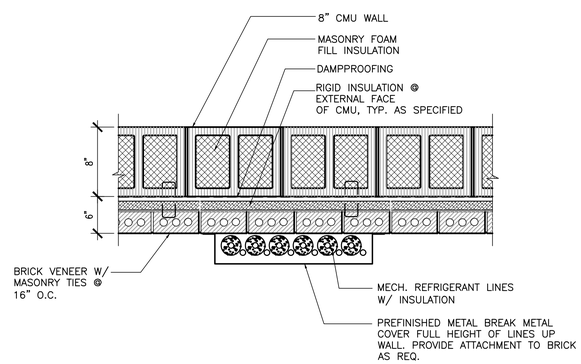
NOTE: LOCATION SUBJECT TO APPROVAL BY THE ARCHITECT AND STRUCTURAL ENG.

LABEL AREA W/ A SMALL SIGNAGE MOUNTED TO THE BRICK.

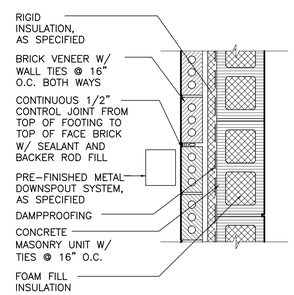
NOT ALLOWED WITHIN 16" OF A DOOR, WINDOW, OR OTHER OPENING. ALL LOCATIONS SUBJECT TO APPROVAL.

DO NOT ALLOW COPPER TO COME IN CONTACT W/ MORTAR, MASONRY OR CONCRETE, SLEEVE AS REQUIRED.

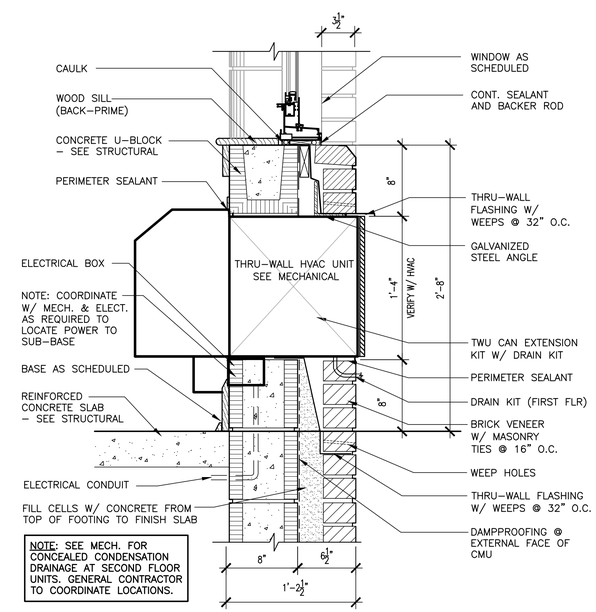
NOT ALLOWED WITHIN MASONRY COLUMNS – SEE STRUCTURAL FOR LOCATIONS. ALL LOCATIONS SUBJECT TO APPROVAL.



5 REFRIGERANT PIPING DETAIL
SCALE: 1" = 1'-0" @ TYPICAL



6 BRICK CONTROL JOINT DETAIL
SCALE: 1" = 1'-0" @ TYPICAL



7 TYPICAL WINDOW DETAILS
SCALE: 1 1/2" = 1'-0"

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

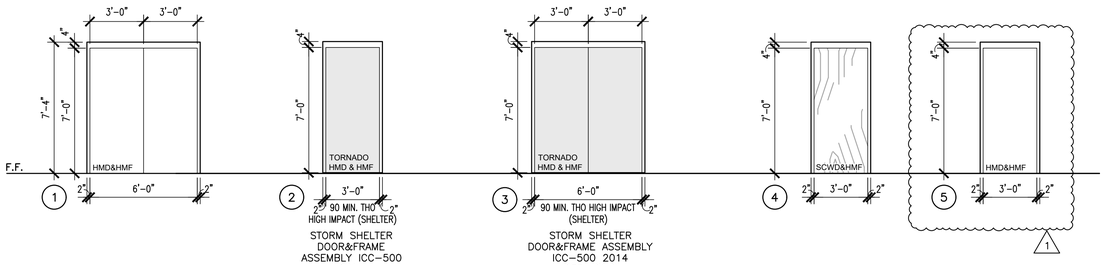
SHEET TITLE:
DOOR AND WINDOW SCHEDULES AND DETAILS

PACKAGE 'A' - CLASSROOM

STATE OF ALABAMA
No. 7007
RYAN D. VERNON
REGISTERED ARCHITECT

PROJ. MGR.: H. RASCO
DRAWN: S.N
DATE: NOVEMBER 7, 2025
REVISIONS
1 01.05.2026

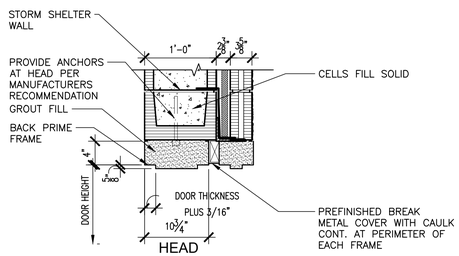
JOB NO. 25-32
SHEET NO:
A2.3A
7 OF 22

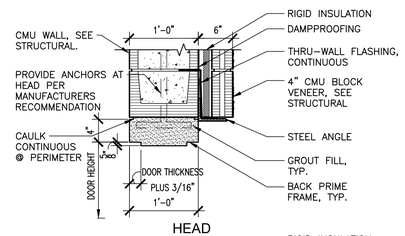


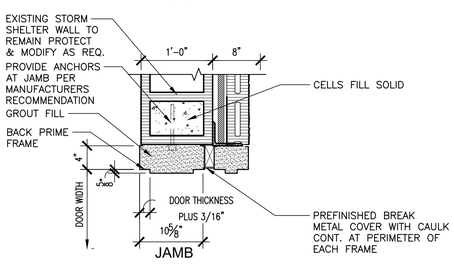
1 DOOR SCHEDULE

SCALE: 1/4" = 1'-0"

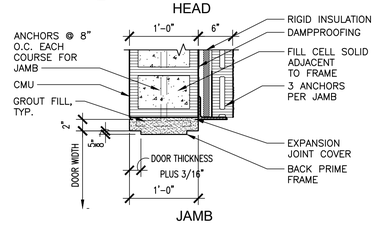
NOTE: 250 MPH RATED TORNADO STORM SHELTER. DOORS AND FRAMES MUST HAVE BOTH THE FEMA 361/ICC-500 2014 LABEL AND THE 90 MIN. FIRE LABEL AS SPECIFIED. MEET ALL TORNADO STORM SHELTER DOOR AND FRAME REQUIREMENTS AS INDICATED IN THE SPECIFICATIONS AND ICC-500 2014.







STORM SHELTER
FIELDHOUSE DOORS



EXTERIOR
12" CMU W/ 4' SPLIT FACE
CMU VENEER

2 HOLLOW METAL FRAME DETAILS

SCALE: 1" = 1'-0"

NOTE: LOCATION SUBJECT TO APPROVAL BY THE ARCHITECT AND STRUCTURAL ENG.

DO NOT ALLOW COPPER TO COME IN CONTACT W/ MORTAR, MASONRY OR CONCRETE, SLEEVE AS REQUIRED.

THIS DETAIL IS FOR THE STORM SHELTER AREA ONLY. SEE ALSO MECHANICAL AND STRUCTURAL DETAILS.

PROVIDE SLEEVES THRU WALL AS DETAILED BY MECHANICAL AND STRUCTURAL.

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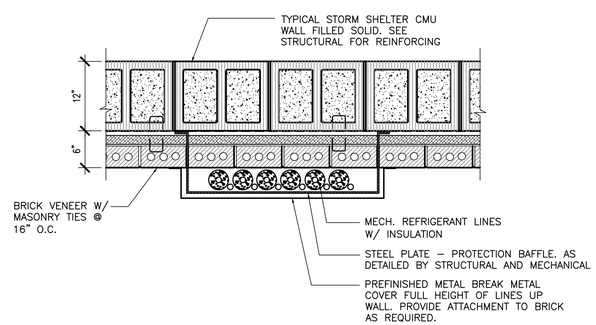

3 REFRIGERANT PIPING DETAIL

SCALE: 1" = 1'-0" @ STORM SHELTER

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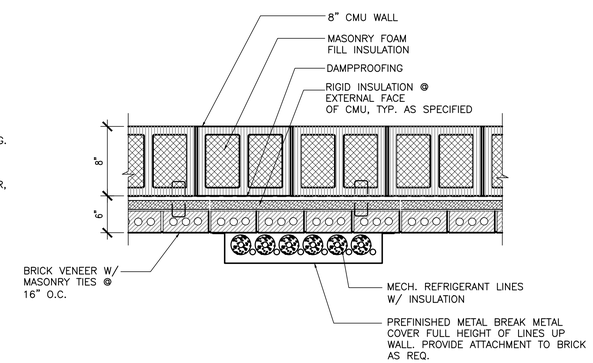
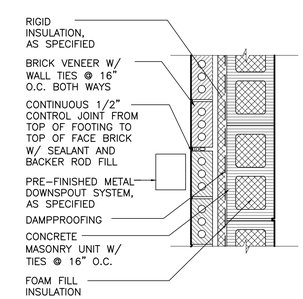


4 REFRIGERANT PIPING DETAIL

SCALE: 1" = 1'-0" @ TYPICAL



5 BRICK CONTROL JOINT DETAIL

SCALE: 1" = 1'-0" @ TYPICAL

DOOR AND WINDOW LEGEND

AL	PREFINISHED ALUMINUM LOUVER SYSTEM AS SPECIFIED
SCWD	SOLID CORE WOOD DOOR
HMF	HOLLOW METAL FRAME
TSG	1" TINTED INSULATED LOW-E TEMPERED SAFETY GLASS AS SPEC.
R.O.	ROUGH OPENING
F.V.	FIELD VERIFY
EXF	EXISTING FRAME

NOTES:
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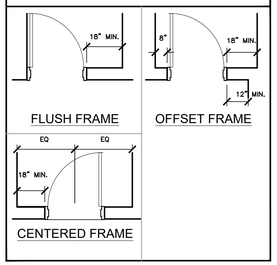
2. WINDOW WIDTH AND HEIGHT DIMENSIONS ARE ROUGH OPENING.

DOOR PLACEMENT LEGEND



DOOR FIRE RATING LEGEND

DOOR TYPE (2)	NO RATING
DOOR TYPE + A (2A)	20 MINUTE RATING

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
DOOR SCHEDULE AND DETAILS

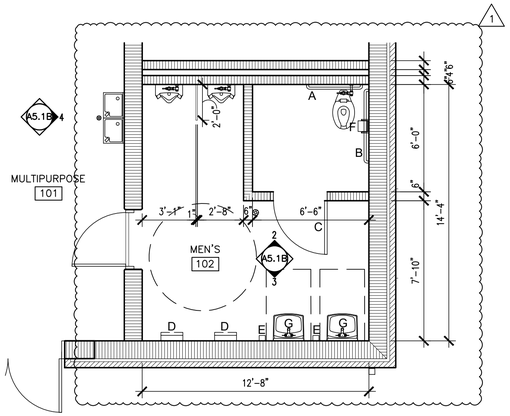
PACKAGE 'B' - STORM SHELTER

STATE OF ALABAMA
No. 7007
RYAN D. VERNON
REGISTERED ARCHITECT

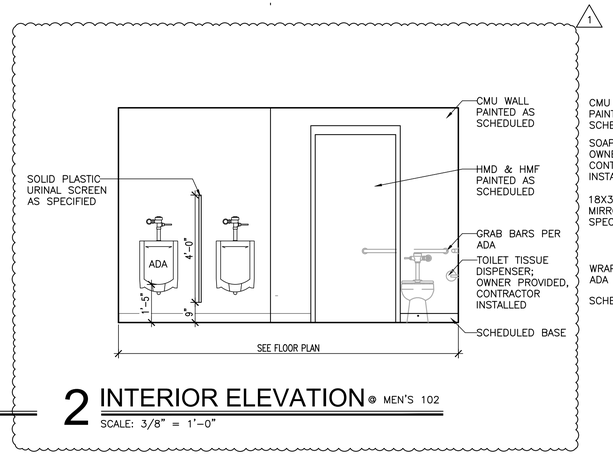
PROJ. MGR.: H. RASCO
DRAWN: E.V.
DATE: NOVEMBER 7, 2025
REVISIONS
1 01.05.2026

JOB NO. 25-32
SHEET NO:
A2.3B
4 OF 11

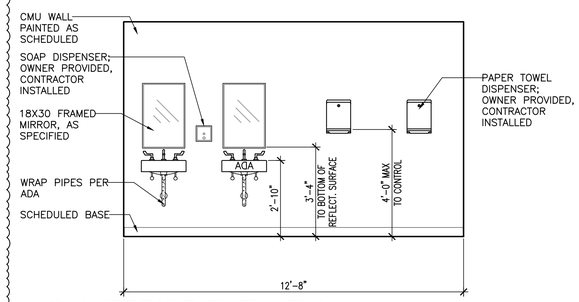
TOILET ACCESSORY LEGEND	
A	36" S.S. GRAB BAR
B	42" S.S. GRAB BAR
C	COAT HOOK (MOUNTED ON INTERIOR STALL DOOR)
D	PAPER TOWEL DISPENSER - OWNER PROVIDED, CONTRACTOR INSTALLED
E	SOAP DISPENSER - OWNER PROVIDED, CONTRACTOR INSTALLED
F	TOILET TISSUE DISPENSER - OWNER PROVIDED, CONTRACTOR INSTALLED
G	FRAMED MIRROR 18" X 30"



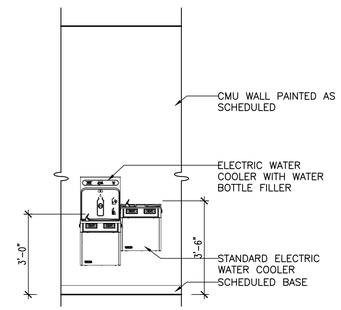
1 ENLARGED TOILET PLAN @ MULTIPURPOSE 101 AND MEN'S 102
SCALE: 1/4" = 1'-0"



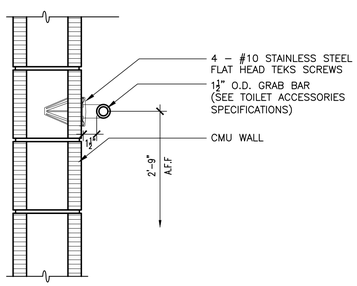
2 INTERIOR ELEVATION @ MEN'S 102
SCALE: 3/8" = 1'-0"



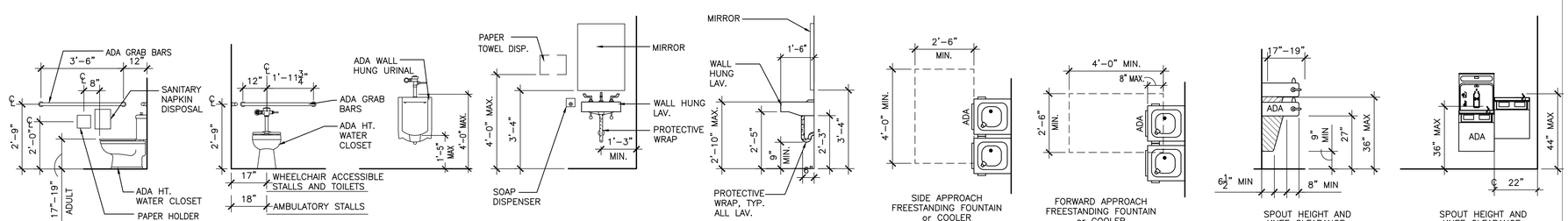
3 INTERIOR ELEVATION @ MEN'S 102 AND WOMEN'S 103
SCALE: 3/8" = 1'-0"



4 INTERIOR ELEVATION @ MULTIPURPOSE 101
SCALE: 3/8" = 1'-0"



5 DETAIL @ GRAB BAR WITH SANITARY NAPKIN DISPOSAL AT CMU WALL
SCALE: 1-1/2" = 1'-0"



TYPICAL ADA DETAILS
NOT TO SCALE

LATHAN McKEE ARCHITECTS

NEW FIELDHOUSE AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
ENLARGED TOILET PLAN, INTERIOR ELEVATIONS, DETAILS AND LEGEND

PACKAGE 'B' - STORM SHELTER

STATE OF ALABAMA
No. 7007
RYAN D. VERNON
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PROJ. MGR.: H. RASCO
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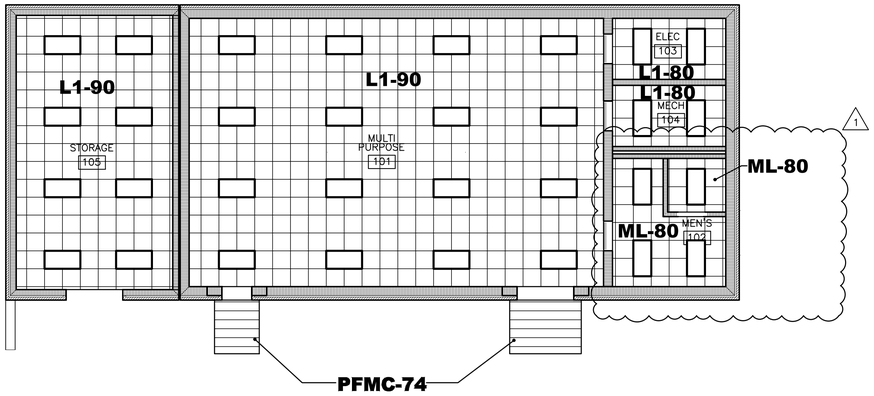
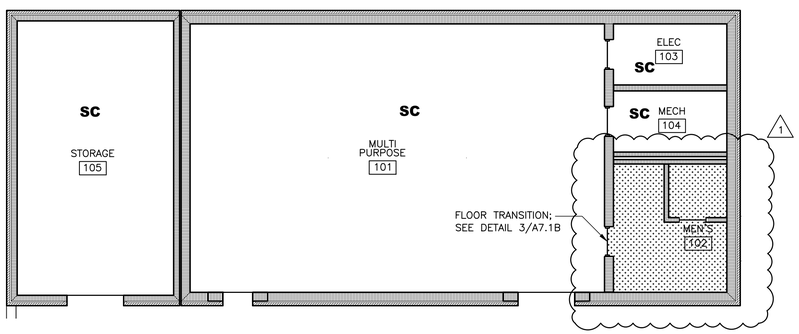


1 REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

@ FIELDHOUSE



2 FINISH FLOOR PLAN

SCALE: 1/8" = 1'-0"

@ FIELDHOUSE

CEILING LEGEND

FIXTURE TYPES - SEE ELECTRICAL

CEILING TYPE	CEILING HEIGHTS
NC - NO CEILING	74 = 7'-4" AFF
GB - GYPSUM BOARD	80 = 8'-0" AFF
L1 - 2 x 2 LAY-IN ACOUSTIC CEILING TILE; SEE SPEC	100 = 10'-0" AFF
R - 1" REVEAL AT ALL GYPSUM SOFFITS; HORIZONTAL AS SHOWN, EXTEND VERTICAL - PAINTED TO MATCH SOFFIT	
ML - MOISTURE RESISTANT LAY-IN	
PFMC - PREFINISHED METAL CANOPY	

REFER TO FINISH SYMBOLS ON PLAN FOR MATERIALS AND CEILING HEIGHTS

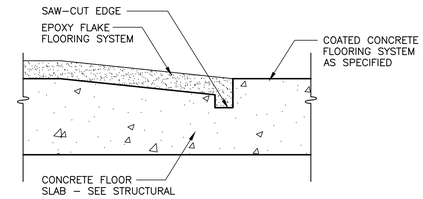
CEILING TYPE — L1-90 — CEILING HEIGHT

CEILING NOTES

1. AFF = ABOVE FINISHED FLOOR
2. ALL CEILING HEIGHTS ARE FROM ADJACENT FINISHED FLOOR
3. CEILING HEIGHTS INDICATED ARE MINIMUM HEIGHTS. COORDINATE WITH PLUMBING, MECHANICAL AND ELECTRICAL TO INSTALL CEILINGS AS HIGH AS POSSIBLE
4. ALL CEILING GRIDS ARE TO BE CENTERED IN ROOM UNLESS SHOWN OR NOTED OTHERWISE
5. USE 2x2 LAY-IN CEILING TILES CUT TO FIT AT ALL LOCATIONS LESS THAN 12; AT PERIMETER OF ROOM. WHERE 2x2 TILE OCCURS THEY SHALL MATCH SPECIFIED TILE AS INDICATED FOR EACH ROOM
6. REFER TO ELECTRICAL DRAWINGS FOR FIXTURE TYPES AND LIGHTING LAYOUTS. CONTACT ARCHITECT WITH ANY DISCREPANCIES.
7. COORDINATE WITH PLUMBING AND MECHANICAL DRAWINGS AND PROVIDE FRAMING AS REQUIRED TO ACCOMMODATE MECHANICAL AND PLUMBING SYSTEMS

LIGHTING/ELECTRICAL NOTES

COORDINATE LIGHTING LAYOUTS WITH ELECTRICAL DRAWINGS. CONTACT ARCHITECT WITH ANY DISCREPANCIES



3 FLOOR TRANSITION @ CONCRETE TO EPOXY

NOT TO SCALE

FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	MILLWORK FACE	MILLWORK TOP	WALLS NORTH	WALLS SOUTH	WALLS EAST	WALLS WEST	DOOR FRAME	CEILING/SOFFIT PAINT	NOTES
101	MULITPURPOSE	SC	RB-1	-	-	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
102	MEN'S	ERF-1	ERB-1	-	-	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
103	ELECTRICAL	SC	RB-1	-	-	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
104	MECHANICAL	SC	RB-1	-	-	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		
105	STORAGE	SC	RB-1	-	-	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2		

BASE

ITEM	MANUFACTURER	ITEM NUMBER/NAME	LOCATION
RB-1	ROPPE	COLOR: BLACK BROWN 193	SEE FINISH SCHEDULE
ERB-1	MATCH ERF	MATCH ERF-1	SEE FINISH SCHEDULE

EPOXY

ITEM	MANUFACTURER	ITEM NUMBER/NAME	LOCATION
ERF-1	TORGINAL	COLOR: CUSTOM COLOR WITH MAX 4 COLORS 1/4" FLAKES	SEE FINISH SCHEDULE

PAINT

ITEM	MANUFACTURER	ITEM NUMBER/NAME	TYPE/LOCATION
PNT-1	SHERWIN WILLIAMS	COLOR: REPOSE GRAY SW7015	GENERAL WALLS
PNT-2	SHERWIN WILLIAMS	COLOR: DORIAN GRAY SW 7017	GENERAL TRIM

CONCRETE

ITEM	MANUFACTURER	ITEM NUMBER/NAME	LOCATION
SC	SHERWIN WILLIAMS	SEE SPEC	SEE FINISH FLOOR PLAN

FINISH ABBREVIATION LEGEND

AP	ACOUSTIC PANEL	ESD	STATIC CONTROL TILE	SS	SOLID SURFACE
BFC	BROOM FINISHED CONCRETE	GYP	GYPSUM BOARD	ST	STAIN
		LVT	LUXURY VINYL TILE	TP	TACKABLE ACOUSTIC PANEL
CC	COATED CONCRETE	PL	PLASTIC LAMINATE		
CM	CROWN MOLDING	PNT	PAINT	VCT	VINYL COMP. TILE
CPT	CARPET	PFT	PORCELAIN TILE	WB	WOOD BASE
CR	CHAIR RAIL	PTB	PORCELAIN TILE BASE	WC	WALLCOVERING
DP	DIGITAL ACOUSTIC PANEL	PWT	PORCELAIN WALL TILE	WF	WOOD FLOORING
		PWF	PRE-ENG. WOOD	WP	WOOD PANELING
CWT	CERAMIC WALL TILE	RB	RUBBER BASE	WV	WOOD VENEER
CTB	CERAMIC TILE BASE	SC	SEALED CONCRETE		

FINISH NOTES

ALL WALLS TO BE PAINTED PNT -1 UNLESS NOTED OTHERWISE.

ALL WALLS AND CEILINGS LOCATED IN WET AREAS SHALL HAVE EPOXY BASED PAINT

LATHAN ▪ McKEE ARCHITECTS

NEW FIELDHOUSE AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
REFLECTED CEILING PLAN, FINISH FLOOR PLAN, LEGENDS AND DETAIL

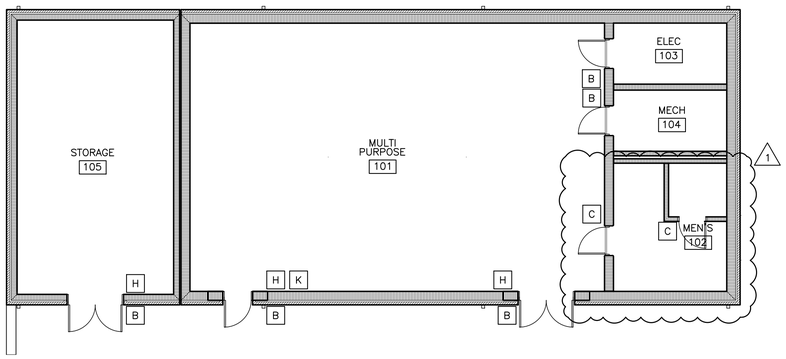
PACKAGE 'B' - STORM SHELTER

STATE OF ALABAMA
No. 7007
RYAN D. VERNON
REGISTERED ARCHITECT

PROJ. MGR.: H. RASCO
DRAWN: K. JOINER
DATE: NOVEMBER 7, 2025
REVISIONS
1 01.05.2026

JOB NO. 25-32
SHEET NO:
A7.1B
10 OF 11

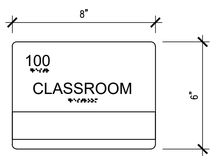
0 1" 2"



1 ROOM SIGNAGE PLAN

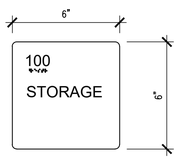
SCALE: 1/8" = 1'-0"

© FIELDHOUSE



INTERIOR SIGNAGE (SIGN TYPE - A)

SCALE: 3" = 1'-0"



INTERIOR SIGNAGE (SIGN TYPE - B)

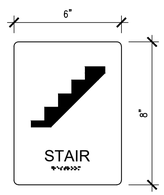
SCALE: 3" = 1'-0"

INTERIOR SIGNAGE (SIGN TYPE - C)

SCALE: 3" = 1'-0"

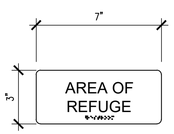
INTERIOR SIGNAGE (SIGN TYPE - D)

SCALE: 3" = 1'-0"



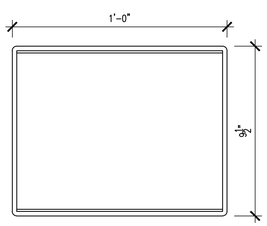
INTERIOR SIGNAGE (SIGN TYPE - E)

SCALE: 3" = 1'-0"



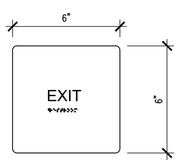
INTERIOR SIGNAGE (SIGN TYPE - F)

SCALE: 3" = 1'-0"



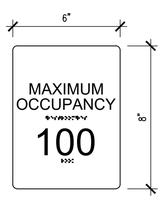
INTERIOR SIGNAGE (SIGN TYPE - G)

SCALE: 3" = 1'-0"



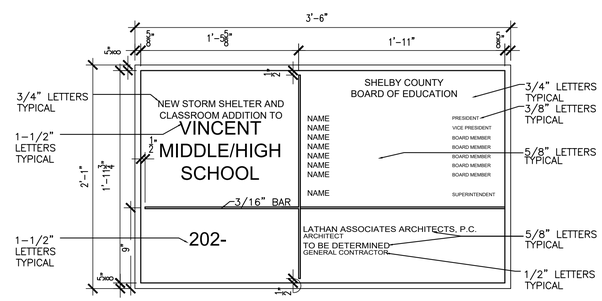
INTERIOR SIGNAGE (SIGN TYPE - H)

SCALE: 3" = 1'-0"



INTERIOR SIGNAGE (SIGN - TYPE J)

SCALE: 3" = 1'-0"



BUILDING PLAQUE (SIGN - TYPE K)

SCALE: 1-1/2" = 1'-0"

INTERIOR SIGNAGE LEGEND

A	SIGN WITH MESSAGE STRIP (OFFICES/CLASSROOM/INSTRUCTIONAL AREA)
B	ROOM NUMBER AND NAME (STORAGE, ELECTRICAL, ETC)
C	RESTROOM SIGNAGE WITH PICTOGRAM/BRAILLE
D	ELEVATOR SIGNAGE WITH PICTOGRAM/BRAILLE
E	STAIR SIGNAGE WITH PICTOGRAM/BRAILLE
F	AREA OF REFUGE SIGN
G	FRAMED CLEAR VIEW SIGNAGE (8.5X11)
H	TACTILE EXIT SIGN TO EXTERIOR (EXIT)
J	OCCUPANT LOAD SIGN (ASSEMBLY SPACES)
K	BUILDING DEDICATION PLAQUE

LATHAN ▪McKEE ARCHITECTS

NEW FIELDHOUSE AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
ROOM SIGNAGE PLAN AND DETAILS

PACKAGE 'B' - STORM SHELTER

STATE OF ALABAMA
No. 7007
RYAN D. VERNON
REGISTERED ARCHITECT

PROJ. MGR.: H. RASCO
DRAWN: K. JOINER

DATE: NOVEMBER 7, 2025
REVISIONS
1 01.05.2026

JOB NO. 25-32
SHEET NO:
A8.1B
11 OF 11

GENERAL NOTES

1. LOCATIONS OF UTILITIES SHOWN ON PLANS ARE APPROXIMATE. VERIFY WITH LOCAL UTILITY PRIOR TO BIDDING.
2. CONTRACTOR SHALL VERIFY EXACT LOCATION, SIZE, AND ELEVATION OF ALL EXISTING SERVICES PRIOR TO INSTALLING ANY NEW PIPE.
3. ALL OUTSIDE CLEANOUTS SHALL BE BROUGHT TO GRADE AND EMBEDDED IN 18"X18"X6" THICK CONCRETE PAD. (J.R. SMITH 4258 OR EQUAL.)
4. WHEREVER DISSIMILAR METALS ARE CONNECTED ON WATER LINES, A DIELECTRIC UNION SHALL BE USED.
5. ALL HORIZONTAL WATER AND VENT PIPING SHALL BE RUN ABOVE CEILING ON PLAN WHERE SHOWN UNLESS OTHERWISE NOTED.
6. ALL HORIZONTAL SANITARY PIPING IS RUN BELOW FLOOR ON PLAN WHERE SHOWN UNLESS OTHERWISE NOTED.
7. ALL WATER PIPING BELOW SLAB ON GRADE SHALL BE BENT UP AT ENDS SO THAT NO JOINTS OCCUR BELOW FLOOR.
8. ALL WALL HYDRANTS AND HOSE BIBBS SHALL BE MOUNTED 24" ABOVE FINISH GRADE OF FINISH FLOOR UNLESS OTHERWISE NOTED.
9. ALL WATER PIPING INSTALLED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF THE EXTERIOR WALL INSULATION.
10. NO VENT THRU ROOF IS TO BE LOCATED WITHIN 10 FEET OF ANY BUILDING AIR INTAKES, PER CODE. COORDINATE WITH MECHANIAL AND GENERAL CONTRACTORS.
11. DOMESTIC WATER PIPING LOCATED ABOVE THE CEILING, SHALL BE INSTALLED BELOW CEILING INSULATION.
12. CONTRACTOR SHALL COORDINATE MECHANICAL FLOOR DRAIN LOCATIONS WITH MECHANICAL EQUIPMENT PRIOR TO INSTALLATION.
13. CONTRACTOR SHALL PROVIDE SHOCK ARRESTORS ON ALL BRANCH LINES.
14. CONTRACTOR SHALL COORDINATE ALL SINKS WITH CASEWORK PRIOR TO ORDERING SINKS.
15. DOMESTIC WATER PIPING SHALL NOT BE INSTALLED IN EXTERIOR WALLS.
16. PROVIDE DISINFECTION OF WATER PIPING SYSTEM WITH CHLORINE SOLUTION AS PER CODE.
17. INSTALLATION OF BACKFLOW PREVENTER SHALL COMPLY WITH CURRENT INTERNATIONAL BUILDING CODE AND CURRENT INTERNATIONAL PLUMBING CODE.
18. ALL OVERHEAD WATER PIPING TO BE RUN BELOW INSULATION AT BOTTOM OF TRUSSES FOR FREEZE PROTECTION.
19. ALL WALL HYDRANTS TO BE FREEZE PROOF AND TO HAVE VACUUM BREAKERS.
20. INSULATION ON ALL PIPING SHALL MEET SMOKE/ FLAME RATING OF 25 & 50.
21. NO JOINTS IN WATER PIPING BELOW SLAB.
22. THE LOCATION OF LAVATORIES AND WATER CLOSETS RELATIVE TO THE FINISHED WALL IS CRITICAL. REFER TO ARCHITECTURAL AND THE SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL WATER CLOSETS TO BE 18" FROM FINISH WALL TO CENTER OF WATER CLOSET.
23. WATER HAMMER ARRESTORS ARE REQUIRED TO PROTECT WATER PIPING SYSTEMS WHERE QUICK-CLOSING VALVES ARE UTILIZED. WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010.
24. THESE DRAWINGS NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE PLUMBING SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES AND CONTROLS, COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL PARAMETERS GIVEN IN THESE DOCUMENTS SHALL BE STRICTLY CONFORMED WITH ANY ITEMS AND LABOR REQUIRED FOR A COMPLETE PLUMBING SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND THESE CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ANY ADDITIONAL COST TO THE PROJECT, CAREFULLY REVIEW ALL CONTRACT DOCUMENTS AND THE DESIGN OF OTHER TRADES BEFORE PREPARING SHOP DRAWINGS.
25. COORDINATE PLUMBING PIPING WITH STRUCTURAL, PLUMBING, HVAC, AND ELECTRICAL. MAKE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES WITHOUT ANY ADDITIONAL COST TO THE PROJECT.
26. COORDINATE ALL PLUMBING IN SLAB WITH BUILDING FOOTINGS.
27. NO PIPING TO BE RUN ABOVE ELECTRICAL PANELS. MAINTAIN ALL REQUIRED CLEARANCES.
28. CONTRACTOR SHALL VISIT JOB SITE AND VERIFY EXISTING CONDITIONS BEFORE SUBMITTING A PRICE, ORDERING MATERIALS OR PERFORMING ANY WORK. NOTIFY THE ARCHITECT OF ANY DEVIATION FROM PLUMBING PLAN.
29. SUPPORT PIPE AS REQUIRED BY THE CURRENT INTERNATIONAL PLUMBING CODE.
30. FIRESTOP ALL RATED WALL AND FLOOR PENETRATIONS. SEE ARCHITECTURAL DRAWINGS FOR RATED WALL AND FLOOR LOCATIONS.
31. OFFSET ALL VTR'S TO BACKSIDE OF ROOF RIDGE.
32. DO NOT BEGIN WORK UNTIL ELEVATION OF FINAL CONNECTION POINT IS VERIFIED AND GRADING OF ENTIRE SYSTEM CAN BE DETERMINED (EVEN IF FINAL CONNECTION IS SPECIFIED UNDER ANOTHER SECTION).
33. ASSE 1070 THERMOSTATIC MIXING VALVES TO BE INSTALLED AND PROVIDE TEMPERED WATER TO PUBLIC LAVATORIES PER IPC 419.5.

PLUMBING LEGEND

	DOMESTIC COLD WATER		CHECK VALVE	DN	DOWN
	DOMESTIC HOT WATER SUPPLY	PRV	PRESSURE RELIEF VALVE	WH - #	WATER HEATER
	SOIL, WASTE, OR SANITARY SEWER	CO	CLEANOUT	GPH	GALLONS PER HOUR
	VENT	FD	FLOOR DRAIN	GPM	GALLONS PER MINUTE
	PIPE TURNING DOWN	P-#	PLUMBING FIXTURE	HW	HOT WATER
	PIPE TURNING UP	WH	WALL HYDRANT	HWR	HOT WATER RETURN
	TEE DOWN	ABV	ABOVE	TYP	TYPICAL
	TEE UP	AFF	ABOVE FINISHED FLOOR	VS	VENT STACK
	UNION	BFP	BACKFLOW PREVENTER	VSTR	VENT THROUGH ROOF
	BALANCE VALVE	BFF	BELOW FINISHED FLOOR	MFD	MECHANICAL FLOOR DRAIN
	BALL VALVE	CW	COLD WATER	WS	WASTE STACK
				#	RISER NUMBER

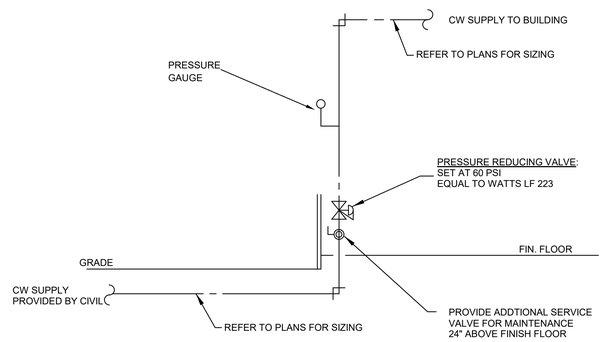
PLUMBING FIXTURE SCHEDULE A

MARK	FIXTURE	WASTE	CW	HW	REMARKS
FD-1	FLOOR DRAIN	3"	-	-	J.R. SMITH #2010 WITH 6" ROUND NICKEL BRONZE GRATE. PROVIDE WITH J.R. SMITH TRAP INSERT.
MFD	MECHANICAL FLOOR DRAIN	3"	-	-	J.R. SMITH #2240 WITH SEDIMENT BUCKET. PROVIDE WITH J.R. SMITH TRAP INSERT.
P-1	WATER CLOSET - ADA COMPLIANT	4"	1"	-	FLOOR MOUNTED - KOHLER K-96057-SS-0 COMPLETE SLOAN #111 FLUSH VALVE WITH YJ BRACKET AND CHURCH "DURA GUARD" MODEL # 2155 SSC SEAT.
P-2	WATER CLOSET	4"	1"	-	FLOOR MOUNTED - KOHLER K-96053-SS-0 COMPLETE SLOAN #111 FLUSH VALVE WITH YJ BRACKET AND CHURCH "DURA GUARD" MODEL #2155 SSC SEAT.
P-3	URINAL - ADA COMPLIANT	2"	1"	-	WALL MOUNTED-KOHLER K-5016-ET COMPLETE, J.R. SMITH #623 FIXTURE SUPPORT, AND SLOAN #186 FLUSH VALVE WITH YJ BRACKET. SET LIP 17" AFF.
P-4	URINAL	2"	1"	-	WALL MOUNTED-KOHLER K-5016-ET COMPLETE, J.R. SMITH #623 FIXTURE SUPPORT, AND SLOAN #186 FLUSH VALVE WITH YJ BRACKET.
P-5	LAVATORY	1 1/4"	1/2"	1/2"	UNDERMOUNT - KOHLER K-2210 COMPLETE, SYMMONS S-20-0 FAUCET, MCGUIRE #8872 P-TRAP. MCGUIRE 165 SUPPLIES WITH STOPS. INSULATE ALL WITH "PRO-WRAP" BY MCGUIRE. PROVIDE LAWLER 570 MIXING VALVE MOUNTED BELOW LAVATORY UNLESS OTHERWISE NOTED ON THE DRAWINGS.
P-6	WATER COOLER - ADA COMPLIANT	1 1/2"	1/2"	-	ELKAY # EZSTL8WSSK BI-LEVEL WATER COOLER WITH BOTTLE FILLER STATION. COMPLETE WITH STAINLESS STEEL CABINET AND WATERWAYS THAT ARE MANUFACTURED OF 100% LEAD FREE MATERIAL, J.R. SMITH #834 FIXTURE SUPPORT EBC TA150 P-TRAP AND EBC LA10 STOP WITH SUPPLY. FULLY INSULATE P-TRAP WITH EBC IK INSULATOR. INSTALL WITH LOWER SPOUT OUTLET MAXIMUM 36" AFF. MUST MEET A.D.A. INSTALL WITH BOTTLE FILLER. INSTALL COMPLETE. PROVIDE WITH ELKAY MODEL #LKAPREZL CANE APRON AS REQUIRED.
P-7	MOP SINK	3"	1/2"	1/2"	STERN WILLIAMS #SBC-1700 (24" X 24") COMPLETE, T-35 HOSE WITH WALL HOOK, STAINLESS STEEL BACKSPLASH AND CHICAGO FAUCET #897 FAUCET.
WH	WALL HYDRANT	-	3/4"	-	J.R. SMITH #5509-QT, WITH INTEGRAL BACKFLOW PREVENTER, LATCHING COVER, FREEZE-PROOF AND OF PROPER LENGTH FOR WALL IN WHICH INSTALLED, ALL BRONZE BOX. VALVE SEAT MUST BE ON BUILDING SIDE OF EXTERIOR WALL INSULATION. INSTALL WITH CENTER LINE 24" ABOVE FINISH GRADE. PROVIDE OWNER WITH ONE (1) LOOSE KEY FOR EACH WALL HYDRANT.

NOTE: TEMPERING VALVES ON LAVATORIES OF ALL PUBLIC LAVATORIESCONFORM TO ASSE1070/CSA B125.3.2021 IPC 419.5 TEMPERED WATER FOR PUBLIC HAND-WASHING FACILITIES. TEMPERED WATER SHALL BE DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070/CSA B125.3.

WATER HEATER SCHEDULE A

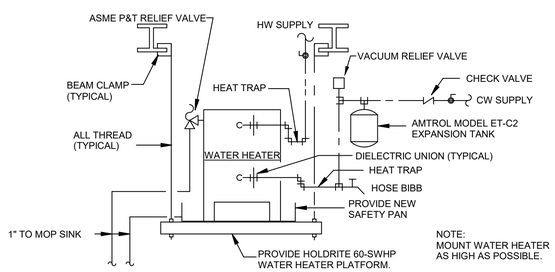
MARK	FIXTURE	ELEC INFO.	REMARKS
ET-1	EXPANSION TANK	-	AMTROL THERM - X-TROL #ST-5 EXPANSION TANK, PRE-CHARGED, WELDED STEEL CONSTRUCTION. ISOLATION BETWEEN WATER AND AIR SHALL BE BY A BUTYL DIAPHRAM.
WH-1	ELECTRIC WATER HEATER	208V, 1 PH, 2 KW	LOCHINVAR LDJ20-JE, 20 GALLON STORAGE, 19 GALLON RECOVERY AT 100°F RISE. NEW P&T RELIEF VALVE. SET OUTLET TEMPERATURE AT 125°F. INSTALL AS DETAILED ON DRAWINGS. VERIFY VOLTAGE WITH ELECTRICAL SECTION.



DETAIL OF WATER ENTRY

NO SCALE

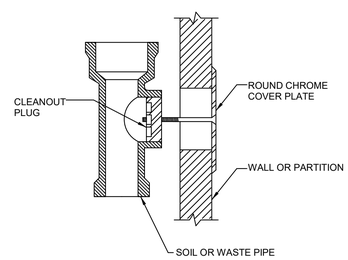
NOTE:
EXPANSION TANK TO BE
SUPPORTED BY STRUCTURE AND
MEET REQUIRMENTS OF IPC 308.10.



NOTE:
MOUNT WATER HEATER
AS HIGH AS POSSIBLE.

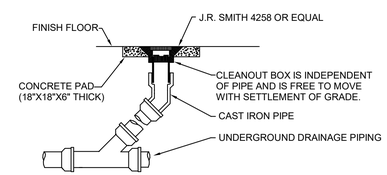
DETAIL OF PIPING AT WATER HEATER

NO SCALE



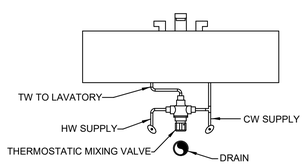
WALL CLEANOUT

NO SCALE



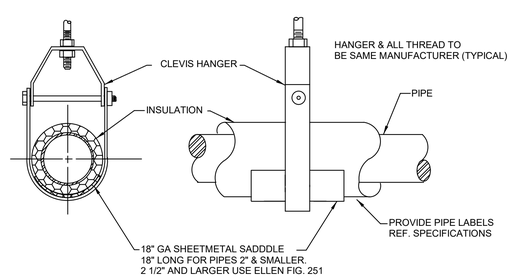
DETAIL OF CLEANOUT TO GRADE

NO SCALE



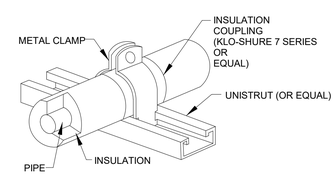
DETAIL OF TMV BELOW LAVATORY

NO SCALE



SUSPENDED PIPE SUPPORT

NO SCALE



NOTES:

1. APPLICATION: FOR STRUT MOUNTED, 4 INCH AND SMALLER, COVER PIPE WITH FOAMED PLASTIC (ARMAFLEX) OR FIBERGLASS INSULATION.
2. ALLOWED FOR HORIZONTAL OR VERTICAL INSTALLATION.
3. FOR COLD PIPE APPLICATION, APPLY ADHESIVE TO END OF FOAMED PLASTIC INSULATION PRIOR TO INSERTING INTO COUPLING.

STRUT-MOUNTED PIPING SUPPORT INSULATION COUPLING DETAIL

NO SCALE

Dewberry
2 Riverchase Office Plaza
Suite 205
Hoover, AL 35244
(205) 988-2069
www.dewberry.com
Project Number :
50189177

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
PLUMBING SCHEDULES, DETAILS AND NOTES

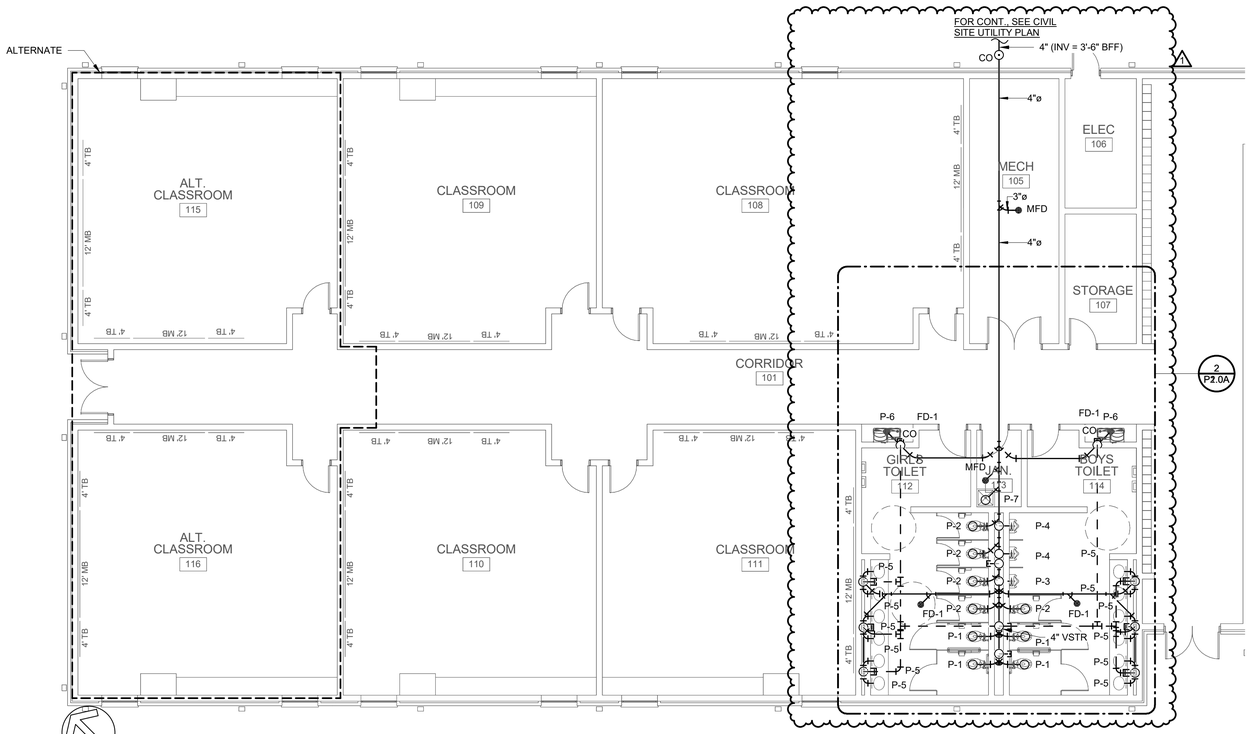
PROJ. MGR.:	JWS
DRAWN:	JTR
DATE:	NOVEMBER 7, 2025

REVISIONS

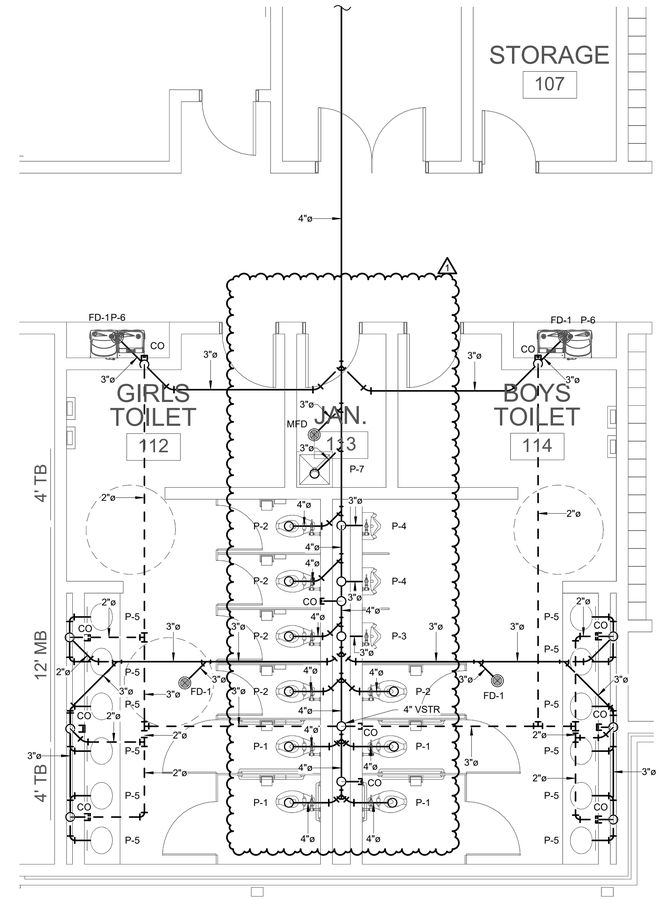
1	1/5/2026	REVISION

JOB NO. 25-32

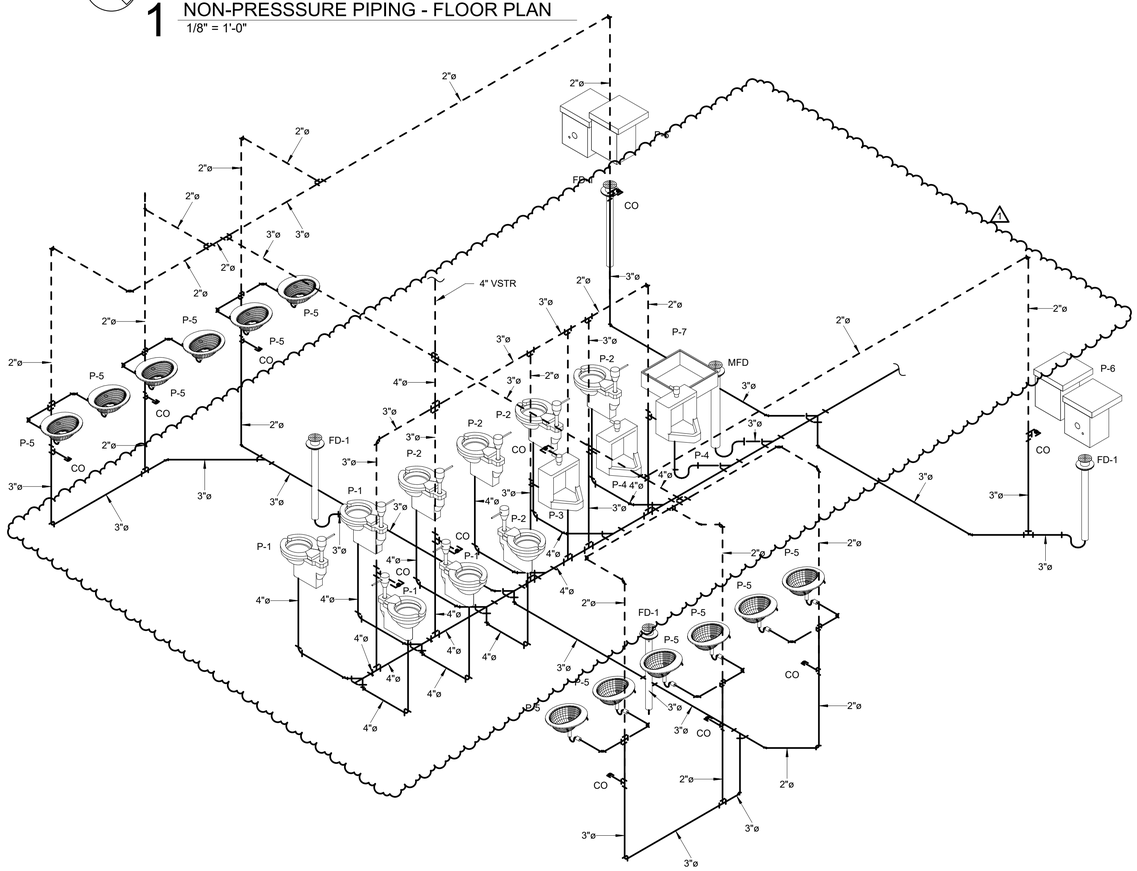
SHEET NO: P0.1A



1 NON-PRESSSURE PIPING - FLOOR PLAN
1/8" = 1'-0"



2 NON-PRESSSURE PIPING - ENLARGED FLOOR PLAN
1/4" = 1'-0"



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LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
NON-PRESSURE PIPING FLOOR PLAN

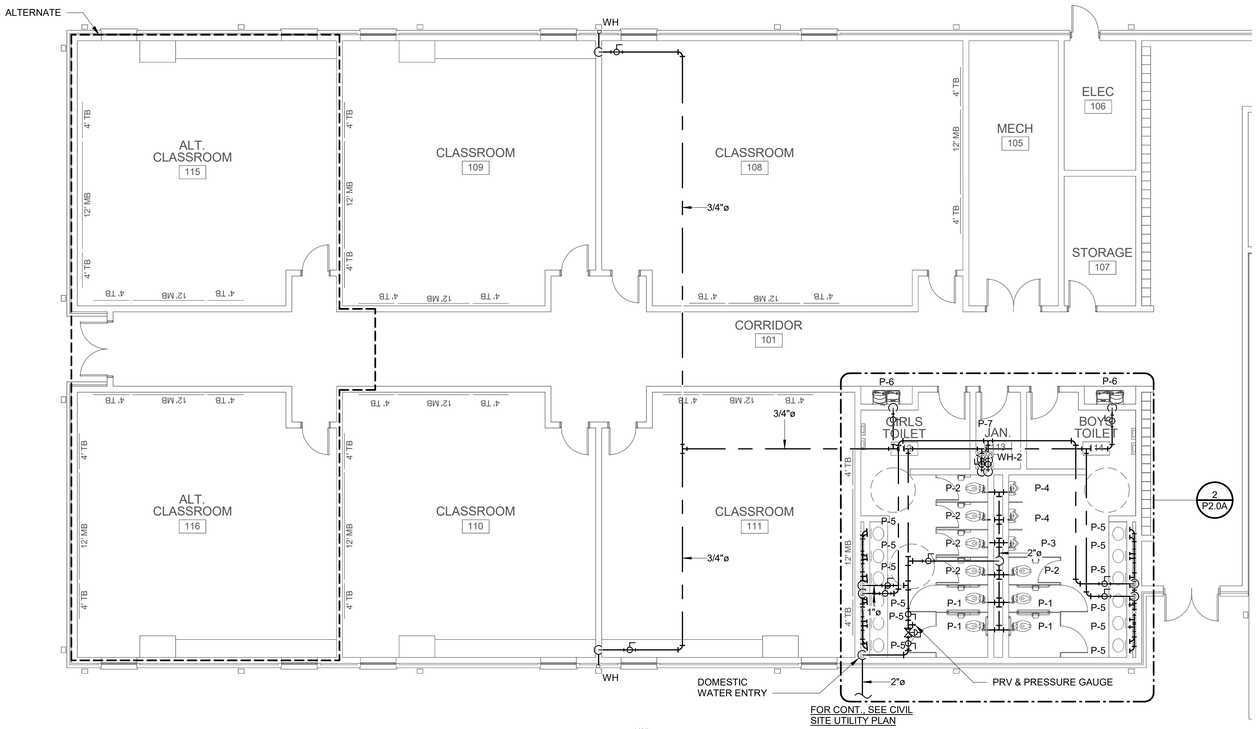
PROJ. MGR.:	JWS
DRAWN:	JTR
DATE:	NOVEMBER 7, 2025

REVISIONS

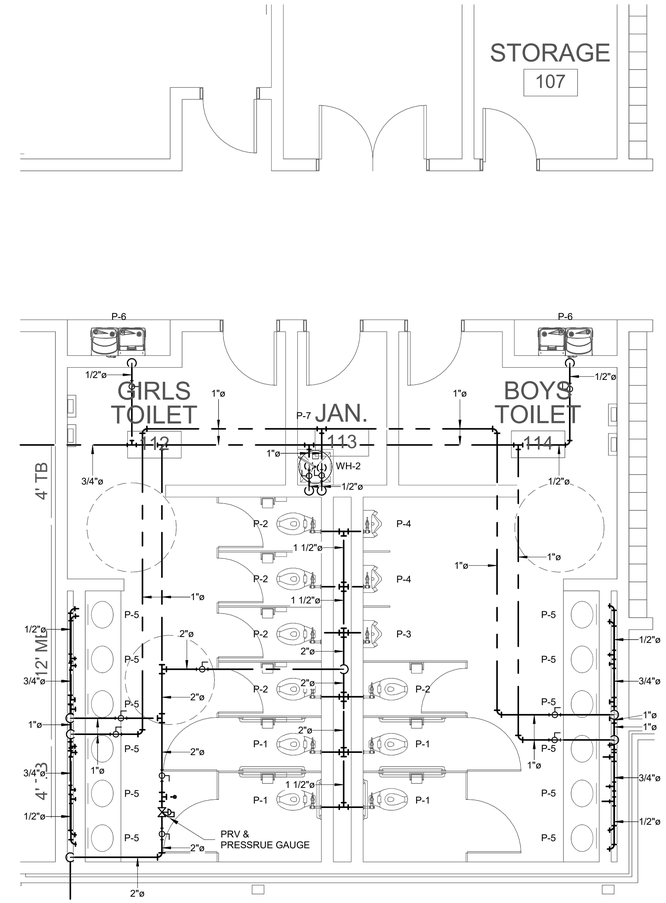
1	1/5/2026	REVISION

JOB NO: 25-32

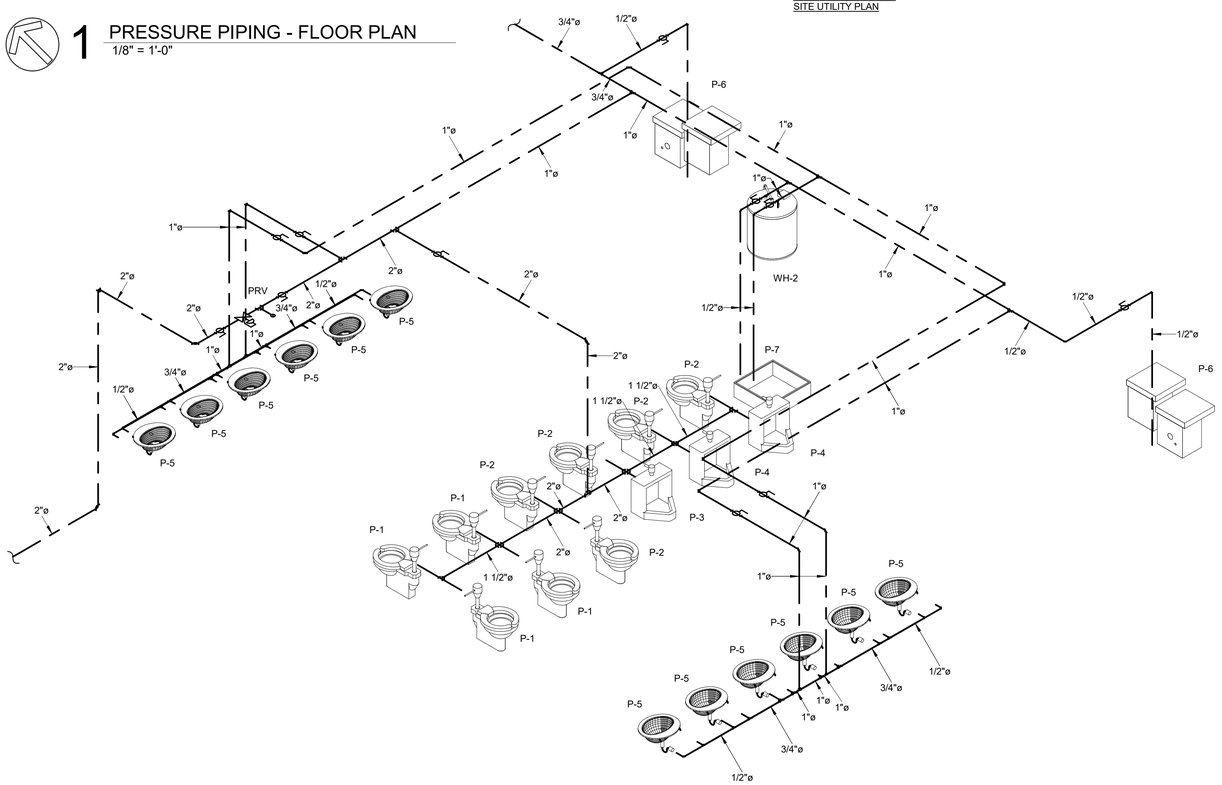
SHEET NO: P1.0A



1 PRESSURE PIPING - FLOOR PLAN
1/8" = 1'-0"



2 PRESSURE PIPING - ENLARGED FLOOR PLAN A
1/4" = 1'-0"



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SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
PRESSURE PIPING FLOOR PLAN

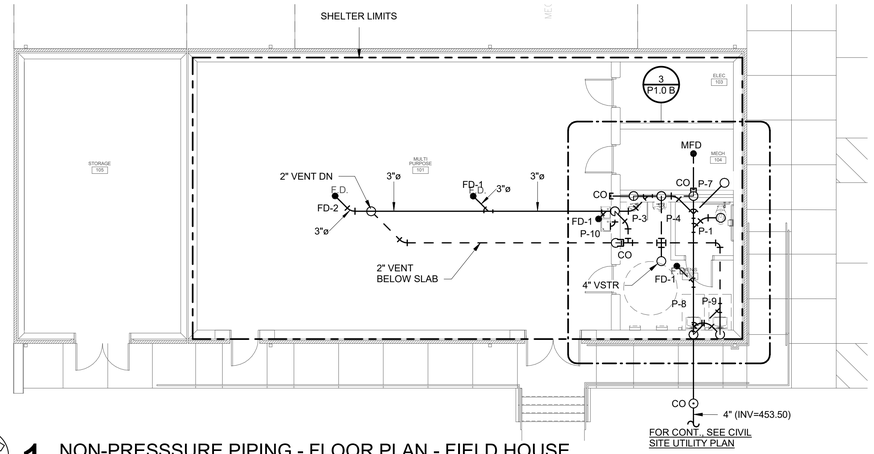
PROJ. MGR.:	JWS
DRAWN:	JTR
DATE:	NOVEMBER 7, 2025

REVISIONS

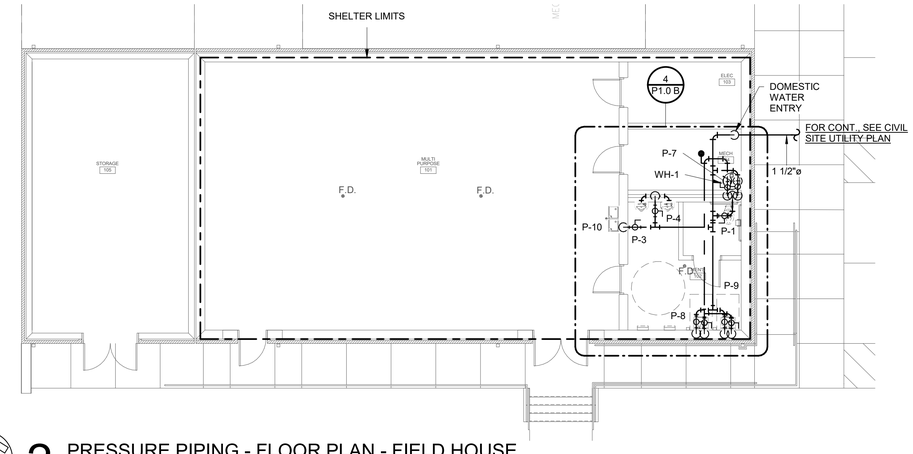
1	1/5/2026	REVISION

JOB NO. 25-32

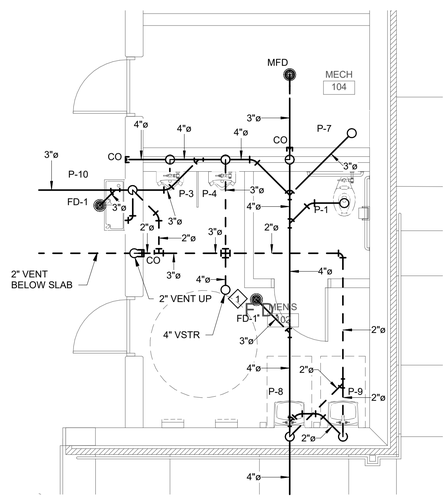
SHEET NO:
P2.0A



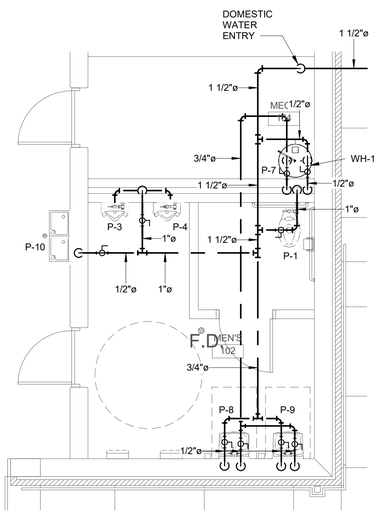
1 NON-PRESSSURE PIPING - FLOOR PLAN - FIELD HOUSE
1/8" = 1'-0"



2 PRESSURE PIPING - FLOOR PLAN - FIELD HOUSE
1/8" = 1'-0"



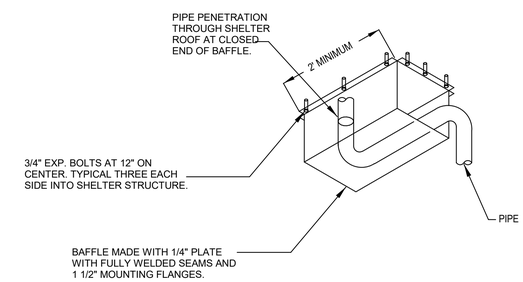
3 NON-PRESSURE - ENLARGED SHELTER PLAN
1/4" = 1'-0"



4 PRESSURE - ENLARGED SHELTER PLAN
1/4" = 1'-0"

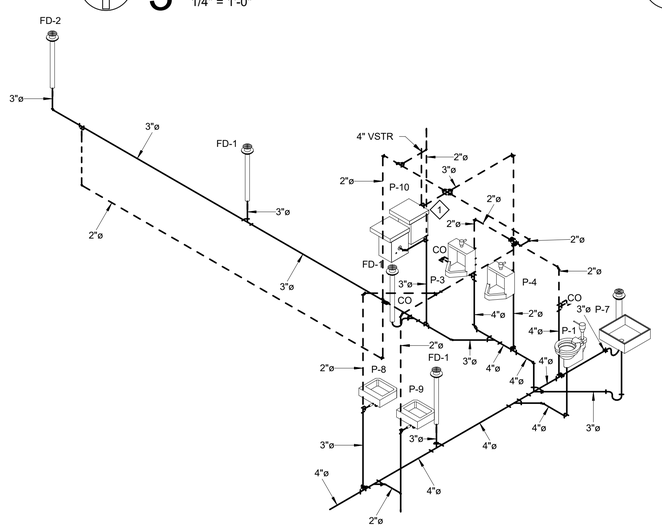
SHELTER KEY NOTES

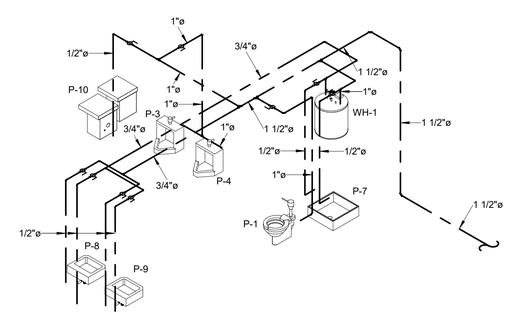
1 SHELTER PENETRATION (SEE DETAIL)



DETAIL OF PIPE PASSING THRU SHELTER ROOF

NO SCALE





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SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
PLUMBING FLOOR PLAN - FIELD HOUSE

No. 24747 PROFESSIONAL ENGINEER 01/05/2026 WADE STEWART

PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025

REVISIONS

1	1/5/2026 REVISION

JOB NO. 25-32

SHEET NO: P1.0 B

DUCTWORK LEGEND

(CFM) S	SUPPLY DIFFUSER
(CFM) R	RETURN GRILLE
(CFM) E	EXHAUST GRILLE
(CFM) T	TRANSFER AIR GRILLE
(CFM) SR	SIDEWALL REGISTER
ø	ROUND DUCT SYMBOL
W X H	RECTANGULAR DUCT (WIDTH X HEIGHT)
	EXISTING DUCTWORK, PIPING, OR EQUIPMENT TO REMAIN.
	EXISTING DUCTWORK, PIPING, OR EQUIPMENT TO BE REMOVED.
	RECTANGULAR SUPPLY DUCT TURNING UP
	RECTANGULAR SUPPLY AIR DUCT TURNING DOWN
	RECTANGULAR RETURN AIR OR EXHAUST DUCT TURNING UP
	RECTANGULAR RETURN AIR OR EXHAUST DUCT TURNING DOWN
	FLAT OVAL TURNING UP.
	FLAT OVAL TURNING DOWN.
	ROUND DUCT TURNING DOWN
	ROUND DUCT TURNING UP
	MAXIMUM 5' FLEXIBLE DUCT ALL BRANCH DUCTS
	RECTANGULAR 90° ELBOW WITH TURNING VANES FOR SUPPLY.
	RISE OR DROP IN DUCT
	RECTANGULAR BRANCH OFF OF RECTANGULAR DUCT WITH MANUAL DAMPER
	CONICAL SPIN-IN WITH MANUAL DAMPER
MD	MANUAL DAMPER
FD	FIRE DAMPER (PROVIDE ACCESS DOOR)
AD	AUTOMATIC DAMPER
SFD	COMBINATION SMOKE/FIRE DAMPER (PROVIDE ACCESS DOOR)
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CO2 MONITOR
	CONNECT TO EXISTING, FIELD VERIFY EXACT SIZE AND LOCATION.

HVAC ABBREVIATIONS

A	AMPS
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AMB.	AMBIENT
ARCH.	ARCHITECTURAL
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB
DN.	DOWN
°F	DEGREES FAHRENHEIT
△P	CHANGE IN PRESSURE
△T	CHANGE IN TEMPERATURE
DIA.	DIAMETER
EA	EXHAUST AIR
ENT.	ENTERING
EAT	ENTERING AIR TEMPERATURE
EMG	EXPANDED METAL GRILLE
EWT	EXTERNAL WATER TEMPERATURE
E.S.P.	EXTERNAL STATIC PRESSURE
EX.	EXISTING
EXT.	EXTERNAL
FPM	FEET PER MINUTE
FT.	FEET
F.V.	FACE VELOCITY
GAL.	GALLONS
GPM	GALLONS PER MINUTE
H	HEIGHT
HP	HORSEPOWER
IN.	INCHES
I.D.	INSIDE DIAMETER
KW	1000 WATTS
L	LENGTH
LBS.	POUNDS
LRA	LOCKED ROTOR AMPS
LVG.	LEAVING
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MAT	MIXED AIR TEMPERATURE
MBH	1000 BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MIN.	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
NPLV	NON-STAND PART LOAD VALUE
OSA	OUTSIDE AIR
O.D.	OUTSIDE DIAMETER
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ATMOSPHERIC
PSIG	PSI GAUGE
RA	RETURN AIR
RAT	RETURN AIR TEMPERATURE
RH	RELATIVE HUMIDITY
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
T.S.P.	TOTAL STATIC PRESSURE
TD	TRANSFER DUCT
TOD	TOP OF DUCT
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLUME
V/Ø/Hz	VOLTS/PHASE/HERTZ
W.G.	WATER GAGE
W	WIDTH
WB	WET BULB

HVAC CONTROLS LEGEND

T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CO2 MONITOR
CP	120V HVAC CONTROLS POWER
TS	AVERAGING TEMPERATURE SENSOR
H	DUCT MOUNTED HUMIDITY SENSOR
AO	ANALOG OUTPUT
AI	ANALOG INPUT
DO	DIGITAL OUTPUT
DI	DIGITAL INPUT
DSD	DUCT MOUNTED SMOKE DETECTOR. SMOKE DETECTOR FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR, INSTALLED IN DUCT BY MECHANICAL CONTRACTOR.
HOA	HAND-OFF-AUTO MAGNETIC STARTER
SP	DUCT STATIC PRESSURE SENSOR
DP	DIFFERENTIAL PRESSURE SENSOR
	INTERLOCK WITH FIRE ALARM SYSTEM
M	FAN/PUMP MOTOR
VFD	VARIABLE FREQUENCY DRIVE
CT	CURRENT TRANSDUCER
FS	FLOW SWITCH
	DIRECTION OF FLOW
TS	PIPE MOUNTED TEMPERATURE SENSOR
	2-WAY AUTOMATIC VALVE
	3-WAY AUTOMATIC VALVE
H-O-A	HAND-OFF-AUTO SWITCH
AFM	AIR FLOW MONITOR.
	(PROVIDE ACCESS DOOR AT EACH AIR FLOW MONITOR.)

PIPING LEGEND

D	DRAIN PIPING
	BALL VALVE
	PIPE TURNING UP.
	PIPE TURNING DOWN.
	BRANCH OFF TOP OF MAIN.
	BRANCH OFF BOTTOM OF MAIN.
	BRANCH OFF SIDE OF MAIN.
	UNION
	SLOPE DOWN IN DIRECTION OF ARROW.

AIR DEVICE LEGEND

MARK	EXAMPLE	DESCRIPTION	SIZE	BASIS OF DESIGN
"S"	200S / CFM	PLAQUE FACE CEILING DIFFUSER WITH ROUND NECK. ALL CEILING DIFFUSERS TO HAVE A 24X24 CEILING PANEL (EXCEPT WHERE SHOWN AS 12X12). ALL CEILING DIFFUSERS TO HAVE ROUND NECKS.	CFM SHOWN ON PLANS. NECK & RUN-OUT SIZED PER THE FOLLOWING: CFM / NECK SIZE / RUN-OUT SIZE 0 - 100 / 6" / 6" 101 - 200 / 8" / 8" 201 - 300 / 10" / 10" 301 - 500 / 12" / 12" 501 - 750 / 15" / 15" 751 - 1000 / 18" / 18"	TITUS OMNI
"LD"	200LD / CFM	LOUVER FACE CEILING DIFFUSER WITH SQUARE NECK. ALL CEILING DIFFUSERS TO HAVE A 24X24 CEILING PANEL (EXCEPT WHERE SHOWN AS 12X12). ALL CEILING DIFFUSERS TO HAVE SQUARE NECKS.	CFM SHOWN ON PLANS. NECK & RUN-OUT SIZED PER THE FOLLOWING: CFM / NECK SIZE / RUN-OUT SIZE 0 - 100 / 6"x6" / 6" 101 - 200 / 9"x9" / 8" 201 - 300 / 12"x12" / 10" 301 - 500 / 15"x15" / 12" 501 - 750 / 18"x18" / 15" 751 - 1000 / 21"x21" / 18"	TITUS TDCA-AA
"R", "E", "T"	200R / CFM R24 / SQUARE NECK SIZE	CEILING MOUNTED RETURN (R), EXHAUST (E), OR TRANSFER (T) EGGCRATE GRILLE. ALL GRILLES IN A LAY-IN CEILING TO HAVE A 24X24 CEILING PANEL.	CFM SHOWN ON PLANS. NECK SIZED PER THE FOLLOWING: CFM / NECK SIZE 0 - 100 / 6x6 101 - 200 / 8x8 201 - 350 / 10x10 351 - 500 / 12x12 501 - 750 / 14x14 751 - 950 / 16x16 951 - 1200 / 18x18 1201 - 1500 / 20x20 1501 - 2000 / 24x24	TITUS 50F
SR	SR12X6 / 200 / CFM / W x H	SIDEWALL SUPPLY REGISTER.	SIZE (WxH) IN INCHES & CFM SHOWN.	TITUS 272FL
WRG / WTG	WRG12X6 / 200 / CFM / W x H	WALL RETURN GRILLE / WALL TRANSFER GRILLE.	SIZE (WxH) IN INCHES & CFM SHOWN.	TITUS 350FL

NOTES:

1. SEE SPECIFICATIONS FOR FINISH AND CONSTRUCTION MATERIAL FOR EACH AIR DEVICE.
2. COORDINATE WITH ARCHITECT'S CEILING PLAN FOR LAY-IN OR SURFACE MOUNTING OF CEILING MOUNTED AIR DEVICES.
3. COORDINATE LOCATIONS OF CEILING MOUNTED AIR DEVICES WITH LIGHT FIXTURES, SPRINKLER HEADS, AND OTHER CEILING MOUNTED DEVICES. DO NOT SCALE MECHANICAL DRAWINGS FOR LOCATIONS.

FAN SCHEDULES MAIN A

FAN TYPE:

1. CEILING MOUNTED EXHAUST FAN.
2. CENTRIFUGAL SQUARE INLINE - DIRECT DRIVE (AMCA SPARK RESISTANT).
3. CENTRIFUGAL SQUARE INLINE - BELT DRIVE.

FAN ACCESSORIES:

1. BACKDRAFT DAMPER.
2. DISCONNECT SWITCH.
3. ALUMINUM CEILING GRILLE.
4. 5A-120V FAN SPEED CONTROL EC MOTOR W/ VFD FOR SOFT START.
5. SPRING VIBRATION ISOLATORS.
6. FLEXIBLE CONNECTIONS.
7. BIRDSCREEN.
8. VARIABLE FREQUENCY DRIVE.
9. SOUND ATTENUATING ROOF CURB
10. MOTOR SIDE GUARD.
11. UL-705
12. ALL ALUMINUM AIRSTREAM STAINLESS STEEL SHAFT & HARDWARE, SHAFT SEAL

MARK	FAN TYPE	AIRFLOW (CFM)	E.S.P. (IN.-W.G.)	WHEEL SIZE (INCHES)	SOUND CRITERIA (SONES/dBA)	RPM	MOTOR (HP / W)	ELECTRICAL			INTERLOCK WITH	WEIGHT (LBS)	ACCESSORIES	BASIS OF DESIGN
								V	PH	HZ				
EF-106	3	140	0.5"	8	10.1	1390	1/4 HP	120 V	1	60	IHP-106 REFRIGERANT SENSOR	75	1,2,4,5,6,11,12	GREENHECK BSQ

REFRIGERANT LEAK DETECTION CONTROLS:

1. THE LEAK DETECTION SYSTEM SHALL CONSIST OF ONE OR MORE REFRIGERANT LEAK DETECTION SENSORS INSTALLED IN THE HVAC EQUIPMENT BY THE HVAC EQUIPMENT MANUFACTURER.

   A. UTILIZE A SET POINT, NONADJUSTABLE IN THE FIELD, TO GENERATE AN OUTPUT SIGNAL TO INITIATE MITIGATION ACTIONS.

   B. FIELD RECALIBRATION OF THE REFRIGERANT DETECTION SYSTEM SHALL NOT BE PERMITTED.

   C. BE CAPABLE OF DETECTING THE PRESENCE OF A SPECIFIED REFRIGERANT CORRESPONDING TO THE REFRIGERANT DESIGNATION OF THE REFRIGERANT CONTAINED IN THE REFRIGERATION SYSTEM.

   D. HAVE ACCESS FOR REPLACEMENT OF REFRIGERANT DETECTION SYSTEM COMPONENTS.

   E. HALF SELF-DIAGNOSTICS TO DETERMINE OPERATIONAL STATUS OF THE SENSING ELEMENT.

   F. ENERGIZE AIR CIRCULATION FANS OF THE EQUIPMENT UPON FAILURE OF A SELF DIAGNOSTIC CHECK.

   G. GENERATE AN OUTPUT SIGNAL IN NOT MORE THAN 30 SECONDS WHEN EXPOSED TO A REFRIGERANT CONCENTRATION OF 25% LFL (+0%,-1%).

2. WHEN THE SYSTEM DETECTS A LEAK, THE FOLLOWING MITIGATION ACTIONS WILL BE INITIATED UNTIL REFRIGERANT HAS NOT BEEN DETECTED FOR 5 MINUTES:

   A. SUPPLY FANS SHALL BE ENERGIZED TO RUN AT 100% FAN SPEED.

   B. COMPRESSOR OPERATION SHALL BE DISABLED.

   C. ALL ZONING DAMPERS, SUCH AS VAV TERMINAL UNITS SHALL BE OPENED TO 100%.

   D. ALL ELECTRIC HEAT OR GAS HEAT SHALL BE DISABLED.

3. THE BUILDING FIRE AND SMOKE SYSTEMS SHALL OVERRIDE THIS FUNCTION.

4. IF THE REFRIGERANT SENSOR HAS A FAULT, IS AT THE END OF ITS USEFUL LIFE, OR IS DISCONNECTED, THE AC UNIT WILL INITIATE THE ABOVE MITIGATION ACTIONS. MITIGATION ACTIONS SHALL BE VERIFIED BY DISCONNECTING THE SENSOR.

5. THE REFRIGERANT SENSORS DO NOT NEED ROUTINE MAINTENANCE. USE ONLY MANUFACTURER-APPROVED SENSORS WHEN REPLACEMENT IS REQUIRED.

HVAC EQUIPMENT REFRIGERANT GENERAL NOTES:

1. THIS PROJECT IS DESIGNED WITH HVAC EQUIPMENT WHICH USE A2L REFRIGERANT.

2. THE MECHANICAL DESIGN WILL COMPLY WITH THE 2024 INTERNATIONAL MECHANICAL CODE, ASHRAE 15-2022, AND ASHRAE 34-2022.

3. THE INSTALLATION SHALL ALSO COMPLY WITH THESE STANDARDS.

4. HVAC EQUIPMENT SHALL BE MANUFACTURED TO COMPLY WITH THESE STANDARDS, AS WELL AS UL 484, UL/CSA 60335-2-40, AND UL/CSA 60355-2-89.

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SHEET TITLE:
MECHANICAL LEGENDS

PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025

REVISIONS

1	1/5/2026 REVISION

JOB NO. 25-32

SHEET NO:

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LATHAN
McKEE
ARCHITECTS

INDOOR HEAT PUMP (MINI-SPLIT SYSTEM) SCHEDULE

TYPE:
1. INDOOR, WALL MOUNT
2. INDOOR, 2x2 CEILING CASSETTE
3. INDOOR, 33x33 CEILING CASSETTE

NOTES:
1. AIRFLOW RATED AT HIGH FAN SPEED.
2. POWER FOR INDOOR UNIT IS FED FROM OUTDOOR UNIT.
3. COOLING CAPACITY RATED AT 95°F.
4. HEATING CAPACITY RATED AT 47°F.

ACCESSORIES:
1. 3-POLE DISCONNECT SWITCH.
2. HARD WIRED UNIT CONTROLLER.
3. FULL PORT BALL VALVES & SCHRADER VALVES WITH FLARED CONNECTIONS.
4. FIELD-INSTALLED CONDENSATE PUMP (120/1/60) - 1 GPH @ 33 FT. HD.
5. INTEGRAL CONDENSATE PUMP.
6. SUPPLY AIR DUCT OUTLET.
7. OUTSIDE AIR DUCT INLET.
8. AIR BLANK-OFF.

MARK	TYPE	AIRFLOW (CFM)	NOMINAL TONS	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	DIMENSIONS (IN.) (WxLxH)	ELECTRICAL				WEIGHT (LBS.)	ACCESSORIES	BASIS OF DESIGN
							V	PH	HZ	MCA (A)			
IHP-1	3	600	1.5	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-2	3	600	1.5	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-3	3	600	1.5	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-100A	3	810	2	24	28	33"x33"x12"	208 V	1	60	1	100	1, 2, 3, 5	TRANE
IHP-100B	3	600	1.5	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-101A	3	600	1.5	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-101B	3	600	1.5	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-101C	3	600	1.5	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5, 6	TRANE
IHP-102	3	600	1.5	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-103	2	300	0.75	9	12	22"x22"x8"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-104	2	300	0.75	9	12	22"x22"x8"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-106	1	775	2	24	28	46"x12"x14"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-112	3	600	1.50	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE
IHP-114	3	600	1.50	18	23	33"x33"x10"	208 V	1	60	1	50	1, 2, 3, 5	TRANE

OUTDOOR HEAT PUMP (MINI-SPLIT SYSTEM) SCHEDULE

TYPE:
1. OUTDOOR HEAT PUMP

NOTES:
1. REFRIGERANT PIPING SHALL BE SIZED AND ROUTED PER MANUFACTURER'S RECOMMENDATIONS.
2. POWER TO INDOOR UNITS IS PROVIDED THRU OUTDOOR UNITS
3. REFRIGERANT CIRCUIT ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING-TYPE TAMPER-RESISTANT CAPS.
4. UNIT SHALL BE CAPABLE OF MINIMUM LINE LENGTH OF 65FT.

MARK	TYPE	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	ELECTRICAL					EFFICIENCY		BASIS OF DESIGN
				V	PH	HZ	MCA (A)	MOCP (A)	SEER	HSPF	
OHP-1	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-2	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-3	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-100A	1	24	28	208	1	60	22	25	21.1	9.2	TRANE
OHP-100B	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-101A	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-101B	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-101C	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-102	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-103	1	9	12	208	1	60	13	15	21	11.8	TRANE
OHP-104	1	9	12	208	1	60	13	15	21	11.8	TRANE
OHP-106	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-112	1	18	23	208	1	60	16	20	24.7	9.8	TRANE
OHP-114	1	18	23	208	1	60	16	20	24.7	9.8	TRANE

PACKAGED THRU-WALL AC UNIT

TYPE:
1. PACKAGED THRU-WALL HEAT PUMP WITH ELECTRIC HEAT.

NOTES:
IF ANOTHER APPROVED MANUFACTURER IS USED, THE MECHANICAL CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATING ANY DEVIATIONS FROM THE SCHEDULED ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. ALL DEVIATIONS SHALL BE IDENTIFIED ON THE PRODUCT SUBMITTAL DATA.

ACCESSORIES:
1. WALL SLEEVE - COORDINATE SLEEVE DEPTH WITH WALL CONDITIONS.
2. EXTRUDED ALUMINUM ARCH. GRILLE WITH ANODIZED ALUMINUM FINISH. (COORDINATE GRILLE STYLE AND FINISH WITH ARCHITECT PRIOR TO ORDERING.)
3. CONDENSATE DRAIN KIT.
4. SUB-BASE KIT W/ LEVELING LEGS, UL APPROVED FUSE HOLDER, MANUAL DISCONNECT SWITCH, AND PLUG-IN POWER CORD TO SUB BASE.
5. POWER DISCONNECT SWITCH.

MARK	TYPE	SUPPLY FAN AIRFLOW (CFM)	DX COOLING COIL CAPACITY TOTAL (MBH)	DX HEATING CAPACITY TOTAL (MBH)	ELEC HEAT (KW)	ELECTRICAL				EER	COP	QTY BASE / ALT	ACCESSORIES	BASIS OF DESIGN
						V	PH	HZ	MOCP (A)					
TWHP-A	1	390	14.2	13.3	5	208 V	1	60	30	10.4	3.1	8 / 4	1, 2, 3, 4, 5	FRIEDRICH

AIR PURIFICATION SCHEDULE

FLOW	GPS MODEL	GPS QUANTITY	MINIMUM NEEDLE SPACING	VOLTAGE	MOUNTING LOCATION	MINIMUM ION DENSITY (IONS/CC)
CV	GPS-FC	1 PER IHP	1 EVERY 3/4"	208	UNIT SERVED	40 MILLION PER 0.75"

NOTES:
1. BASIS OF DESIGN: GLOBAL PLASMA SOLUTIONS: APPROVED EQUALS BY PHENOMENAL AIRE, ACTIVE AIR, AIRGENICS AND BIOXGEN SUBJECT TO SPECIFICATION COMPLIANCE.
2. MOUNT GPS-FC TO AIR INLET SIDE OF COOLING COIL.
3. IF CONTRACTOR SUBSTITUTES BASIS OF DESIGN WITH ANOTHER MANUFACTURER, CONTRACTOR SHALL COORDINATE ALL ELECTRICAL AND MECHANICAL CHANGES.
4. BI-POLAR IONIZATION SYSTEMS REQUIRING PERISHABLE GLASS TUBES ARE NOT ACCEPTABLE.
5. ALL MANUFACTURER'S MUST PASS UL-867-2007 OZONE CHAMBER TESTING BY EITHER US OR ETL.
6. PROVIDE STAND ALONE ION DETECTOR TO COMMUNICATE WITH THE BAS. SYSTEMS WITHOUT ION DETECTORS SHALL NOT BE ACCEPTABLE.
7. IONIZATION BAR TO HAVE A MINIMUM OF 1 NEEDLEPOINT EVERY 0.75" OF COIL WIDTH. SYSTEMS WITH NEEDLES FURTHER APART SHALL NOT BE ACCEPTABLE.
8. IONIZATION SYSTEMS WITH MULTIPLE ION MODULES MOUNTED TO A BAR SHALL NOT BE AN ACCEPTABLE SUBSTITUTE.
9. IONIZATION SYSTEMS THAT DO NOT USE EPOXY TO PROTECT THE ION CIRCUITRY SHALL NOT BE ACCEPTABLE.
10. IONIZATION OUTPUT SHALL BE A MINIMUM OF 40 MILLION IONS/CC FOR EVERY 0.75" OF COIL WIDTH.
11. BIPOLAR IONIZATION UNIT SHALL DE-ENERGIZE UPON SYSTEM SHUTDOWN.

CONDENSING UNIT SCHEDULE

TYPE:
1. AIR COOLED CONDENSING UNIT.

NOTES:
1. CAPACITY TO BALANCE RESPECTIVE INDOOR AC UNIT.
2. COOLING CAPACITY RATED AT 95°F.
3. UL LISTED, AHRI CERTIFIED.
4. REFRIGERANT CIRCUIT ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING TYPE TAMPER-RESISTANT CAPS. ANY ACCESS DEVICE REQUIRED SHALL BE LEFT ON SITE WITH THE OWNER AT PROJECT CLOSE OUT.

ACCESSORIES:
1. PHASE PROTECTION.
2. MICROPROCESSOR CONTROLS.
3. ISOLATION VALVES.
4. LIQUID LINE REFRIGERANT FILTER DRIER.
5. ANTI SHORT CYCLE TIMER.
6. LOW AMBIENT CONTROL DOWN TO 0°F.
7. HAIL / VANDAL GUARDS.
8. THERMAL EXPANSION VALVE.

MARK	TYPE	NOMINAL TONS	COOLING CAPACITY (MBH)	ELECTRICAL					EFFICIENCY	BASIS OF DESIGN
				V	PH	HZ	MCA (A)	MOCP (A)	COOLING (SEER, EER/IEER)	
CU-1	1	7.5	90	208 V	3	60	38	60	11.5 / 14.8	TRANE

ENERGY RECOVERY UNIT

TYPE:
INDOOR, CONSTANT VOLUME, HORIZONTAL DRAW-THRU, WITH DX COOLING COIL, ELECTRIC HEAT, HOT GAS RE-HEAT COIL, FIXED, ENERGY RECOVERY WHEEL, AND MATCHED CONDENSING UNIT.

NOTES:
1. COOLING CAPACITY IS NET CAPACITY @ 95°F AMBIENT.
2. UNIT SHALL BE ASHRAE 90.1 - 2013 COMPLIANT.
3. CKT 1: SPP
4. CKT 2: ELECTRIC HEAT

ACCESSORIES:
1. 2" THICK THROWAWAY FILTERS, MERV 13.
2. INVERTER DUTY RATED MOTORS
3. DIRECT DRIVE SUPPLY & EXHAUST FAN.
4. VARIABLE FREQUENCY DRIVE FOR SUPPLY & EXHAUST FAN.
5. HINGED ACCESS DOORS.
6. STAINLESS STEEL DRAIN PAN.
7. MARINE LIGHTS IN ALL SECTIONS.
8. ELECTRIC HEAT WITH SCR CONTROL.

COMPONENTS
1. INTAKE SECTION WITH OUTSIDE AIR CONNECTION WITH AUTO DAMPERS.
2. FILTER SECTION WITH ANGLED FILTERS.
3. ENERGY RECOVERY WHEEL SECTION.
4. ELECTRIC REHEAT SECTION.
5. DX COOLING COIL.
6. ACCESS SECTION.
7. DIRECT DRIVE PLENUM FAN IN SUPPLY FAN SECTION WITH HORIZONTAL DISCHARGE.
8. DIRECT DRIVE PLENUM FAN IN EXHAUST FAN SECTION WITH HORIZONTAL DISCHARGE.

MARK	SUPPLY FAN			EXHAUST FAN			SUMMER			WINTER			ELECTRICAL					ELECTRIC HEAT		DX COOLING COIL				WEIGHT (LBS)	ACCESSORIES	BASIS OF DESIGN	
	CFM	"W.G. E.S.P.	HP	CFM	"W.G. E.S.P.	HP	OUTSIDE AIR EAT (°F) (DB/WB)	OUTSIDE AIR LAT (°F) (DB/WB)	EXHAUST ENTERING (°F) (DB/WB)	OUTSIDE AIR EAT (°F) (DB/WB)	OUTSIDE AIR LAT (°F) (DB/WB)	EXHAUST ENTERING (°F) (DB/WB)	V	PH	Hz	MCA CKT 1/ CKT 2	MOCP CKT 1/ CKT 2	KW	STAGES	LAT (°F) (DB/WB)	TOTAL (MBH)	SENS (MBH)	NOM. TONS			MANUFACTURER	MODEL
ERU-1	1885	1.10	3	1775	1.10	3	95 / 78	79 / 66.4	75 / 62.5	17 / 15	58.5 / 50.5	70 / 58	208	3	60	31.3 / 43.8	45 / 45	12	SCR	54.4 / 53.3	86.6	58.6	7.5	2448	1, 2, 3, 4, 5, 6, 8	TRANE	CSAA
ERU-ALT	2175	1.10	3	2020	1.10	3	95 / 78	79 / 66.4	75 / 62.5	17 / 15	58.5 / 50.5	70 / 58	208	3	60	31.3 / 43.8	45 / 45	12	SCR	54.4 / 53.3	86.6	58.6	7.5	2448	1, 2, 3, 4, 5, 6, 8	TRANE	CSAA

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

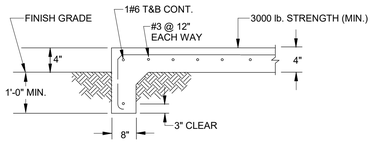
SHEET TITLE:
MECHANICAL SCHEDULES

PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025

REVISIONS
1 1/5/2026 REVISION

JOB NO. 25-32

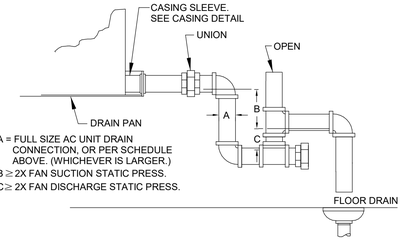
SHEET NO:
M0.2A



CONCRETE PAD DETAIL

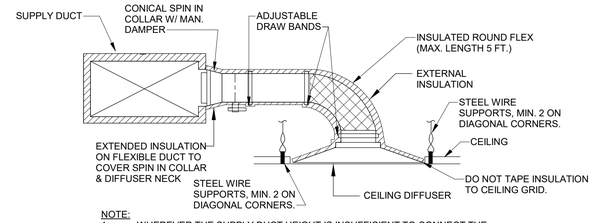
NO SCALE

MINIMUM CONDENSATE PIPE SIZE	
AC TONS	MIN. DRAIN SIZE
0 TO 20	1"
21 TO 40	1-1/4"
41 TO 60	1-1/2"
61 TO 100	2"
101 TO 250	3"
251 & LARGER	4"



AC UNIT DRAIN TRAP DETAIL

NO SCALE

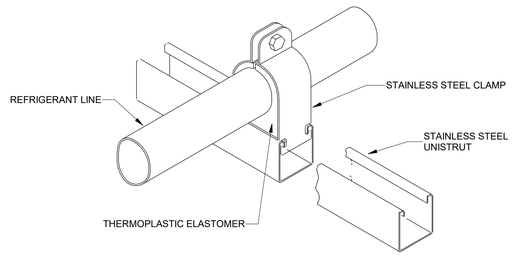


NOTE:

1. WHEREVER THE SUPPLY DUCT HEIGHT IS INSUFFICIENT TO CONNECT THE SPIN-IN, THE SPIN-IN MAY BE CONNECTED TO THE TOP OR BOTTOM OF THE DUCT. IF THE BRANCH DUCT MUST BE CONNECTED TO THE SIDE OF THE MAIN DUCT, USE A RECTANGULAR BRANCH DUCT CONNECTION OF EQUAL AIR VELOCITY AND TRANSITION TO ROUND DUCT. REFER TO SPECIFICATION FOR MAXIMUM TURNS IN FLEX DUCT.
2. PROVIDE EXTERNAL INSULATION ON ALL ROUND BRANCH DUCTWORK. SEE SPECS FOR THICKNESS AND EXTENT.
3. PROVIDE EXTERNAL INSULATION ON BACK SIDE OF CEILING DIFFUSERS. THICKNESS TO MATCH BRANCH DUCT INSULATION THICKNESS.

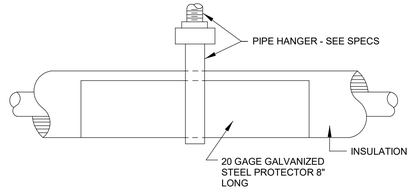
CEILING DIFFUSER INSTALLATION DETAIL

NO SCALE

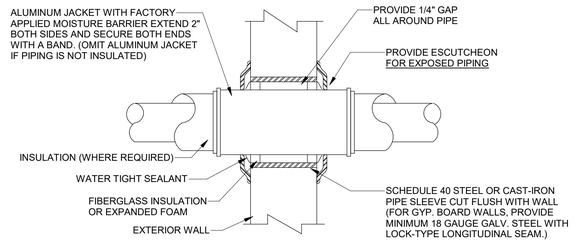


REFRIGERANT LINE SUPPORT DETAIL

NO SCALE

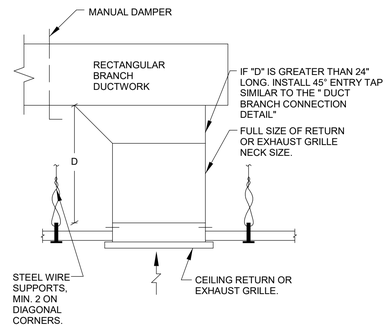


INSULATED LINES



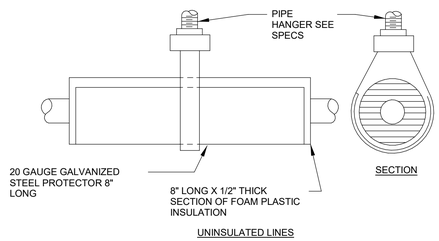
PIPE PENETRATION DETAIL

NO SCALE



CEILING RETURN/EXHAUST BRANCH CONNECTION DETAIL

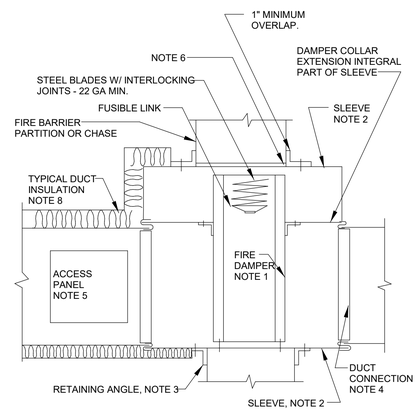
NO SCALE



UNINSULATED LINES

REFRIGERANT PIPING HANGER DETAIL

NO SCALE

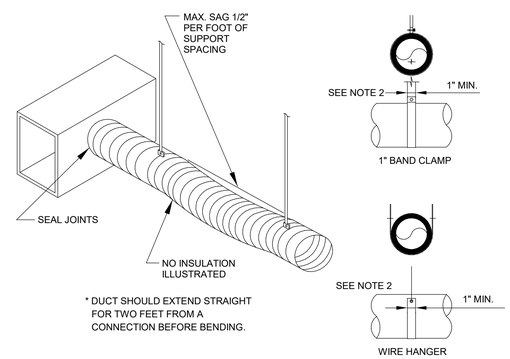


NOTES:

1. A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION, IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS AND SMACNA FIRE DAMPER INSTALLATION GUIDELINE, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND RETAINING ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION. ALL FIRE DAMPERS SHALL BE UL LISTED.
2. GALVANIZED SLEEVE: GAGE NOT LESS THAN CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
3. RETAINING ANGLES: GALVANIZED STEEL, NOT LESS THAN 1-1/2" x 1-1/2", 14 GAGE, TO PROVIDE 1" MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES. RETAINING ANGLES MUST NOT BE ATTACHED TO EACH OTHER AT CORNERS. SECURE RETAINING ANGLES TO FIRE DAMPER SLEEVE ONLY.
4. BREAKAWAY DUCT CONNECTION: CONTRACTOR'S OPTION OF TYPES SHOWN IN SMACNA OR PER MANUFACTURER'S RECOMMENDATIONS.
5. ACCESS DOORS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS. ACCESS DOORS SHALL BE AT A MINIMUM 12 INCHES SQUARE OR PROVIDED WITH A REMOVABLE DUCT SECTION.
6. PROVIDE CLEARANCE TO PERMIT INSTALLATION & EXPANSION. PROVIDE 1/8" PER FOOT LARGER THAN THE OVERALL SIZE OF THE DAMPER/SLEEVE ASSEMBLY. THE MAXIMUM OPENING SIZE SHALL NOT EXCEED 1/8" PER FOOT + 2", NOR SHALL THE OPENING BE LESS THAN 1/4" LARGER THAN THE DAMPER/SLEEVE ASSEMBLY.
7. ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THRU ATTIC FLOORS AND MECHANICAL ROOM FLOORS, SHALL BE PROVIDED WITH 4" HIGH CONCRETE CURB AROUND OPENING FOR DUCT.

FIRE DAMPER INSTALLATION DETAIL

NO SCALE



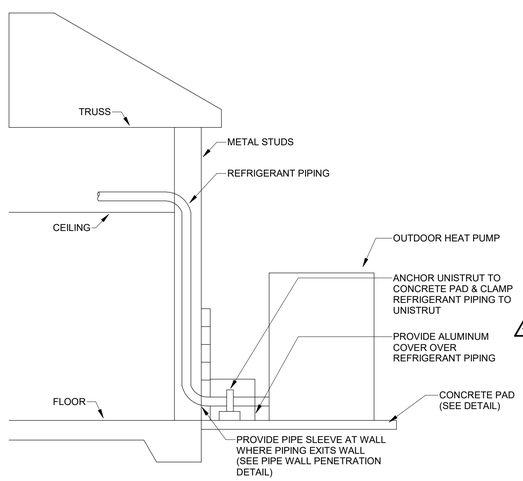
* DUCT SHOULD EXTEND STRAIGHT FOR TWO FEET FROM A CONNECTION BEFORE BENDING.

NOTES:

1. SUPPORT SYSTEM MUST NOT DAMAGE DUCT OR CAUSE OUT OF ROUND SHAPE.
2. DUCTS ARE FLEXIBLE WITH EXTERNAL INSULATION AND VAPOR BARRIER JACKETING.
3. MIN. CENTER LINE BEND LINE RADIUS IS ONE DIA. (OR INSIDE RADIUS OF D/2).
4. FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 5 LINEAR FEET.

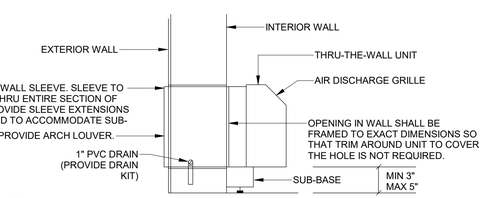
FLEXIBLE DUCT SUPPORT DETAIL

NO SCALE



CONDENSING UNIT INSTALLATION DETAIL

NO SCALE



NOTE:
ELECTRICAL CONTRACTOR TO HARDWIRE SUB-BASE. CORD FROM UNIT SHALL PLUG INTO SUB-BASE OUTLET. VERIFY ACTUAL WALL SECTION AND MOUNTING HEIGHT W/ ARCHITECTURAL PLANS.

THRU-WALL AC UNIT DETAIL

NO SCALE

Dewberry
2 Riverchase Office Plaza
Suite 205
Hoover, AL 35244
(205) 988-2069
www.dewberry.com
Project Number : 50189177

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
MECHANICAL DETAILS

PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025
REVISIONS	
1	1/5/2026 REVISION

JOB NO. 25-32

SHEET NO:

M0.3A

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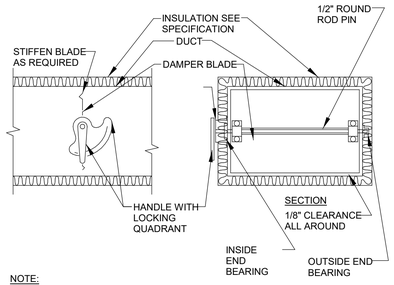
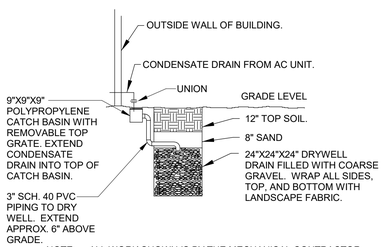


NOTE:

1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.
3. MANUAL DAMPERS SHALL BE EQUAL TO RUSKIN MD35 (FOR RECTANGULAR DUCTS) AND SHALL BE EQUAL TO RUSKIN MDRS25 (FOR ROUND DUCTS).

MANUAL DAMPER DETAIL

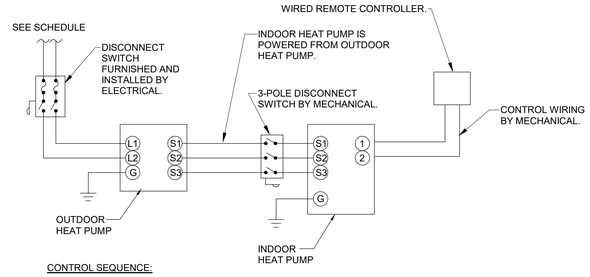
NO SCALE



NOTE: ALL WORK SHOWN IS BY THE MECHANICAL CONTRACTOR.

DRY WELL DETAIL

NO SCALE

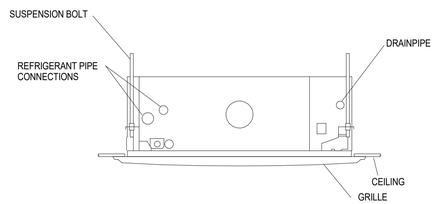


CONTROL SEQUENCE:

THE AC UNIT SHALL BE CONTROLLED BY A WIRED WALL MOUNTED REMOTE CONTROLLER. THE CONTROLLER SHALL CYCLE ON COMPRESSOR(S) TO MAINTAIN COOLING SETPOINT (74°F - ADJUSTABLE) AND HEATING SETPOINT (70°F - ADJUSTABLE). ALL MINI-SPLIT AC UNITS THAT SERVE ELECTRICAL AND IT ROOMS SHALL NOT SET THEIR TEMPERATURE BACK AT NIGHT. FOR ALL MINI-SPLIT AC UNITS THAT SERVE OFFICES, CLASSROOMS, ETC. SHALL SET THEIR TEMPERATURE BACK TO 4°F ABOVE SETPOINT IN SUMMER AND 4°F BELOW SETPOINT IN THE WINTER. COORDINATE WITH OWNER TO ESTABLISH OCCUPIED / UNOCCUPIED SCHEDULES.

DUCTLESS SPLIT SYSTEM CONTROLS

NO SCALE



INDOOR CEILING CASSETTE DETAIL

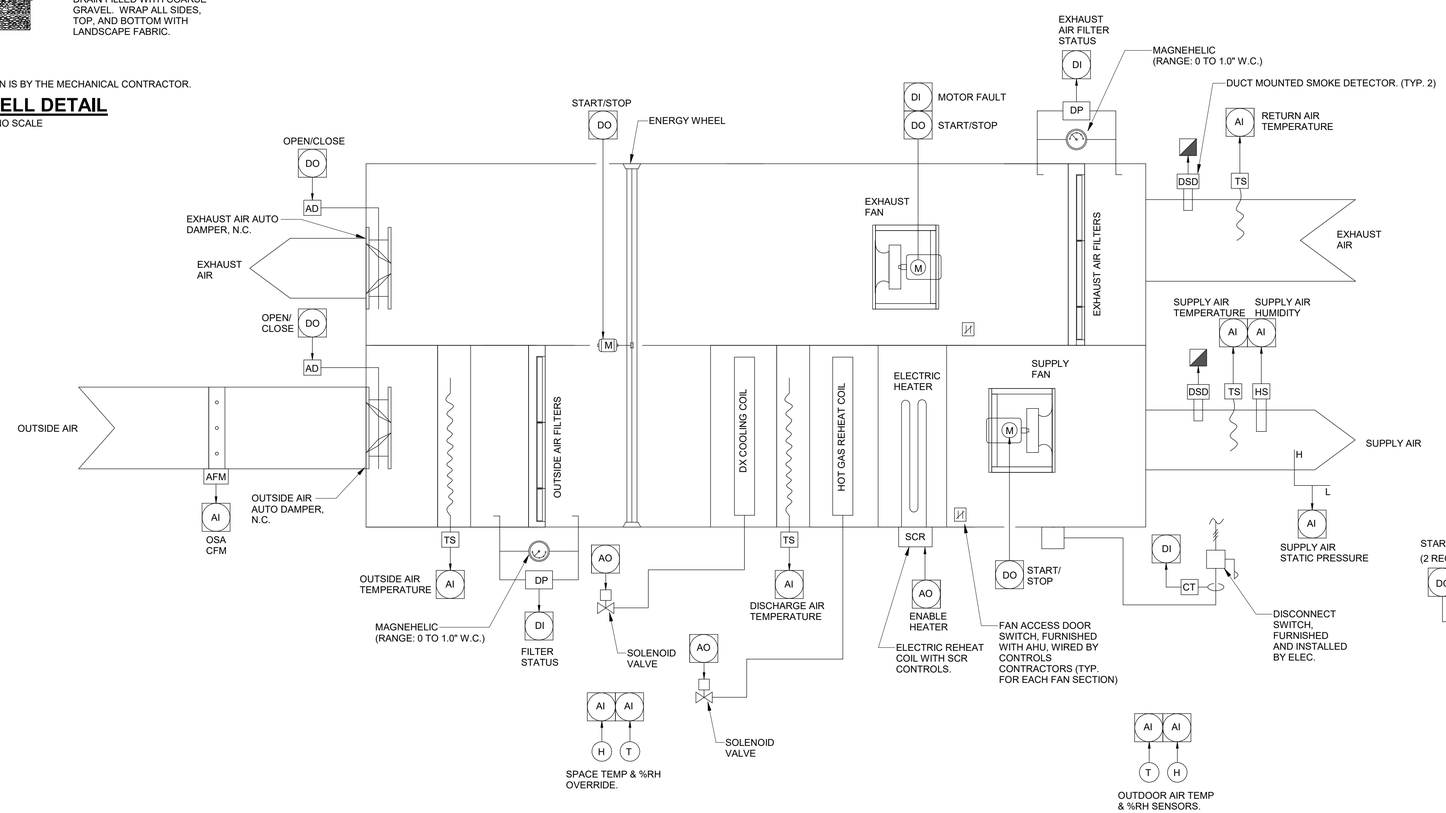
NO SCALE

AIR PURIFICATION SCHEDULE

FLOW	MFG MODEL NO.	GPS QUANTITY	MINIMUM NEEDLE SPACING	V/Ø	W	MOUNTING LOCATION	MINIMUM ION DENSITY (IONS/CC)
CV	GPS-iRIB	1 PER UNIT	1 EVERY 3/4"	208/1	15	UNIT SERVED	40 MILLION PER 0.75"

NOTES:

1. BASIS OF DESIGN: GLOBAL PLASMA SOLUTIONS: APPROVED EQUALS BY PHENOMENAL AIRE, ACTIVE AIR, AIRGENICS AND BIOXGEN SUBJECT TO SPECIFICATION COMPLIANCE.
2. MOUNT GPS-IMOD TO AIR INLET SIDE OF COOLING COIL.
3. IF CONTRACTOR SUBSTITUTES BASIS OF DESIGN WITH ANOTHER MANUFACTURER, CONTRACTOR SHALL COORDINATE ALL ELECTRICAL AND MECHANICAL CHANGES.
4. BI-POLAR IONIZATION SYSTEMS REQUIRING PERISHABLE GLASS TUBES ARE NOT ACCEPTABLE.
5. ALL MFGS MUST PASS UL-867-2007 OZONE CHAMBER TESTING BY EITHER UL OR ETL.
6. PROVIDE STAND ALONE ION DETECTOR TO COMMUNICATE WITH THE BAS. SYSTEMS WITHOUT ION DETECTORS SHALL NOT BE ACCEPTABLE.
7. IONIZATION BAR TO HAVE A MINIMUM OF 1 NEEDLEPOINT EVERY 0.75" OF COIL WIDTH. SYSTEMS WITH NEEDLES FURTHER APART SHALL NOT BE ACCEPTABLE.
8. IONIZATION SYSTEMS WITH MULTIPLE ION MODULES MOUNTED TO A BAR SHALL NOT BE AN ACCEPTABLE SUBSTITUTE.
9. IONIZATION SYSTEMS THAT DO NOT USE EPOXY TO PROTECT THE ION CIRCUITRY SHALL NOT BE ACCEPTABLE.
10. IONIZATION OUTPUT SHALL BE A MINIMUM OF 40 MILLION IONS/CC FOR EVERY 0.75" OF COIL WIDTH.
11. BIPOLAR IONIZATION UNIT SHALL DE-ENERGIZE UPON SYSTEM SHUTDOWN.



OUTSIDE AIR UNIT CONTROLS - ENERGY RECOVERY WHEEL, DX COOLING, WITH ELECTRIC HEAT

NO SCALE

ENERGY RECOVERY UNIT CONTROL SEQUENCE:

THE ENERGY RECOVERY UNIT (ERU) SHALL BE STARTED AND STOPPED BY THE BUILDING AUTOMATION SYSTEM SUBJECT TO AN OWNER'S OCCUPANCY SCHEDULE AND SUBJECT TO ALL INTERNAL UNIT SAFETIES. OCCUPIED AND UNOCCUPIED HOURS SHALL BE DETERMINED BY THE OWNER AND SHALL BE FULLY ADJUSTABLE AT THE BUILDING AUTOMATION SYSTEM FRONT END BY THE OWNER.

UNOCCUPIED MODE:
DURING UNOCCUPIED MODE, THE EXHAUST AIR AND OUTSIDE AIR AUTO DAMPERS SHALL BE CLOSED AND THE EXHAUST AIR AND OUTSIDE AIR FANS SHALL BE OFF.

OCCUPIED MODE:
DURING OCCUPIED HOURS, THE EXHAUST AIR AND OUTSIDE AIR DAMPERS SHALL OPEN. ONCE THE DAMPERS ARE PROVEN TO BE OPEN, THE SUPPLY FAN AND EXHAUST FAN SHALL BE STARTED BY THE BUILDING AUTOMATION SYSTEM AND SHALL RUN CONTINUOUSLY. TEST AND BALANCE SHALL ADJUST THE FAN SPEED AT THE VARIABLE FREQUENCY DRIVE FOR EACH FAN TO PROVIDE THE SCHEDULED OUTSIDE AIR AND EXHAUST AIR CFM. THIS FAN SPEED SHALL BE SET AND SHALL BE DISPLAYED AT THE BAS FRONT END. THE FAN SPEED FOR THE OUTSIDE AIR AND EXHAUST AIR FANS SHALL NOT VARY.

THE BAS SHALL STAGE ON COMPRESSORS AND OPEN/CLOSE SOLENOID VALVE(S) AT THE DX COIL TO MAINTAIN A 54°F SUPPLY AIR TEMPERATURE AS MEASURED AT THE TEMPERATURE SENSOR DOWNSTREAM OF THE DX COIL. THE HOT GAS REHEAT COIL AND ELECTRIC HEATER IN THE DOAS SHALL MODULATE TO MAINTAIN A TEMPERATURE LEAVING THE ERU OF 72°F (SUMMER) AND 70°F (WINTER) AS MEASURED AT THE DISCHARGE AIR TEMPERATURE SENSOR.

DEHUMIDIFICATION MODE:
IF THE SPACE MOUNTED RELATIVE HUMIDITY SENSOR RISES ABOVE 60% RH FOR LONGER THAN 10 MINUTES DURING OCCUPIED OR UNOCCUPIED MODES, THE ERU SHALL GO INTO DEHUMIDIFICATION MODE. IN DEHUMIDIFICATION MODE, THE EXHAUST AIR AND OUTSIDE AIR DAMPERS SHALL BE OPEN, THE EXHAUST AIR AND OUTSIDE AIR FANS SHALL RUN, THE CONDENSING UNIT SHALL BE ON AND PROVIDING 100% COOLING, AND THE HOT GAS REHEAT COIL AND ELECTRIC HEATER SHALL MODULATE TO MAINTAIN A SPACE TEMPERATURE OF 72°F (SUMMER) AND 70°F (WINTER). ONCE THE HUMIDITY RETURNS TO BELOW 60%RH, THE ERU SHALL RETURN TO NORMAL OCCUPIED OR UNOCCUPIED MODE.

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
MECHANICAL DETAILS AND CONTROLS

PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025

REVISIONS

1	1/5/2026	REVISION

JOB NO. 25-32

SHEET NO:

M0.4A

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (ERU-1)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	SERVED BY	REFRIGERANT TYPE	REFRIGERANT CONCENTRATION LIMIT (lb/MCf)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
100 - CORRIDOR	994	9,443	ERU-1	R-454B	3.1	1.3	29.3	1
101 - CORRIDOR	828	7,866	ERU-1	R-454B	3.1	1.1	24.4	1
102 - CONFERENCE ROOM	304	2,888	ERU-1	R-454B	3.1	0.4	9.0	1
103 - OFFICE	160	1,520	ERU-1	R-454B	3.1	0.2	4.7	1
104 - OFFICE	160	1,520	ERU-1	R-454B	3.1	0.2	4.7	1
105 - MECH	297	2,822	ERU-1	R-454B	3.1	0.4	8.7	1
108 - CLASSROOM	1,152	10,944	ERU-1	R-454B	3.1	1.5	33.9	1
109 - CLASSROOM	816	7,752	ERU-1	R-454B	3.1	1.1	24.0	1
110 - CLASSROOM	816	7,752	ERU-1	R-454B	3.1	1.1	24.0	1
111 - CLASSROOM	816	7,752	ERU-1	R-454B	3.1	1.1	24.0	1
112 - GIRLS TOILET	368	3,496	ERU-1	R-454B	3.1	0.5	10.8	1
113 - JAN.	43	409	ERU-1	R-454B	3.1	0.1	1.3	1
114 - BOYS TOILET	368	3,496	ERU-1	R-454B	3.1	0.5	10.8	1
ALT CLASSROOM	901	8,560	ERU-1	R-454B	3.1	1.2	26.5	1
					MAXIMUM ALLOWED REFRIGERANT:		236.3	
					TOTAL REFRIGERANT CHARGE:	10.7		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
100 - CORRIDOR	994	9,443	13.4	29.3	1
101 - CORRIDOR	828	7,866	9.9	24.4	1
102 - CONFERENCE ROOM	304	2,888	4.8	9.0	1
103 - OFFICE	160	1,520	2.2	4.7	1
104 - OFFICE	160	1,520	2.2	4.7	1
105 - MECH	297	2,822	0.4	8.7	1
108 - CLASSROOM	1,152	10,944	5.2	33.9	1
109 - CLASSROOM	816	7,752	4.8	24.0	1
110 - CLASSROOM	816	7,752	4.8	24.0	1
111 - CLASSROOM	816	7,752	4.8	24.0	1
112 - GIRLS TOILET	368	3,496	4.9	10.8	1
113 - JAN.	43	409	0.1	1.3	1
114 - BOYS TOILET	368	3,496	4.9	10.8	1
ALT CLASSROOM	901	8,560	10.0	24.0	1
		MAXIMUM ALLOWED REFRIGERANT:		233.8	
		TOTAL REFRIGERANT CHARGE:	72.4		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (TWHPs)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	SERVED BY	REFRIGERANT TYPE	REFRIGERANT CONCENTRATION LIMIT (lb/MCf)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
108 - CLASSROOM	1,152	10,944	TWHP-A	R-32	4.8	3.7	52.5	1
109 - CLASSROOM	816	7,752	TWHP-A	R-32	4.8	3.7	37.2	1
110 - CLASSROOM	816	7,752	TWHP-A	R-32	4.8	3.7	37.2	1
111 - CLASSROOM	816	7,752	TWHP-A	R-32	4.8	3.7	37.2	1
					MAXIMUM ALLOWED REFRIGERANT:		164.2	
					TOTAL REFRIGERANT CHARGE:	14.8		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (IHPs)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	SERVED BY	REFRIGERANT TYPE	REFRIGERANT CONCENTRATION LIMIT (lb/MCf)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
100 - CORRIDOR	994	9,443	IHP-100A,B	R-454B	3.1	12.1	29.3	1
101 - CORRIDOR	828	7,866	IHP-101B,C	R-454B	3.1	8.8	24.4	1
102 - CONFERENCE ROOM	304	2,888	IHP-102	R-454B	3.1	4.4	9.0	1
103 - OFFICE	160	1,520	IHP-103	R-454B	3.1	2.0	4.7	1
104 - OFFICE	160	1,520	IHP-104	R-454B	3.1	2.0	4.7	1
106 - ELEC	117	1,108	IHP-106	R-454B	3.1	4.4	3.4	2
112 - GIRLS TOILET	368	3,496	IHP-112	R-454B	3.1	4.4	10.8	1
114 - BOYS TOILET	368	3,496	IHP-114	R-454B	3.1	4.4	10.8	1
ALT CLASSROOM	816	7,752	IHP-1,2	R-454B	3.1	8.8	24.0	1
					MAXIMUM ALLOWED REFRIGERANT:		106.0	
					TOTAL REFRIGERANT CHARGE:	51.3		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.
2. MECHANICAL EXHAUST IS PROVIDED THAT WILL BE INTERLOCKED WITH RESPECTIVE UNIT REFRIGERANT LEAK SENSOR

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (ERU-ALT)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	SERVED BY	REFRIGERANT TYPE	REFRIGERANT CONCENTRATION LIMIT (lb/MCf)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
100 - CORRIDOR	994	9,443	ERU-ALT	R-454B	3.1	1.1	29.3	1
101 - CORRIDOR	828	7,866	ERU-ALT	R-454B	3.1	0.9	24.4	1
102 - CONFERENCE ROOM	304	2,888	ERU-ALT	R-454B	3.1	0.3	9.0	1
103 - OFFICE	160	1,520	ERU-ALT	R-454B	3.1	0.2	4.7	1
104 - OFFICE	160	1,520	ERU-ALT	R-454B	3.1	0.2	4.7	1
105 - MECH	297	2,822	ERU-ALT	R-454B	3.1	0.3	8.7	1
108 - CLASSROOM	1,152	10,944	ERU-ALT	R-454B	3.1	1.3	33.9	1
109 - CLASSROOM	816	7,752	ERU-ALT	R-454B	3.1	0.9	24.0	1
110 - CLASSROOM	816	7,752	ERU-ALT	R-454B	3.1	0.9	24.0	1
111 - CLASSROOM	816	7,752	ERU-ALT	R-454B	3.1	0.9	24.0	1
112 - GIRLS TOILET	368	3,496	ERU-ALT	R-454B	3.1	0.4	10.8	1
113 - JAN.	43	409	ERU-ALT	R-454B	3.1	0.0	1.3	1
114 - BOYS TOILET	368	3,496	ERU-ALT	R-454B	3.1	0.4	10.8	1
115 - ALT CLASSROOM	837	7,952	ERU-ALT	R-454B	3.1	0.9	24.6	1
116 - ALT CLASSROOM	837	7,952	ERU-ALT	R-454B	3.1	0.9	24.6	1
ALT CLASSROOM	901	8,560	ERU-ALT	R-454B	3.1	1.0	26.5	1
					MAXIMUM ALLOWED REFRIGERANT:		285.6	
					TOTAL REFRIGERANT CHARGE:	10.7		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (ALT)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
100 - CORRIDOR	994	9,443	13.2	29.3	1
101 - CORRIDOR	828	7,866	9.7	24.4	1
102 - CONFERENCE ROOM	304	2,888	4.7	9.0	1
103 - OFFICE	160	1,520	2.2	4.7	1
104 - OFFICE	160	1,520	2.2	4.7	1
105 - MECH	297	2,822	0.3	8.7	1
108 - CLASSROOM	1,152	10,944	5.0	33.9	1
109 - CLASSROOM	816	7,752	4.6	24.0	1
110 - CLASSROOM	816	7,752	4.6	24.0	1
111 - CLASSROOM	816	7,752	4.6	24.0	1
112 - GIRLS TOILET	368	3,496	4.8	4.7	1
113 - JAN.	43	409	0.0	1.3	1
114 - BOYS TOILET	368	3,496	4.8	4.7	1
115 - ALT CLASSROOM	837	7,952	4.6	24.6	1
116 - ALT CLASSROOM	837	7,952	4.6	24.6	1
ALT CLASSROOM	901	8,560	9.8	10.8	1
		MAXIMUM ALLOWED REFRIGERANT:		257.6	
		TOTAL REFRIGERANT CHARGE:	79.8		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (TWHPs)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	SERVED BY	REFRIGERANT TYPE	REFRIGERANT CONCENTRATION LIMIT (lb/MCf)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
108 - CLASSROOM	1,152	10,944	TWHP-A	R-32	4.8	3.7	52.5	1
109 - CLASSROOM	816	7,752	TWHP-A	R-32	4.8	3.7	37.2	1
110 - CLASSROOM	816	7,752	TWHP-A	R-32	4.8	3.7	37.2	1
111 - CLASSROOM	816	7,752	TWHP-A	R-32	4.8	3.7	37.2	1
115 - ALT CLASSROOM	837	7,952	TWHP-A	R-32	4.8	3.7	38.2	1
116 - ALT CLASSROOM	837	7,952	TWHP-A	R-32	4.8	3.7	38.2	1
					MAXIMUM ALLOWED REFRIGERANT:		240.5	
					TOTAL REFRIGERANT CHARGE:	22.2		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (IHPs)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	SERVED BY	REFRIGERANT TYPE	REFRIGERANT CONCENTRATION LIMIT (lb/MCf)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
100 - CORRIDOR	994	9,443	IHP-100A,B	R-454B	3.1	12.1	29.3	1
101 - CORRIDOR	828	7,866	IHP-101B,C	R-454B	3.1	8.8	24.4	1
102 - CONFERENCE ROOM	304	2,888	IHP-102	R-454B	3.1	4.4	9.0	1
103 - OFFICE	160	1,520	IHP-103	R-454B	3.1	2.0	4.7	1
104 - OFFICE	160	1,520	IHP-104	R-454B	3.1	2.0	4.7	1
112 - GIRLS TOILET	368	3,496	IHP-112	R-454B	3.1	4.4	10.8	1
114 - BOYS TOILET	368	3,496	IHP-114	R-454B	3.1	4.4	10.8	1
ALT CLASSROOM	816	7,752	IHP-1,2	R-454B	3.1	8.8	24.0	1
					MAXIMUM ALLOWED REFRIGERANT:		106.0	
					TOTAL REFRIGERANT CHARGE:	46.9		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

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LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
MECHANICAL CALCS

LATHAN McKEE ARCHITECTS
No. 24747
PROFESSIONAL
01/05/2026
ENGINEER
WADE STEWART

PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025

REVISIONS

1	1/5/2026 REVISION

JOB NO. 25-32

SHEET NO:
M0.5A

OSA CALCULATIONS

Room	Room Type	Rp cfm / P	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Ez	Voz cfm	Provided OSA (IAQP) cfm
108 CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	1,152	418	0.80	523	140
109 CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	816	378	0.80	472	140
110 CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	816	378	0.80	472	140
111 CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	816	378	0.80	472	140
112 GIRLS TOILET	Toilets-public	0	0	0.00	368	0	0.80	0	0
113 JAN.	Janitor closets, trash rooms, recycling	0	0	0.00	43	0	0.80	0	0
114 BOYS TOILET	Toilets-public	0	0	0.00	368	0	0.80	0	0
100 CORRIDOR	Corridors	0	0	0.06	994	60	0.80	75	0
101 CORRIDOR	Corridors	0	0	0.06	828	50	0.80	62	0
102 CONFERENCE ROOM	Conference/meeting	5	10	0.06	304	68	0.80	85	80
103 OFFICE	Office spaces	5	1	0.06	160	15	0.80	18	10
104 OFFICE	Office spaces	5	1	0.06	160	15	0.80	18	10
105 MECH	Storage rooms	0	0	0.12	297	36	0.80	45	70
ALT CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	901	388	0.80	485	160
						Total Required by ERU-1:		2,728	
						Total Provided by ERU-1:			890

EXHAUST AIR CALCULATIONS

# OF FIXTURES	# OF SHOWERS	EXHAUST RATE CFM/FT²	EXHAUST RATE CFM / FIXTURE	EXHAUST RATE CFM/ SHOWER	REQUIRED EXHAUST CFM	PROVIDED EXHAUST CFM
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
6	0	N/A	50	N/A	300	300
1	0	1	N/A	N/A	43	50
6	0	N/A	50	N/A	300	300
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
			Total Required Exhaust		643	
			Total Provided Exhaust			650

OSA CALCULATIONS

Room	Room Type	Rp cfm / P	Pz People	Ra cfm/ft²	Az ft³	Vbz cfm	Ez	Voz cfm	Provided OSA (IAQP) cfm
108 CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	1,152	418	0.80	523	140
109 CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	816	378	0.80	472	140
110 CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	816	378	0.80	472	140
111 CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	816	378	0.80	472	140
112 GIRLS TOILET	Toilets-public	0	0	0.00	368	0	0.80	0	0
113 JAN.	Janitor closets, trash rooms, recycling	0	0	0.00	43	0	0.80	0	0
114 BOYS TOILET	Toilets-public	0	0	0.00	368	0	0.80	0	0
100 CORRIDOR	Corridors	0	0	0.06	994	60	0.80	75	0
101 CORRIDOR	Corridors	0	0	0.06	828	50	0.80	62	0
102 CONFERENCE ROOM	Conference/meeting	5	10	0.06	304	68	0.80	85	80
103 OFFICE	Office spaces	5	1	0.06	160	14	0.80	17	10
104 OFFICE	Office spaces	5	1	0.06	160	14	0.80	17	10
105 MECH	Storage rooms	0	0	0.12	297	36	0.80	45	70
115 ALT CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	837	380	0.80	476	140
116 ALT CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	837	380	0.80	476	140
ALT CLASSROOM	Classrooms (ages 9 plus)	10	28	0.12	901	388	0.80	485	160
						Total Required by ERU-ALT:		3,677	
						Total Provided by ERU-ALT:			1,170

EXHAUST AIR CALCULATIONS

# OF FIXTURES	# OF SHOWERS	EXHAUST RATE CFM/FT²	EXHAUST RATE CFM / FIXTURE	EXHAUST RATE CFM/ SHOWER	REQUIRED EXHAUST CFM	PROVIDED EXHAUST CFM
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
6	0	N/A	50	N/A	300	300
1	0	1	N/A	N/A	43	50
6	0	N/A	50	N/A	300	300
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
0	0	N/A	N/A	N/A	0	0
			Total Required Exhaust		643	
			Total Provided Exhaust			650

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ALABAMA REGISTERED PROFESSIONAL ENGINEER
No. 24747
01/05/2026
WADE STEWART

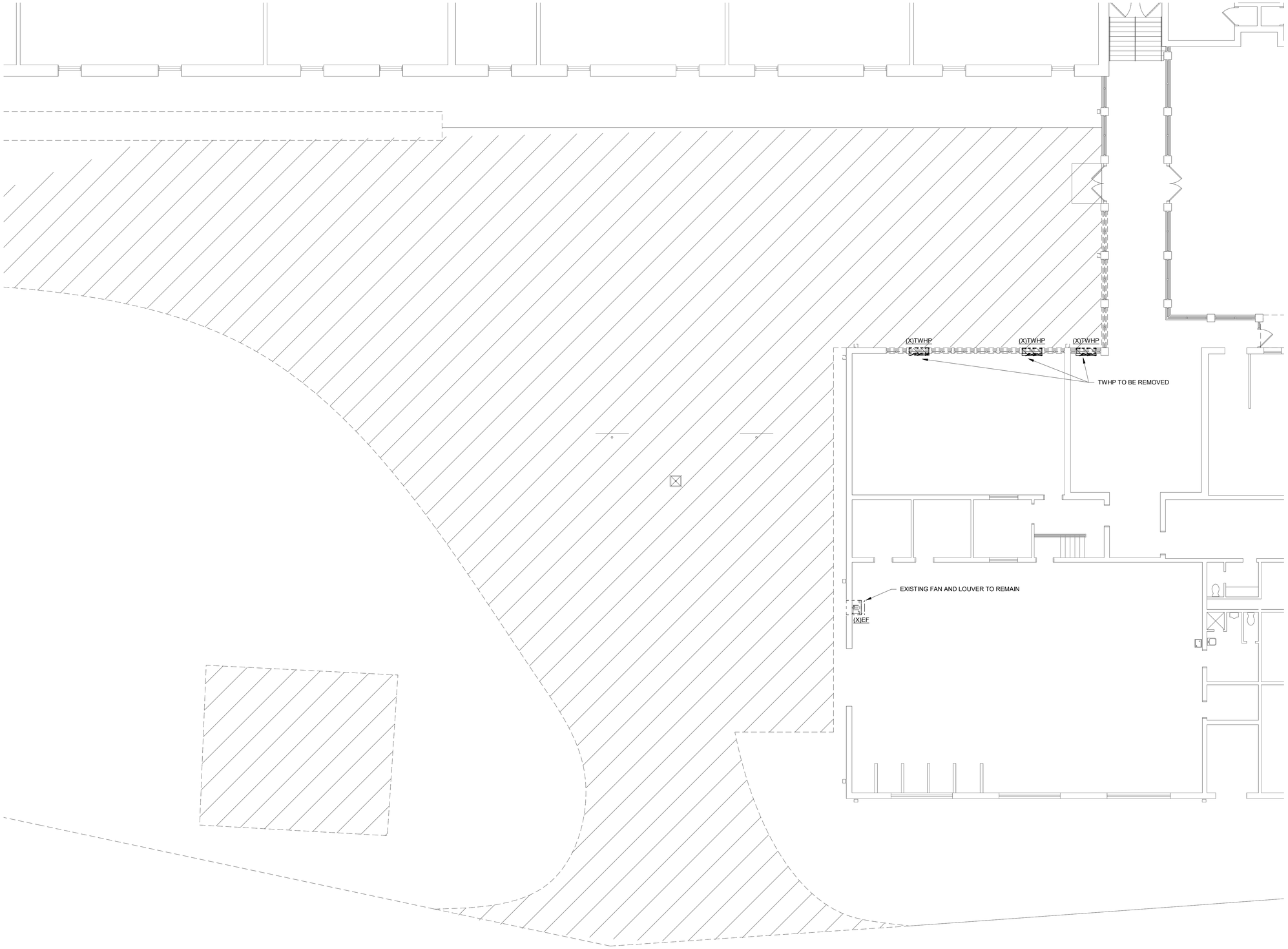
PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025

REVISIONS

1	1/5/2026	REVISION

JOB NO. 25-32

SHEET NO:
M0.6A



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

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MECHANICAL FLOOR PLAN - DEMOLITION

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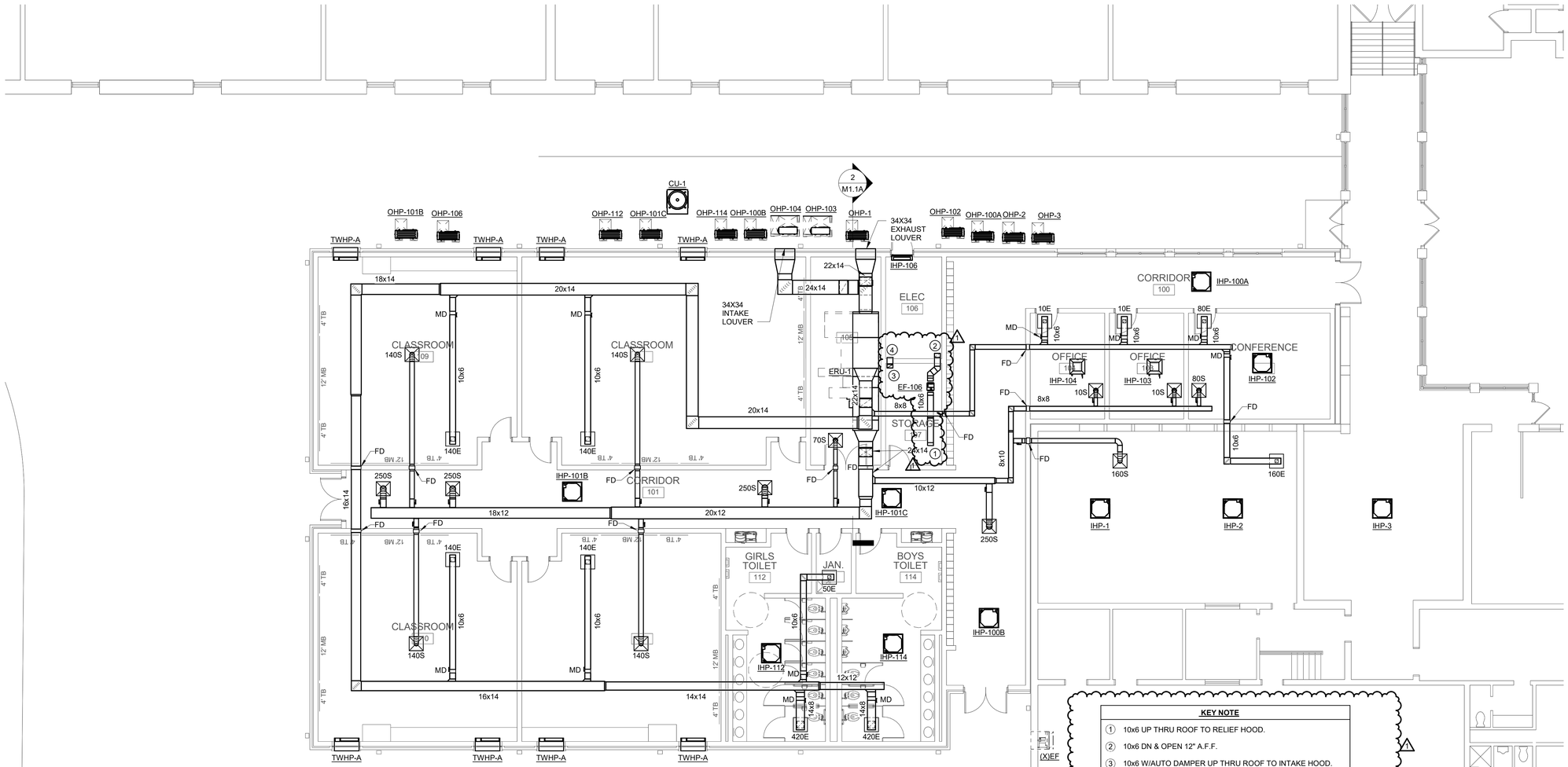
ARCHITECTS



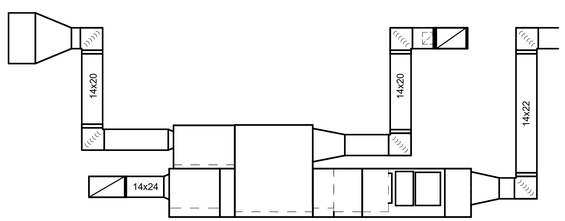
KEY NOTE

1. 10x6 UP THRU ROOF TO RELIEF HOOD.
2. 10x6 DN & OPEN 12" A.F.F.
3. 10x6 W/AUTO DAMPER UP THRU ROOF TO INTAKE HOOD.
4. 12x6 WALL TRANSFER GRILLE (WTG) (HIGH)

CONTROLS

EF-106 CONTROLS:

PROVIDE A RELAY(S) TO ENABLE EF-106 WHENEVER THERE IS A REFRIGERANT LEAK FROM IHP-106. RELAY(S) FOR REFRIGERANT LEAK MITIGATION ACTIONS SHALL BE INTERLOCKED WITH THE ON-BOARD REFRIGERANT LEAK DETECTOR FOR IHP-106. RESPECTIVE INTAKE AUTO DAMPER SHALL OPEN ONCE RESPECTIVE EXHAUST FAN IS ENERGIZED. AUTO DAMPER TO CLOSE ONCE RESPECTIVE FAN IS DE-ENERGIZED. RESPECTIVE INTAKE AUTO DAMPER SHALL OPEN ONCERESPECTIVE EXHAUST FAN IS ENERGIZED. AUTO DAMPER TO CLOSE ONCE RESPECTIVE FAN IS DE-ENERGIZED.



2 SECTION AT ERU-1
1/4" = 1'-0"

1 MECHANICAL - FLOOR PLAN - BASE BID
1/8" = 1'-0"

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
MECHANICAL FLOOR PLAN

STATE OF ALABAMA
No. 24747
PROFESSIONAL
01/05/2026
ENGINEER
WADE STEWART

PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025

REVISIONS

1	1/5/2026	REVISION

JOB NO. 25-32

SHEET NO:

M1.1A

Dewberry
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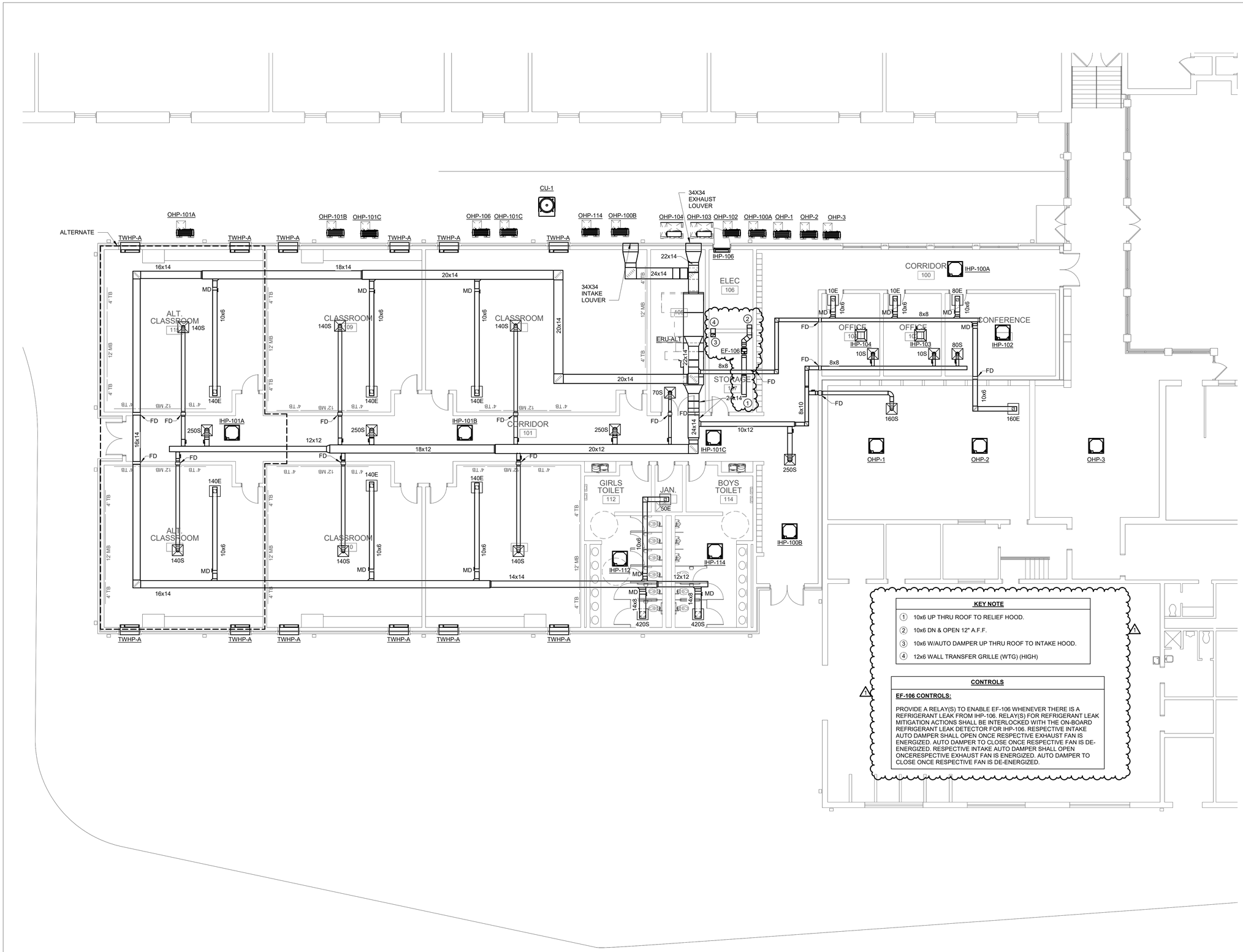
www.dewberry.com

Project Number :
50189177

LATHAN
McKEE
ARCHITECTS



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1 MECHANICAL - FLOOR PLAN - ALT.
1/8" = 1'-0"

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

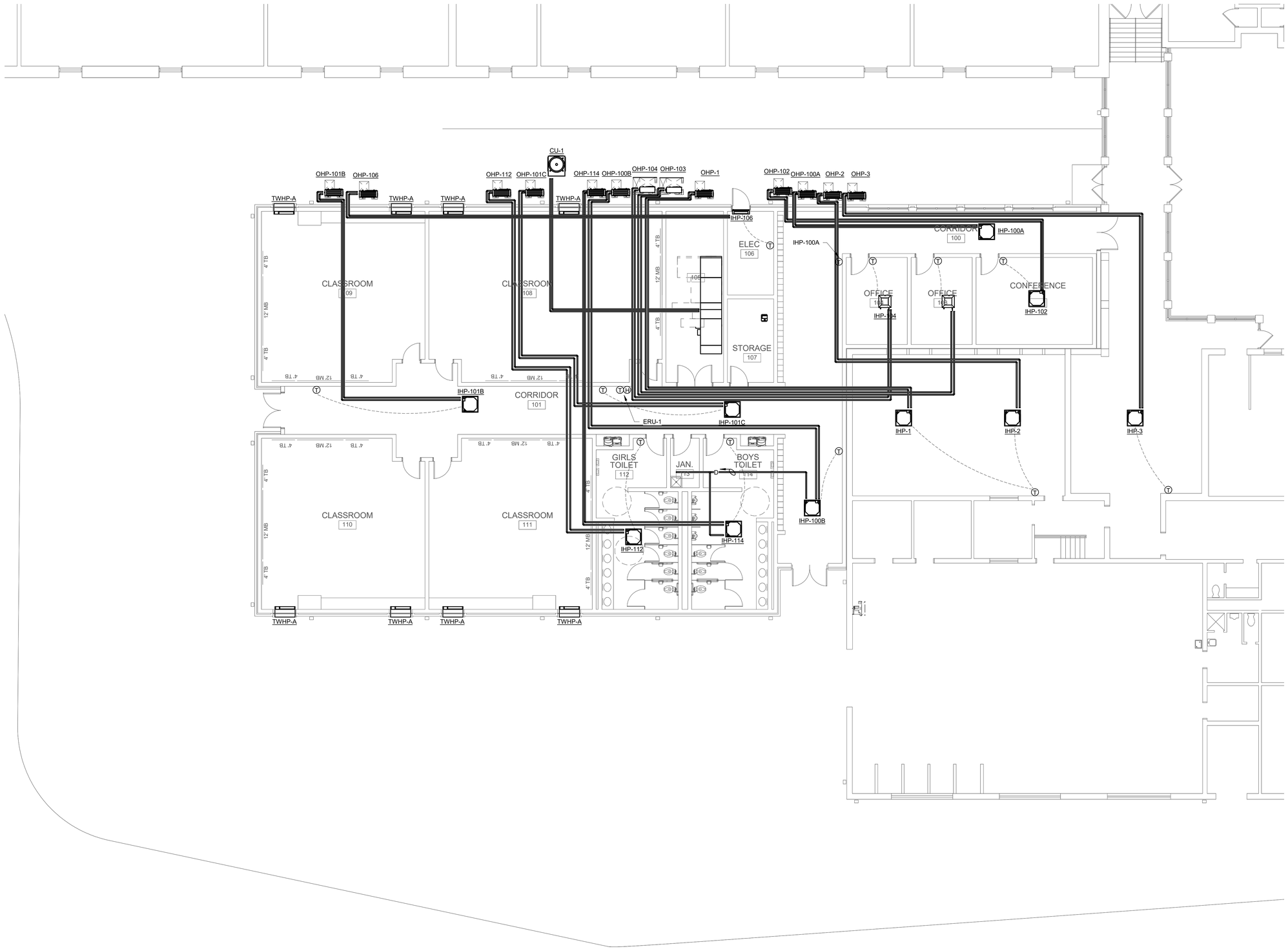
SHEET TITLE:
MECHANICAL FLOOR PLAN - ALT.

ALABAMA LICENSED PROFESSIONAL ENGINEER
No. 24747
01/05/2026
WADE STEWART

PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025
REVISIONS	
1	1/5/2026 REVISION

JOB NO. 25-32

SHEET NO:
M1.2A



1 MECHANICAL PIPING - FLOOR PLAN - BASE BID
1/8" = 1'-0"

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LATHAN McKEE ARCHITECTS

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42505 HIGHWAY 25, VINCENT, ALABAMA 35178
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SHEET TITLE:
MECHANICAL PIPING FLOOR PLAN

ALABAMA LICENSED
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JOB NO. 25-32

SHEET NO:
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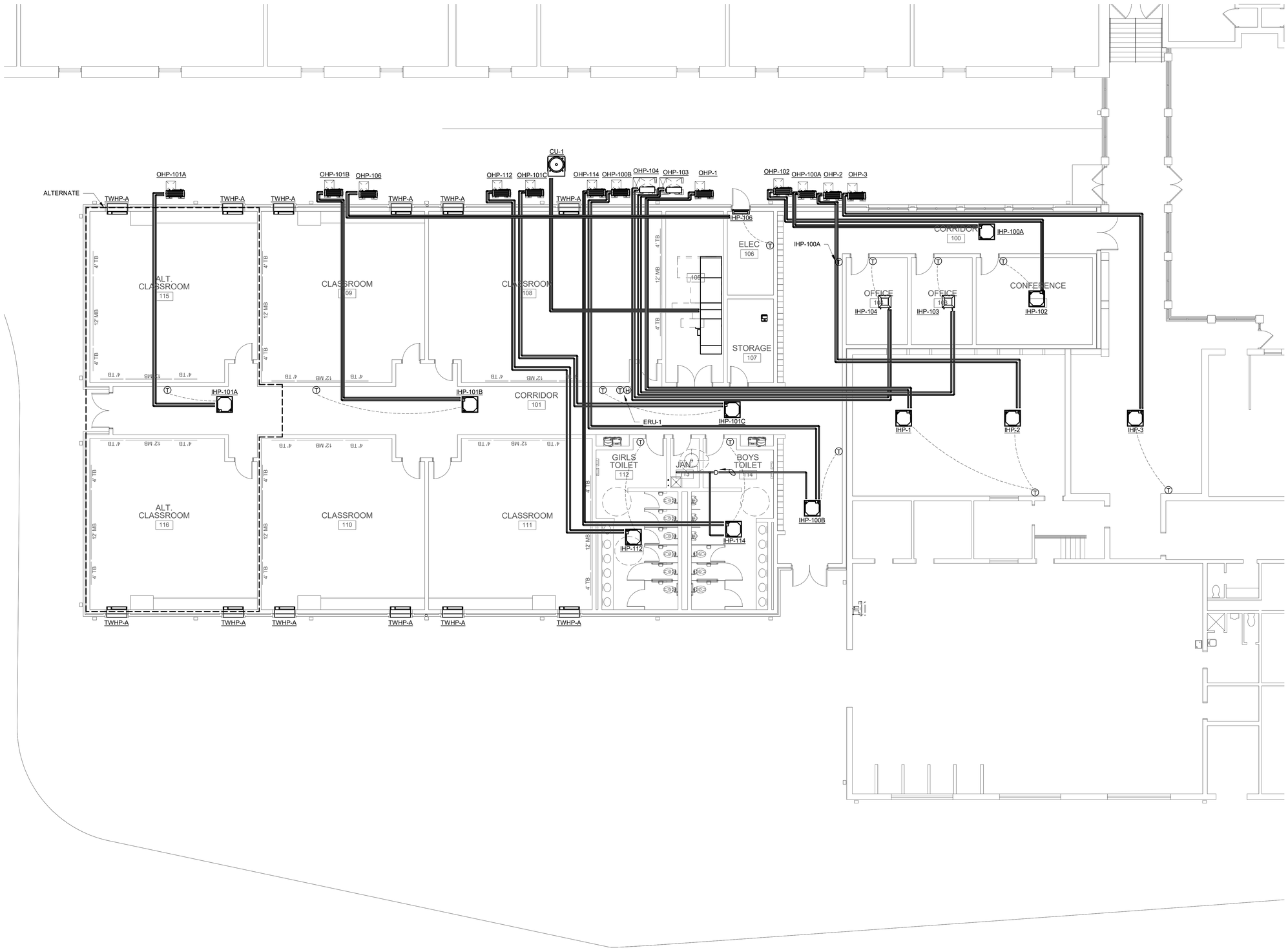

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1/8" = 1'-0"

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JOB NO. 25-32

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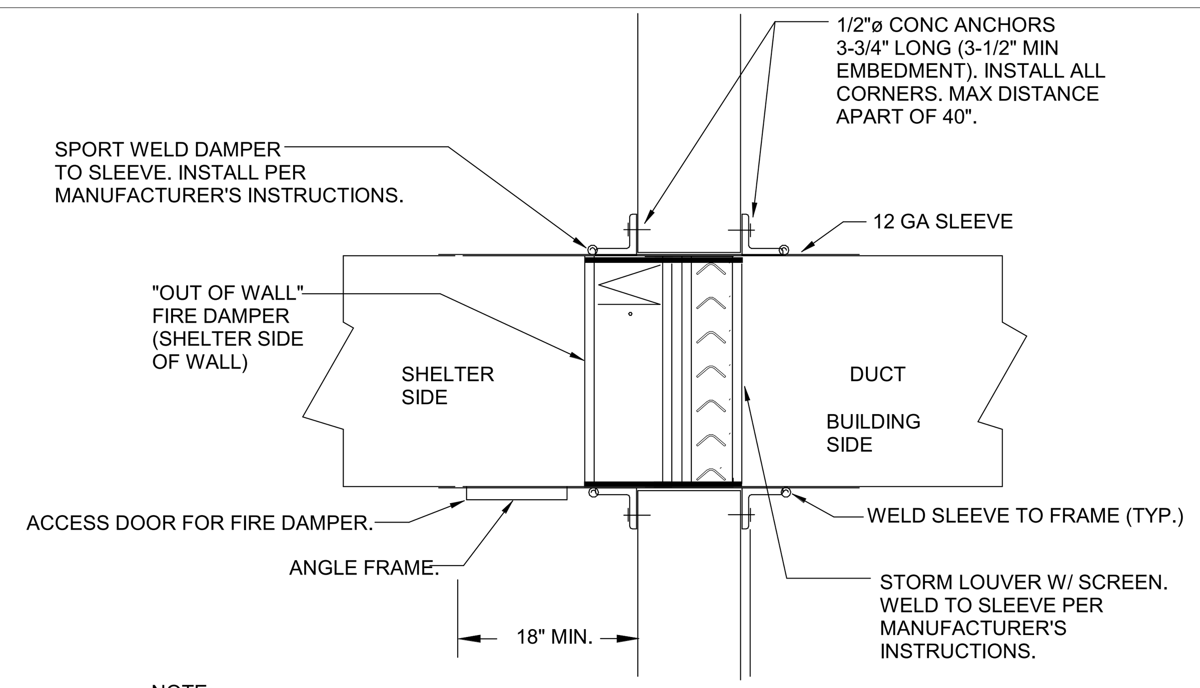
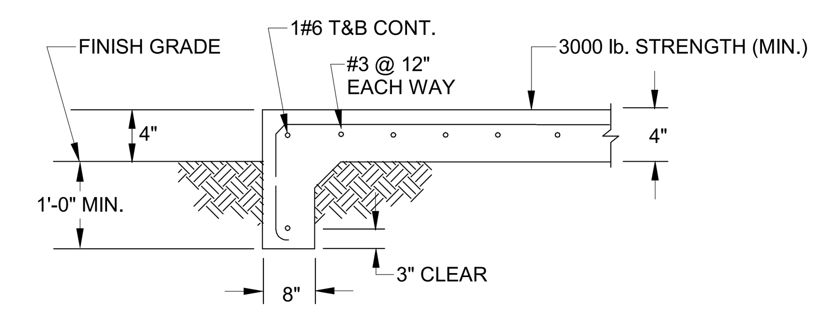


NOTE:

1. COORDINATE ALL PENETRATIONS OF SHELTER WALLS OR ROOF WITH GENERAL CONTRACTOR.
2. SHELTER LOUVERS SHALL BE INSTALLED IN THE SHELTER WALL. SHELTER LOUVERS SHALL BE RUSKIN XP500, GREENHECK MODEL FSG, OR APPROVED EQUAL. HIGH IMPACT LOUVERS SHALL MEET THE IMPACT TESTING CRITERIA FOR TORNADO SHELTERS PER 2020 ICC 500 / FEMA 361.
3. INSTALL 1/2" MESH, 18 GA. GALVANIZED SCREEN BETWEEN SHELTER LOUVER AND FIRE DAMPER.
4. INSTALL ACCESS DOOR IN DUCTWORK FOR ACCESS TO FIRE DAMPER. ACCESS DOOR SHALL BE MINIMUM 12" X 12".
5. INSTALL ACCESS DOOR IN DUCTWORK ON SHELTER SIDE FOR LABEL INSPECTION OF STORM LOUVER.

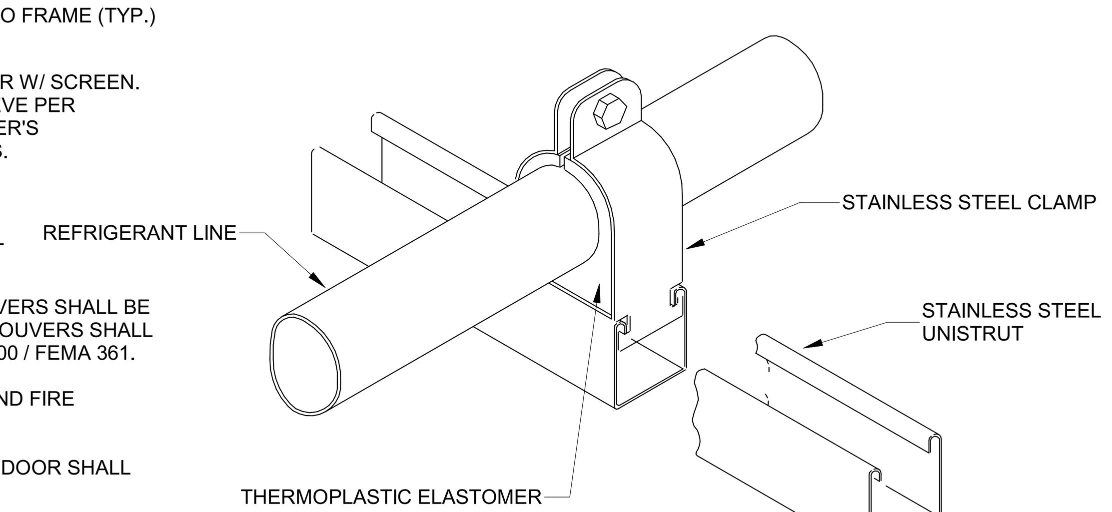
SHELTER DUCT PENETRATION DETAIL

NO SCALE



CONCRETE PAD DETAIL

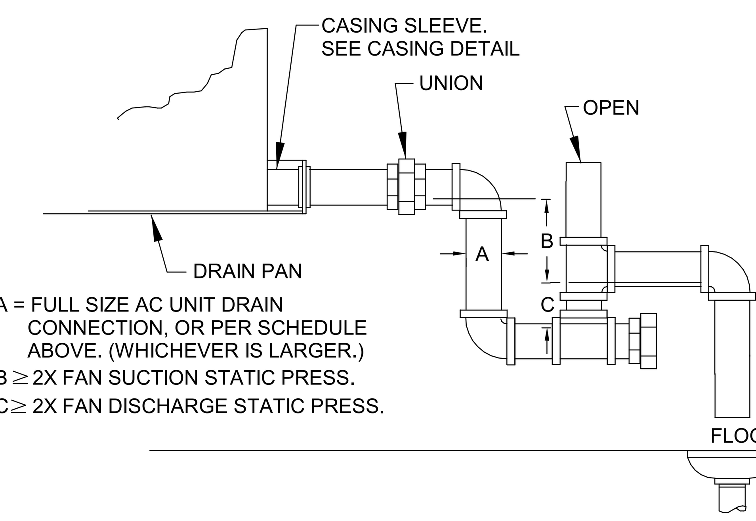
NO SCALE



REFRIGERANT LINE SUPPORT DETAIL

NO SCALE

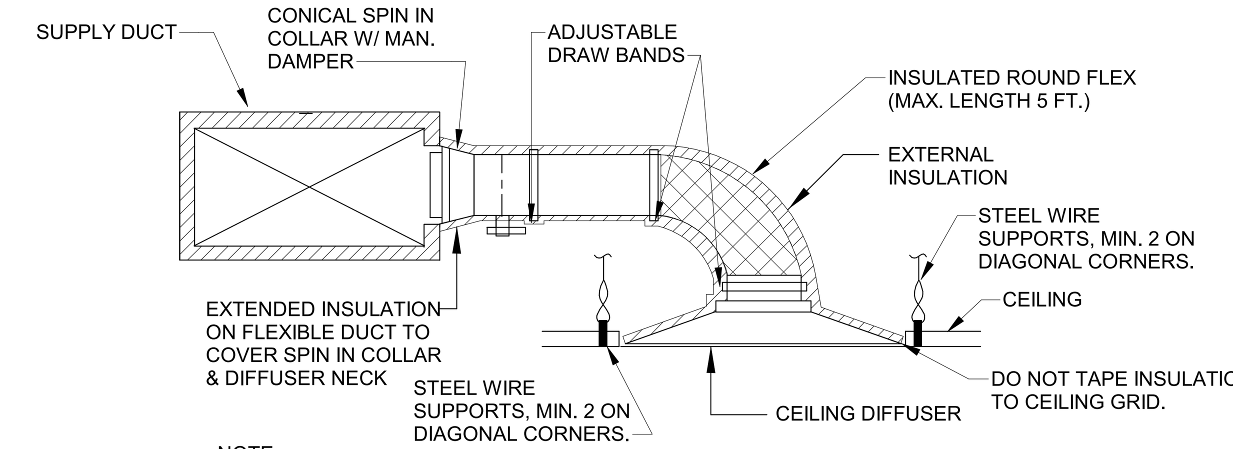
MINIMUM CONDENSATE PIPE SIZE	
AC TONS	MIN. DRAIN SIZE
0 TO 20	1"
21 TO 40	1-1/4"
41 TO 60	1-1/2"
61 TO 100	2"
101 TO 250	3"
251 & LARGER	4"



A = FULL SIZE AC UNIT DRAIN CONNECTION, OR PER SCHEDULE ABOVE. (WHICHEVER IS LARGER.)
B ≥ 2X FAN SUCTION STATIC PRESS.
C ≥ 2X FAN DISCHARGE STATIC PRESS.

AC UNIT DRAIN TRAP DETAIL

NO SCALE

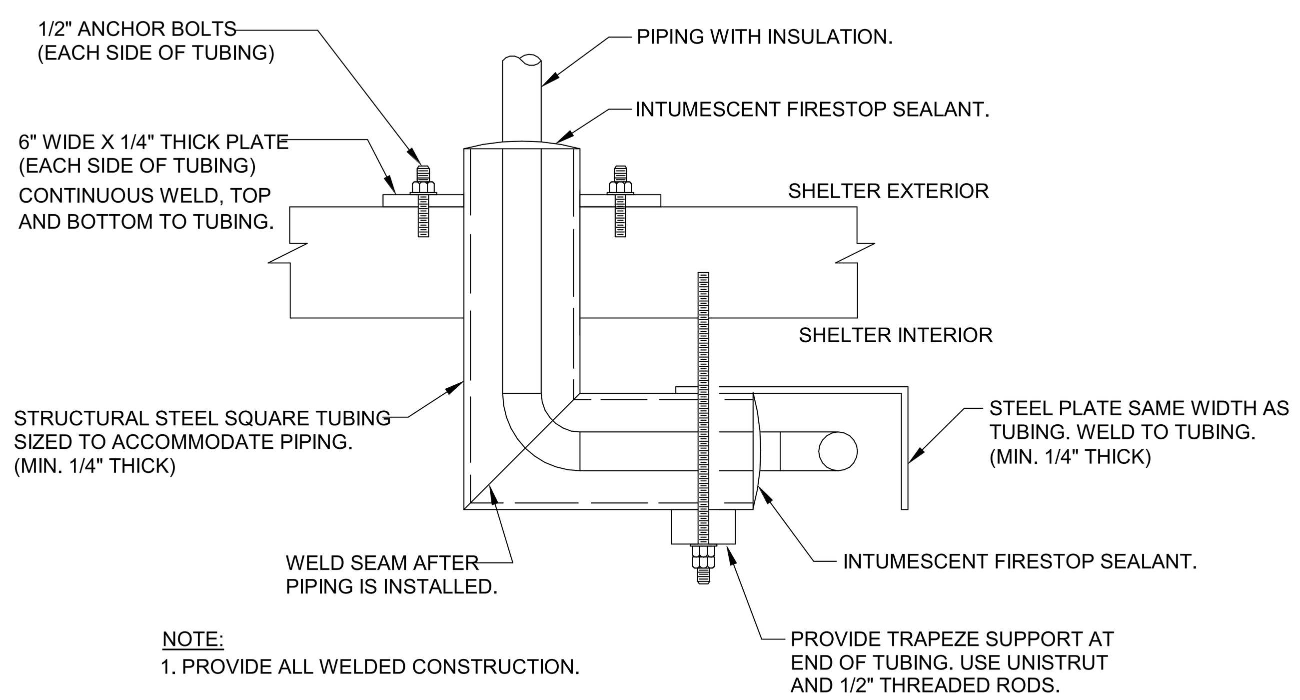


NOTE:

1. WHEREVER THE SUPPLY DUCT HEIGHT IS INSUFFICIENT TO CONNECT THE SPIN-IN, THE SPIN-IN MAY BE CONNECTED TO THE TOP OR BOTTOM OF THE DUCT. IF THE BRANCH DUCT MUST BE CONNECTED TO THE SIDE OF THE MAIN DUCT, USE A RECTANGULAR BRANCH DUCT CONNECTION OF EQUAL AIR VELOCITY AND TRANSITION TO ROUND DUCT. REFER TO SPECIFICATION FOR MAXIMUM TURNS IN FLEX DUCT.
2. PROVIDE EXTERNAL INSULATION ON ALL ROUND BRANCH DUCTWORK. SEE SPECS FOR THICKNESS AND EXTENT.
3. PROVIDE EXTERNAL INSULATION ON BACK SIDE OF CEILING DIFFUSERS. THICKNESS TO MATCH BRANCH DUCT INSULATION THICKNESS.

CEILING DIFFUSER INSTALLATION DETAIL

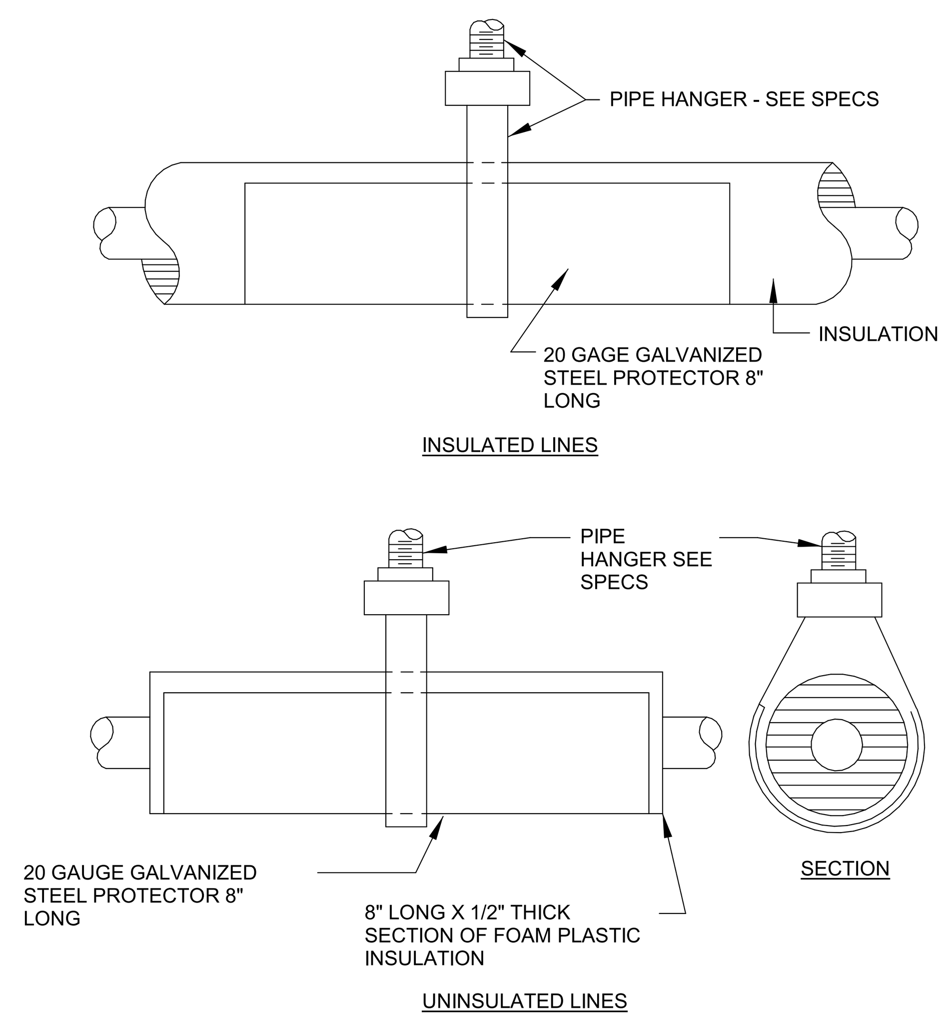
NO SCALE



NOTE:
1. PROVIDE ALL WELDED CONSTRUCTION.

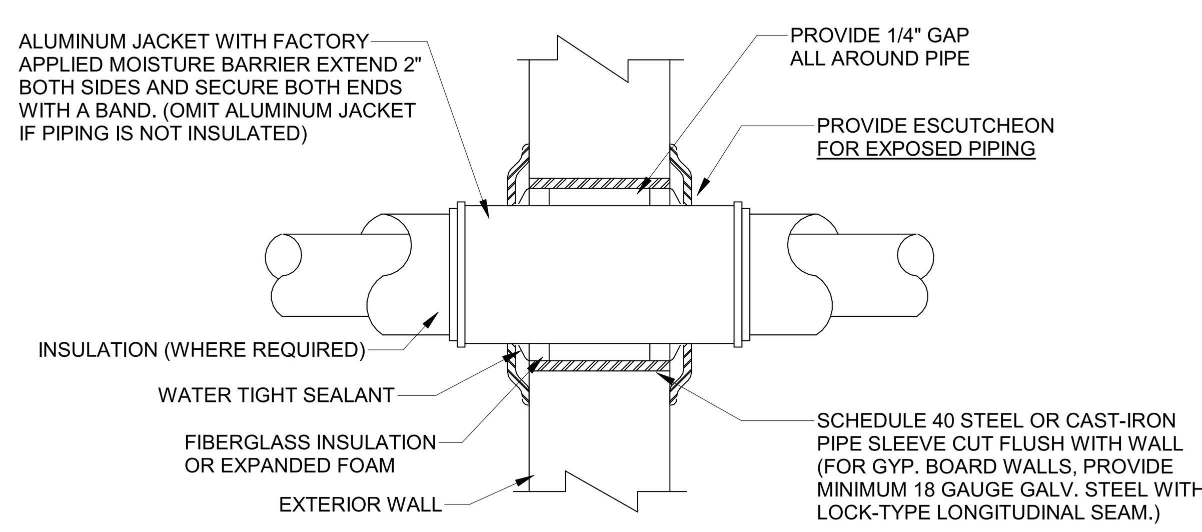
DETAIL OF PIPE PASSING THRU SHELTER WALL OR ROOF

NO SCALE



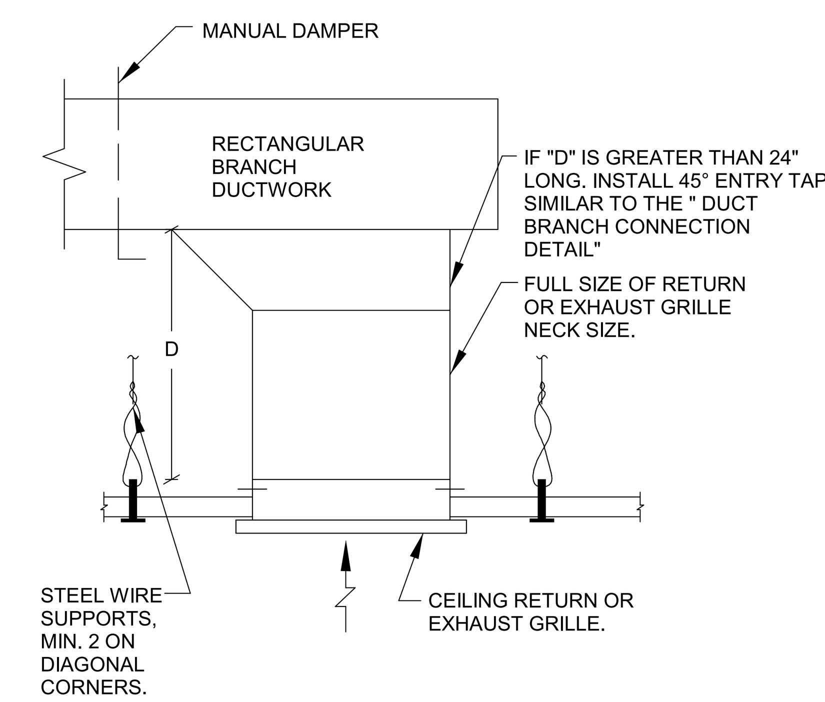
REFRIGERANT PIPING HANGER DETAIL

NO SCALE



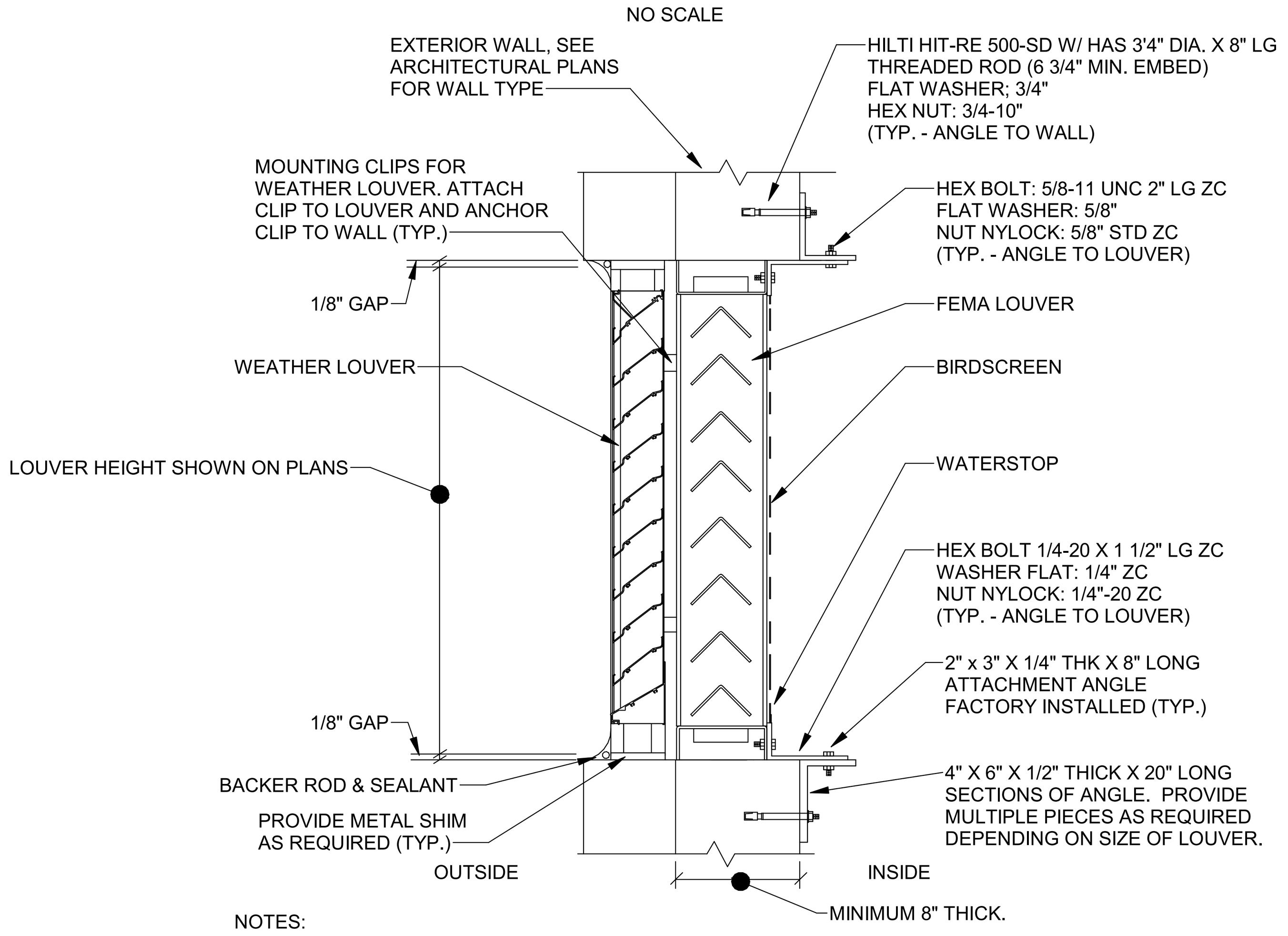
PIPE PENETRATION DETAIL

NO SCALE



CEILING RETURN/EXHAUST BRANCH CONNECTION DETAIL

NO SCALE

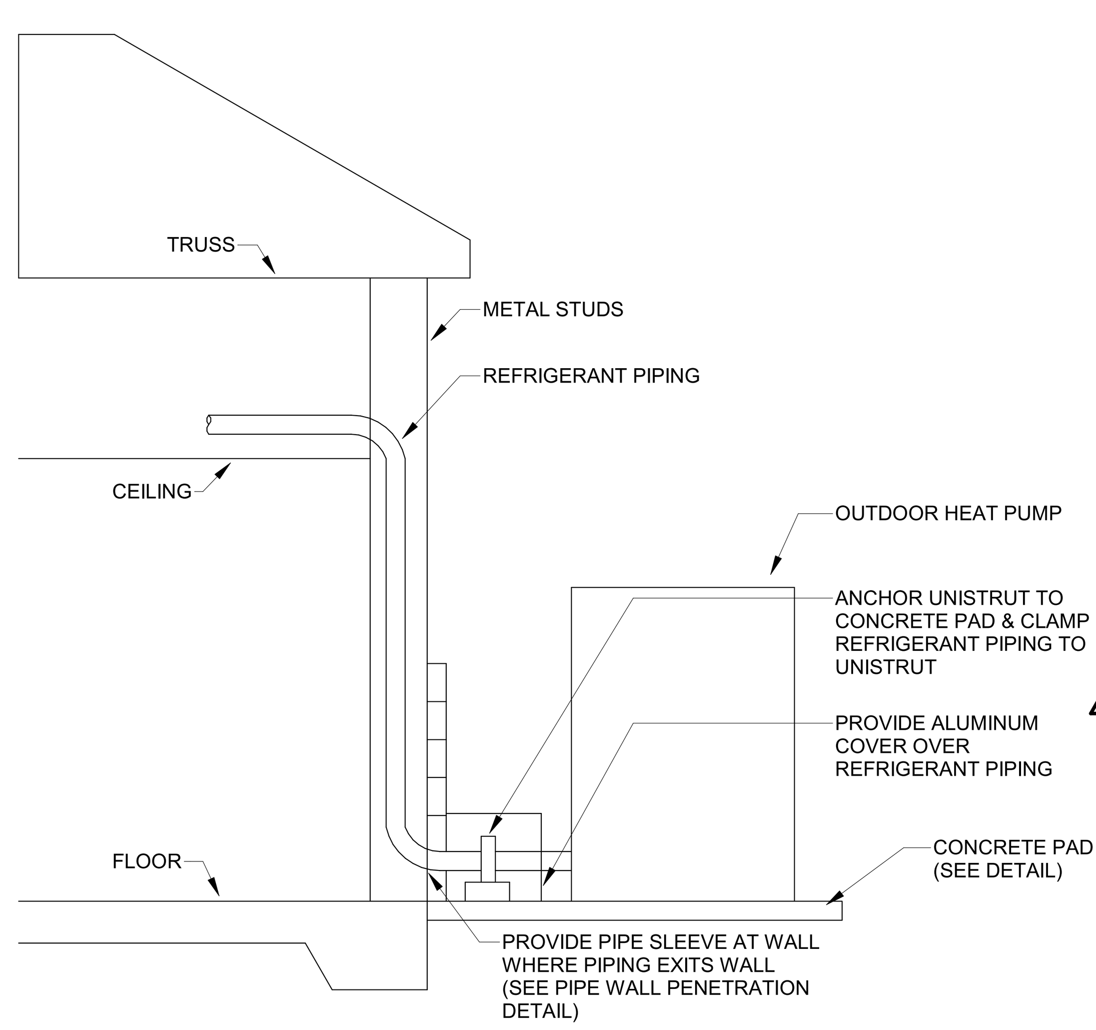


NOTES:

1. INSTALL WEATHER LOUVER AND FEMA LOUVER PER MANUFACTURER'S RECOMMENDATIONS.
2. WEATHER LOUVER SHALL HAVE DRAINABLE BLADES.
3. FEMA LOUVER SHALL BE TESTED AND MANUFACTURED TO FEMA 361 AND 2020 ICC500 SPECIFICATIONS FOR LARGE MISSILE IMPACT.
4. FEMA LOUVER SHALL HAVE A PERMANENT IDENTIFICATION TAG AFFIXED TO THE LOUVER THAT IS VISIBLE TO THE OWNER, ARCHITECT, ENGINEER, AND/OR AHJ. INSTALL ACCESS DOOR IN DUCTWORK ON SHELTER SIDE FOR LABEL INSPECTION OF STORM LOUVER.
5. INSTALLATION METHOD ABOVE IS ONE EXAMPLE FOR INSTALLING THE FEMA LOUVER. INSTALLING CONTRACTOR SHALL FOLLOW THIS DETAIL & ALL MANUFACTURER'S INSTALLATION GUIDELINES FOR DIFFERING WALL CONSTRUCTION.
6. ARCHITECT TO SELECT COLOR FOR WEATHER LOUVER.

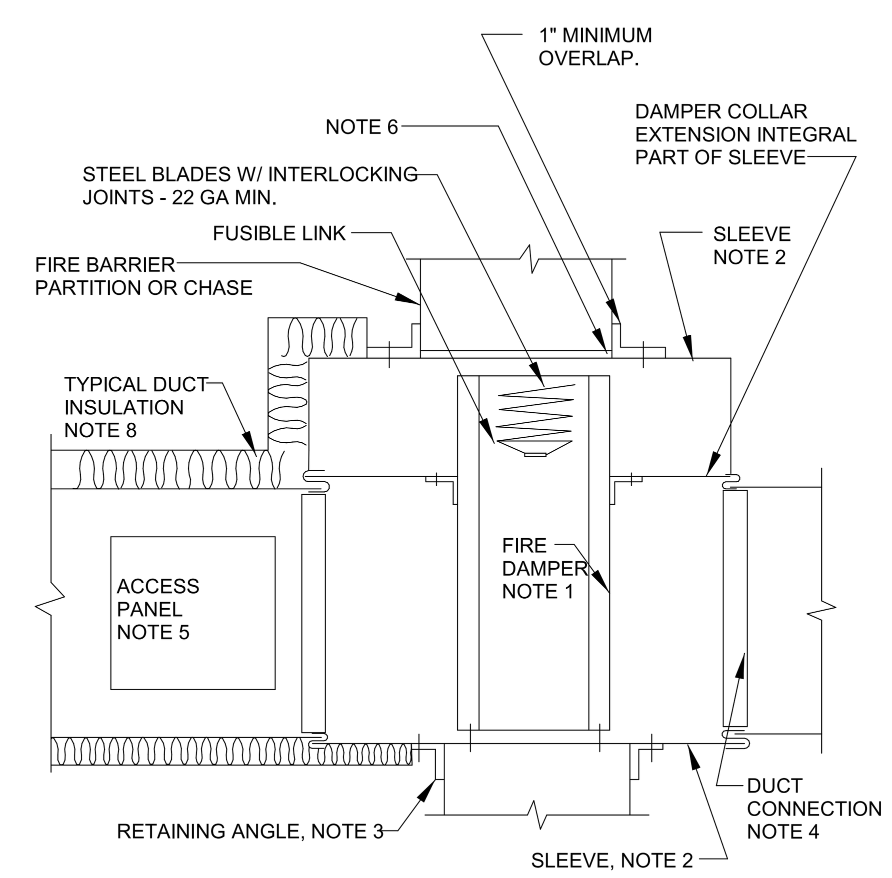
WEATHER LOUVER & FEMA LOUVER INSTALLATION DETAIL

NO SCALE



CONDENSING UNIT INSTALLATION DETAIL

NO SCALE

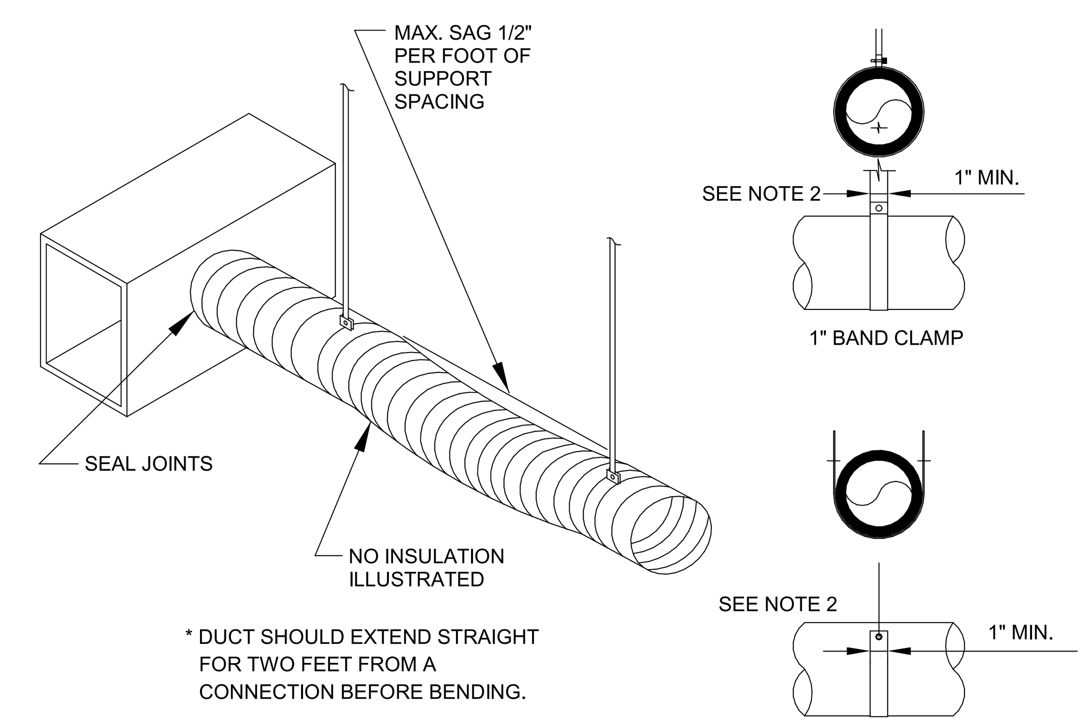


NOTES:

1. A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION, IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS AND SMACNA FIRE DAMPER INSTALLATION GUIDELINE, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND RETAINING ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION. ALL FIRE DAMPERS SHALL BE UL LISTED.
2. GALVANIZED SLEEVE: GAGE NOT LESS THAN CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
3. RETAINING ANGLES: GALVANIZED STEEL, NOT LESS THAN 1-1/2" x 1-1/2", 14 GAGE, TO PROVIDE 1" MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES. RETAINING ANGLES MUST NOT BE ATTACHED TO EACH OTHER AT CORNERS. SECURE RETAINING ANGLES TO FIRE DAMPER SLEEVE ONLY.
4. BREAKAWAY DUCT CONNECTION: CONTRACTOR'S OPTION OF TYPES SHOWN IN SMACNA OR PER MANUFACTURER'S RECOMMENDATIONS.
5. ACCESS DOORS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS. ACCESS DOORS SHALL BE AT A MINIMUM 12 INCHES SQUARE OR PROVIDED WITH A REMOVABLE DUCT SECTION. (1) (1)
6. PROVIDE CLEARANCE TO PERMIT INSTALLATION & EXPANSION. PROVIDE 1/8" PER FOOT LARGER THAN THE OVERALL SIZE OF THE DAMPER/SLEEVE ASSEMBLY. THE MAXIMUM OPENING SIZE SHALL NOT EXCEED 1/8" PER FOOT + 2", NOR SHALL THE OPENING BE LESS THAN 1/4" LARGER THAN THE DAMPER/SLEEVE ASSEMBLY.
7. ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THRU ATTIC FLOORS AND MECHANICAL ROOM FLOORS, SHALL BE PROVIDED WITH 4" HIGH CONCRETE CURB AROUND OPENING FOR DUCT.

FIRE DAMPER INSTALLATION DETAIL

NO SCALE



* DUCT SHOULD EXTEND STRAIGHT FOR TWO FEET FROM A CONNECTION BEFORE BENDING.

NOTES:
1. SUPPORT SYSTEM MUST NOT DAMAGE DUCT OR CAUSE OUT OF ROUND SHAPE.
2. DUCTS ARE FLEXIBLE WITH EXTERNAL INSULATION AND VAPOR BARRIER JACKETING.
3. MIN. CENTER LINE BEND LINE RADIUS IS ONE DIA. (OR INSIDE RADIUS OF D/2).
4. FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 5 LINEAR FEET.

FLEXIBLE DUCT SUPPORT DETAIL

NO SCALE

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LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
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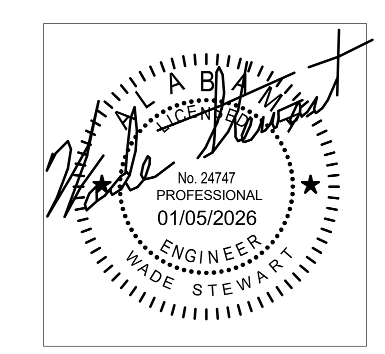
SHEET TITLE:
MECHANICAL DETAILS



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LATHAN McKEE ARCHITECTS

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (OSA-1)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	SERVED BY	REFRIGERANT TYPE	REFRIGERANT CONCENTRATION LIMIT (lb/MCf)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
101 - MULTIPURPOSE	1,390	13,205	OSA-1	R-454B	3.1	7.1	40.9	1
					MAXIMUM ALLOWED REFRIGERANT:		40.9	
					TOTAL REFRIGERANT CHARGE:	7.1		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (SHELTER)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
101 - MULTIPURPOSE	1,390	13,205	17.0	40.9	1
		MAXIMUM ALLOWED REFRIGERANT:		40.9	
		TOTAL REFRIGERANT CHARGE:	17.0		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.

AMOUNT OF REFRIGERANT PER OCCUPIED SPACE CALCULATIONS (IHPs)

ROOM	AREA (sq. ft.)	VOLUME (cu. ft.)	SERVED BY	REFRIGERANT TYPE	REFRIGERANT CONCENTRATION LIMIT (lb/MCf)	REFRIGERANT CHARGE (lb)	MAX. ALLOWED REFRIGERANT (lb)	NOTES
101 - MULTIPURPOSE	1,390	13,205	IHP-101S,102S	R-454B	3.1	9.9	40.9	1
102 - MENS	816	7,752	IHP-103S	R-454B	3.1	2.0	24.0	1
103 - ELEC	1,477	11,816	IHP-ELECS	R-454B	3.1	7.7	36.6	*2
					MAXIMUM ALLOWED REFRIGERANT:		101.6	
					TOTAL REFRIGERANT CHARGE:	19.6		

1. OCCUPIED SPACE COMPLIES WITH 2024 IMC CHAPTER 11, ASHRAE 15-2022, AND ASHRAE 34-2022.
2. TRANSFER GRILLES ALLOW FOR ADJACENT ROOMS TO COMMUNICATE AND PROVIDE LARGER ROOM VOLUME

OSA CALCULATIONS

		Rp	Pz	Ra	Az	Vbz	Ez	Voz	Provided OSA (IAQP)
Room	Room Type	cfm / P	People	cfm/ft²	ft²	cfm		cfm	cfm
101 MULTIPURPOSE	Multipurpose assembly	5	139	0.06	1,390	778	0.80	973	695
					Total Required by OSA-1:			973	
					Total Provided by OSA-1:				695

NEW STORM SHELTER AND CLASSROOM ADDITION TO
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SHELBY COUNTY BOARD OF EDUCATION

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MECHANICAL CALCS

ALABAMA LICENSED PROFESSIONAL ENGINEER
No. 24747
PROFESSIONAL
01/05/2026
ENGINEER
WADE STEWART

PROJ. MGR.:	JWS
DRAWN:	CWM
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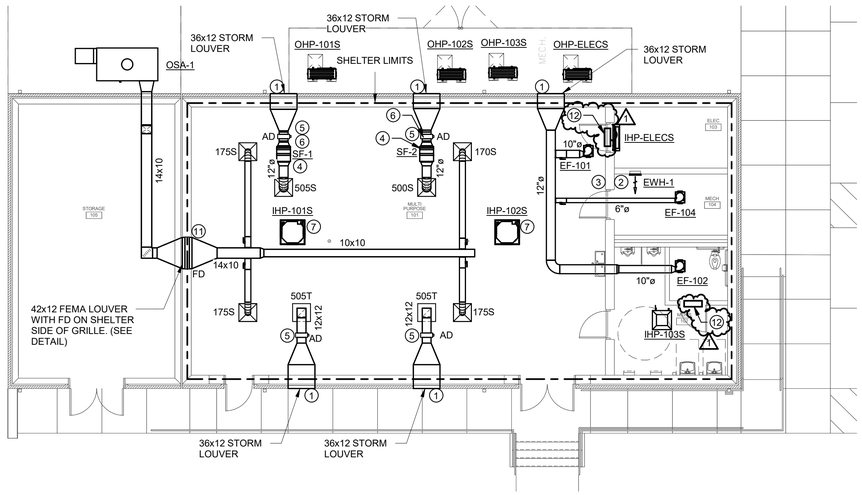
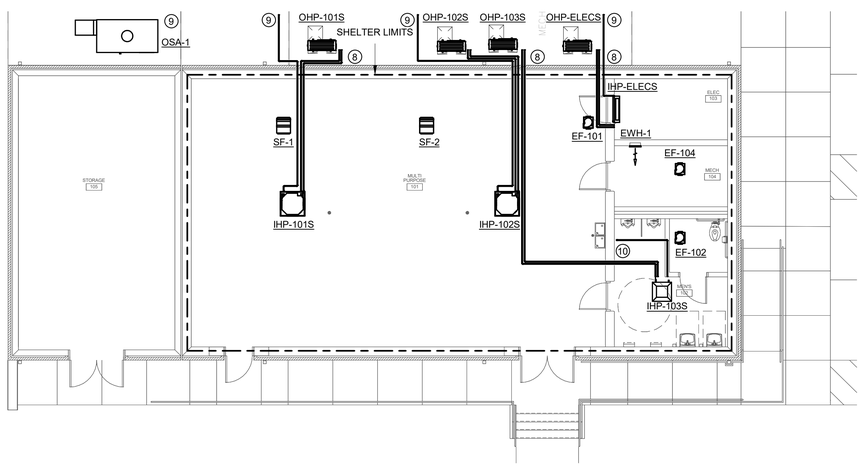
JOB NO. 25-32

SHEET NO:
M0.6B



1 MECHANICAL - FLOOR PLAN - FIELD HOUSE
1/8" = 1'-0"



2 MECHANICAL PIPING - FLOOR PLAN - FIELD HOUSE
1/8" = 1'-0"

KEYED NOTES

1. HIGH IMPACT LOUVERS AND WEATHER LOUVERS. HIGH IMPACT LOUVERS SHALL MEET IMPACT TESTING CRITERIA FOR TORNADO SHELTERS IN 2020 ICC 500/FEMA 361. LOUVER TO BE GREENHECK MODEL AFL-501 OR EQUAL, SEE DETAIL. WEATHER LOUVER SHALL BE INSTALLED ON EXTERIOR WALL WITH HIGH IMPACT LOUVER INSTALLED BEHIND WEATHER LOUVER. (EXTERIOR WALLAPPLICATION ONLY). TOP OF STORM LOUVER SHALL BE INSTALLED BELOW BOND BEAMS. INSTALL ACCESS DOOR FOR INSPECTION OF STORM LOUVER LABEL.
2. WALL SWITCH FOR SHELTER SUPPLY FANS TO BE ACTIVATED UPON THE LOSS OF POWER DURING A STORM EVENT. SWITCH SHALL ALSO CUT POWER TO ALL AUTOMATIC INTAKE AND RELIEF DAMPERS TO CAUSE THEM TO OPEN.
3. SIGNAGE FOR EMERGENCY VENTILATION FAN SWITCH (REFER TO ARCHITECTURAL SIGNAGE SPECIFICATIONS FOR SIGN AND TEXT COLOR AND SIZE)(COORDINATE EXACT LOCATION WITH ARCHITECT.)
4. STORM SHELTER SUPPLY FAN TO RUN WHENEVER POWER IS LOST DURING A STORM EVENT BY TURNING THE WALL SWITCH TO THE "ON" POSITION. NORMALLY, THE STORM SHELTER SUPPLY FAN SHALL BE "OFF".
5. AUTOMATIC DAMPER IS NORMALLY CLOSED AND SHALL OPEN WHEN POWER IS LOST. DAMPER SHALL SPRING RETURN TO OPEN POSITION.
6. SUSPEND FAN FROM STRUCTURE WITH SPRING VIBRATION ISOLATORS. PROVIDE FLEXIBLE CONNECTION (WITH GROUNDING STRAP) ON INLET & OUTLET OF FAN.
7. SUSPEND UNIT FROM STRUCTURE ABOVE.
8. ROUTE REFRIGERANT LINES UP IN WALL TO ABOVE CEILING SPACE AND TO INDOOR UNIT, SIZE PER MANUFACTURER'S RECOMMENDATIONS. PROTECT AS REQUIRED. (SEE DETAIL)
9. ROUTE 1" CONDENSATE DRAIN TO DRY WELL. (SEE DETAIL).
10. ROUTE 3/4" CONDENSATE TO WALL DRAIN BOX (SEE PLUMBING).
11. HIGH IMPACT LOUVERS AND FIRE DAMPER. HIGH IMPACT LOUVERS SHALL MEET IMPACT TESTING CRITERIA FOR TORNADO SHELTERS IN 2020 ICC 500/FEMA 361. LOUVER TO BE GREENHECK MODEL AFL-501 OR EQUAL, SEE DETAIL. FIRE DAMPER TO BE INSTALLED ON SHELTER SIDE. TOP OF STORM LOUVER SHALL BE INSTALLED BELOW BOND BEAMS. INSTALL ACCESS DOOR FOR INSPECTION OF STORM LOUVER LABEL.
12. 24x10 DOOR TRANSFER GRILLE BY OTHERS (SEE ARCH PLAN). BOTTOM OPENING OF GRILLE TO BE MAXIMUM 12" A.F.F. TO MEET ASHRAE 15.

SHELTER OSA CALCULATIONS

Room	Room Type	Rp cfm / P	Pz People
101 MULTIPURPOSE	Multipurpose assembly	5	201
	Total Required by SF-1,2:		1,005
	Total Provided by SF-1,2:		1,005

STORM SHELTER CALCULATIONS

MECHANICAL VENTILATION SHALL BE PROVIDED FOR THE STORM SHELTER. PER ICC-500-2020, CHAPTER 7, PART 702.4.2.

THE MECHANICAL VENTILATION SYSTEM CONSISTS OF USING A SUPPLY FAN TO PROVIDE OUTSIDE AIR AT A RATE THAT IS 5 CFM PER OCCUPANT.

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Project Number : 50189177

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
MECHANICAL FLOOR PLAN - FIELD HOUSE

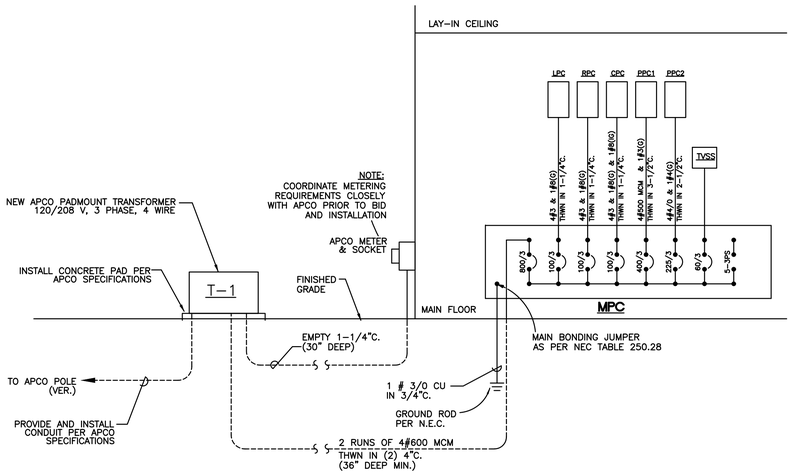
PROJ. MGR.:	JWS
DRAWN:	CWM
DATE:	NOVEMBER 7, 2025

REVISIONS

1	1/5/2026 REVISION

JOB NO. 25-32

SHEET NO:
M1.0B



ELECTRICAL SINGLE LINE DIAGRAM (MPC)

N.T.S.

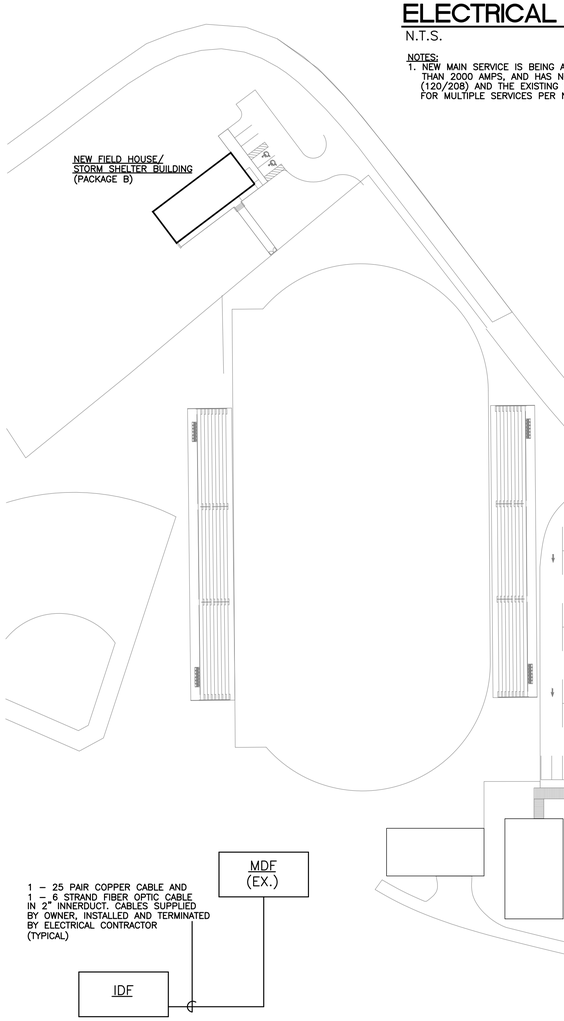
NOTES:
1. NEW MAIN SERVICE IS BEING ADDED, THE EXISTING 120/240 MAIN SERVICE EQUIPMENT (MP1) IS LARGER THAN 2000 AMPS, AND HAS NO ROOM TO EXPAND. SO THE NEW SERVICE WILL BE A DIFFERENT VOLTAGE (120/208) AND THE EXISTING SERVICE IS LARGER THAN 2000 AMPS. THEREFORE THE EXCEPTIONS FOR MULTIPLE SERVICES PER NEC 230.2C AND 230.2D WILL APPLY TO THIS BUILDING.

PANELBOARD SCHEDULE

MARK	TYPE	MAINS			BRANCHES					LUG LOCATION	TYPE MOUNTING	AREA PANEL LOCATED	AVAILABLE FAULT CURRENT	REMARKS
		TYPE	AMPS	SERVICE	1 POLE	2 POLE	3 POLE	SPARES	SPACES					
MPC	I-LINE	M/B	800	120/208V 3ø, 4W			1-60 3-100 1-225 1-400		5-3PS	BOTTOM	SURFACE	ELEC 106	31,000	SEE NOTES 1, 2, 3, 4, & 6
LPC	NQOD	LUGS	100	120/208V 3ø, 4W	8-20			6-20/1	16-1PS	BOTTOM	SURFACE	ELEC 106	24,000	SEE NOTES 1, 2, & 4
PPC1	NQOD	LUGS	400	120/208V 3ø, 4W		1-20 12-30	2-45	6-20/1	16-1PS	BOTTOM	SURFACE	ELEC 106	28,000	SEE NOTES 1, 2, & 4 54 SPACE PANEL
PPC2	NQOD	LUGS	225	120/208V 3ø, 4W		13-20 1-25	1-60	6-20/1	5-1PS	BOTTOM	SURFACE	EXTERIOR	22,000	SEE NOTES 1, 2, & 4 NEMA 3R PANEL
RPC	NQOD	LUGS	100	120/208V 3ø, 4W	20-20			6-20/1	4-1PS	BOTTOM	SURFACE	ELEC 106	17,000	SEE NOTES 1, 2, & 4
CPC	NQOD	LUGS	100	120/208V 3ø, 4W	19-20		1-60	6-20/1	2-1PS	BOTTOM	SURFACE	ELEC 106	14,000	SEE NOTES 1, 2, 3, 4, & 5

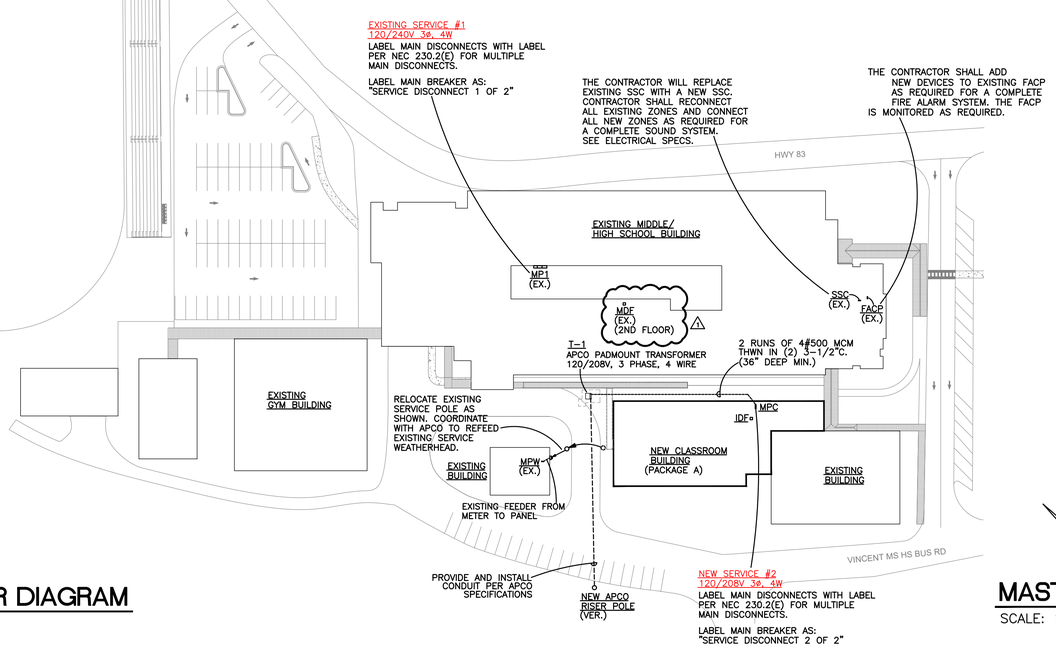
NOTES:
1. ALL PANELBOARDS SHALL BE CAPABLE OF WITHSTANDING AND INTERRUPTING THE AVAILABLE FAULT CURRENTS AS LISTED ABOVE.
2. ALL PANELBOARDS SHALL HAVE MICARTA LABELS SHOWING PANELBOARD DESIGNATION, AND OPERATING VOLTAGE. I-LINE PANELBOARDS SHALL ALSO HAVE MICARTA LABELS AT EACH BREAKER.
3. SHALL BE EQUIPPED WITH BUILT-IN SURGE PROTECTION, CAPABLE OF WITHSTANDING A TRANSIENT SURGE OF 160,000 AMPS. (60/3 BREAKER CALLED FOR IN MPC, CPC, AND MPF FOR THIS PURPOSE).
4. NO SERIES RATING WILL BE ALLOWED ON ANY PANELBOARDS.
5. SHALL HAVE A SECOND EQUIPMENT GROUND BUS, ISOLATED FROM PANELBOARD BOX.
6. SHALL BE RATED FOR SERVICE ENTRANCE EQUIPMENT.

PANELBOARD NOTES:
1. MANUFACTURER OF SWITCHBOARDS AND/OR PANELBOARDS SHALL PERFORM FAULT CURRENT CALCULATIONS, COORDINATION STUDY, AND ARC FLASH HAZARD ANALYSIS, AND LABEL ALL SWITCHBOARDS AND/OR PANELBOARDS, IN ACCORDANCE WITH NFPA 70E-2020 (ARTICLE 130) AND NFPA 70-2020 (ARTICLE 110.16).
2. CONTRACTOR SHALL FIELD MARK ELECTRICAL SERVICE EQUIPMENT WITH A CONSPICUOUS AND PERMANENT LABEL THAT INDICATES THE AVAILABLE FAULT CURRENT PER NEC 110.24.
3. CONTRACTOR SHALL FIELD MARK ELECTRICAL PANELS WITH A CONSPICUOUS AND PERMANENT LABEL THAT INDICATES WHERE PANELS ARE FED FROM PER NEC 408.4(B).



MDF FIBER OPTIC CABLE RISER DIAGRAM

N.T.S.



MASTER PLAN

SCALE: 1" = 60'

APCO NOTES

1. CONTRACTOR SHALL COORDINATE CLOSELY WITH ALABAMA POWER AND SHALL PROVIDE AND INSTALL ANY AND ALL LABOR AND OR MATERIAL, AS REQUIRED BY APCO, REGARDLESS OF ITS BEING OR NOT BEING SHOWN ON ELECTRICAL DRAWINGS.
2. ANY AND ALL COSTS ASSOCIATED WITH PROVIDING THIS LABOR AND/OR MATERIAL SHALL BE INCLUDED IN BID PRICE.
3. CONTRACTOR SHALL OBTAIN ALL DIRECT CHARGES FROM ALABAMA POPWER, AND INCLUDE THESE CHARGES IN BID PRICE. CONTRACTOR IS RESPONSIBLE FOR CONTACTING APCO DURING THE BID PROCESS.

STEWART ENGINEERING
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Electrical Consultants STEWART ENGINEERING

Engineer:
J. Lance Junkin, P.E.
Alabama Reg. 14817

Project Number:
25104

LATHAN McKEE ARCHITECTS

NEW STORM SHELTER AND CLASSROOM ADDITION TO
VINCENT MIDDLE / HIGH SCHOOL
42505 HIGHWAY 25, VINCENT, ALABAMA 35178
SHELBY COUNTY BOARD OF EDUCATION

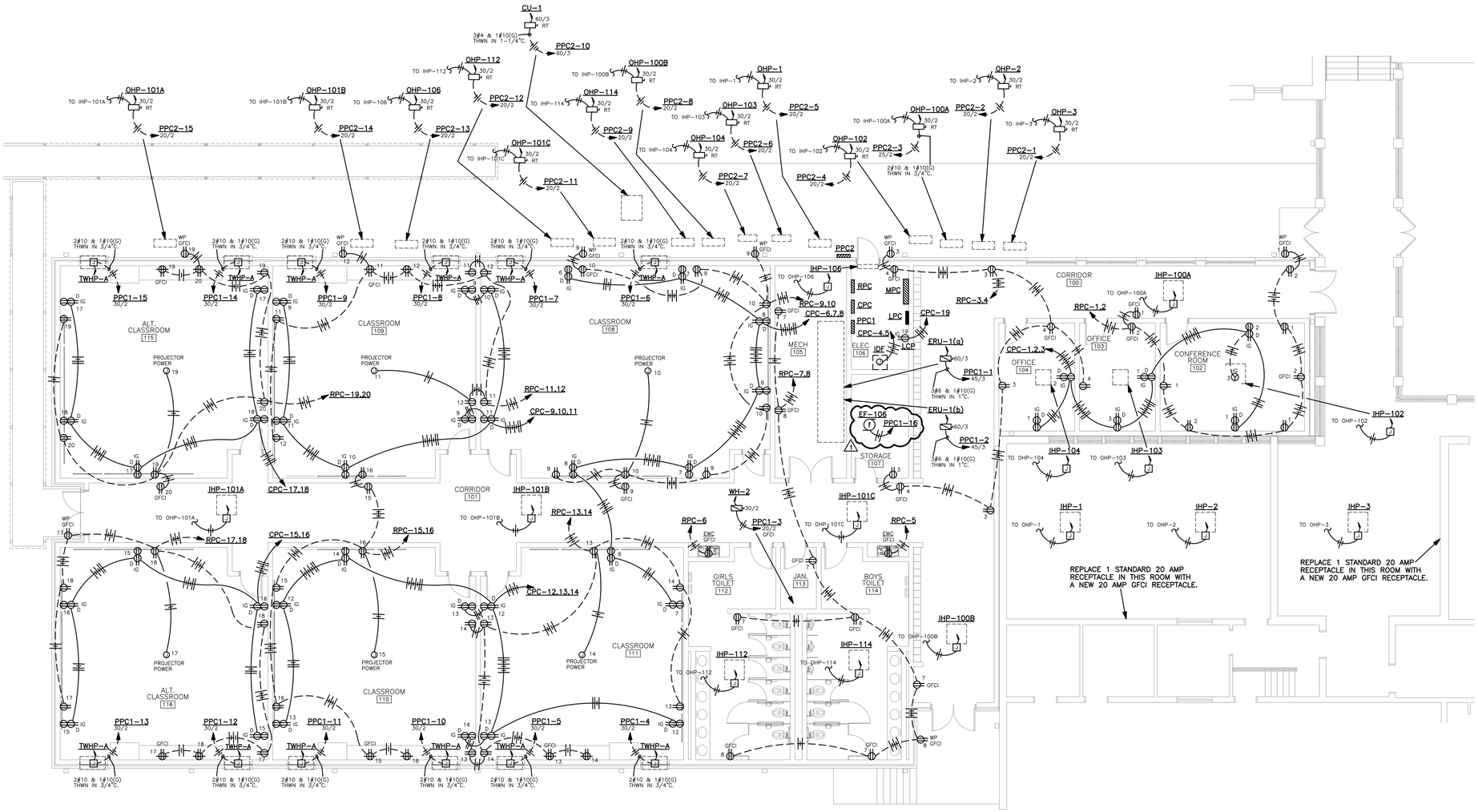
SHEET TITLE:
MASTER PLAN AND SINGLE LINE DIAGRAM

ALABAMA LICENSED No. 25140 PROFESSIONAL ENGINEER J. RYAN HART
01-05-2026

PROJ. MGR.: LANCE JUNKIN
DRAWN: SEC
DATE: NOVEMBER 7, 2025
REVISIONS
1 ADDENDUM NO. 4 1-5-26

JOB NO. 25-32
SHEET NO:
E2.1A
2 OF 5

0 1" 2"



NOTES:

1. ALL ISOLATED GROUND TYPE RECEPTACLE OUTLET BRANCH CIRCUITS CONTAIN TWO EQUIPMENT GROUNDING CONDUCTORS. ONE INSULATED GROUND WIRE, CONNECTED TO THE ISOLATED GROUND BUS AT PANELBOARD, CONNECTS TO GROUNDING SCREW ON THE ACTUAL RECEPTACLE. THE OTHER, CONNECTED TO THE "NORMAL" EQUIPMENT GROUND BUS AT PANELBOARD, CONNECTS TO A GROUNDING SCREW IN THE RECEPTACLE OUTLET BOX.
2. COORDINATE ALL OUTLETS AT COUNTER AREAS CLOSELY WITH ARCHITECTURAL CASEWORK DRAWINGS. PLACE OUTLETS BELOW COUNTERS, AT STANDARD MOUNTING HEIGHT, WHEN KNEE SPACE PERMITS ACCESS (COORDINATE INSTALLATION OF HOLES WITH RUBBER GROMMETS IN THOSE CASES).
3. COORDINATE INSTALLATION OF OUTLETS CLOSELY WITH FURNITURE SUPPLIER.
4. ALL BRANCH CIRCUIT HOME RUNS THAT EXCEED 100' IN LENGTH SHALL BE #10 THHN.

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SHELBY COUNTY BOARD OF EDUCATION

SHEET TITLE:
CLASSROOM FLOOR PLAN – POWER

ALABAMA LICENSED No. 25140 PROFESSIONAL ENGINEER RYAN HART
01-05-2026

PROJ. MGR.: LANCE JUNKIN
DRAWN: SEC
DATE: NOVEMBER 7, 2025
REVISIONS
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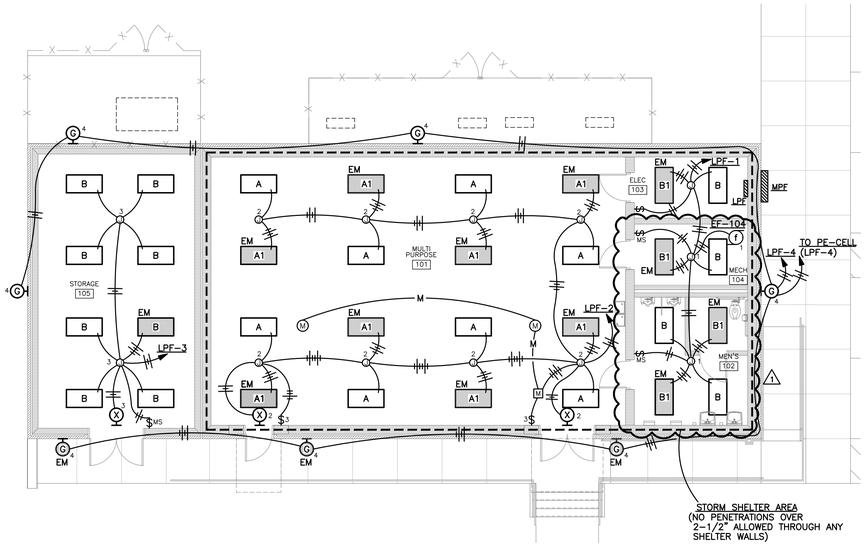
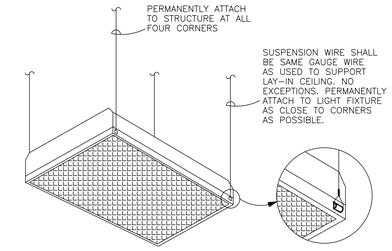


FIELD HOUSE FLOOR PLAN - LIGHTING

SCALE: 1/8" = 1'-0"

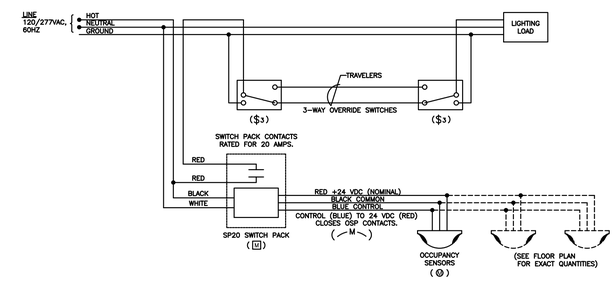


DETAIL - LIGHT FIXTURE SUPPORT

N.T.S.

ENERGY CODE NOTES:

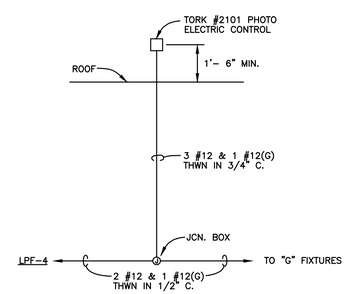
1. LIGHTING INSTALLED WITH ROOM CONTROLS SHALL HAVE THE REQUIRED CONNECTION TO THE WALL SWITCH AND MOTION SENSORS TO ACCOMPLISH PARTIAL-ON AND MANUAL-ON. ROOM CONTROLS AND WALL STATION SHALL ALSO HAVE CONNECTIONS FOR BI-LEVEL LIGHTING WHERE REQUIRED. VERIFY ALL CONTROLS WITH LIGHTING CONTROLS MANUFACTURER DURING SITE VISIT FROM FACTORY TRAINED REPRESENTATIVE.



OCCUPANCY SENSOR - 3 WAY

USING POWER PACK SENSORS IN A 3-WAY SWITCHED CIRCUIT

NOT TO SCALE



DETAIL - P.E. CELL

N.T.S.

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ALABAMA LICENSED No. 25140 PROFESSIONAL ENGINEER J. RYAN HART
01-05-2026

PROJ. MGR.: LANCE JUNKIN
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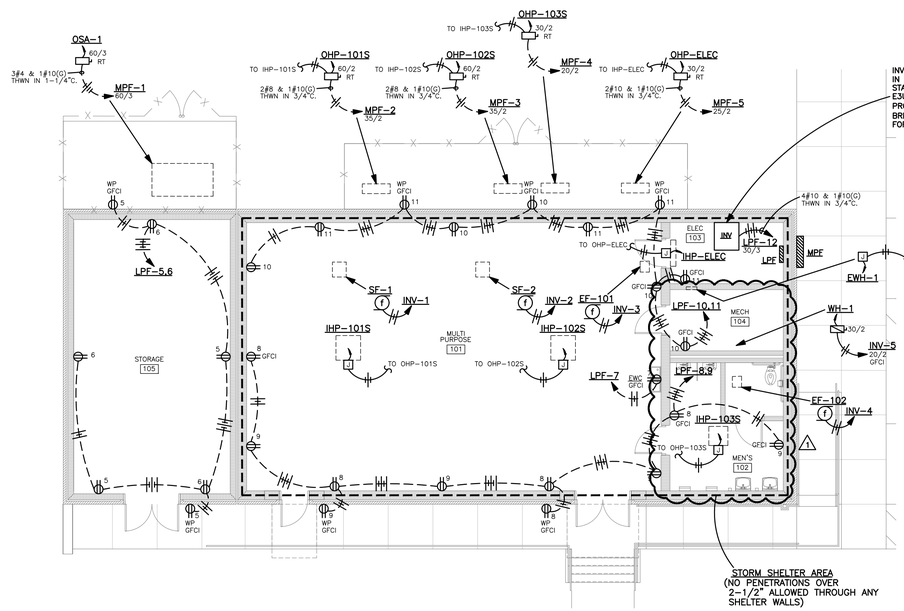

FIELD HOUSE
FLOOR PLAN - POWER

SCALE: 1/8" = 1'-0"

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ALABAMA LICENSED No. 25140 PROFESSIONAL ENGINEER J. RYAN HART
01-05-2026

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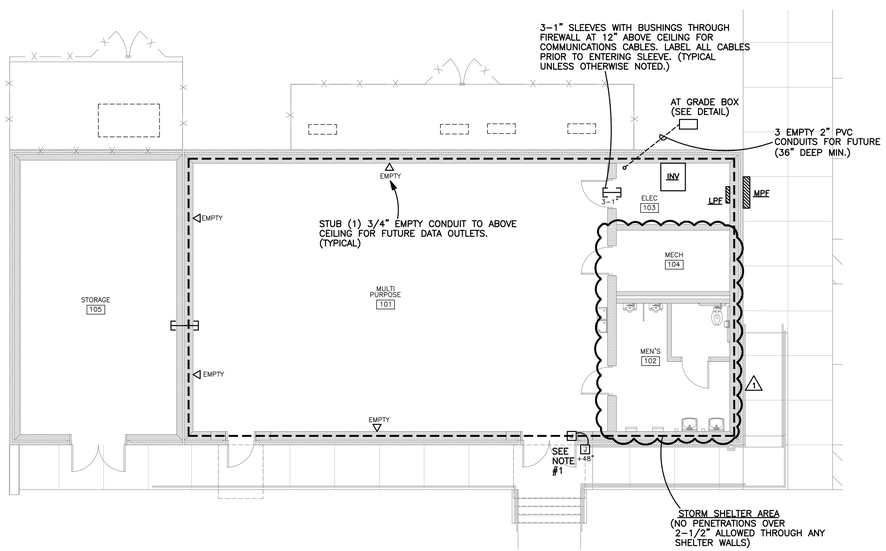
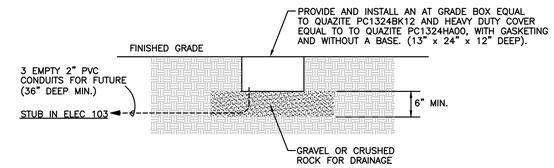


FIELD HOUSE
FLOOR PLAN - AUXILIARIES

SCALE: 1/8" = 1'-0"

NOTES:

1. AT THIS DOOR LOCATION, CONTRACTOR SHALL INSTALL EMPTY JUNCTION BOX WITH 3/4" EMPTY CONDUIT WITH PULL STRING TO ABOVE LAY-IN CEILING FOR FUTURE CARD ACCESS SYSTEM. COORDINATE CLOSELY WITH ARCHITECT FOR DOOR HARDWARE CONFIGURATION.



DETAIL - AT GRADE JUNCTION BOX

N.T.S.

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SHEET TITLE:
FIELD HOUSE FLOOR PLAN - AUXILIARIES

ALABAMA LICENSED No. 25140 PROFESSIONAL ENGINEER J. RYAN HART
01-05-2026

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