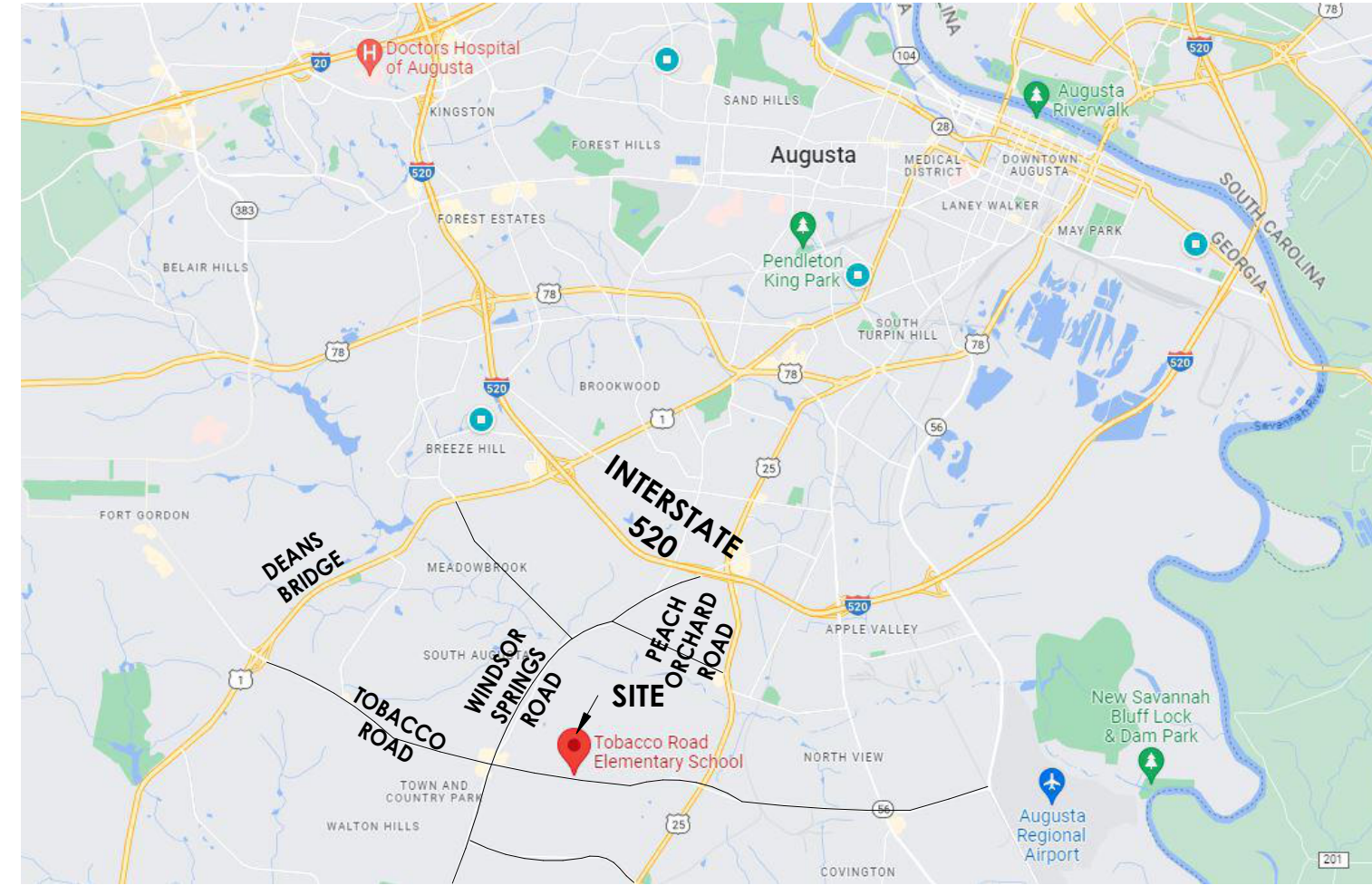


ARCHITECTS  
Christopher Booker & Associates, PC

PROJECT VICINITY



# TOBACCO ROAD ELEMENTARY SCHOOL ROOFING PROJECT

## 2397 TOBACCO ROAD AUGUSTA, GA 30906

PROJECT LOCATION



CODE ANALYSIS

**APPLICABLE CODES:**  
 BUILDING CODES: 2018 IBC, WITH GEORGIA AMENDMENTS  
 NFPA 101 LIFE SAFETY 2018 EDITION  
 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN  
 MECHANICAL CODE: 2018 IMC, WITH GEORGIA AMENDMENTS  
 ELECTRICAL CODE: 2020 NEC  
 PLUMBING CODE: 2018 IPC, WITH GEORGIA AMENDMENTS  
 ENERGY CODE: 2015 IECC, WITH GEORGIA SUPPLEMENTS AND AMENDMENTS

**OCCUPANCY CLASSIFICATION:**  
 EXISTING EDUCATIONAL OCCUPANCY (LSC2018) CH. 15 NFPA 101  
 GROUP E EDUCATIONAL (2018 IBC) SECTION 305

**TYPE OF CONSTRUCTION:** II B SPRINKLERED (NFPA 13)

**FIRE RESISTANCE RATINGS FOR BUILDING ELEMENTS:** (IBC TABLE 601)  
 STRUCTURAL: 1 HR.  
 BEARING WALLS- EXT.: 1 HR.  
 BEARING WALLS- INT.: 1 HR.  
 NON-BEARING WALLS: 0  
 FLOOR CONSTRUCTION: 1 HR.  
 ROOF CONSTRUCTION: 1 HR.

**BUILDING AREA & HEIGHT:** (PER IBC 2018 TABLES 506.2, 504.3, 504.4)  
 ALLOWABLE BUILDING AREA= 58,000 SQ. FT. PER FLOOR  
 $A_a = A_t + (N_s \times I_f)$  If =  $[F/P - 0.25]W/30$   
 $A_a = 58,000 + (14,500 \times [0.75]60/30)$   
 $A_a = 58,000 + (21,750) = 79,750$  SQ. FT. ALLOWABLE BUILDING AREA  
 ALLOWABLE HEIGHT= 75'-0"  
 ALLOWABLE STORIES= THREE (3)

ACTUAL BUILDING AREA= 48,422 SQ. FT. (FROM EXIST. DRAWINGS)  
 ACTUAL HEIGHT= ±28'-0"  
 ACTUAL STORIES= ONE (1)

**FIRE PROTECTION & SEPARATION REQUIREMENTS:**  
 SHAFT (N/A): 2 HR. (IBC 713.4)  
 STAIRWAYS (N/A): 2 HR. (LSC 7.1.3.2.1)  
 MECH. ROOM: 0  
 STORAGE: 0

**OCCUPANT LOAD:** (NFPA 101 LSC 2018 TABLE 7.3.1.2)  
 RE-ROOF ONLY = NOT APPLICABLE: NOT APPLICABLE  
 TOTAL OCCUPANCY: NOT APPLICABLE

**EGRESS:** (NFPA 101 LSC 2018 TABLE A.7.6) (Not applicable to Roof)  
 TRAVEL DISTANCE LIMIT: 200'  
 COMMON PATH LIMIT: 100'  
 DEAD-END LIMIT: 20'

**CORRIDORS:** NOT APPLICABLE  
**STAIRS:** NOT APPLICABLE  
**HANDRAIL:** NOT APPLICABLE  
**GUARDRAIL:** NOT APPLICABLE

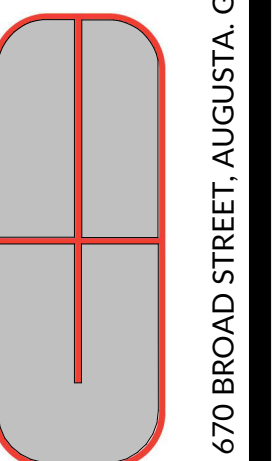
**INTERIOR FINISHES:** (NFPA 101 LSC 2018 15.3.3)  
**WALLS & CEILING:** NOT APPLICABLE  
**FLOOR:** NOT APPLICABLE

DRAWING LIST

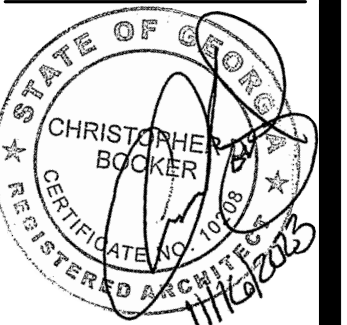
**INDEX TO DRAWINGS**

SHEET	SHEET TITLE
CS1.1	COVER SHEET, DRAWING LIST, CODE ANALYSIS, PROJECT LOCATION
CS1.2	GENERAL PROJECT NOTES, SYMBOLS LEGENDS, ABBREVIATIONS
A1.1	ROOF PLAN - DEMOLITION
A1.2	ROOF PLAN - NEW WORK
A1.3	ENLARGED ROOF PLANS
A2.1	SELECTED ROOFING DETAILS
A2.2	SELECTED ROOFING DETAILS
M1.1	HVAC PLAN - GYM & MEDIA CENTER
M1.2	HVAC PLAN - CAFETERIA & ARTS
M1.3	HVAC ROOF PLAN - GYM & MEDIA CENTER
M1.4	HVAC ROOF PLAN - CAFETERIA & ARTS
M2.1	HVAC NOTES, LEGEND & DETAILS
M3.1	HVAC SCHEDULES
E1.1	ELECTRICAL PLAN - GYM & MEDIA CENTER
E1.2	ELECTRICAL PLAN - CAFETERIA & ARTS
E1.3	ELECTRICAL ROOF PLAN - GYM & MEDIA CENTER
E1.4	ELECTRICAL ROOF PLAN - CAFETERIA & ARTS
E2.1	ELECTRICAL NOTES & SCHEDULES

ARCHITECTS  
Christopher Booker & Associates, PC  
670 BROAD STREET, AUGUSTA, GA 30901 | P: (706) 798-6792 | WWW.CBARCHITECTSPC.COM



TOBACCO ROAD ROOFING PROJECT  
PROJECT No. B-21-016-0294  
2397 TOBACCO ROAD  
AUGUSTA, GA 30906



COVER SHEET  
DRAWING LIST / CODE ANALYSIS  
RICHMOND COUNTY BOARD OF EDUCATION  
TOBACCO ROAD ELEMENTARY SCHOOL  
FACILITY No. 721-0294

DRAWN BY: TJS / EB  
CHKD BY: eab  
DATE: 11.08.2023  
REVISIONS

JOB NO. 2313  
SHEET NO.

THE LOCAL FIRE OFFICIAL HAVING JURISDICTION HAS REVIEWED AND APPROVED A SET OF DOCUMENTS IDENTICAL TO THIS SET OF DOCUMENTS ON \_\_\_\_\_ A CONSTRUCTION PERMIT WILL BE ISSUED TO THE CONTRACTOR AT THE START OF CONSTRUCTION.

CS1.1

## GENERAL NOTES

- ATTENTION ALL USERS OF THESE DRAWINGS, GENERAL CONTRACTORS, SUB CONTRACTORS, MANUFACTURERS, SUPPLIERS; CAREFULLY AND THOROUGHLY REVIEW THESE GENERAL NOTES. IT IS YOUR RESPONSIBILITY TO KNOW AND ADHERE TO THESE REQUIREMENTS.
- DO NOT PRESUME THAT YOUR SCOPE OF WORK IS SINGULARLY DEFINED. YOUR SCOPE OF WORK IS DEFINED THROUGHOUT THE ENTIRE SET OF DRAWINGS AND SPECIFICATIONS AND IS NOT CONTAINED IN JUST ONE SERIES OF DRAWINGS OR DIVISION OF SPECIFICATIONS. YOU MUST REVIEW THE ENTIRE SET OF CONTRACT DOCUMENTS TO DETERMINE YOUR SCOPE OF WORK.
- EVERY EFFORT HAS BEEN MADE TO MAKE THESE DOCUMENTS CONCISE AND COORDINATED, TO DEFINE WORK IN THE MOST LOGICAL PLACE AND TO ELIMINATE REDUNDANCY. KEEP IN MIND HOWEVER THAT YOUR SCOPE OF WORK CAN BE CONTAINED IN VARIOUS PLACES, WITH VARYING DESCRIPTIONS. DO NOT CONSIDER THAT THERE IS ONE CUSTOMARY PLACE TO LOCATE YOUR WORK. THERE IS A DANGER OF OMITTING WORK FROM YOUR SCOPE BECAUSE THE ENTIRE SET OF DOCUMENTS WAS NOT REVIEWED.
- MECHANICAL AND ELECTRICAL DRAWINGS SHOW INFORMATION IN A DIAGRAMMATIC FASHION WITHOUT DIMENSIONING. THE GENERAL CONTRACTOR IS TO COORDINATE THE LOCATIONS OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT WITH RESPECT TO THE ARCHITECTURAL AND STRUCTURAL DETAILING OF SHAFTS, CHASES, AND SUCH.
- THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH SITE CONDITIONS AS THEY MAY AFFECT CARRYING OUT THE WORK AS DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT, AND NOTIFY THE ARCHITECT OF ANY CONDITIONS THAT REQUIRE MODIFICATION BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, LABOR, AND SERVICES NECESSARY TO COMPLETE THE WORK.
- ALL PERSONS DIRECTLY OR INDIRECTLY ASSOCIATED WITH THE PROJECT SHALL BE FAMILIAR WITH THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT, AND IMPLEMENT THOSE RULES AS THEY APPLY TO THIS PROJECT.
- ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE BUILDING CODES AS NOTED ON CODE SHEETS.
- CONTRACTOR SHALL SUBMIT CONFIRMATION OF ORDERED MATERIALS OR ITEMS NECESSARY TO COMPLETE THE PROJECT WITH PROJECTED DELIVERY DATE GREATER THAN FOUR WEEKS.
- ALL SUBCONTRACTORS SHALL SUBMIT SHOP DRAWINGS AS REQUIRED FOR APPROVAL PRIOR TO COMMENCING ANY WORK.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL TRADES AND THE PREVENTION OF CONFLICT AMONG ALL TRADES.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITY LINES. LOCATIONS SHOWN ARE APPROXIMATE. REPAIR ALL DAMAGE TO UTILITY LINES CAUSED BY CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
- PROVIDE SEALANT AT ALL JOINTS OR CRACKS THAT OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EACH OTHER, AND THE INTERSECTION IS EXPOSED TO VIEW, UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- ALL PENETRATIONS AT SMOKE AND FIRE RATED WALLS, FLOORS, OR CEILINGS, SHALL BE PROTECTED, SEALED OR DAMPERED USING ONLY U.L. AND/OR I.C.B.O. APPROVED METHODS, MATERIALS AND INSTALLATION.
- CONTRACTOR SHALL TAKE CARE TO MAINTAIN FIRE PROTECTION SYSTEMS. REPLACE FIRE-PROOFING AND SEALANTS TO ORIGINAL STATE WHERE DISTURBED BY CONSTRUCTION.
- PROVIDE FINISHED COAT OF PAINT ALL EXPOSED STEEL - COORDINATE WITH FINISH SCHEDULE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING AND SHORING REQUIRED DURING CONSTRUCTION.
- TYPICAL DETAILS MAY NOT NECESSARILY BE REFERENCED ON THE DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.

## DRAWING & DIMENSION NOTES

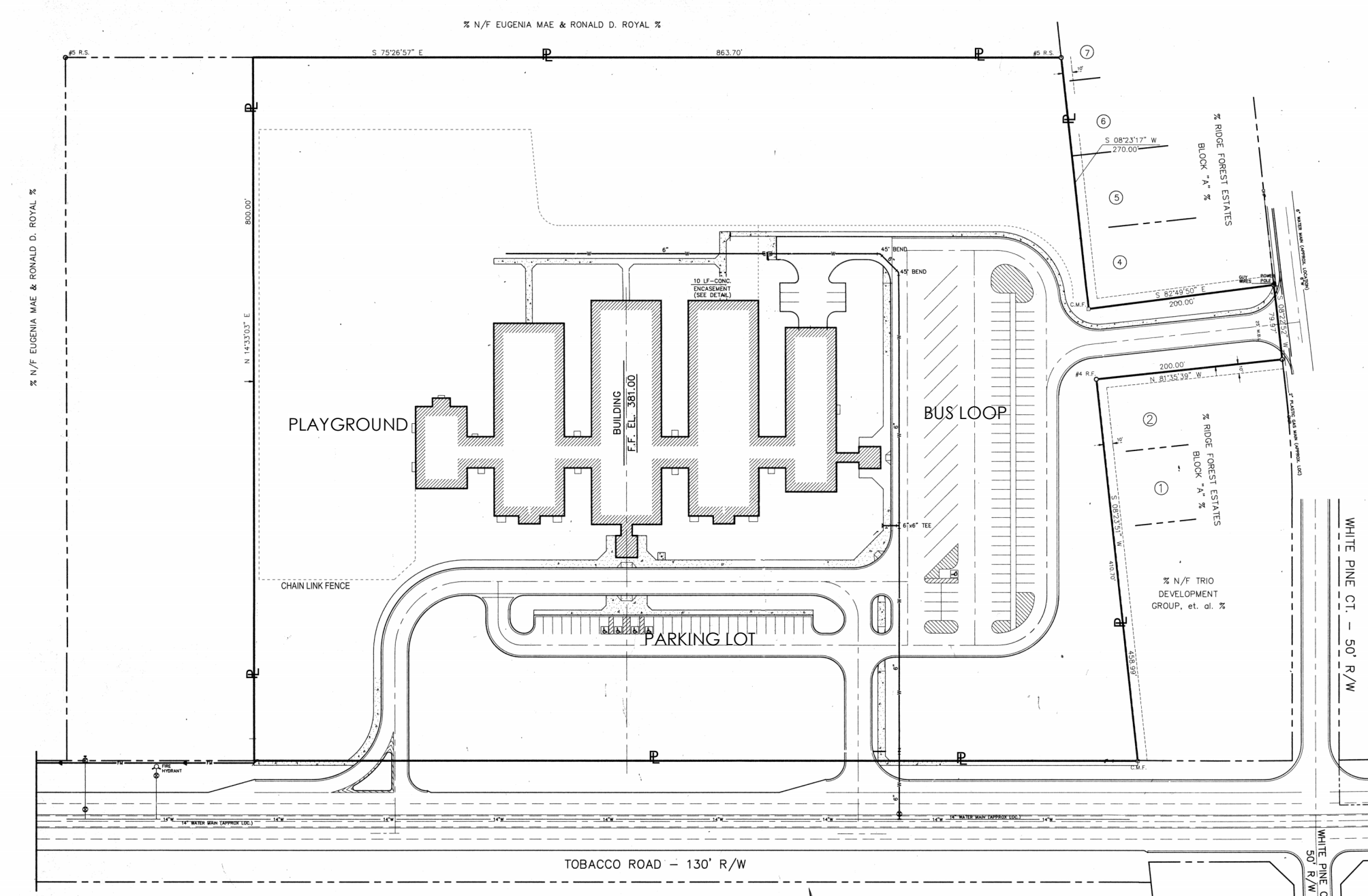
- THE CONTRACT DOCUMENT DRAWINGS HAVE BEEN PREPARED USING REVIT® SOFTWARE IN A MICROSOFT WINDOWS ENVIRONMENT. A BUILDING INFORMATION MODEL (BIM) WAS DEVELOPED SOLELY TO COMMUNICATE THE DESIGN TO THE OWNER AND IS NOT SUITABLE FOR ANY OTHER PURPOSE. FOR EXAMPLE THE REVIT MODEL IS NOT SUITABLE FOR COST ESTIMATING, SYSTEMS PERFORMANCE, COORDINATION, SCHEDULING, OR FACILITIES MANAGEMENT.
- THESE DOCUMENTS WERE PRODUCED USING THE CONSTRUCTION SPECIFICATIONS INSTITUTES UNIFORM DRAWING SYSTEM AND THE NATIONAL CAD STANDARD AS GUIDES.
- ANY INDICATION OF PROJECT LIMITS OR LINES OF DEMARCATION ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, AND ARE NOT TO BE TAKEN LITERALLY. ACTUAL CONTRACT LIMITS ARE TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE OWNER BEFORE ACTUAL CONSTRUCTION WORK BEGINS.
- DRAWINGS ARE PREPARED USING DIMENSIONS AND PRODUCT CONFIGURATIONS OR DETAILS OF SPECIFIC MANUFACTURERS. DIMENSIONS AND DETAILS FOR SPECIFIC PRODUCTS MAY CHANGE BEFORE THEY ARE ACTUALLY INCORPORATED INTO THE WORK, AND PRODUCTS BY OTHER MANUFACTURERS ARE ALSO ACCEPTABLE. THEREFORE, ACTUAL INSTALLATION DETAILS AND DIMENSIONS MAY DIFFER FROM THOSE SHOWN. CONTRACTOR SHALL VERIFY INSTALLATION REQUIREMENTS FOR ALL PRODUCTS TO BE INCORPORATED IN THE WORK (INCLUDING THICKNESSES FOR RECESSED OR SEMI-RECESSED PRODUCTS), AND IS RESPONSIBLE FOR ACCOMMODATING AND COORDINATING CHANGES TO OTHER MATERIALS OR PRODUCTS THAT ARE NECESSARY BECAUSE OF THESE DIFFERENCES.
- THE DRAWINGS AND SPECIFICATIONS ARE SEPARATED INTO DISCIPLINES FOR CONVENIENCE. THE SEPARATIONS USED ARE USED ONLY FOR THE PURPOSES OF CONVENIENCE AND REFERENCE AND IN NO WAY DO THEY DEFINE OR LIMIT THE SCOPE OR INTENT OF ANY PART OF THE DRAWINGS, OR OF THE DRAWINGS AND SPECIFICATIONS AS A WHOLE. THE FACT THAT THE DRAWINGS ARE SEPARATED IN NO WAY SUGGESTS THAT THE WORK IS NOT TO BE CONSTRUCTED AS A COMPLETE, INTEGRATED AND UNIFIED WHOLE.
- THE DRAWINGS AND SPECIFICATIONS, INCLUDING DRAWINGS PREPARED BY SPECIFIC ENGINEERING DISCIPLINES (SUCH AS CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.) ARE COMPLEMENTARY; ITEMS SHOWN IN ANY ONE LOCATION IN THE DRAWINGS SHALL BE CONSIDERED TO BE REQUIREMENTS OF THE CONTRACT FOR CONSTRUCTION. IN THE EVENT OF AN INCONSISTENCY BETWEEN THE DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT, THE CONTRACTOR SHALL SEEK CLARIFICATION OR INTERPRETATION FROM THE ARCHITECT PRIOR TO BIDDING, WHERE INCONSISTENCIES ARE NOT CLARIFIED PRIOR TO BIDDING, AND WHERE THE ACTUAL SOLUTION OR INTENT CANNOT BE REASONABLY INFERRED, THE CONTRACTOR SHALL PROVIDE THE BETTER QUALITY OR GREATER QUANTITY OF WORK.
- USE OF THE WORD "VERIFY" POINTS OUT A SITUATION WHICH MUST BE CONFIRMED PRIOR TO PROCEEDING WITH THE WORK, FABRICATION OF EQUIPMENT, OR ORDERING MATERIAL. NOTIFY THE ARCHITECT OF ANY DISCREPANCY DISCOVERED.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT IMMEDIATELY SHOULD ANY DISCREPANCIES BE FOUND IN THE DRAWINGS AND SPECIFICATIONS.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL FIELD CONDITIONS AND DIMENSIONS AS THEY RELATE TO THIS PROJECT. SHOULD DISCREPANCIES EXIST BETWEEN THE WORK INDICATED AND ACTUAL FIELD CONDITIONS NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
- DO NOT SCALE THE DRAWINGS. DRAWING SCALES AS INDICATED ARE FOR REFERENCE ONLY AND ARE NOT INTENDED TO ACCURATELY DEPICT ACTUAL OR DESIGNATED CONDITIONS. WRITTEN DIMENSIONS SHALL GOVERN.
- ALL EXTERIOR WALLS ARE DIMENSIONED TO THE EXTERIOR FACE OF STUD OR CMU. ALL INTERIOR WALLS ARE DIMENSIONED TO THE CENTERLINE OF METAL STUDS OR FACE OF CMU. INTERIOR DIMENSIONS FROM EXTERIOR WALLS START AT THE INTERIOR FACE OF METAL STUD OR CMU. (UNLESS NOTED OTHERWISE)
- THE TERM "ALIGN" REFERS TO LOCATING DIFFERENT COMPONENTS OF CONSTRUCTION TO PROVIDE A FLUSH FINISH SURFACE.
- SHOULD DIMENSIONS BE MISSING OR CONFLICTING, NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH RELATED WORK.
- SEE ENLARGED FLOOR PLANS FOR ANY & ALL DIMENSIONS AND WALL TYPES THAT MAY NOT BE REFERENCED ON THE OVERALL FLOOR PLAN (UNLESS NOTED OTHERWISE)

## ABBREVIATIONS

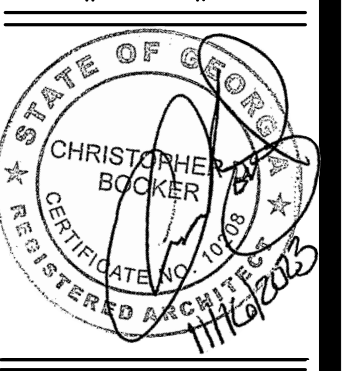
A/C	AIR CONDITIONING	F.O.S.	FACE OF STUD
ACT	ACOUSTICAL CEILING TILE	FR	FIRE RATED
ADA	AMERICANS WITH DISABILITIES ACT	FT	FOOT / FEET
A.F.F.	ABOVE FINISH FLOOR	F.V.	FIELD VERIFY
A.H.U.	AIR HANDLING UNIT		
ALT	ALTERNATIVE	GA	GAUGE
ALUM	ALUMINUM	GALV	GALVANIZED
ANO	ANODIZED	GC	GENERAL CONTRACTOR
ARCH	ARCHITECTURAL	GD	GARBAGE DISPOSAL
		GL	GLASS
		GL BLK	GLASS BLOCK
		GLU LAM	GLUE LAMINATED WOOD
		GYP BD	GYPSON BOARD
BD	BOARD	HC	HOLLOW CORE
BLDG	BUILDING	HT	HEIGHT
BLKG	BLOCKING	HM	HOLLOW METAL
B/	BOTTOM OF BEARING	HORIZ	HORIZONTAL
BRG		HR	HOUR, HANDRAIL
		HVAC	HEATING, VENTILATING & AIR CONDITIONING
C.I.P.	CAST IN PLACE	IBC	INTERNATIONAL BUILDING CODE
C.J.	CONTROL JOINT	INFO	INFORMATION
CL	CENTERLINE	INT	INTERIOR
CLG	CEILING	JAN	JANITOR
CMU	CONCRETE MASONRY UNITS	JT	JOINT
CONC.	CONCRETE	DN	DOWN
CONT.	CONTINUOUS	MAINT.	MAINTENANCE
COORD	COORDINATE	MATL.	MATERIAL
DEMO	DEMOLITION	MAX.	MAXIMUM
DIA	DIAMETER	MECH.	MECHANICAL
DISP	DISPENSER	MANUF.	MANUFACTURER
DN	DOWN	MIN.	MINIMUM
DR	DOOR	MICR.	MICROWAVE
DW	DISHWASHER	MISC.	MISCELLANEOUS
DWG	DRAWING	M.O.	MASONRY OPENING
		MTL	METAL
(E)	EXISTING	N.I.C.	NOT IN CONTRACT
EJ	EXPANSION JOINT	NTS	NOT TO SCALE
EL	ELEVATION	O.C.	ON CENTER
ELEC	ELECTRICAL	PT	PAINT
ELEV	ELEVATOR	PC	PORCELAIN TILE
EQ	EQUAL	PVC	POLYVINYL CHLORIDE
EQUIP	EQUIPMENT	QA	QUALITY ASSURANCE
EXIST	EXISTING	QT	QUARRY TILE
EXT	EXTERIOR		
FD	FLOOR DRAIN		
FE	FIRE EXTINGUISHER		
FEC	FIRE EXTINGUISHER CABINET		
FIN FL	FINISH FLOOR		
FF & E	FURNITURE FIXTURES & EQUIPMENT		
FIN	FINISH		
FO	FINISH OPENING		

## SYMBOLS

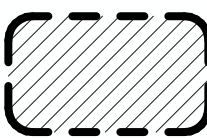
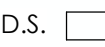
	Wall Type (see wall types)
	Door Type (see door schedule)
	Window Type (see window configuration)
	Building Section
	Wall Section
	Detail Callout
	Elevation (without line)
	Interior Elevation Mark
	Elevation Mark
	Room Name / Number
	Plan Notes
	Revision Tag



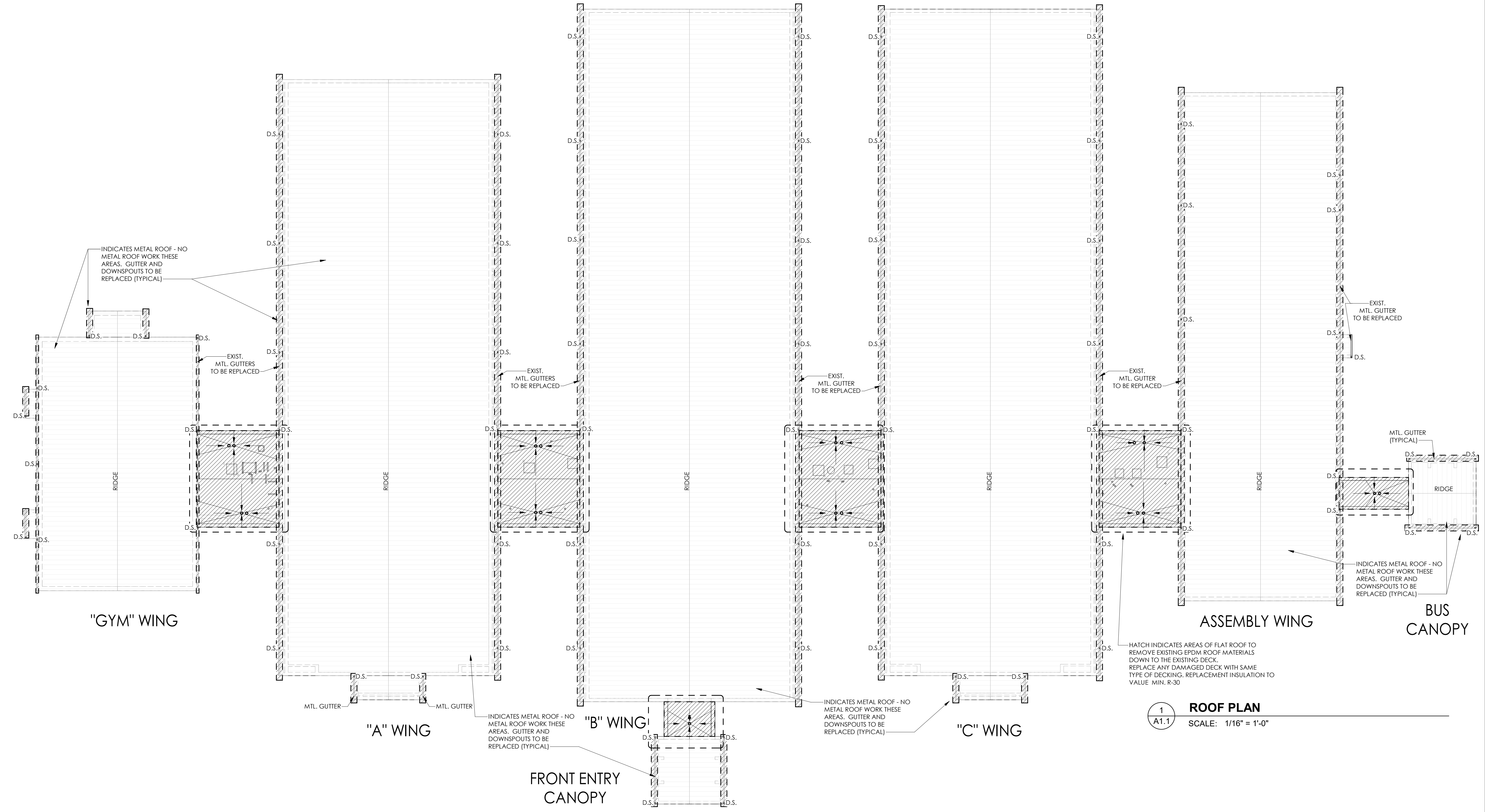
**1 SITE PLAN**  
NOT TO SCALE



DRAWN BY: TJS
CHKD BY: eab
DATE: 11.08.2023
REVISIONS:
JOB NO. 2313
SHEET NO.

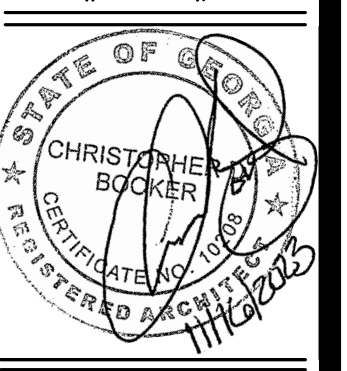
DEMOLITION LEGEND	
	AREA OF ROOF DEMOLITION AND PREPARATION FOR NEW EPDM ROOF OR GUTTER & DOWNSPOUT REPLACEMENT
D.S. 	DOWNSPOUT LOCATION - VERIFY UNDERGROUND STORM SYSTEM CLEAR AND REPLACE DOWNSPOUTS

- ROOF DEMOLITION NOTES**
- REMOVE ALL EXISTING ROOFING MATERIALS DOWN TO THE EXISTING DECKING. REPLACE ANY DAMAGED DECKING WITH THE SAME TYPE OF DECKING.
  - CAREFULLY REMOVE EXISTING COPING AND MARK IN AN INCONSPICUOUS PLACE LOCATION ON ROOF. REPLACE EXISTING COPING AFTER EPDM WORK IS COMPLETE.
  - REMOVE ANY DAMAGED FLASHING AND REPLACE.
  - COORDINATE REMOVAL OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS. PROVIDE NEW SLEEPERS AND MOUNTING RAILS FOR EQUIPMENT.
  - KEEP BUILDING DRY AT ALL TIMES
  - PROVIDE METHOD FOR ROOF TO DRAIN PROPERLY WHILE DEMOLITION AND INSTALLATION OF NEW IS IN PROGRESS.



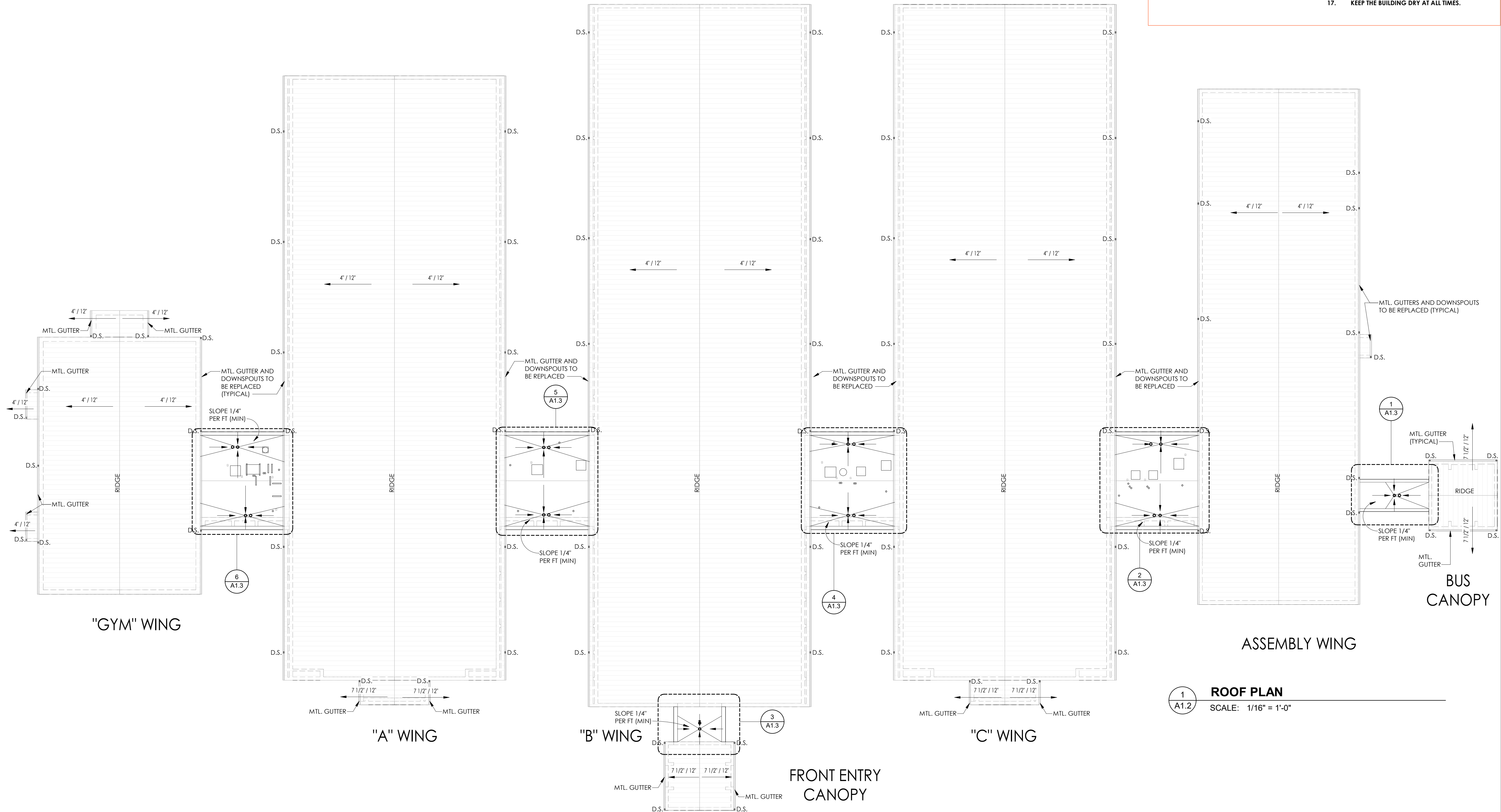
**1**  
**A1.1** **ROOF PLAN**  
SCALE: 1/16" = 1'-0"

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DRAWN BY: TJS
CHKD BY: eab
DATE: 11.08.2023
REVISIONS
JOB NO. 2313
SHEET NO.

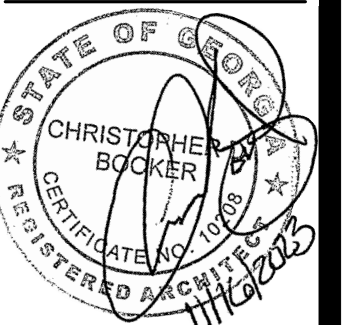
3/12/2024 12:08:38 PM



- ROOF PLAN NOTES**
- DO NOT BEGIN WORK WITHOUT HOLDING A PRE-ROOFING CONFERENCE. NOTIFY ARCHITECT, ROOFING MANUFACTURER, INSTALLER, SHEET METAL SUBCONTRACTOR AND OTHER RELATED SUB-CONTRACTORS A MINIMUM OF 7 DAYS BEFORE COMMENCING ROOFING WORK.
  - ROOFING SUPPLIER, MANUFACTURE AND INSTALLER SHALL REVIEW ALL ROOFING DETAILS AND ADVISE ARCHITECT ON ANY RECOMMENDED CHANGES.
  - PROVIDE CRICKETS BEHIND ALL MECHANICAL EQUIPMENT CURBS, ROOF HATCH CURBS, ETC.
  - MINIMUM SLOPE AT ALL CRICKET VALLEYS SHALL BE 1/4" PER FOOT. DO NOT SCALE PLANS FOR CRICKET DIMENSIONS.
  - ALL CRICKET SLOPES SHALL BE ACHIEVED IN ACCORDANCE WITH ROOFING MANUFACTURES REQUIREMENTS.
  - PROVIDE CURBS AND FLASHING AT ANY EQUIPMENT NOT PROVIDED WITH PRE-MANUFACTURED CURBS.
  - SEPARATE ALL DISSIMILAR METALS WITH BITUMINOUS COATINGS OR OTHER METHODS ACCEPTABLE TO THE ARCHITECT.
  - PROVIDE FLASHING PER ROOF MANUFACTURES STANDARD DETAILS AT ALL ELECTRICAL CONDUIT, HVAC LINES, ETC.
  - CONTRACTOR AND ALL SUBTRADES SHALL EXERCISE THE NECESSARY CARE TO LIMIT TRAFFIC AND PREVENT DAMAGE TO THE ROOF MEMBRANE
  - PROVIDE (4) WALKWAY PADS AT EACH MECHANICAL UNIT & ACCESS PATH TO THE UNITS.
  - ROOFING CONTRACTOR RESPONSIBLE FOR WATER TIGHTNESS OF ALL ROOF PENETRATIONS.
  - PONDING OF WATER SHALL NOT BE ALLOWED.
  - DEBRIS OF ANY KIND SHALL NOT BE ALLOWED TO ACCUMULATE IN THE ROOF.
  - ROOF INSULATION VALUE TO BE R-30 MIN.
  - INSTALL WATER CUT-OFFS EACH DAY WHERE ROOFING IS REMOVED OR INCOMPLETE.
  - RAISE CURBS OF ANY EQUIPMENT WHERE NEW INSULATION MAY CAUSE CURB TO BE LESS THAN 8" HIGH
  - KEEP THE BUILDING DRY AT ALL TIMES.

1  
A1.2  
**ROOF PLAN**  
SCALE: 1/16" = 1'-0"

**TOBACCO ROAD ROOFING PROJECT**  
PROJECT No. B-21-016-0294  
2397 TOBACCO ROAD  
AUGUSTA, GA 30906

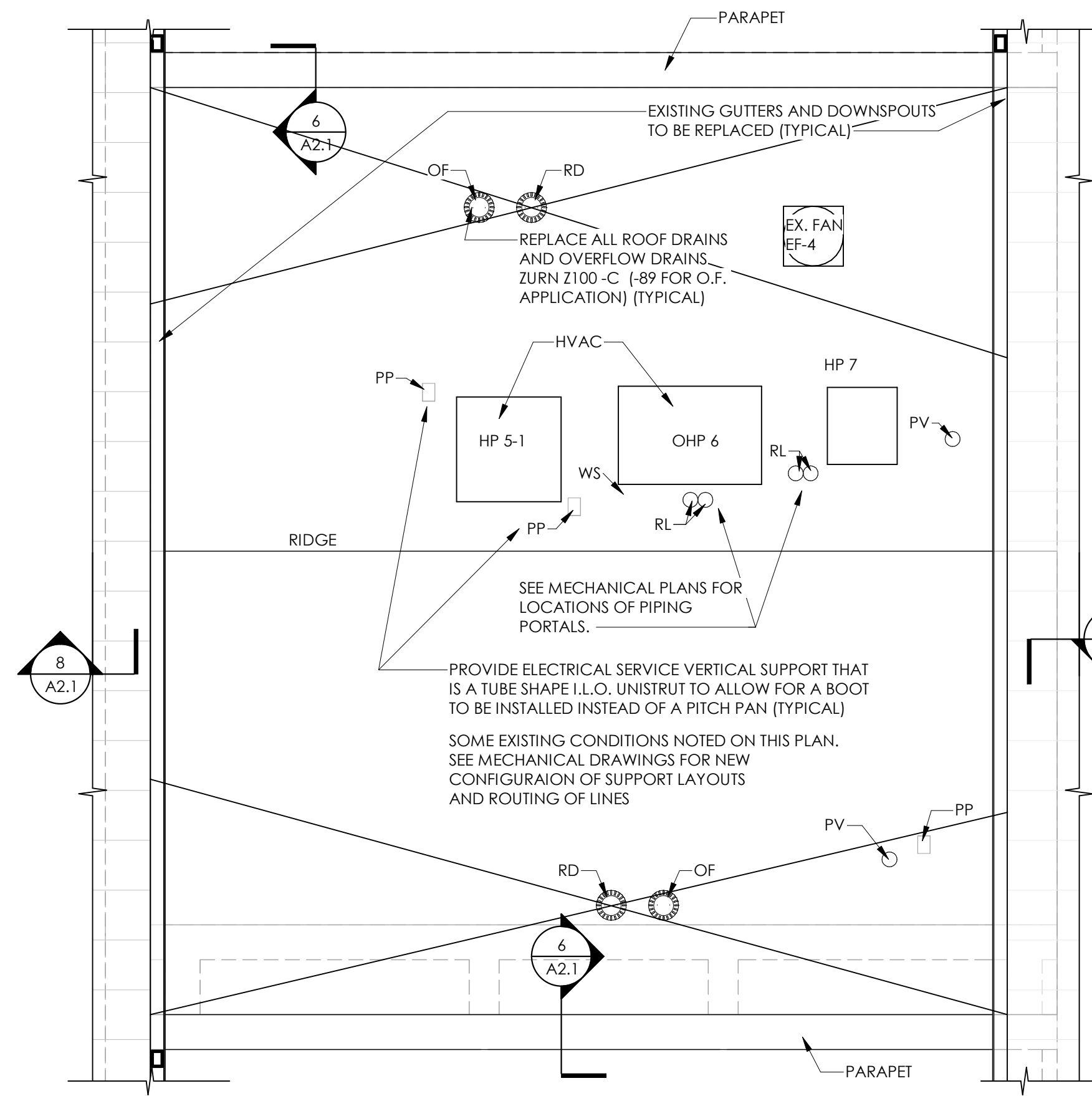


**ROOF PLAN - NEW WORK**  
RICHMOND COUNTY BOARD OF EDUCATION  
TOBACCO ROAD ELEMENTARY SCHOOL  
FACILITY No. 721-0294

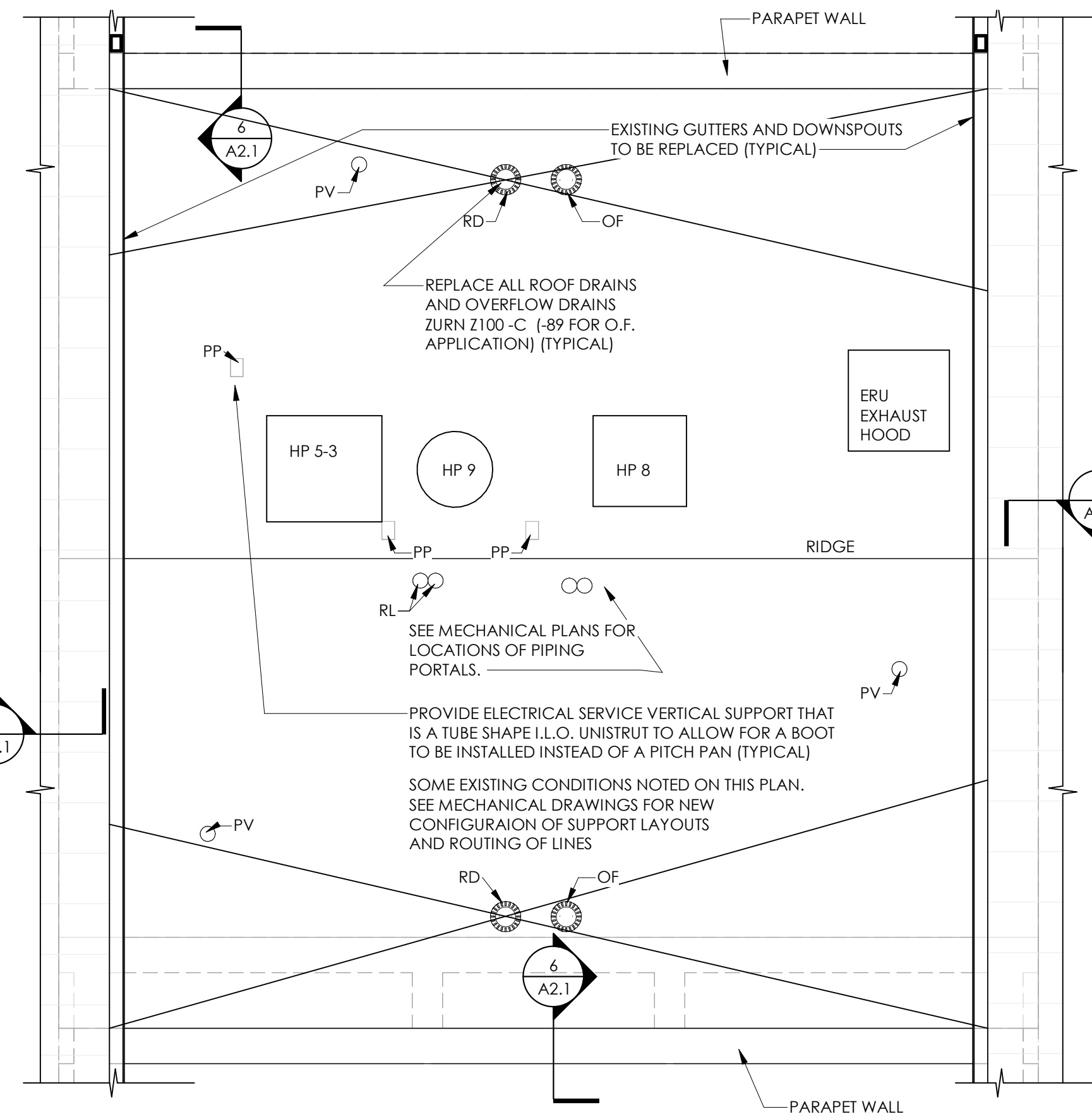
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CHKD BY: eab  
DATE: 11.08.2023  
REVISIONS:

JOB NO. 2313  
SHEET NO.

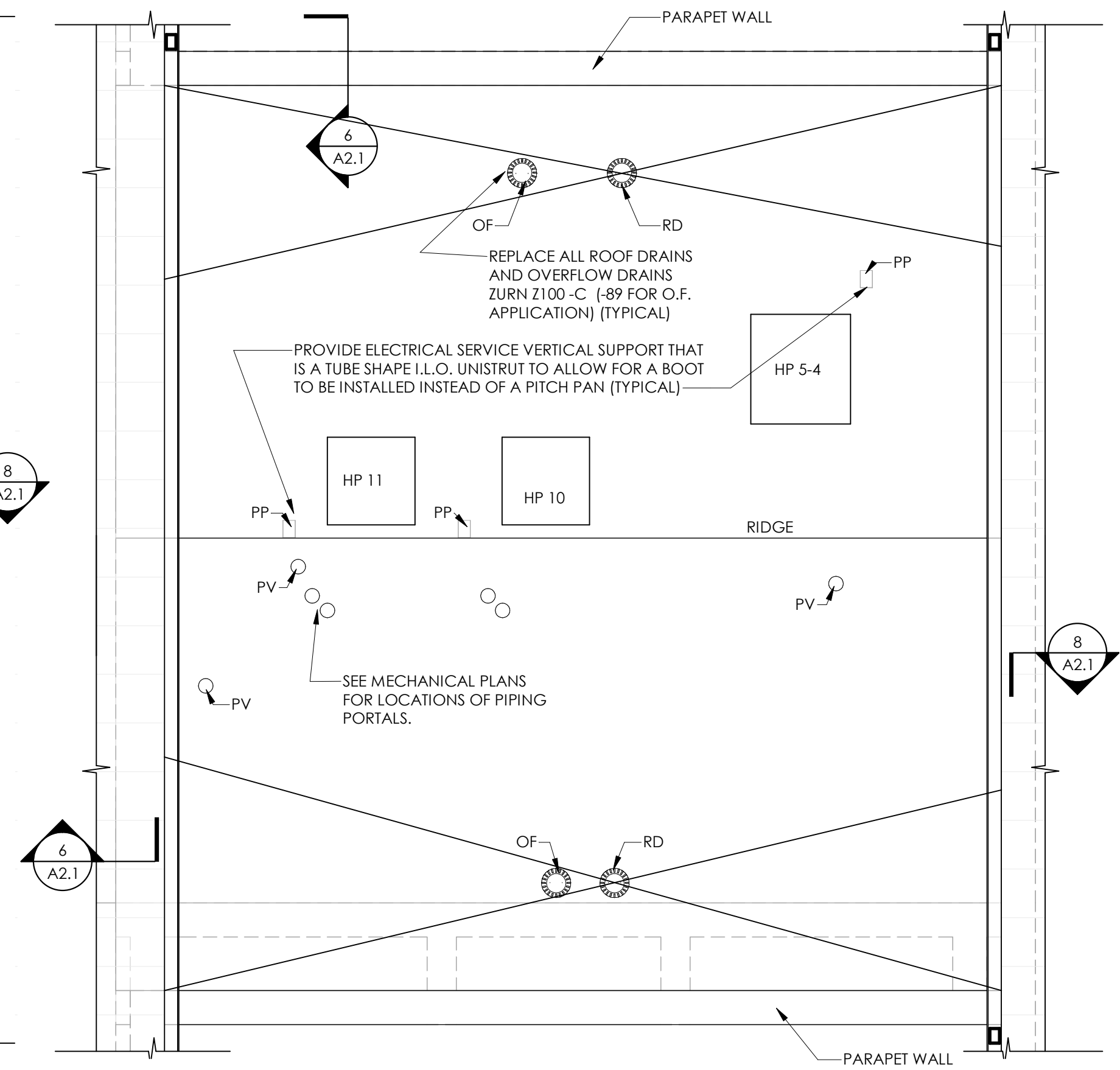
**A1.2**



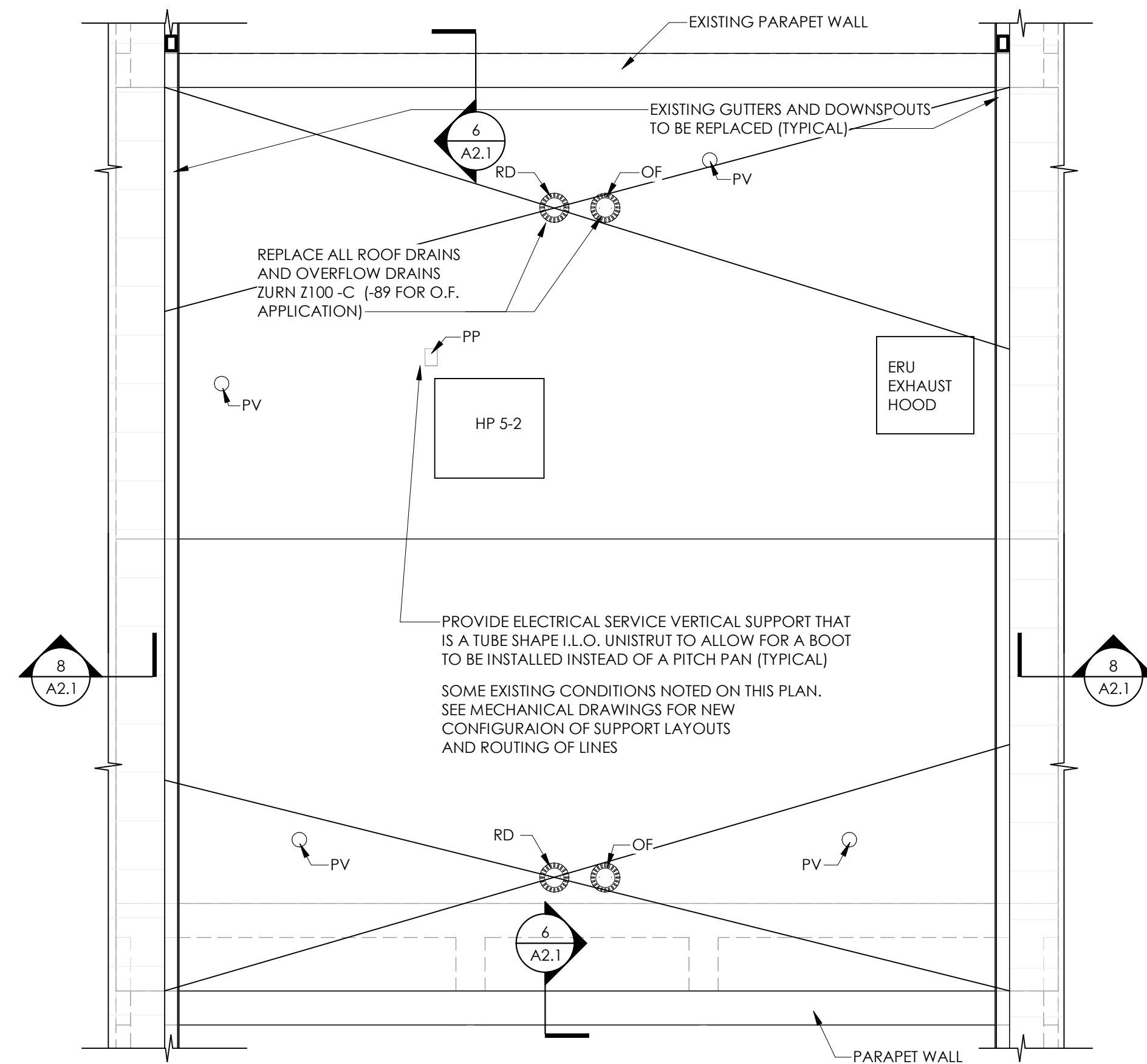
6  
A1.3  
**ENLARGED PLAN BETWEEN GYM AND A WING**  
SCALE: 1/4" = 1'-0"



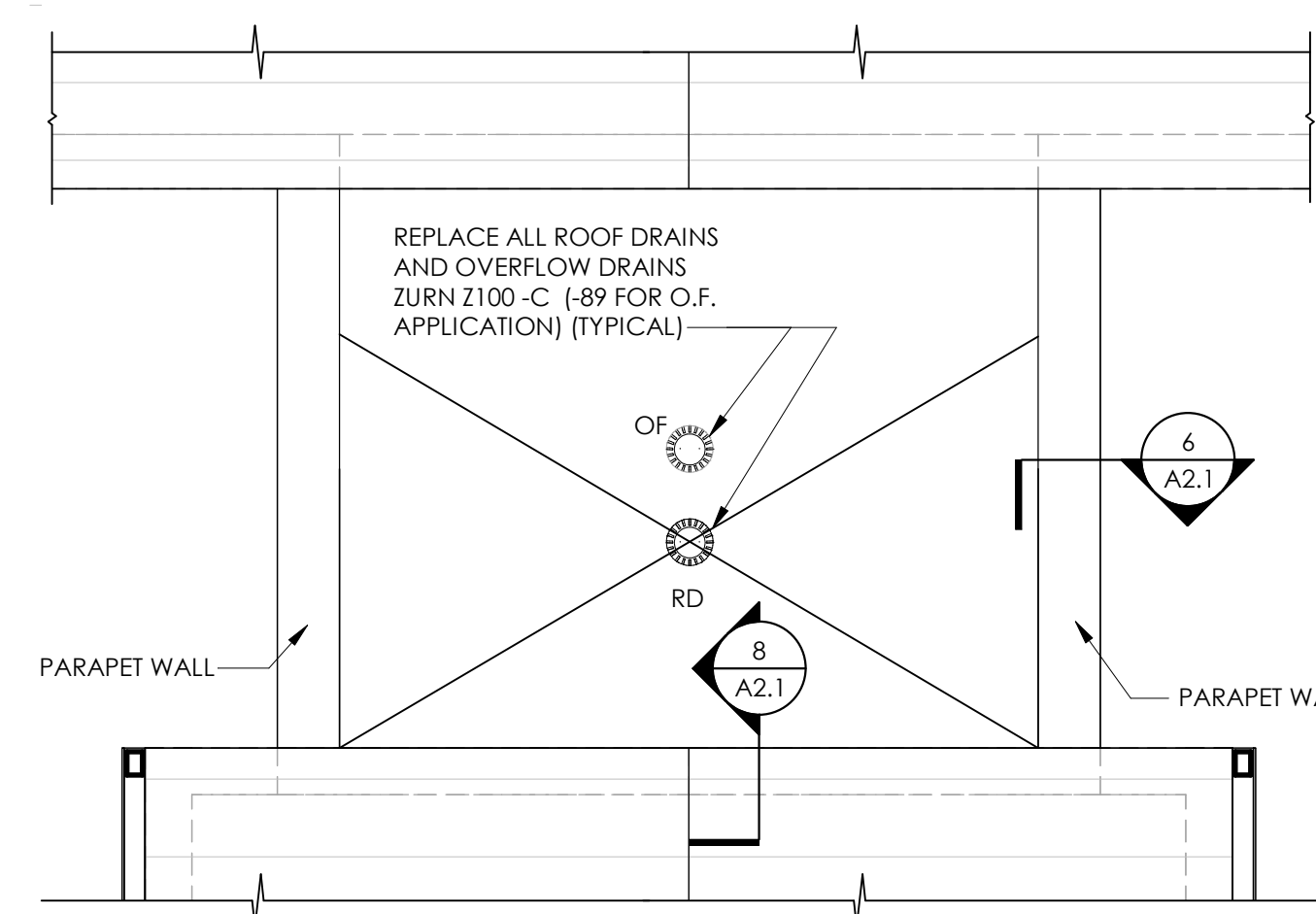
4  
A1.3  
**ENLARGED PLAN BETWEEN B & C WINGS**  
SCALE: 1/4" = 1'-0"



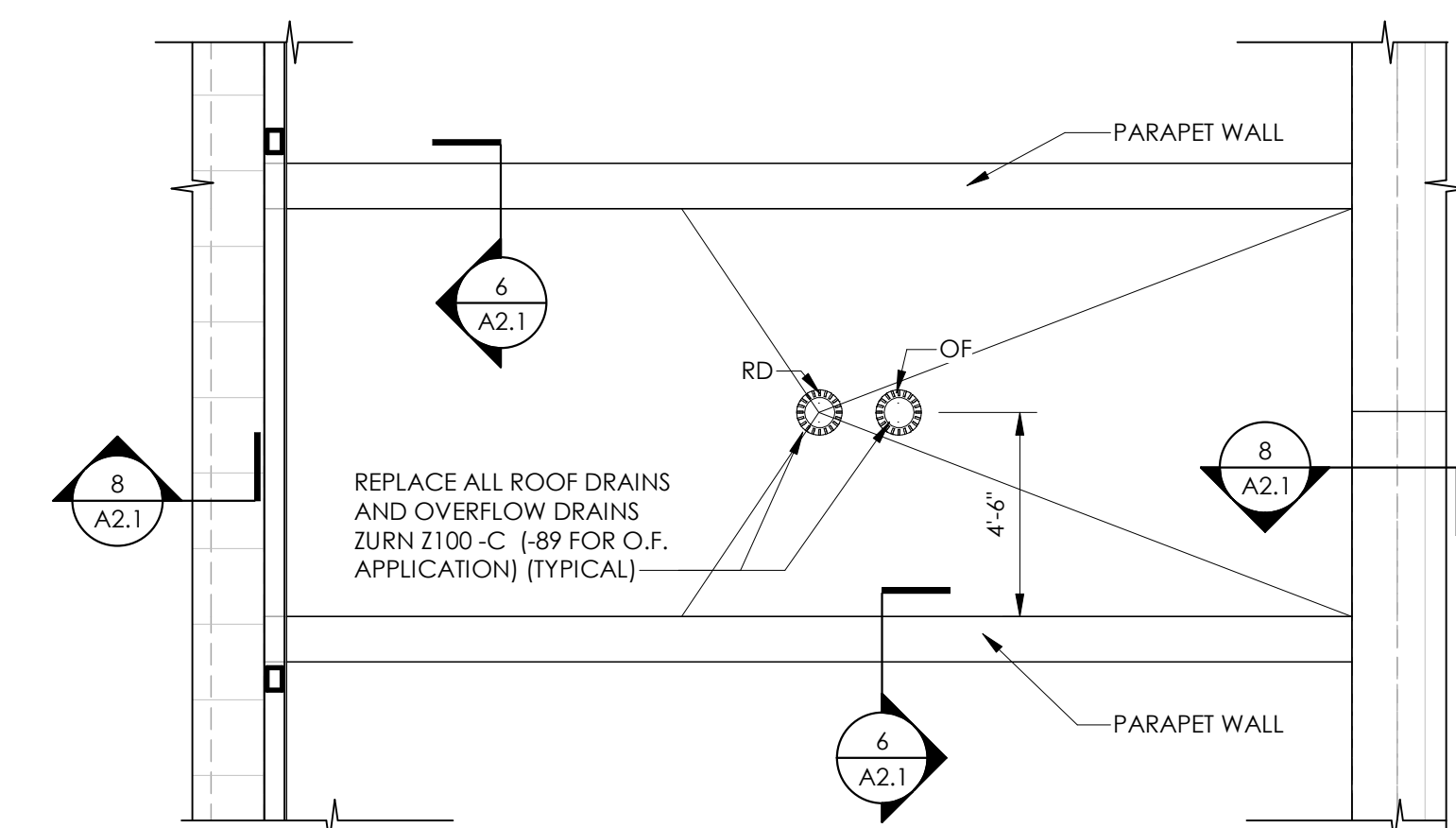
2  
A1.3  
**ENLARGED PLAN BETWEEN ASSEMBLY AND C WINGS**  
SCALE: 1/4" = 1'-0"



5  
A1.3  
**ENLARGED PLAN BETWEEN A AND B WINGS**  
SCALE: 1/4" = 1'-0"

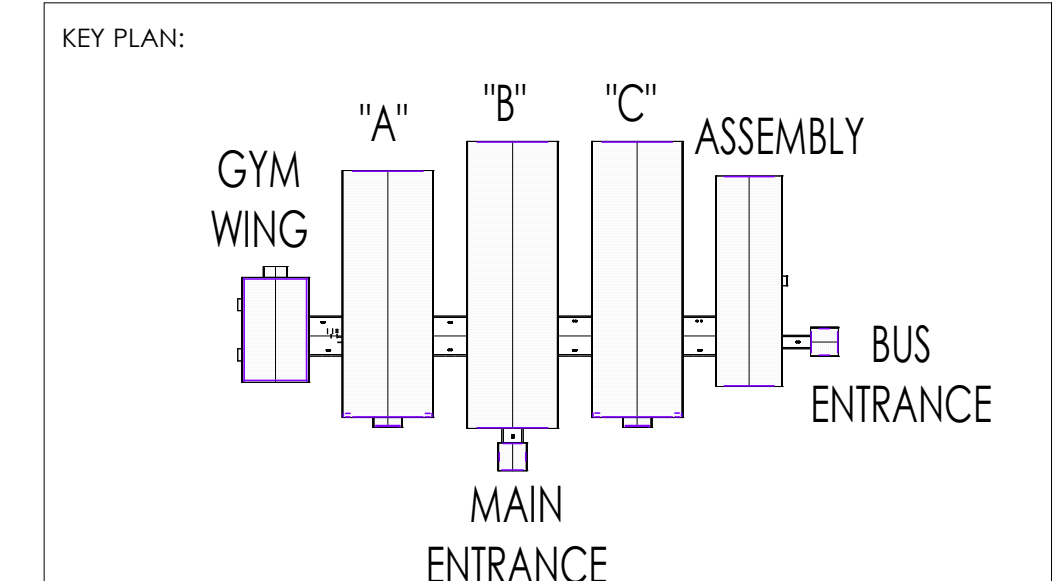


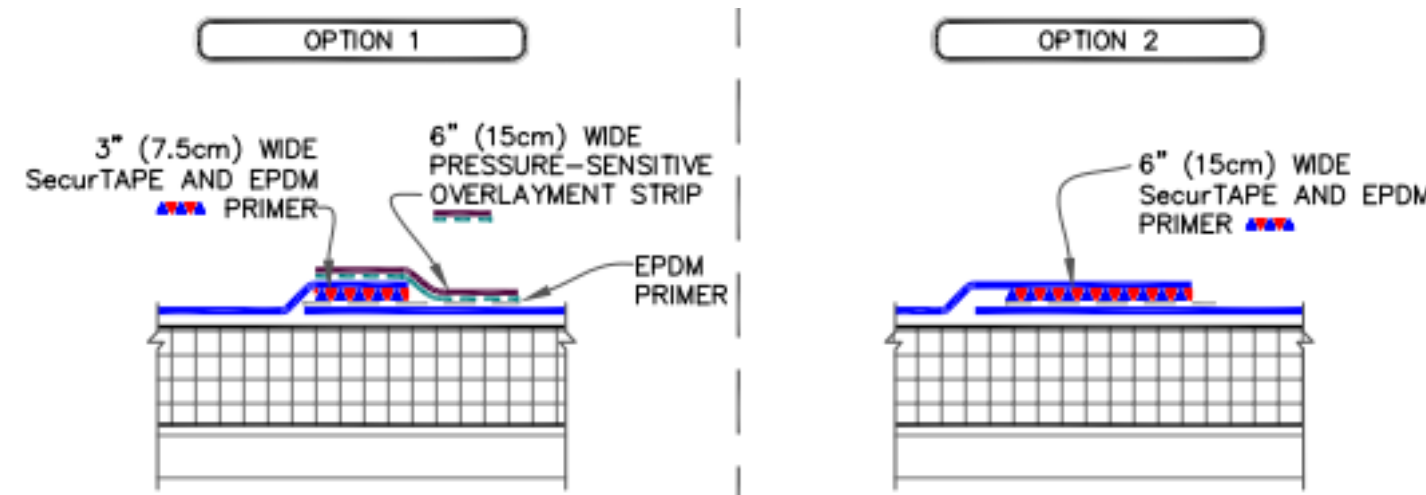
3  
A1.3  
**ENLARGED PLAN BETWEEN ENTRANCE AND B WING**  
SCALE: 1/4" = 1'-0"



1  
A1.3  
**ENLARGED PLAN BETWEEN BUS ENTRANCE AND ASSEMBLY**  
SCALE: 1/4" = 1'-0"

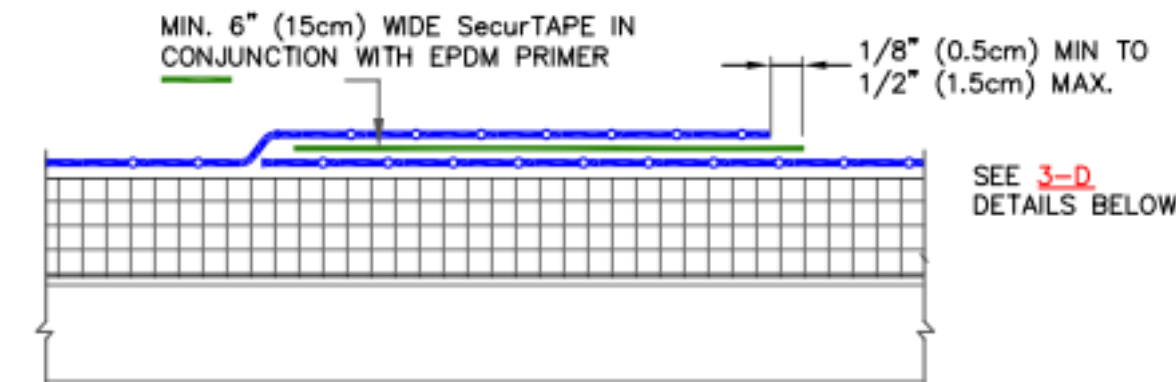
DRAWING LEGEND	
F	FAN
D	DUCT
WS	WOOD SLEEPER
RL	REFRIGERANT LINE
HVAC	HVAC
RD	PRIMARY ROOF DRAIN
PV	PLUMBING VENT
OF	OVERFLOW DRAIN
PP	PITCH PAN





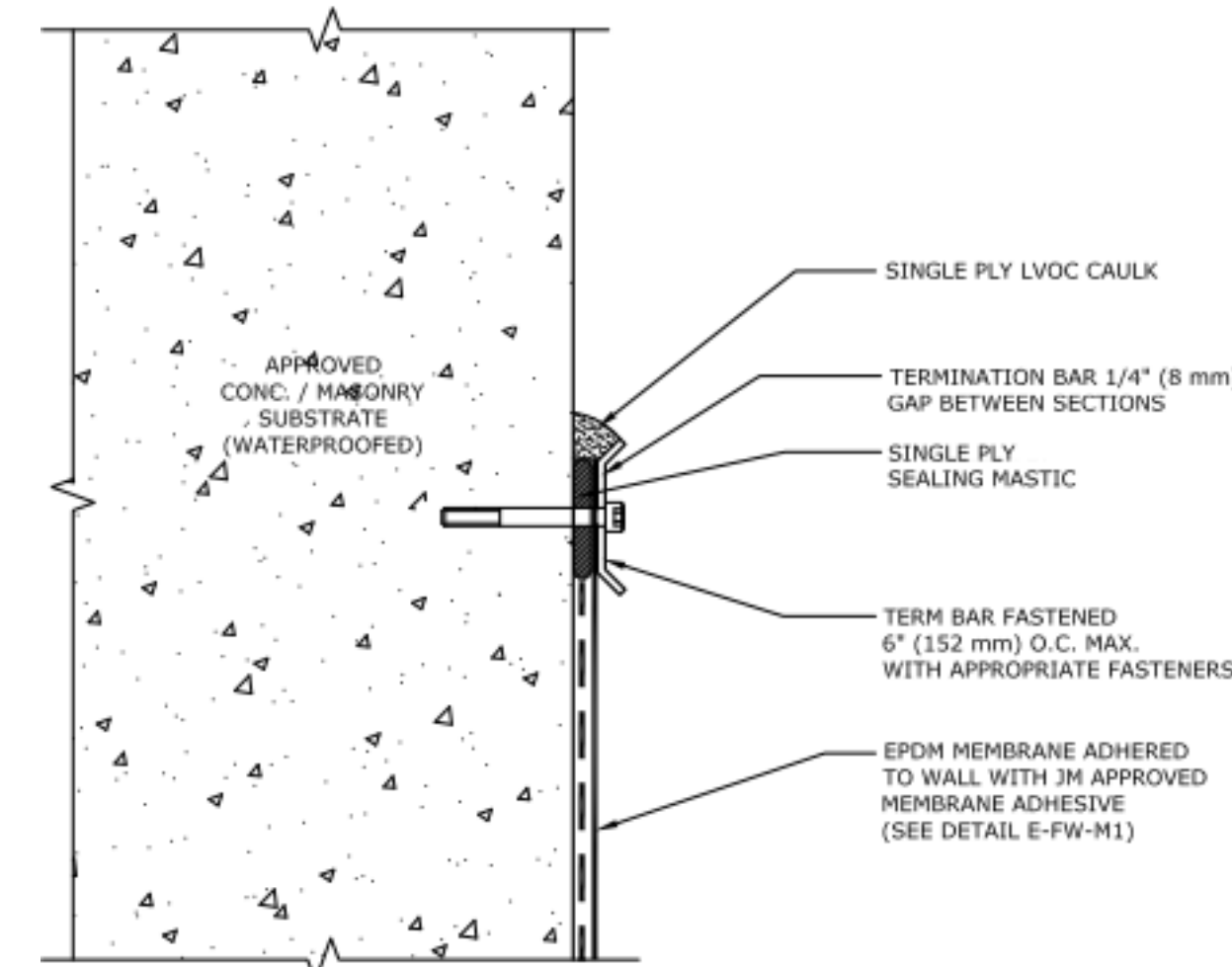
- OPTION 1**
- 3" (7.5cm) WIDE SureTape AND EPDM PRIMER
- OPTION 2**
- 6" (15cm) WIDE PRESSURE-SENSITIVE OVERLAY STRIP AND EPDM PRIMER
- NOTES:
- APPLY SEALANT AT ALL INTERSECTIONS BETWEEN PRESSURE-SENSITIVE OVERLAYMENT STRIP.
  - APPLY LAP SEALANT ALONG THE EXPOSED EDGE OF THE MEMBRANE SPlice COVERING THE EXPOSED SPlice TAPE 1/2" IN EACH DIRECTION FROM THE SPlice INTERSECTION AND OVERLAY WITH A 6" T-JOINT COVER. INSTALL A 12" T-JOINT COVER CENTERED OVER THE FIRST T-JOINT COVER.

**12**  
A2.1 **EPDM MEMBRANE SPlice DETAIL**  
SCALE: 1/4" = 1'-0"



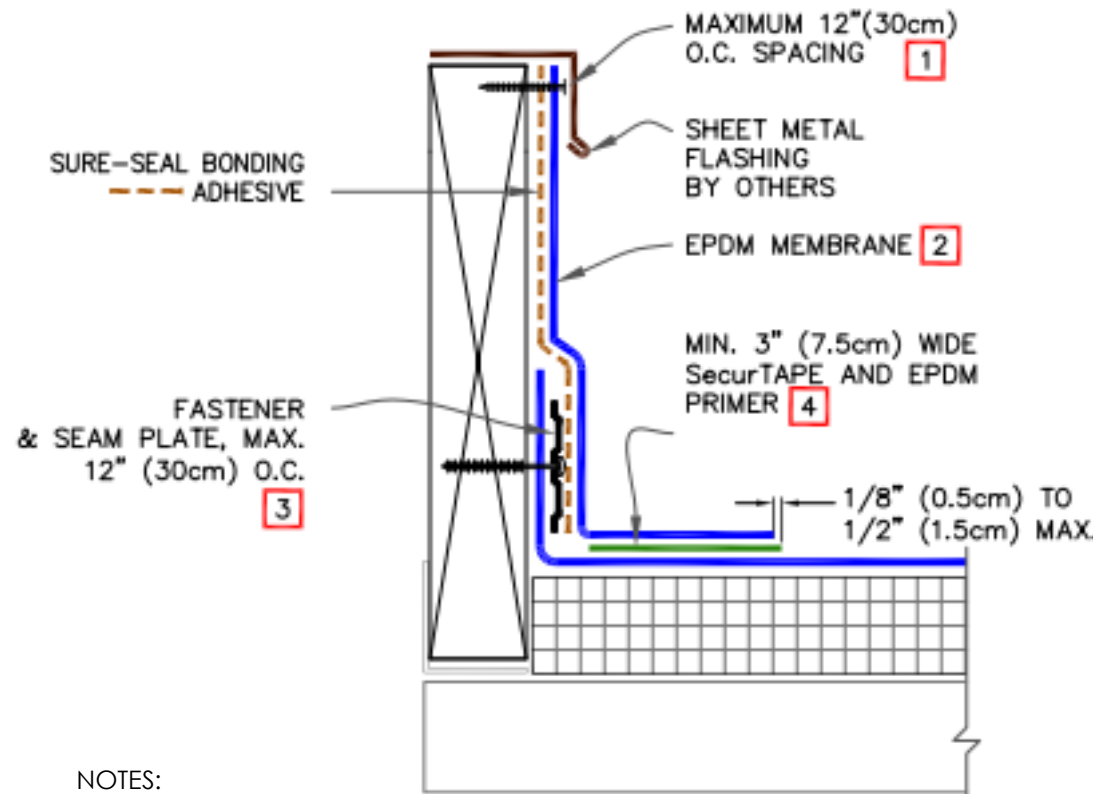
- MIN. 6" (15cm) WIDE SureTape IN CONJUNCTION WITH EPDM PRIMER
- 1/8" (0.5cm) MIN TO 1/2" (1.5cm) MAX.
- SEE 3-0 DETAILS BELOW
- NOTES:
- APPLY EPDM PRIMER TO THE MEMBRANE SURFACES PRIOR TO INSTALLING PRESSURE-SENSITIVE FLASHING.
  - LAP SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED EPDM MEMBRANE.

**11**  
A2.1 **END LAP SPlice DETAIL**  
SCALE: 1/4" = 1'-0"



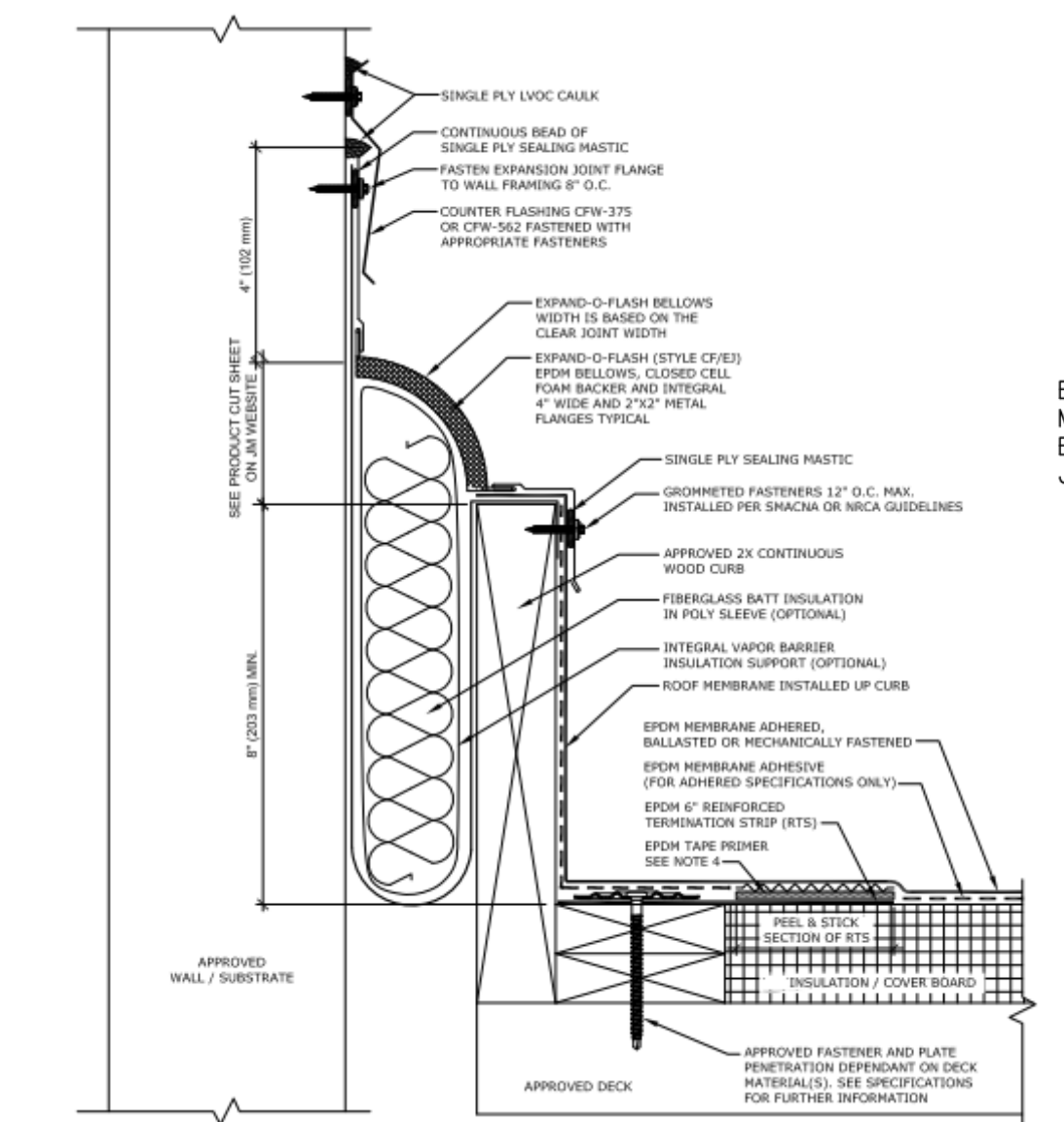
- NOTES:
- REFER TO MANUFACTURER FOR MOST UP-TO-DATE INFORMATION.
  - PLEASE SEE SINGLE PLY SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
  - ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
  - ALL SEALANTS/CAULKING SHALL BE PERIODICALLY INSPECTED AND MAINTAINED BY THE BUILDING OWNER THROUGHOUT THE LIFE OF THE ROOF.
  - TO ASSURE SURFACE MOUNTED TERMINATIONS PERFORM EFFECTIVELY, WATERPROOF AND MAINTAIN CONCRETE AND MASONRY SUBSTRATES.
  - MINIMUM FLASHING HEIGHT IS 8" (203 MM) ABOVE ROOF SURFACE.

**10**  
A2.1 **TERMINATION DETAIL**  
SCALE: 1/4" = 1'-0"



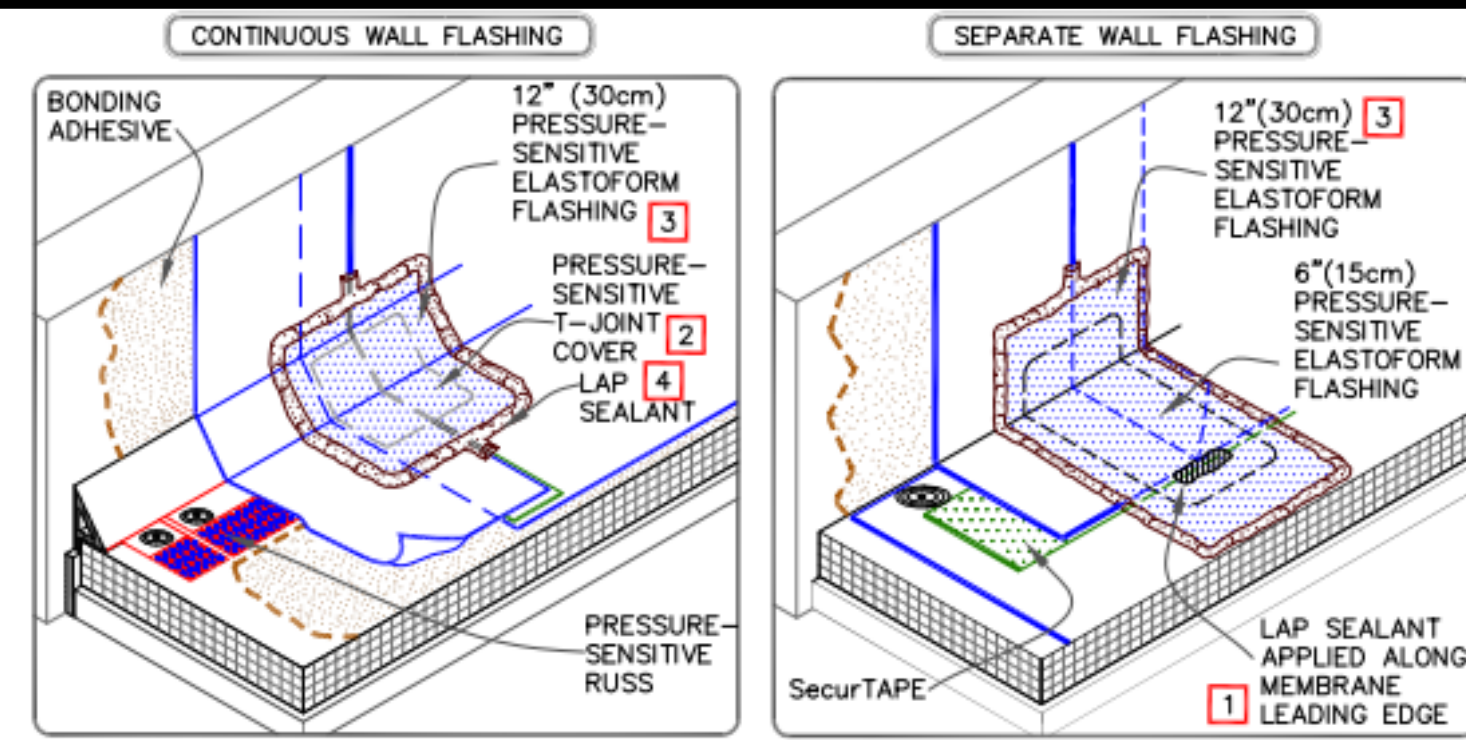
- NOTES:
- WHEN MECHANICAL FASTENERS ARE USED TO PENETRATE THE METAL COUNTER-FLASHING. USE EPDM WASHERS. APPLY WATER CUT-OFF MASTIC UNDER THE COUNTER-FLASHING OR CAULK THE FASTENER HEADS.
  - LAP SEALANT IS REQUIRED ON CUT-EDGES OF REINFORCED MEMBRANE.
  - SEAM PLATES AND FASTENERS MAY BE INSTALLED INTO THE STRUCTURAL DECK AND THEN HP FASTENERS AND POLYMER SEAM PLATES ARE REQUIRED FOR MECHANICALLY-FASTENED ROOFING SYSTEMS OVER STEEL DECKS.
  - MEMBRANE SPlices SHALL INCORPORATE 6" WIDE SECURTAPE.
  - IF THE VERTICAL SPlice ON THE CURB FLASHING IS NOT LOCATED AT THE CORNER. USE EPDM MEMBRANE SPlices AT ANGLE CHANGE DETAIL FOR EPDM MEMBRANE SPlices AT ANGLE CHANGES.

**9**  
A2.1 **CURB FLASHING DETAIL**  
SCALE: 1/4" = 1'-0"



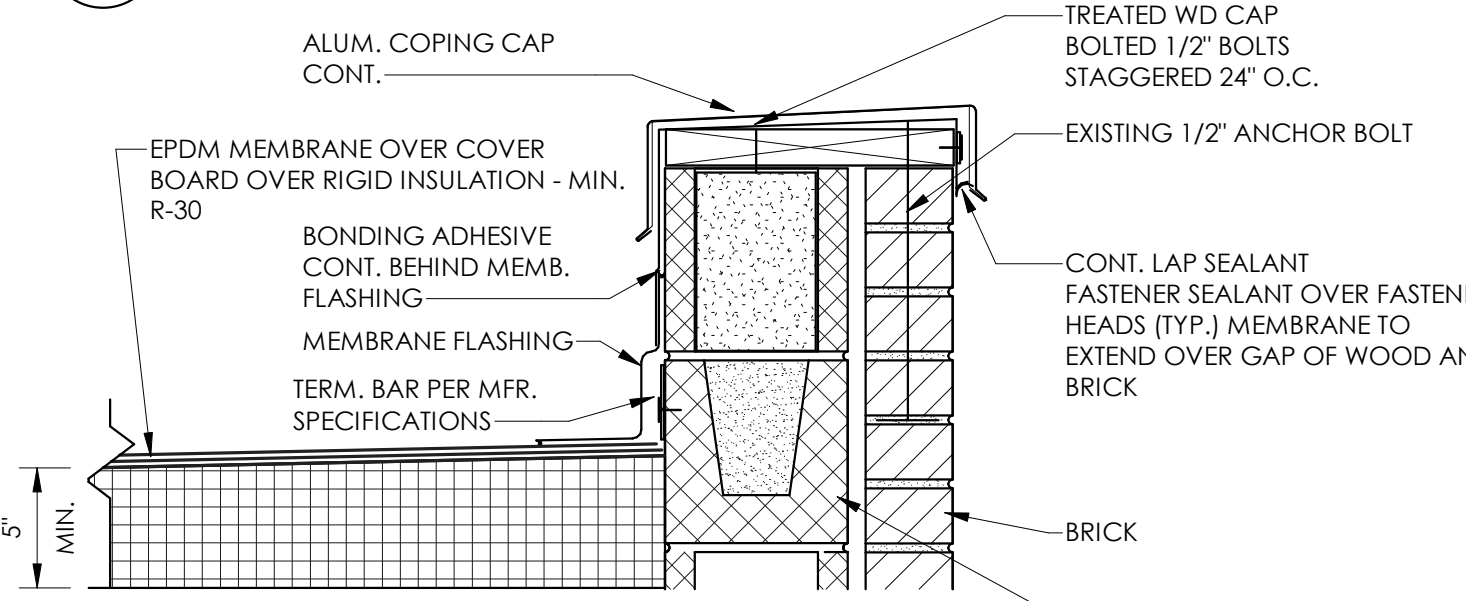
- NOTES:
- REFER TO MANUFACTURER FOR MOST CURRENT INFORMATION.
  - PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
  - ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATION. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
  - EPDM TAPE PRIMER OR SINGLE PLY MEMBRANE PRIMER (LOW VOC) MUST BE APPLIED ON ALL SURFACES COMING INTO CONTACT WITH EPDM PEEL AND STICK PRODUCTS. ROLL MEMBRANE WITH HAND ROLLER UNDER PRESSURE AT SEAM
  - MEMBRANE FASTENING REQUIRES RIGID COVER BOARD OVER INSULATION OR APPROVED WOOD NAILER SECURELY ANCHORED TO DECK WITHIN THIS ASSEMBLY
  - ALL SEALANTS / CAULKING SHALL BE PERIODICALLY INSPECTED AND MAINTAINED BY THE BILDING OWNER THROUGHOUT THE LIFE OF THE ROOF

**8**  
A2.1 **EXPANSION JOINT DETAIL**  
SCALE: 3/16" = 1'-0"



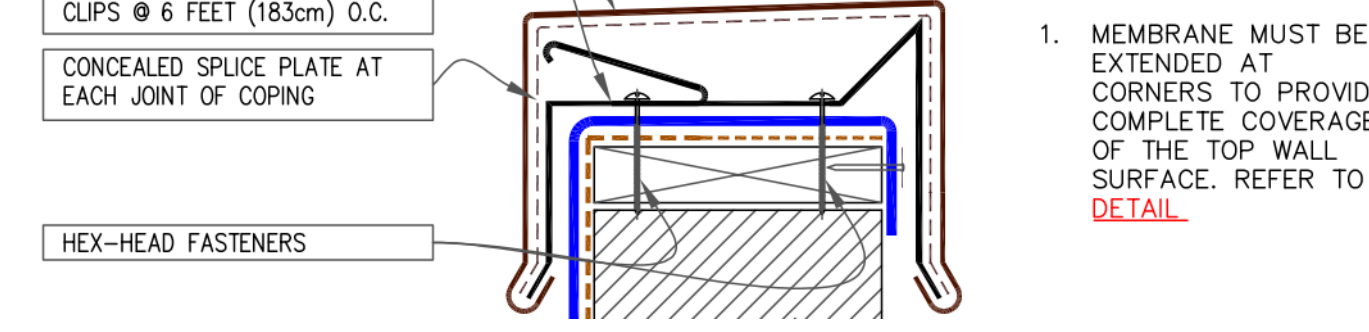
- NOTES:
- APPLY LAP SEALANT ALONG THE LEADING EDGE OF THE MEMBRANE SPlice (UNDER THE PRESSURE-SENSITIVE ELASTOFORM FLASHING) COVERING THE EXPOSED SPlice TAPE APPROXIMATELY 1/2" BEYOND THE SPlice EDGE.
  - PRESSURE-SENSITIVE T-JOINT COVER OR 6" WIDE PRESSURE-SENSITIVE FLASHING. IN CONJUNCTION WITH EPDM PRIMER. MUST BE CENTERED OVER FIELD SPlices AT THE ANGLE CHANGE.
  - FIELD SPlices TO BE OVERLAPD WITH TWO LAYERS OF PRESSURE-SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6" WIDE COVERED WITH A 12" WIDE TOP LAYER. BOTH LAYERS SHALL BE CENTERED.
  - SEAL EXPOSED LAYER WITH LAP SEALANT.

**7**  
A2.1 **ANGLE CHANGE DETAIL**  
SCALE: 1/4" = 1'-0"

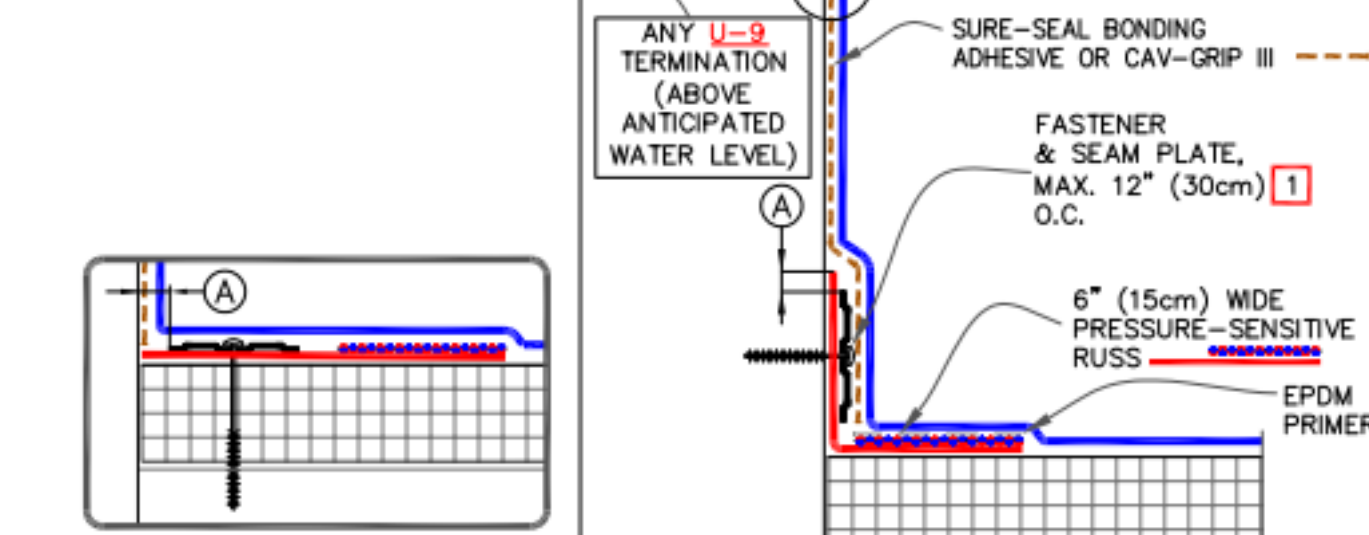


- NOTES:
- MEMBRANE MUST BE EXTENDED TO CORNERS TO PROVIDE COMPLETE COVERAGE OF THE TOP WALL SURFACE.
- MAXIMUM WARRANTY: 30 YEARS!
- NOTE:
- MEMBRANE MUST BE EXTENDED AT CORNERS TO PROVIDE COMPLETE COVERAGE OF THE TOP WALL SURFACE. REFER TO DETAIL.

**6**  
A2.1 **PARAPET DETAIL**  
SCALE: 1 1/2" = 1'-0"

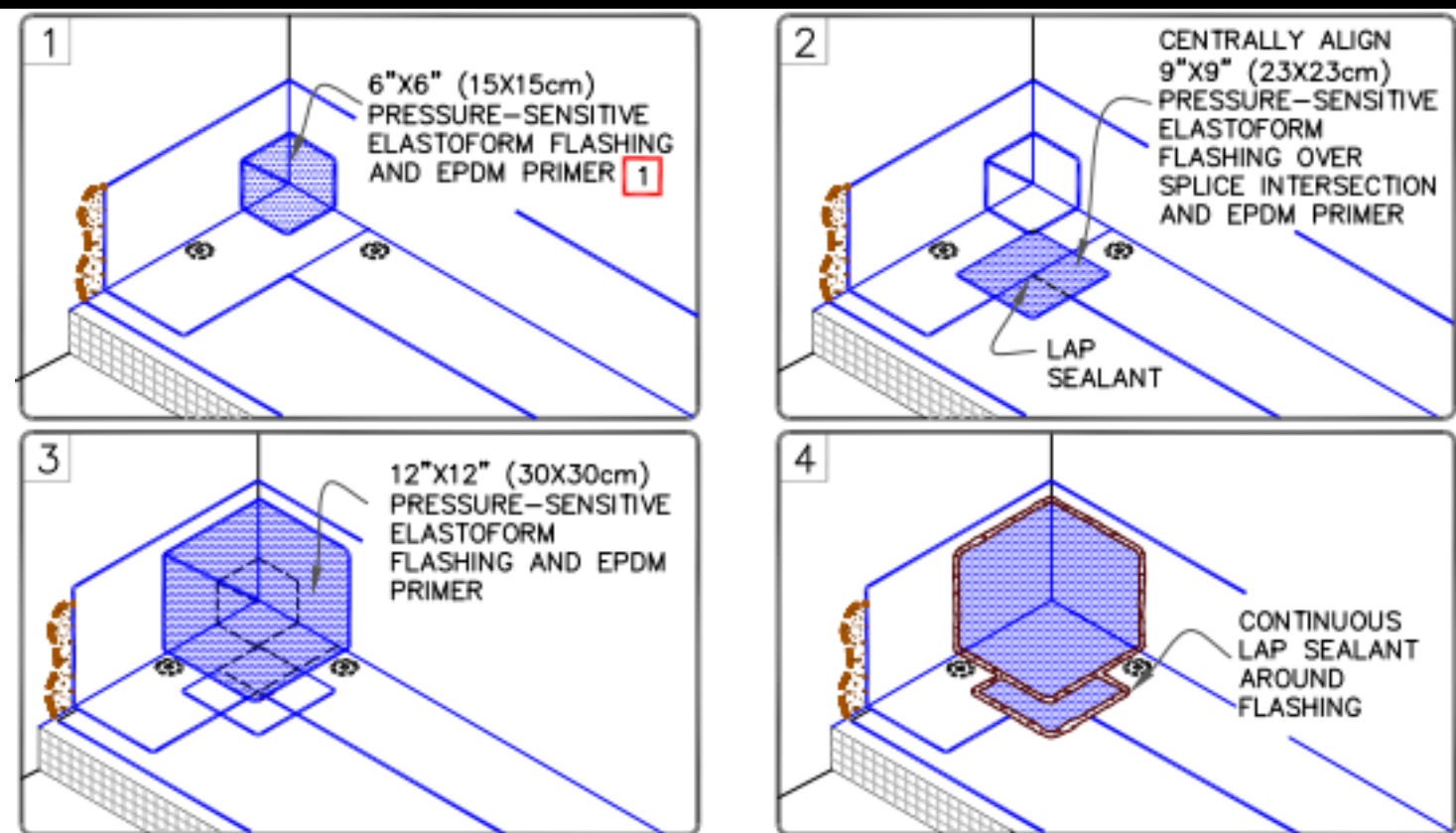


**5**  
A2.1 **MEMBRANE AT PARAPET CAP**  
SCALE: 1/4" = 1'-0"



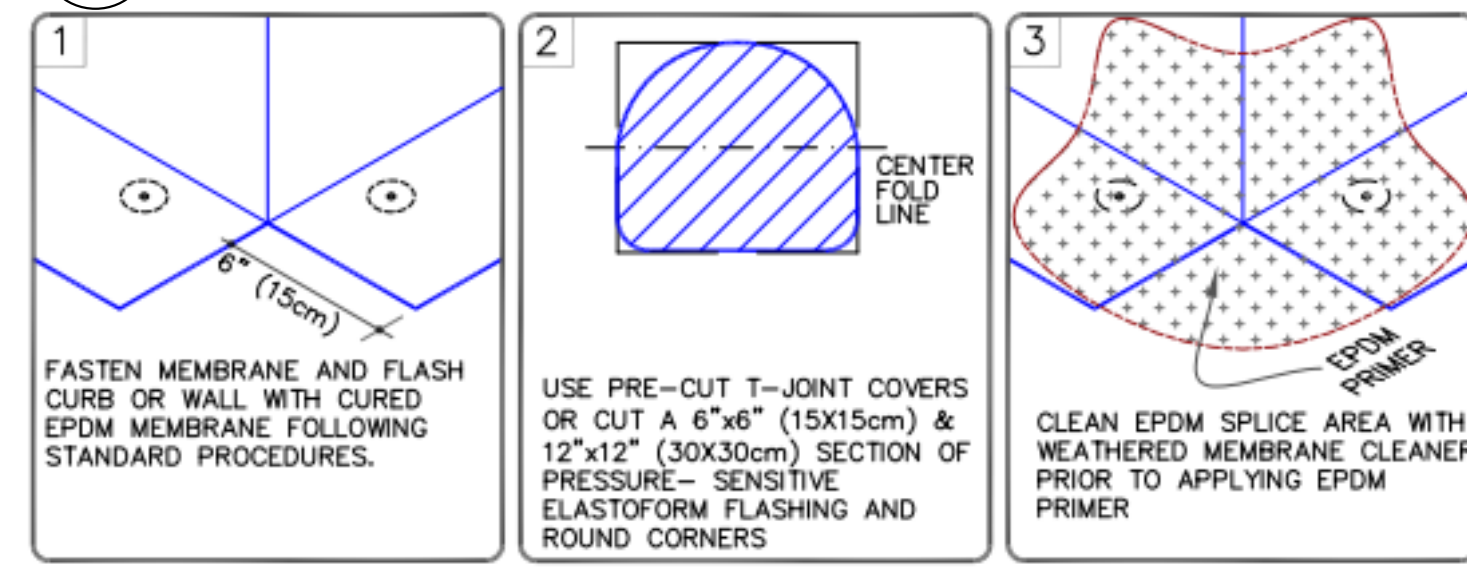
- NOTES:
- FASTENERS AND PLATES ARE REQUIRED AT 4" O.C. FOR ADHERED SYSTEMS WITH WARRANTY WIND SPEED COVERAGE GREATER THAN 90 MPH AND FOR ALL PROJECTS WITH WARRANTIES GREATER THAN 20 YEARS. HP FASTENERS AND POLYMER SEAM PLATES ARE REQUIRED OVER STEEL DECKS ON MECHANICALLY FASTENED SYSTEMS.

**4**  
A2.1 **PARAPET/CURB FLASHING DETAIL**  
SCALE: 1/4" = 1'-0"

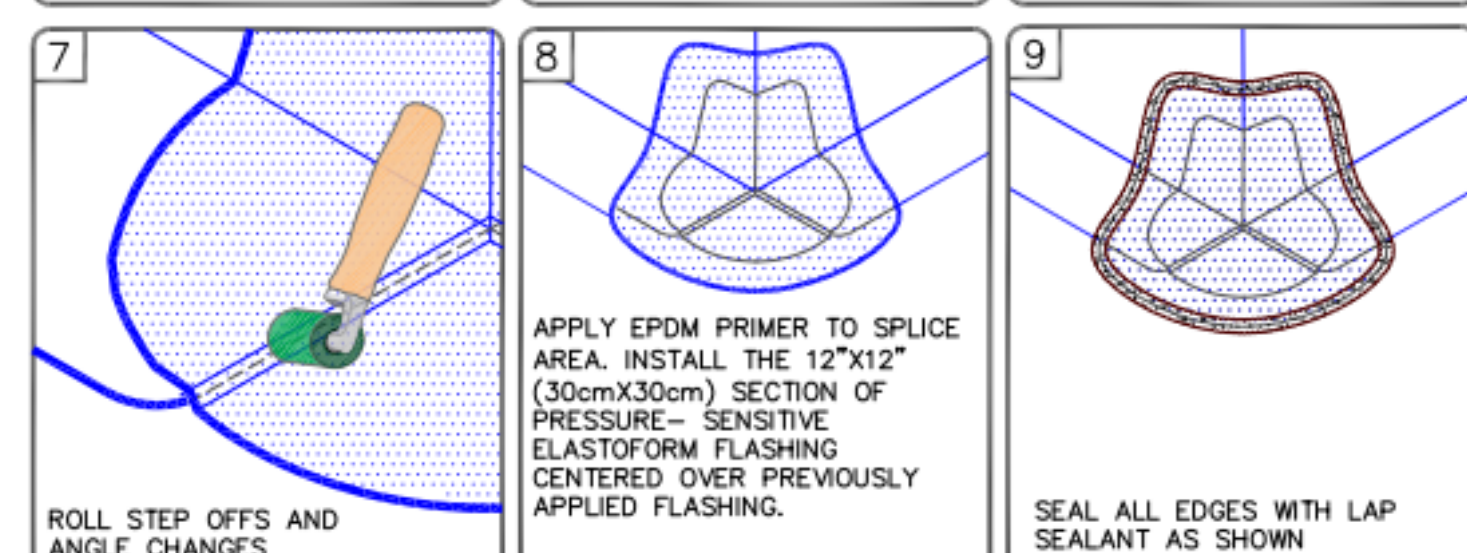


- NOTES:
- A 7" x 9" PRESSURE-SENSITIVE PRE-CUT INSIDE/OUTSIDE CORNER MAY BE CUT DOWN TO 6" x 6".
  - A HEAT GUN MUST BE USED WHEN FORMING PRESSURE-SENSITIVE ELASTOFORM FLASHING IN COLDER TEMPERATURES.
  - APPLY PRIMER AND SECURTAPE TO ADHERE PIG EAR TO THE WALL.

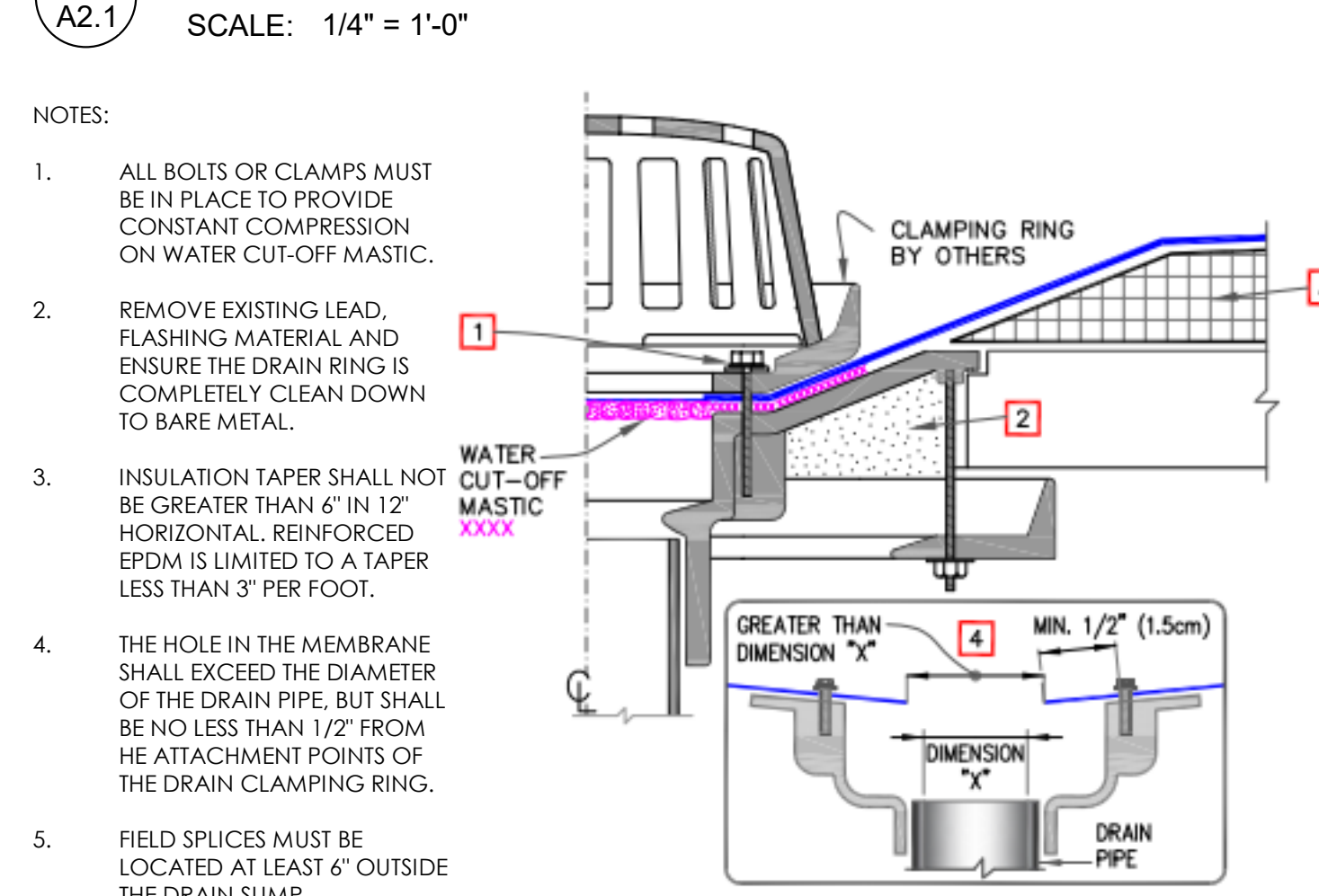
**3**  
A2.1 **INSIDE CORNER FLASHING DETAIL**  
SCALE: 1/4" = 1'-0"



- NOTES:
- REMOVE & REPLACE POLY BACKING ON FLASHING. FOLD FLASHING IN HALF WITH ROUNDED PORTION TURNED UP. CENTER ON CORNER & FIRMLY PRESS AGAINST VERTICAL SURFACE
  - ROLL & CREASE FLASHING TIGHTLY INTO ANGLE CHANGE & FIRMLY ROLL FLASHING ONTO THE DECK MEMBRANE
  - ROLL WITH A TWO INCH WIDE STEEL HAND ROLLER. PAY PARTICULAR ATTENTION TO THE STEP OFFS AND ANGLE CHANGES



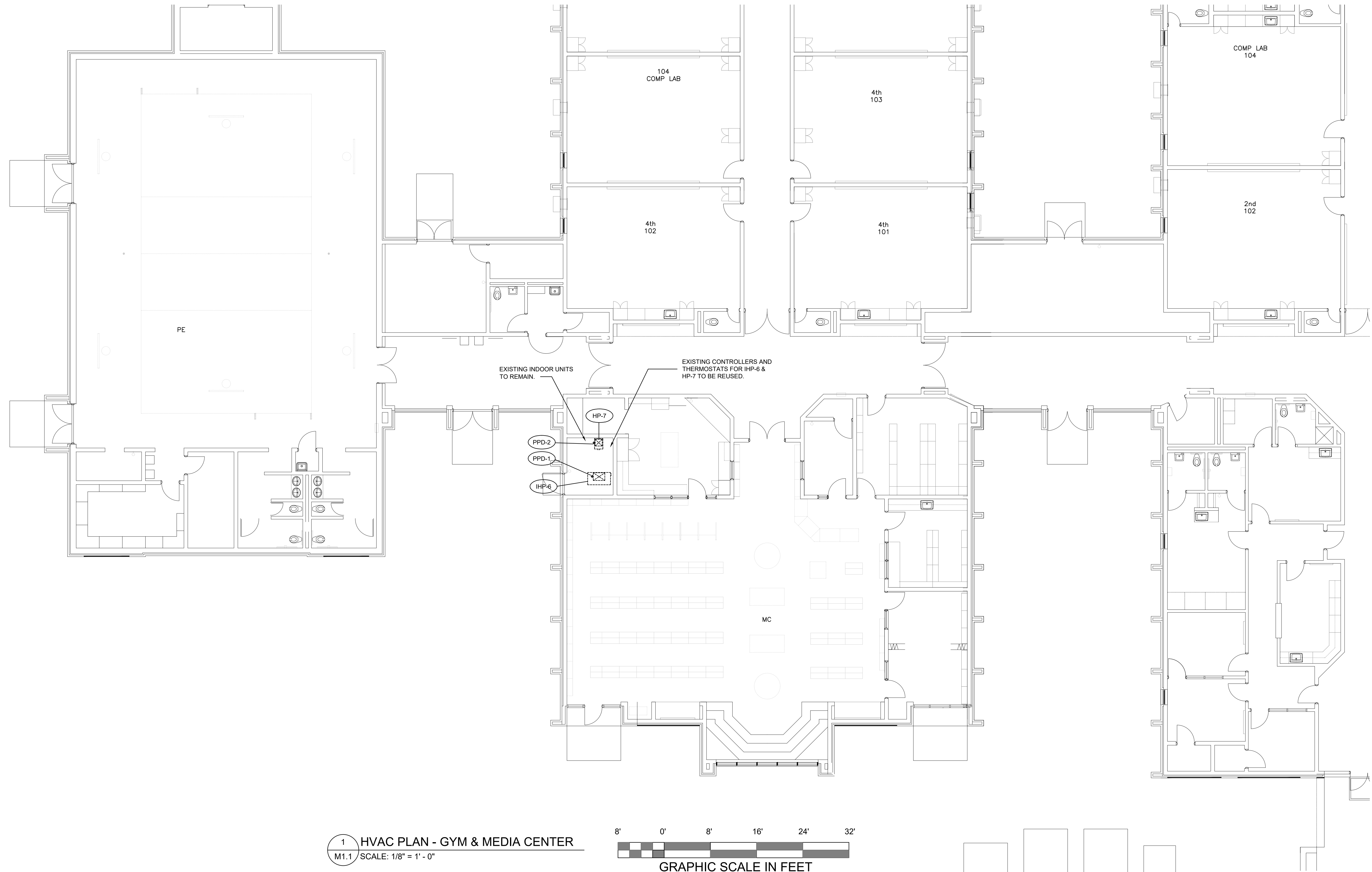
**2**  
A2.1 **OUTSIDE CORNER FLASHING DETAIL**  
SCALE: 1/4" = 1'-0"



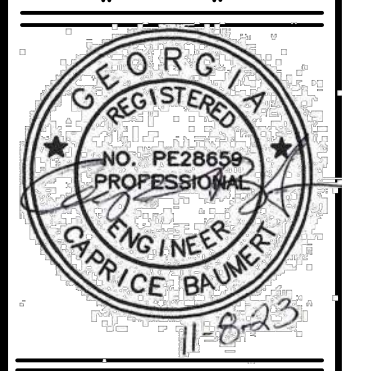
- NOTES:
- ALL BOLTS OR CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON WATER CUT-OFF MASTIC.
  - REMOVE EXISTING LEAD, FLASHING MATERIAL AND ENSURE THE DRAIN RING IS COMPLETELY CLEAN DOWN TO BARE METAL.
  - INSULATION TAPER SHALL NOT BE GREATER THAN 6" IN 12" HORIZONTAL. REINFORCED EPDM IS LIMITED TO A TAPER LESS THAN 3" PER FOOT.
  - THE HOLE IN THE MEMBRANE SHALL EXCEED THE DIAMETER OF THE DRAIN PIPE, BUT SHALL BE NO LESS THAN 1/2" FROM HE ATTACHMENT POINTS OF THE DRAIN CLAMPING RING.
  - FIELD SPlices MUST BE LOCATED AT LEAST 6" OUTSIDE THE DRAIN SUMP
  - ROOF DRAIN SIZE AND NUMBER OF DRAINS SHALL BE IN ACCORDANCE WITH THE LOCAL CODES.

**1**  
A2.1 **ROOF DETAIL @ DRAIN**  
SCALE: 1/4" = 1'-0"





1 HVAC PLAN - GYM & MEDIA CENTER  
M1.1 SCALE: 1/8" = 1' - 0"

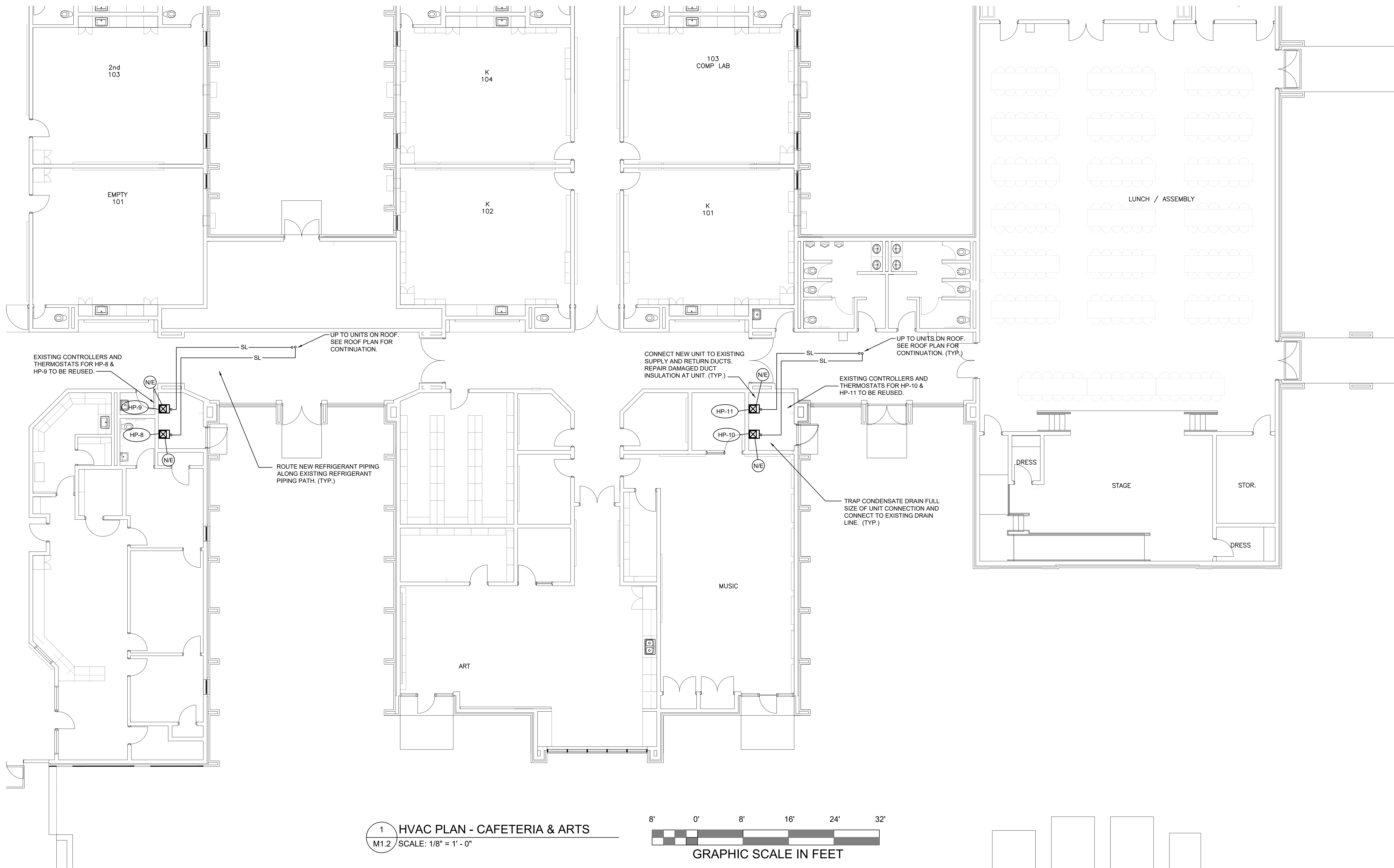


2023-182

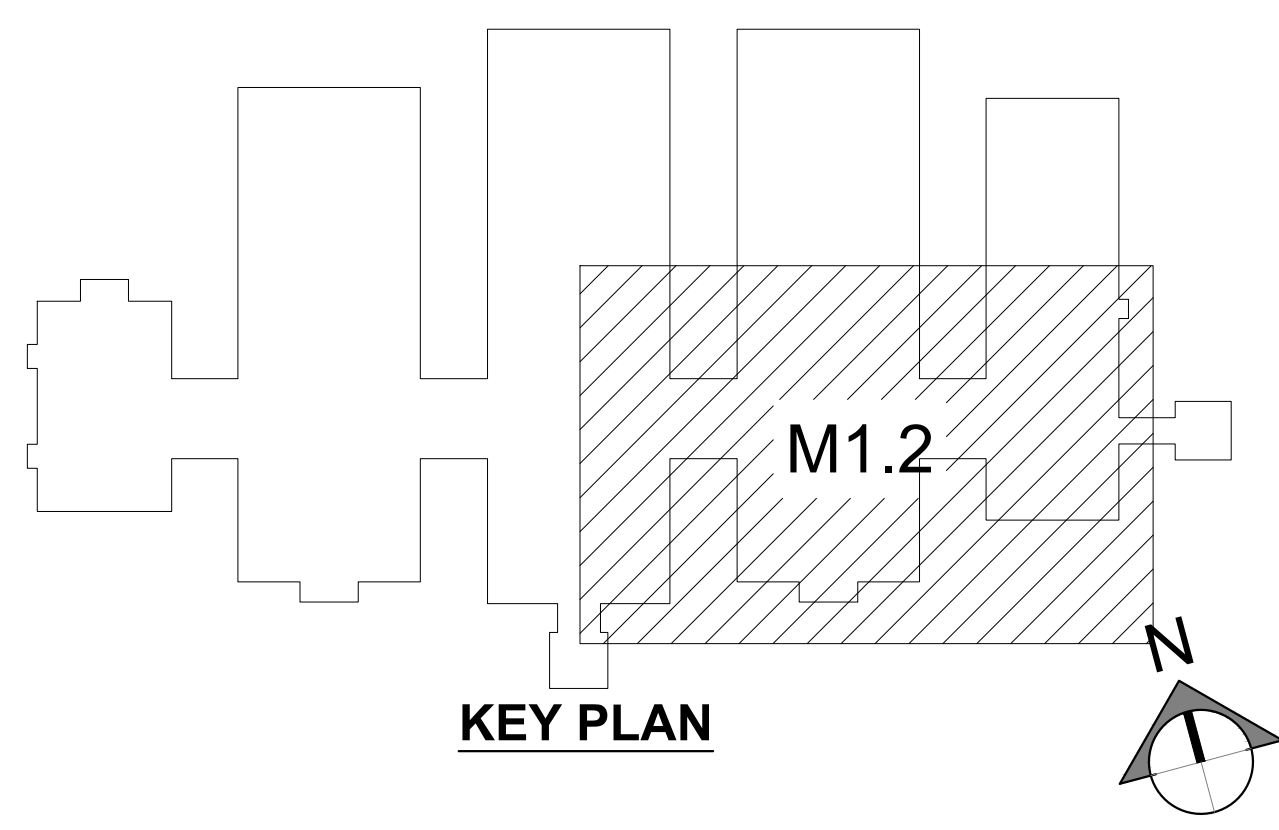
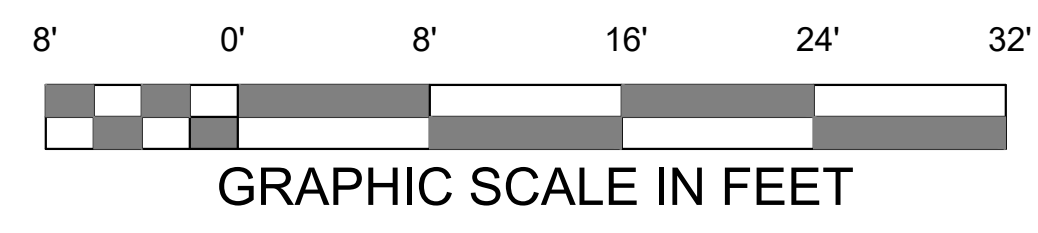
DRAWN BY: MHW
CHK'D BY: CAB
DATE: 11.08.2023
REVISIONS:

**DELTA ENGINEERING**  
3604 Wheeler Rd., Suite C - Augusta, GA 30909  
706-364-1770 • deltaeng.net





1 HVAC PLAN - CAFETERIA & ARTS  
M1.2 SCALE: 1/8" = 1' - 0"

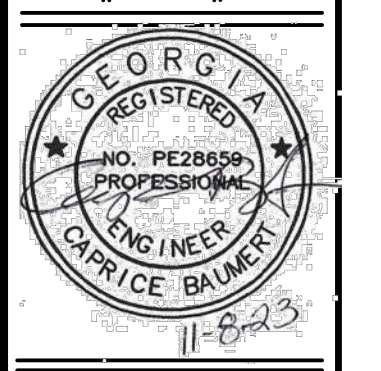


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TOBACCO ROAD ROOFING PROJECT  
PROJECT No. B-21-016-0294  
2397 TOBACCO ROAD  
AUGUSTA, GA 30906

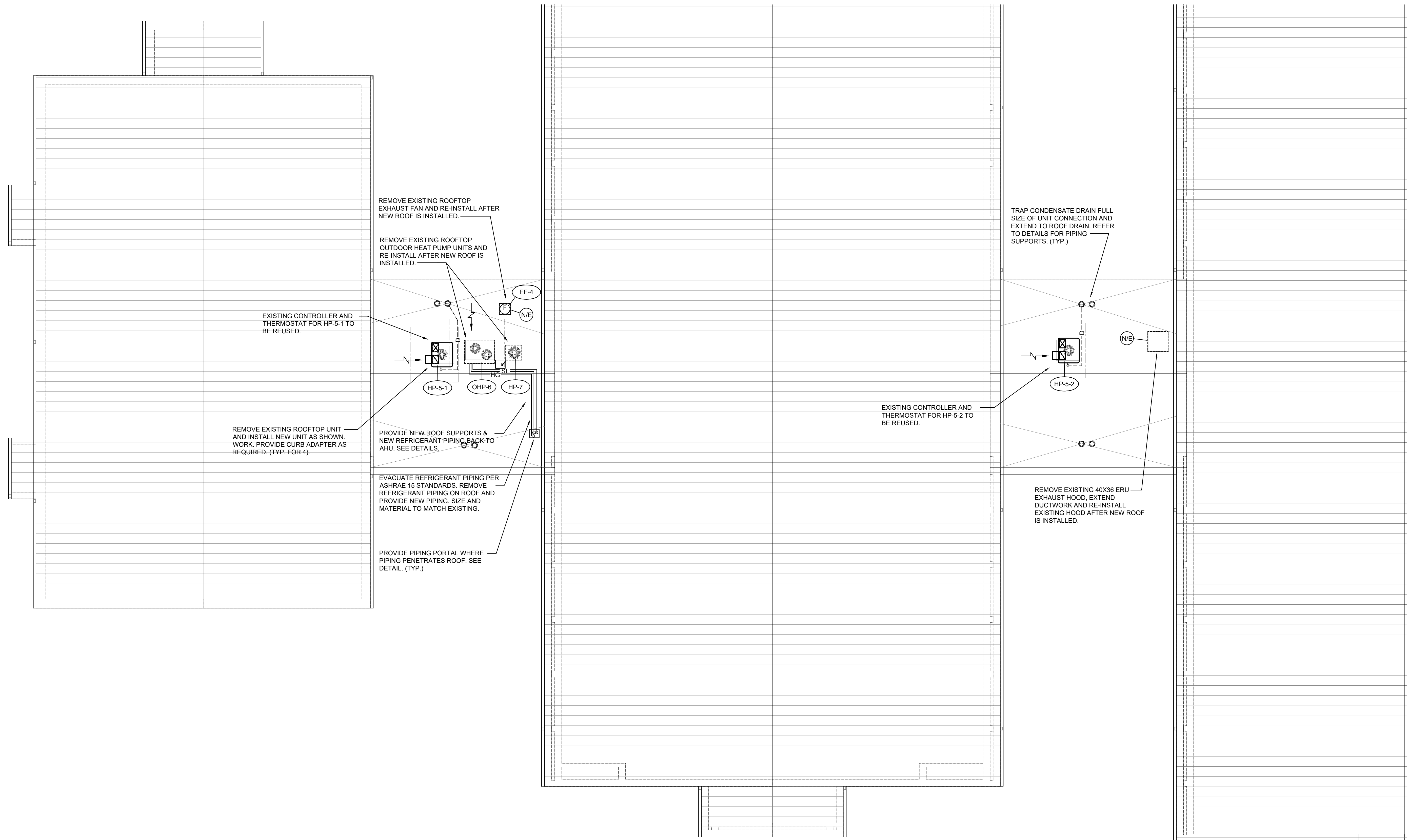


HVAC PLAN - CAFETERIA & ARTS  
RICHMOND COUNTY BOARD OF EDUCATION  
TOBACCO ROAD ELEMENTARY SCHOOL  
FACILITY No. 721-0294

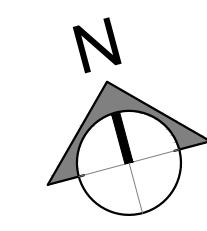
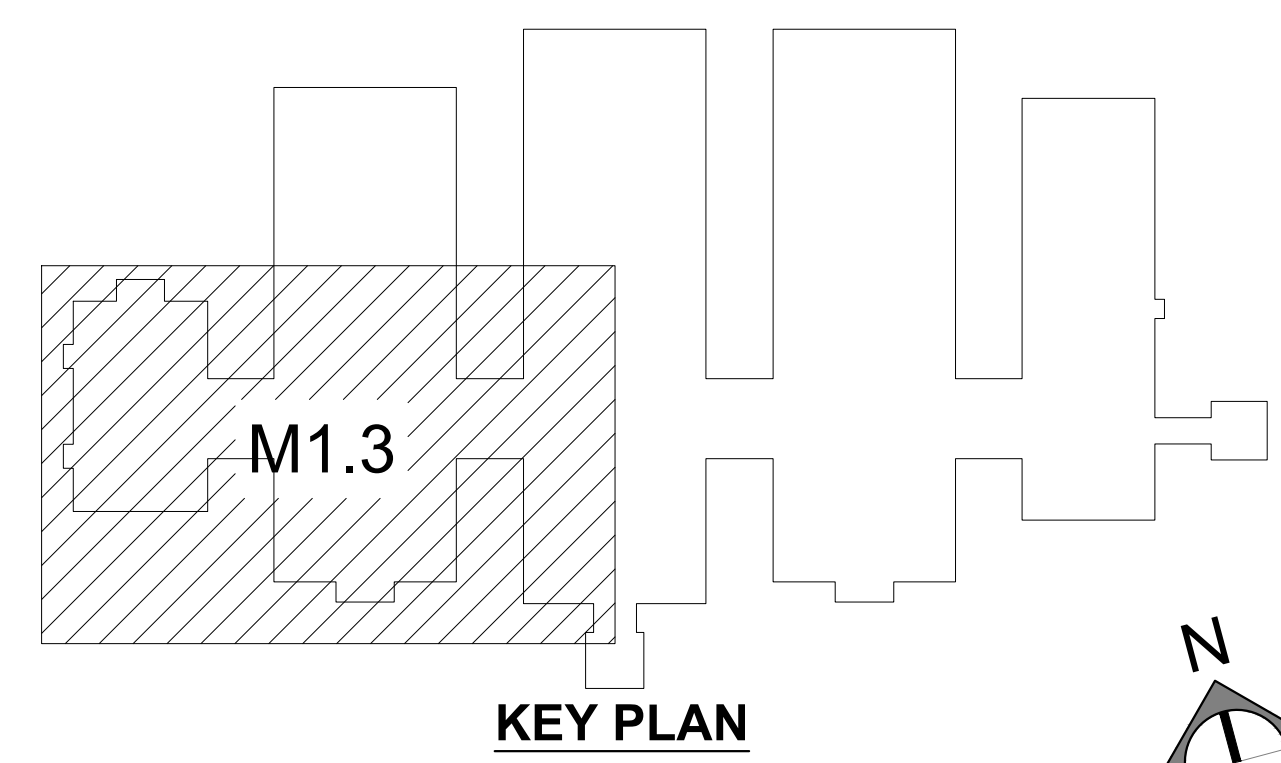
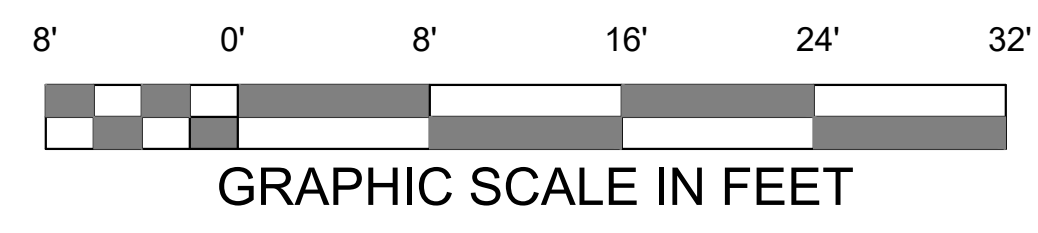
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CHK'D BY: CAB  
DATE: 11.08.2023

REVISIONS

JOB NO. 2313  
SHEET NO. M1.2



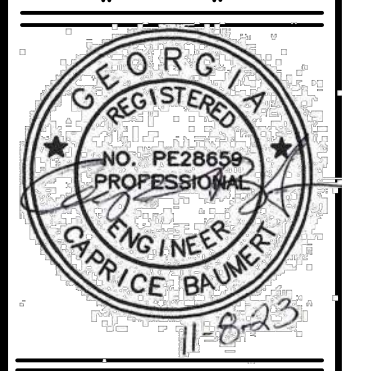
1 HVAC ROOF PLAN - GYM & MEDIA CENTER  
 M1.3 SCALE: 1/8" = 1' - 0"



2023-182

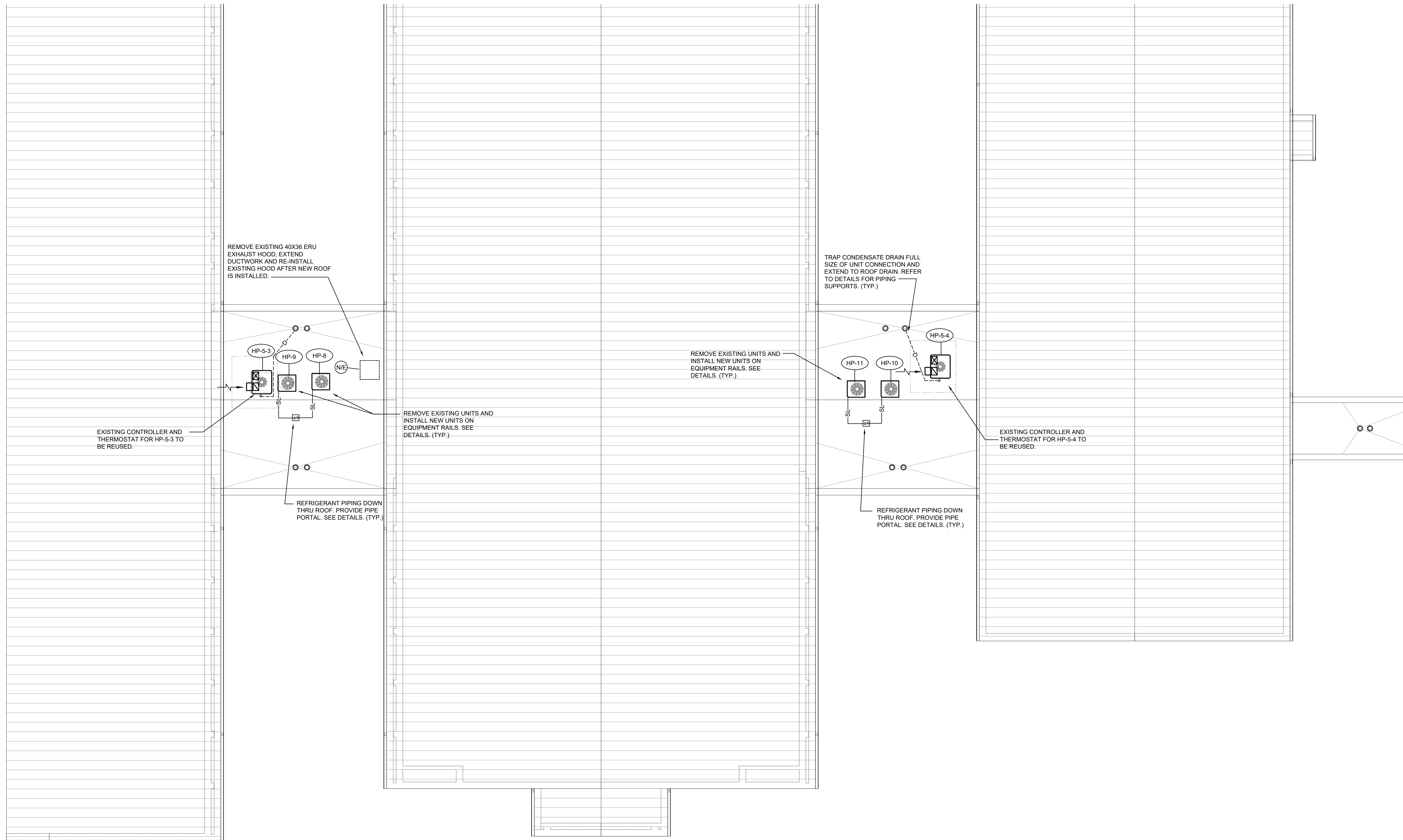
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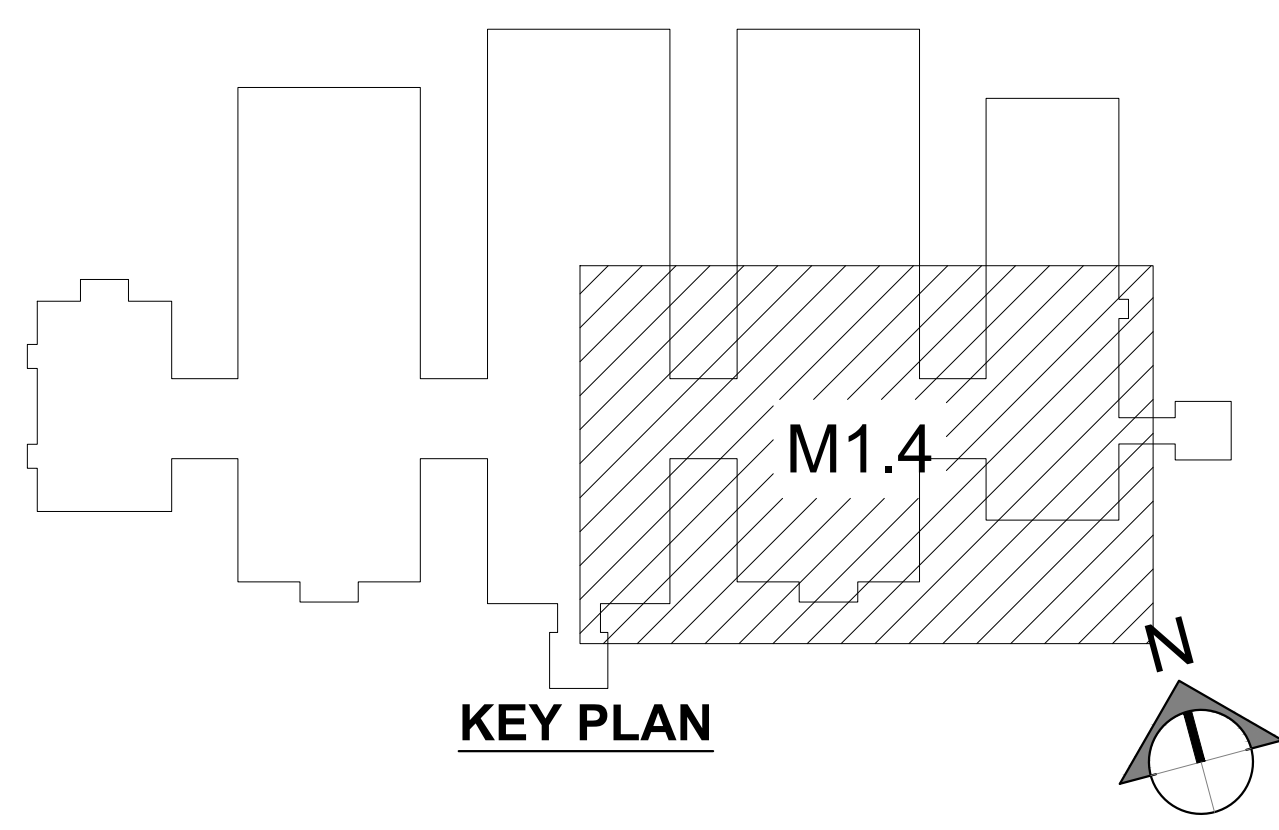
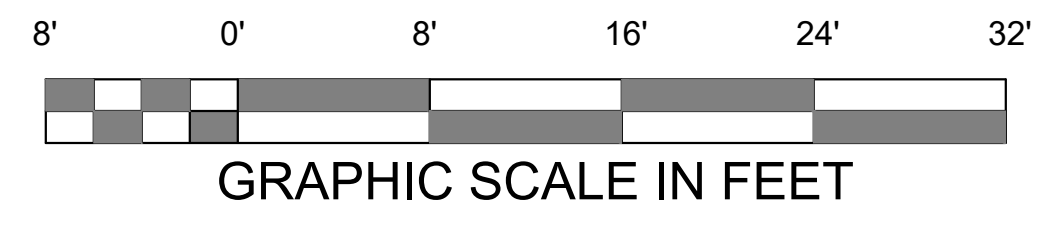


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1 HVAC ROOF PLAN - CAFETERIA & ARTS  
M1.4 SCALE: 1/8" = 1' - 0"



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REVISIONS

**HVAC GENERAL NOTES**

EXISTING WORK IS SHOWN IN ITS APPROXIMATE LOCATION AND ARRANGEMENT. EXISTING WORK SHOWN MAY NOT INCLUDE ALL EXISTING CONDITIONS. EXACT LOCATION, ARRANGEMENT, AND SIZES SHALL BE VERIFIED BEFORE STARTING ANY NEW WORK OR ORDERING ANY MATERIALS.

INSTALL PIPING ABOVE CEILINGS WHERE POSSIBLE AND IN CHASES TO PROVIDE MAXIMUM POSSIBLE CLEARANCE'S FOR MAINTENANCE ACCESS. INSTALL PIPING IN EQUIPMENT ROOMS PARALLEL OR PERPENDICULAR TO WALLS AND CEILINGS UNLESS SHOWN OTHERWISE.

ALL PIPING SHALL BE CONCEALED UNLESS NOTED OTHERWISE.

COORDINATE THE INSTALLATION OF PIPING WITH THAT OF OTHER TRADES TO PROVIDE THE BEST POSSIBLE ARRANGEMENT. REFER TO PLUMBING, ELECTRICAL, AND STRUCTURAL DRAWINGS AND SPRINKLER SHOP DRAWINGS. ARRANGE PIPING AND TO AVOID CONFLICTS WITH OTHER BUILDING TRADES.

UNLESS DIMENSIONED, PIPING AND EQUIPMENT ARE SHOWN IN APPROXIMATE LOCATIONS. EXACT CONFIGURATION SHALL BE DETERMINED IN THE FIELD TO COORDINATE WITH OTHER TRADES AND TO ALLOW FOR A MINIMUM NUMBER OF OFFSETS AS POSSIBLE WHILE ALLOWING FOR ADEQUATE MAINTENANCE ACCESS.

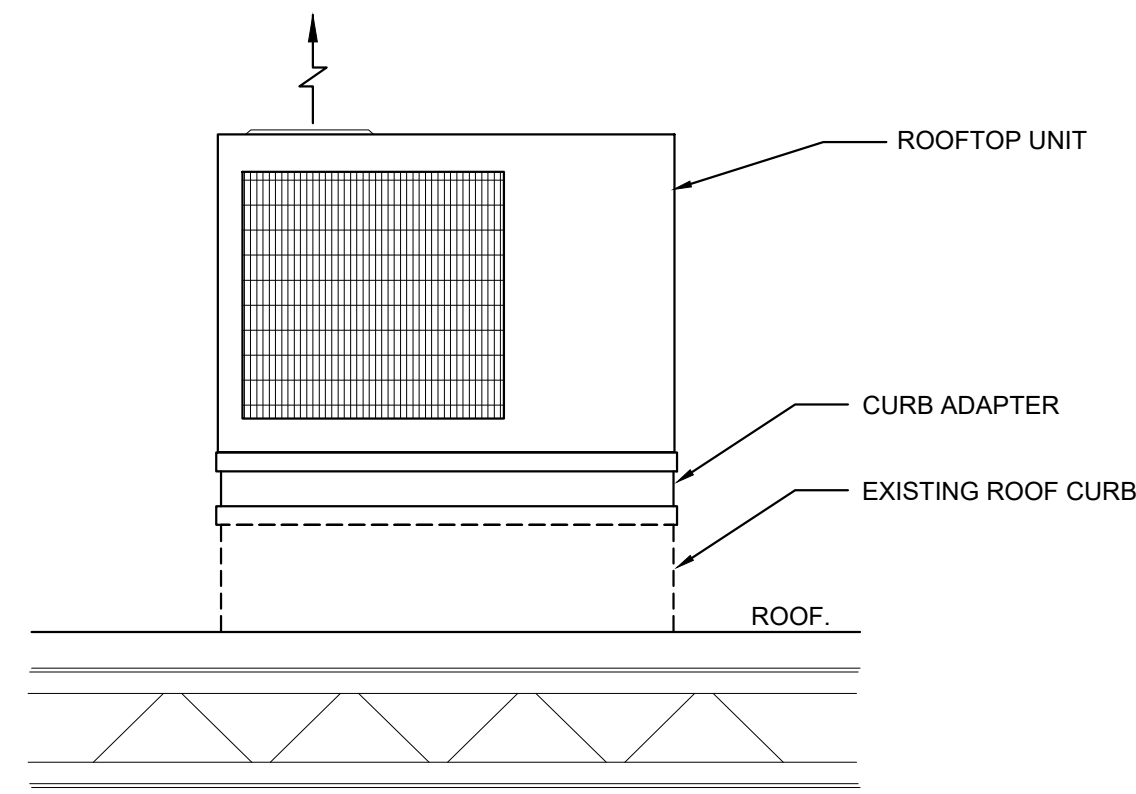
FURNISH FLEXIBLE DUCT CONNECTIONS TO ALL AIR HANDLING EQUIPMENT.

FURNISH FLANGED OR UNION CONNECTIONS IN PIPING AT ALL EQUIPMENT AND CONTROL VALVES, AND AS REQUIRED FOR SERVICE.

SLOPE DRAIN LINE TOWARDS DRAIN WITH A MINIMUM SLOPE OF 1/4" PER FOOT.

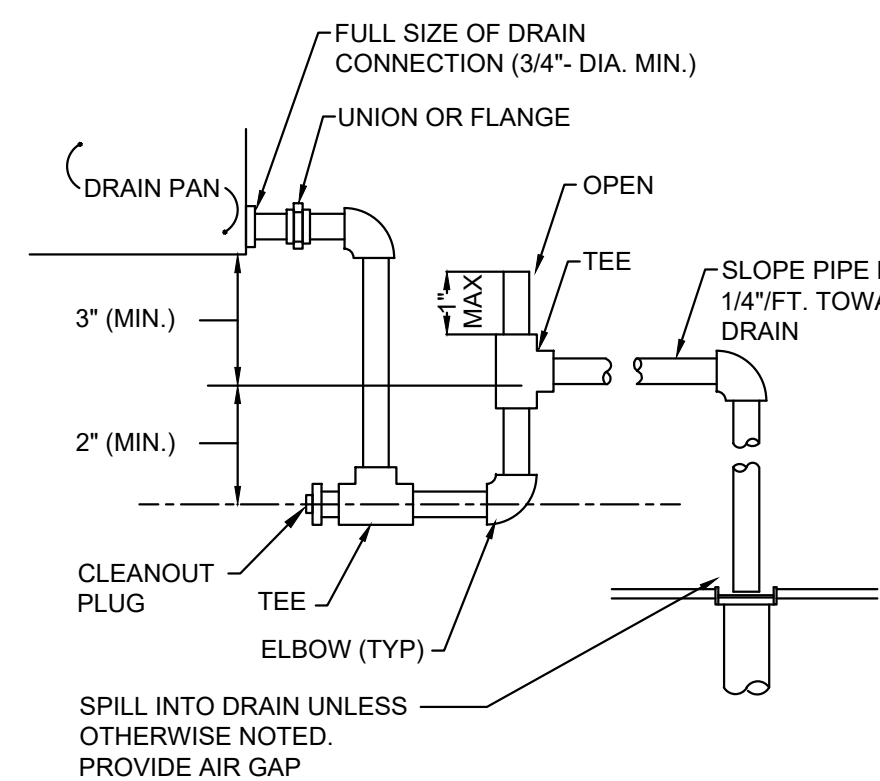
**H.V.A.C. LEGEND**

SYMBOL	DESCRIPTION
— SL —	REFRIGERANT SUCTION / LIQUID
--- D ---	CONDENSATE DRAIN
— HG —	HOT GAS REFRIGERANT LINE
(F-1)	EQUIPMENT NUMBER - SEE SCHEDULES
→	AIRFLOW DIRECTION
∅	DIAMETER
TYP.	TYPICAL
ENT.	ENTERING
LVG.	LEAVING
S.P.	STATIC PRESSURE
A.P.D.	AIR PRESSURE DROP
(NE)	NEW TO EXISTING
OA	OUTDOOR AIR
⋄ C.F.M.	CUBIC FEET PER MINUTE



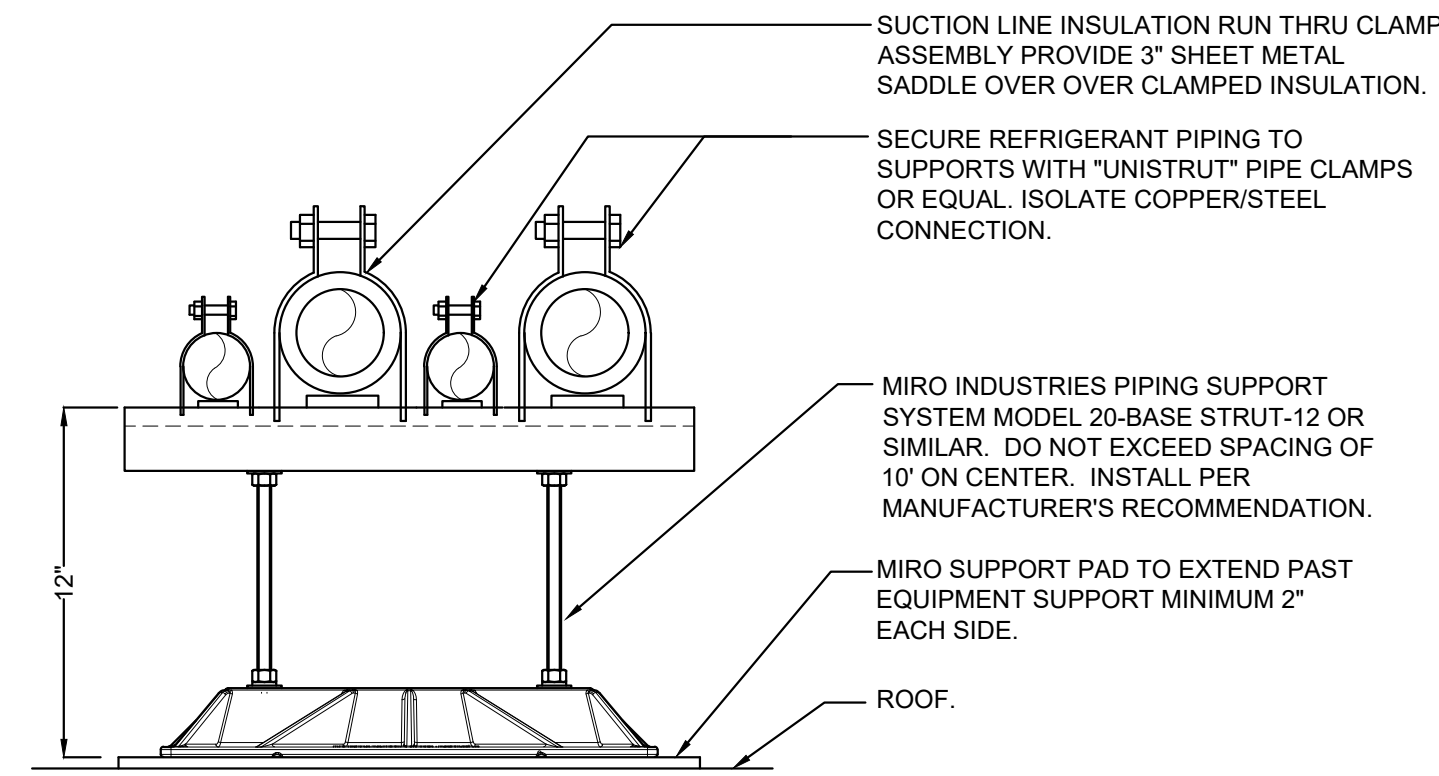
**1 ROOFTOP UNIT DETAIL**

M2.1 SCALE: NONE



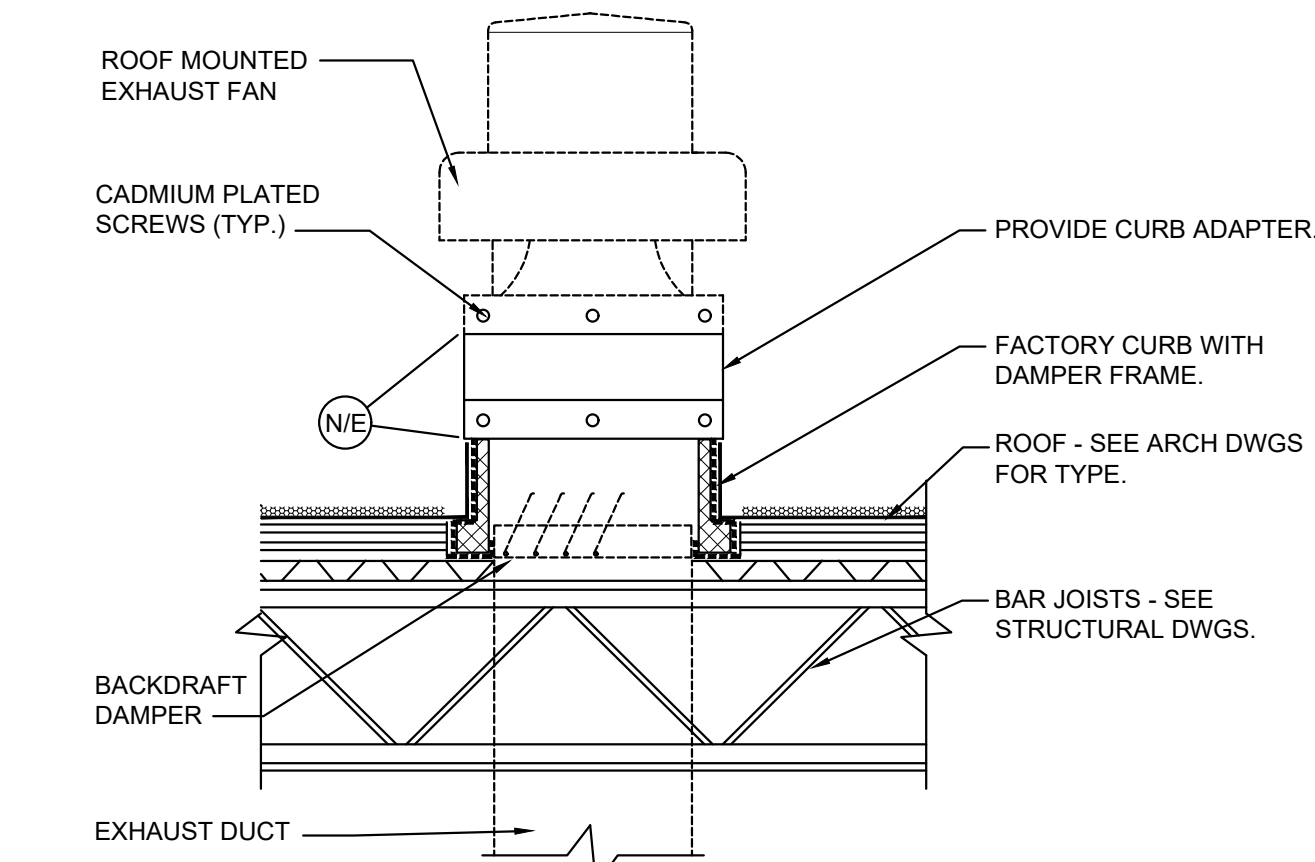
**2 CONDENSATE DRAIN DETAIL**

M2.1 SCALE: NONE



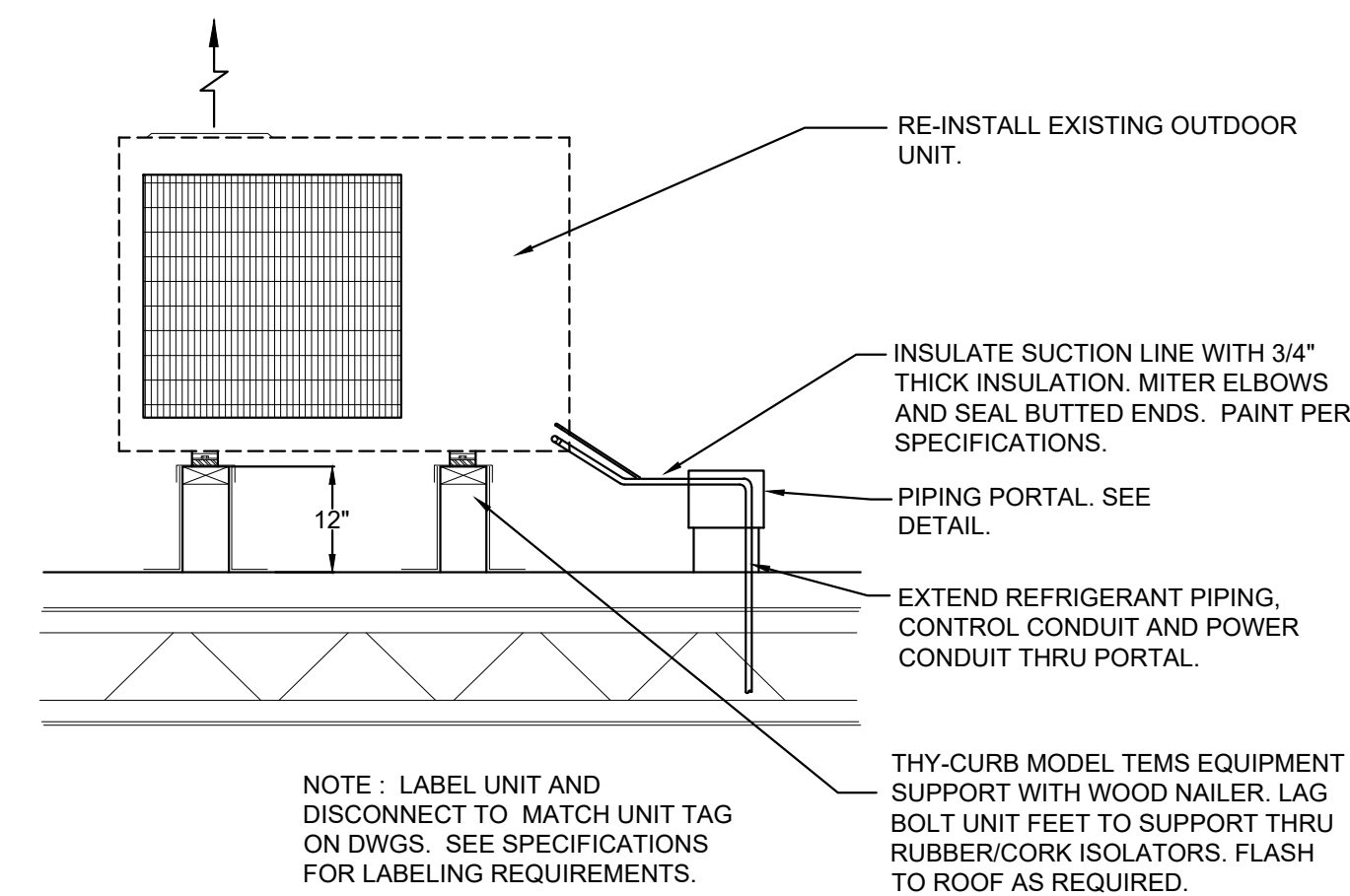
**3 ROOFTOP PIPING SUPPORT DETAIL**

M2.1 SCALE: NONE



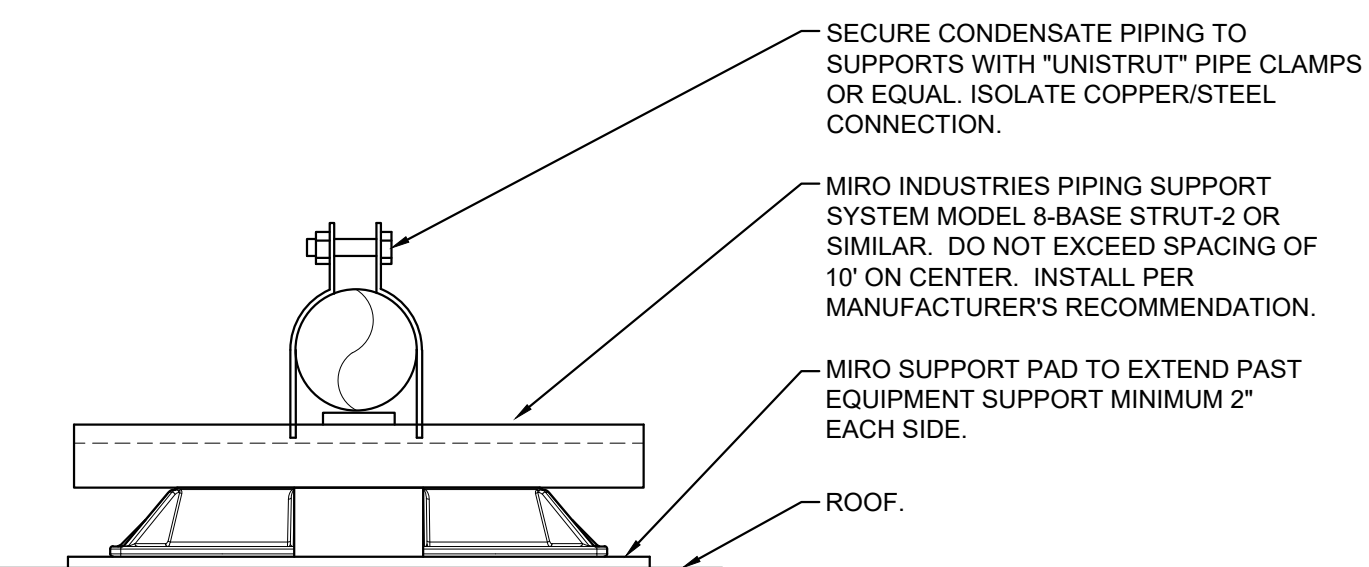
**4 ROOF MOUNTED EXHAUST FAN DETAIL**

M2.1 SCALE: NONE



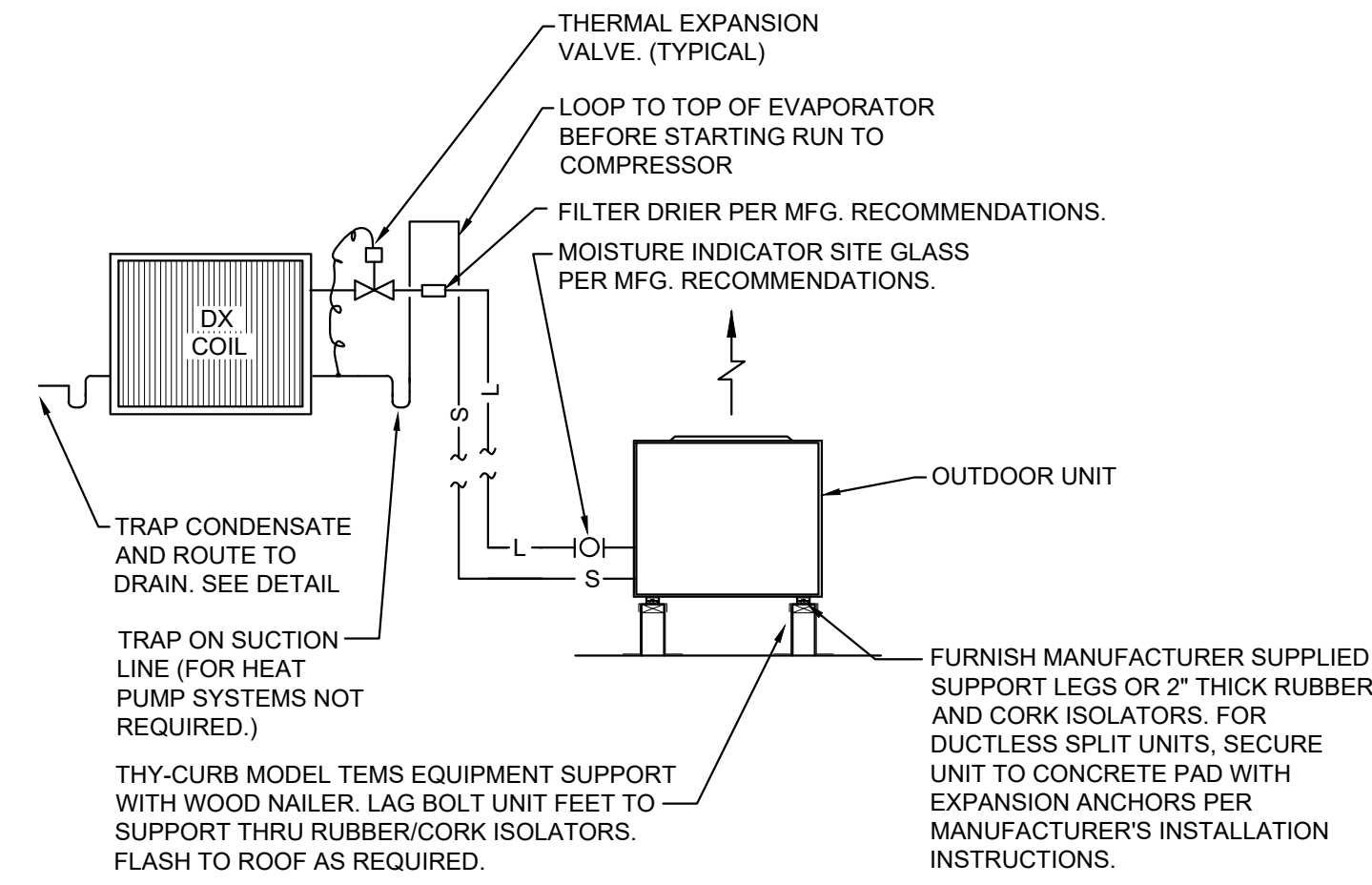
**5 SECTION AT OUTDOOR HEAT PUMP**

M2.1 SCALE: NONE



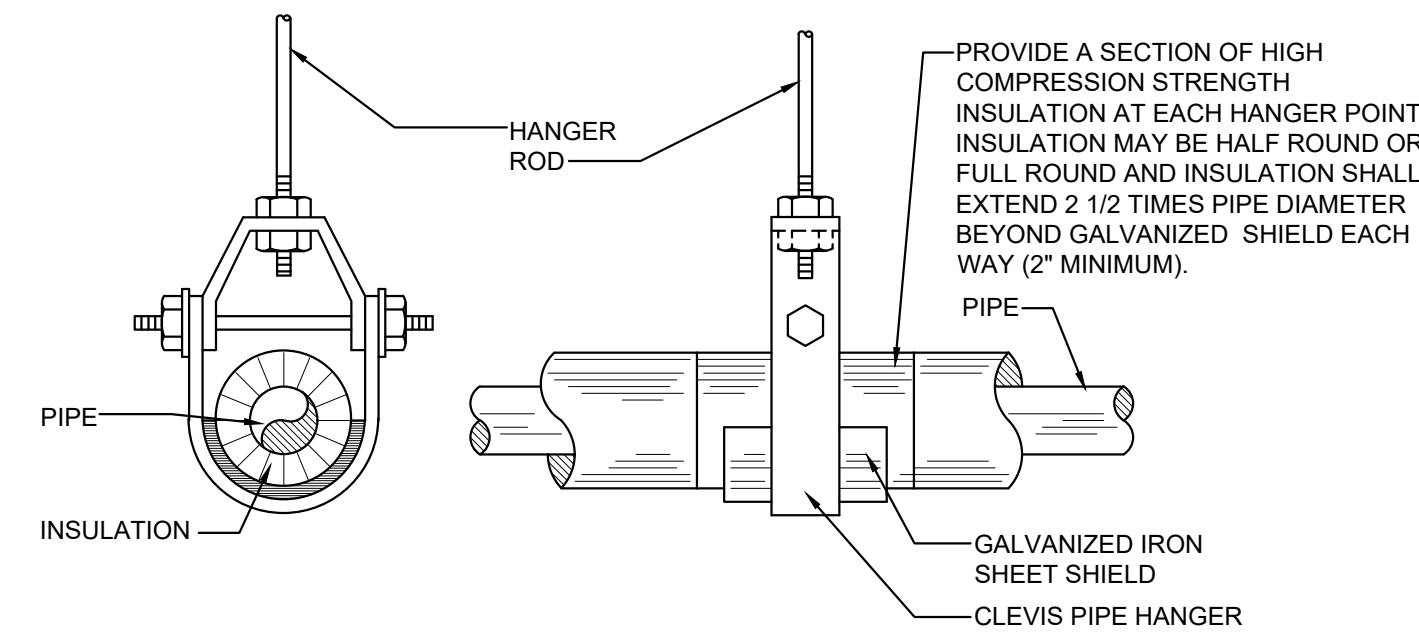
**6 ROOFTOP CONDENSATE SUPPORT DETAIL**

M2.1 SCALE: NONE



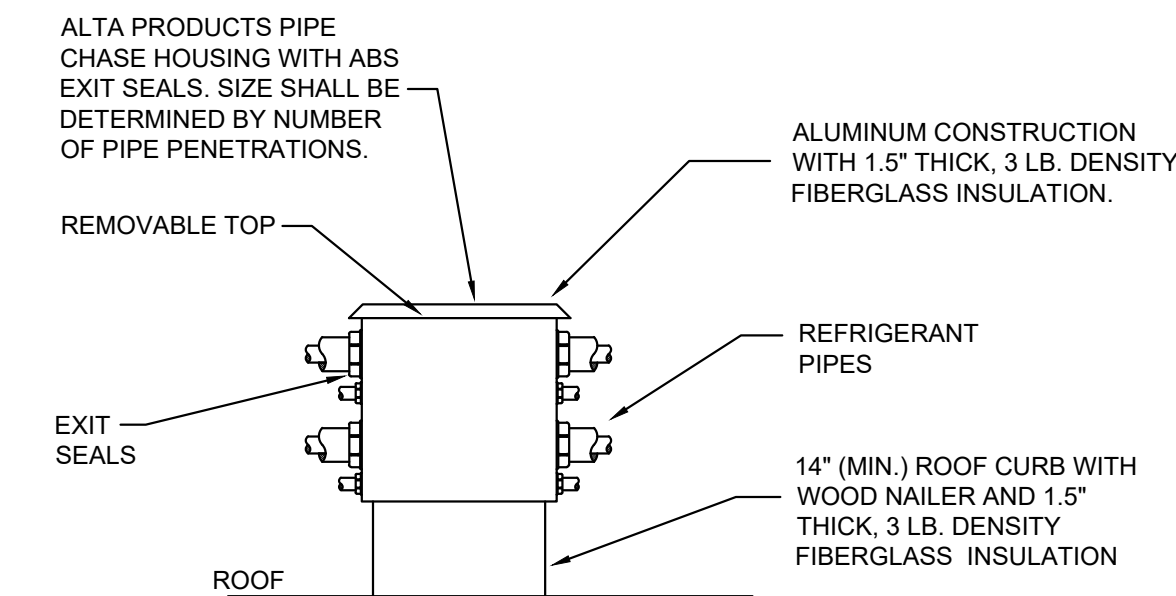
**7 REFRIGERANT PIPING SCHEMATIC**

M2.1 SCALE: NONE



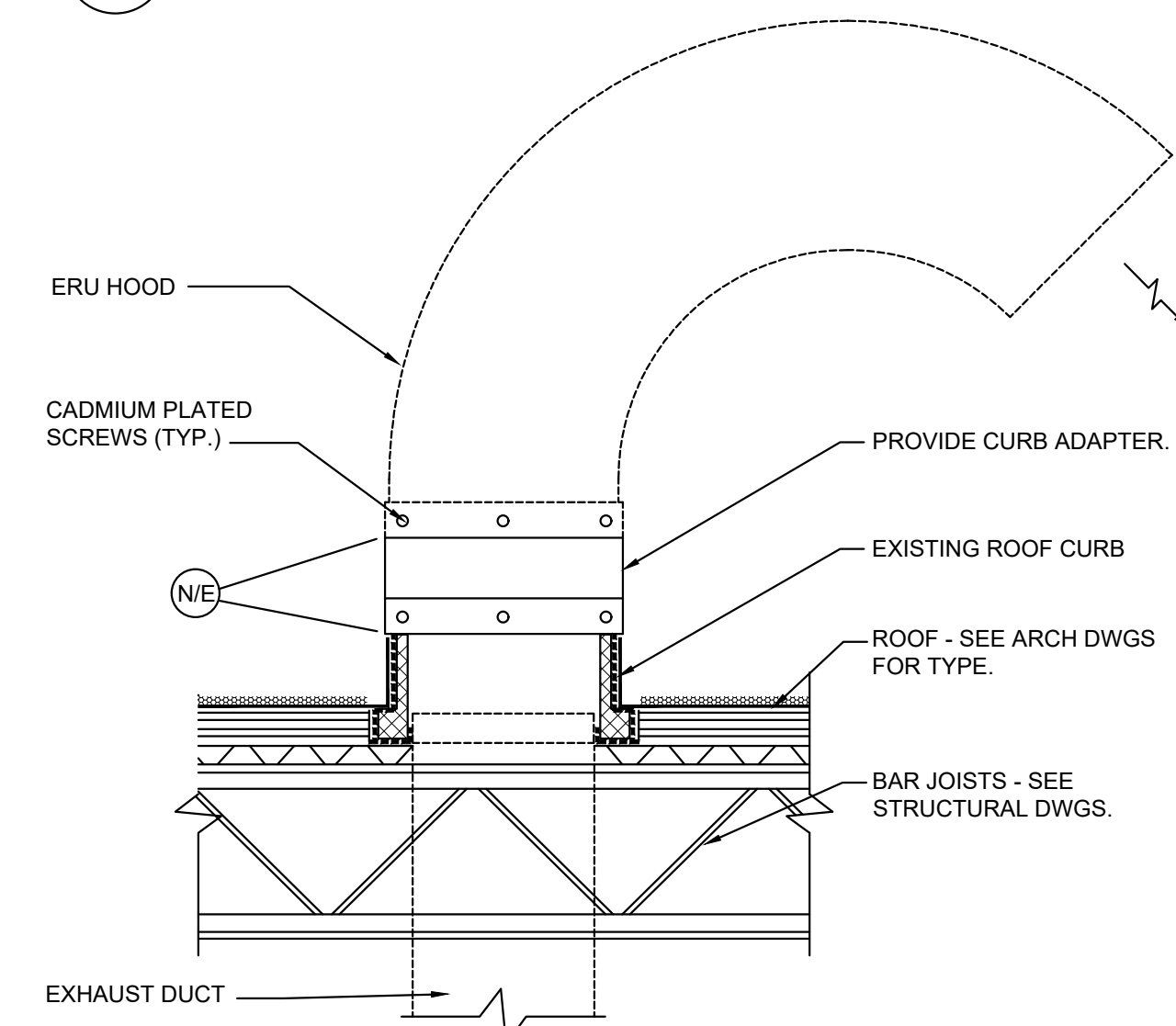
**8 PIPE HANGER DETAILS**

M2.1 SCALE: NONE



**9 PIPING PORTAL DETAIL**

M2.1 SCALE: NONE



**10 ROOF MOUNTED ERU HOOD DETAIL**

M2.1 SCALE: NONE

INDOOR HEAT PUMP SCHEDULE															
ITEM	SUPPLY C.F.M.	EXT. S.P. (IN. W.C.)	O.A. C.F.M.	FAN HP.	DRIVE	COOLING CAP. BTUH (1)		AUX. HEAT (2)		ELECTRICAL DATA (3)				CARRIER MODEL NO.	NOTES
						SENSIBLE	TOTAL	K.W.	STGS.	VOLTAGE	PHASE	M.C.A.	M.O.C.P.		
HP-8	1990	0.5	(4)	3/4	DIRECT	45,340	54,130	6.8	1	208	3	32.0	35	FV4CNB006	(5)
HP-9	1200	0.5	(4)	1/2	DIRECT	26,250	34,520	6.0	1	208	1	43.3	45	FJ4DNXB36	(5)
HP-10	1800	0.5	(4)	3/4	DIRECT	45,340	54,130	6.8	1	208	3	32.0	35	FV4CNB006	(5)
HP-11	1200	0.5	(4)	1/2	DIRECT	26,250	34,520	3.8	1	208	1	27.5	30	FJ4DNXB36	(5)

- (1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.  
(2) HEATER SIZED AT 230 VOLT. COORDINATE WITH ELECTRICAL PLANS.  
(3) ELECTRICAL DATA PROVIDED IS BASED ON EQUIPMENT SELECTED AS BASIS OF DESIGN. VERIFY ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS AND/OR CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ELECTRICAL DATA IF OTHER MANUFACTURERS ARE FURNISHED.  
(4) OUTSIDE AIR PROVIDED THROUGH CENTRAL ENERGY RECOVERY UNIT.  
(5) BALANCE SUPPLY AIR CFM QUANTITY AT INDOOR UNIT.

OUTDOOR HEAT PUMP SCHEDULE												
ITEM	COOLING CAPACITY (1) BTUH	SEER2 MIN.	HEATING CAP. M.B.H. (1)		HSPF2	C.O.P. (1)		ELECTRICAL DATA (2)				CARRIER MODEL NO.
			HI	LO		HI	LO	VOLTAGE	PHASE	M.C.A.	M.O.C.P.	
HP-8	57,520	14.3	57.7	36.4	7.5	3.88	2.76	208/230	1	33.2	50	25SCA560
HP-9	34,520	14.3	30.4	24.7	7.5	3.70	2.54	208/230	1	20.3	30	25SCA536
HP-10	57,520	14.3	57.7	36.4	7.5	3.88	2.76	208/230	1	33.2	50	25SCA560
HP-11	34,520	14.3	30.4	24.7	7.5	3.70	2.54	208/230	1	20.3	30	25SCA536

- (1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.  
(2) ELECTRICAL DATA PROVIDED IS BASED ON EQUIPMENT SELECTED AS BASIS OF DESIGN. VERIFY ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS AND/OR CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ELECTRICAL DATA IF OTHER MANUFACTURERS ARE PROVIDED.

REFRIGERATION PIPE SCHEDULE		
ITEM	SUCTION LINE O.D. (1)	LIQUID LINE O.D.(1)
HP-8/HP-8	7/8"	3/8"
HP-9/HP-9	3/4"	3/8"
HP-10/HP-10	7/8"	3/8"
HP-11/HP-11	7/8"	3/8"

- (1) REFRIGERANT PIPE SIZES INDICATED ARE FOR ESTIMATING PURPOSES ONLY. EXACT SIZES AND ACCESSORIES REQUIRED SHALL BE DETERMINED BY EQUIPMENT MANUFACTURER FROM FIELD OBTAINED DIMENSIONS.

PACKAGED ROOF TOP UNIT SCHEDULE														
ITEM	SUPPLY C.F.M.	EXT. S.P. (W.C.)	MOTOR H.P.	O.A. C.F.M.	COOLING CAP. BTUH (1)	S.E.E.R2 MIN.	AUX. HEAT (2)		ELECTRICAL DATA (3)				CARRIER MODEL NO.	NOTES
							K.W.	STAGES	VOLTAGE	PHASE	M.C.A.	M.O.C.P.		
HP-5-1	800	0.5"	1/2	80	23,360	13.4	3.8	1	208	1	27.5	30	50VL-K24 (4)(5)	(6)
HP-5-2	800	0.5"	1/2	80	23,360	13.4	3.8	1	208	1	27.5	30	50VL-K24 (4)(5)	(6)
HP-5-3	800	0.5"	1/2	80	23,360	13.4	3.8	1	208	1	27.5	30	50VL-K24 (4)(5)	(6)
HP-5-4	800	0.5"	1/2	80	23,360	13.4	3.8	1	208	1	27.5	30	50VL-K24 (4)(5)	(6)

- (1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.  
(2) HEATER SIZED AT 208 VOLT. COORDINATE WITH ELECTRICAL PLANS.  
(3) ELECTRICAL DATA PROVIDED IS BASED ON EQUIPMENT SELECTED AS BASIS OF DESIGN. VERIFY ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS AND/OR CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ELECTRICAL DATA IF OTHER MANUFACTURERS ARE FURNISHED.  
(4) FURNISH ROOF CURB ADAPTER AND LOW AMBIENT CONTROL.  
(5) FURNISH 25% O.A. HOOD.  
(6) BALANCE SUPPLY, RETURN AND OUTSIDE AIR CFM QUANTITIES AT ROOFTOP UNIT.

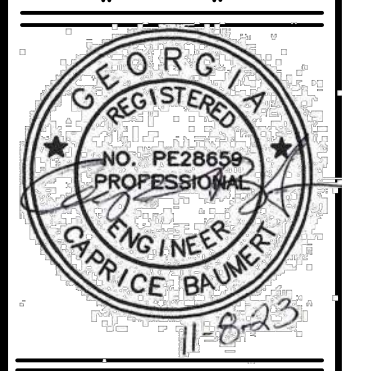
PLASMA PURIFICATION DEVICE SCHEDULE					
ITEM	UNIT SERVED	TREATED AIRFLOW (CFM)	VOLTAGE INPUT	POWER WATTS	GLOBAL PLASMA SOLUTIONS MODEL NO. (1)
PPD-1	IHP-6	3400	208	10	GPS-FC48-AC
PPD-2	IHP-7	800	208	4	GPS-C1-2

- (1) UNIT SHALL BE SELF CLEANING. VERIFY VOLTAGE REQUIREMENT WITH AIR HANDLER REQUIREMENTS.



**ARCHITECTS**  
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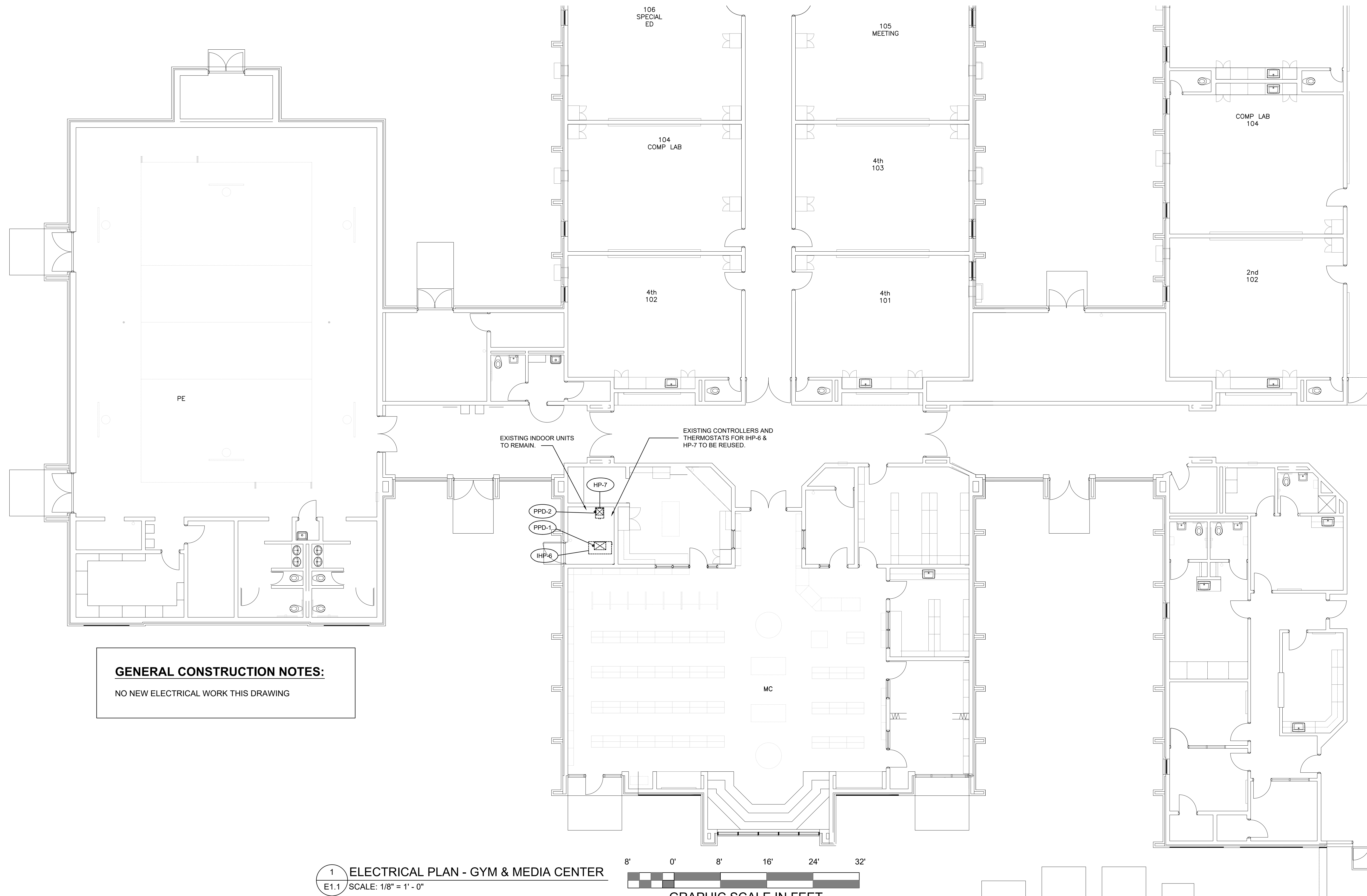
**TOBACCO ROAD ROOFING PROJECT**  
 PROJECT No. B-21-016-0294  
 2397 TOBACCO ROAD  
 AUGUSTA, GA 30906



**HVAC SCHEDULES**  
 RICHMOND COUNTY BOARD OF EDUCATION  
 TOBACCO ROAD ELEMENTARY SCHOOL  
 FACILITY No. 721-0294

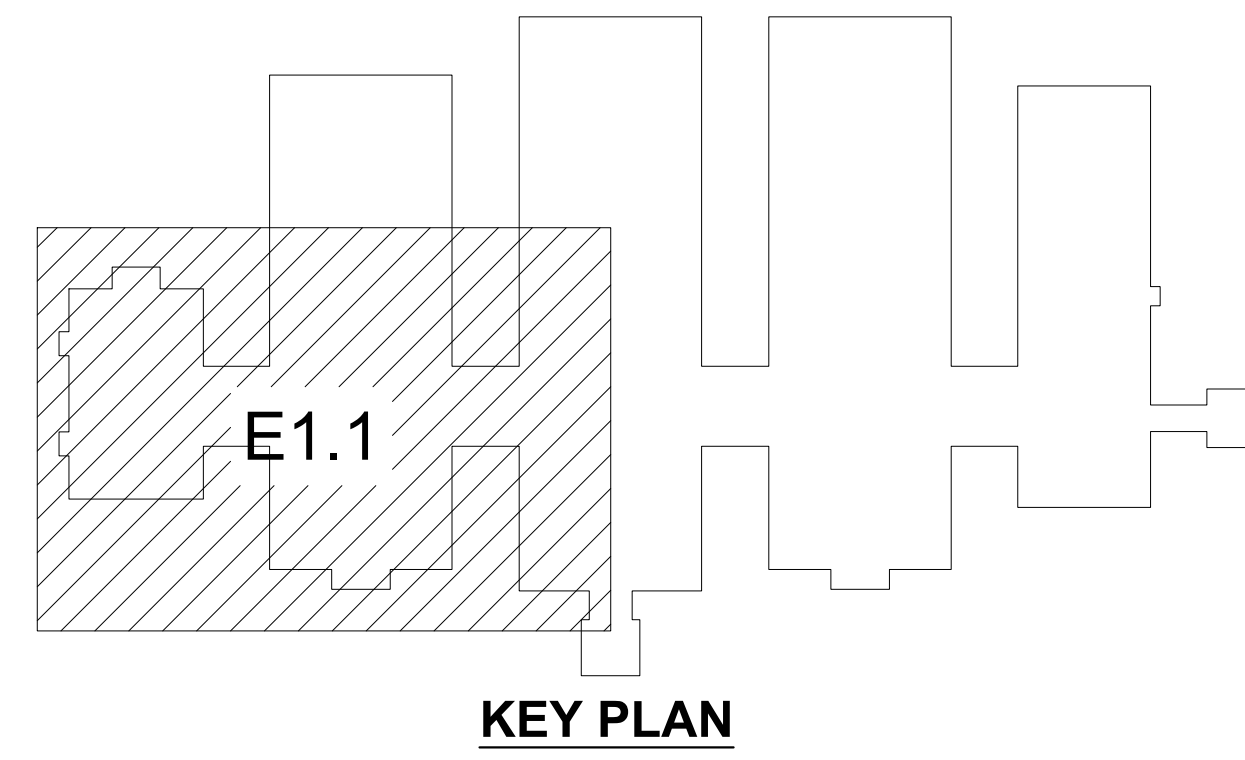
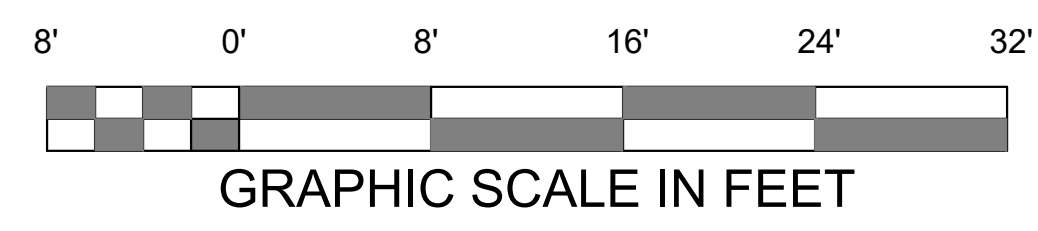
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 CHKD BY: CAB  
 DATE: 11.08.2023  
 REVISIONS:

JOB NO. 2313  
 SHEET NO. M3.1



**GENERAL CONSTRUCTION NOTES:**  
NO NEW ELECTRICAL WORK THIS DRAWING

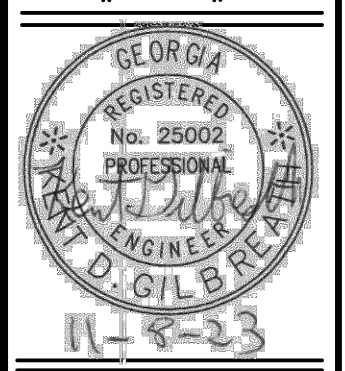
1 ELECTRICAL PLAN - GYM & MEDIA CENTER  
E1.1 SCALE: 1/8" = 1' - 0"



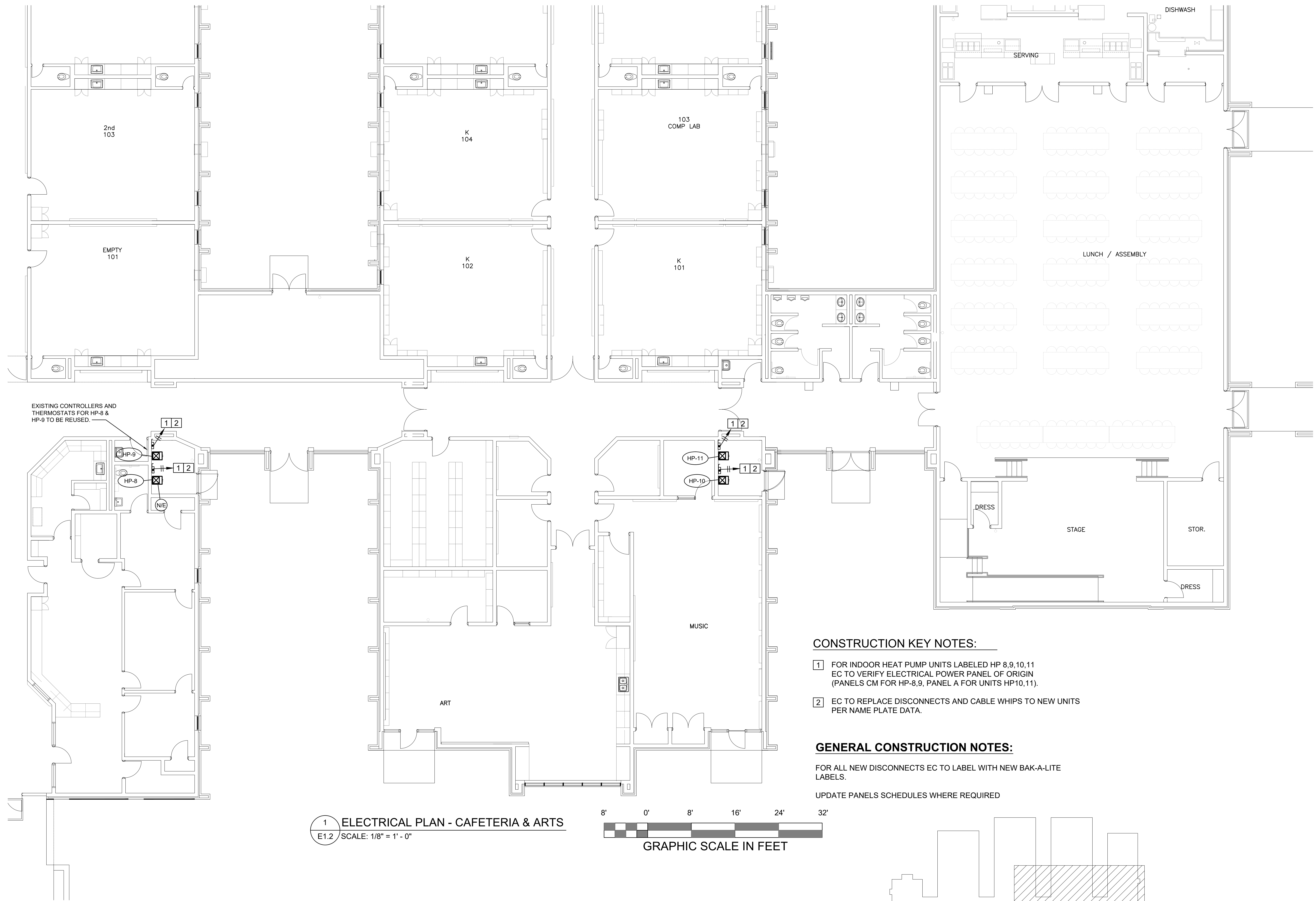
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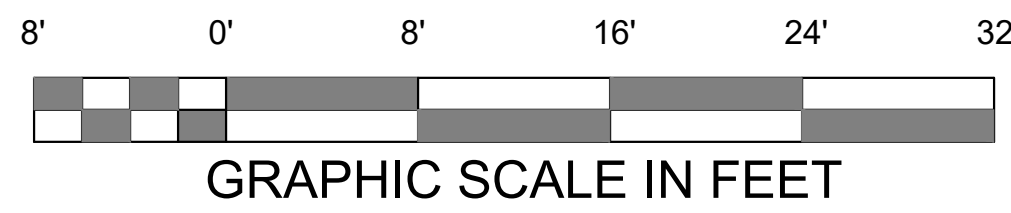


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EXISTING CONTROLLERS AND THERMOSTATS FOR HP-8 & HP-9 TO BE REUSED.

1 ELECTRICAL PLAN - CAFETERIA & ARTS  
E1.2 SCALE: 1/8" = 1' - 0"

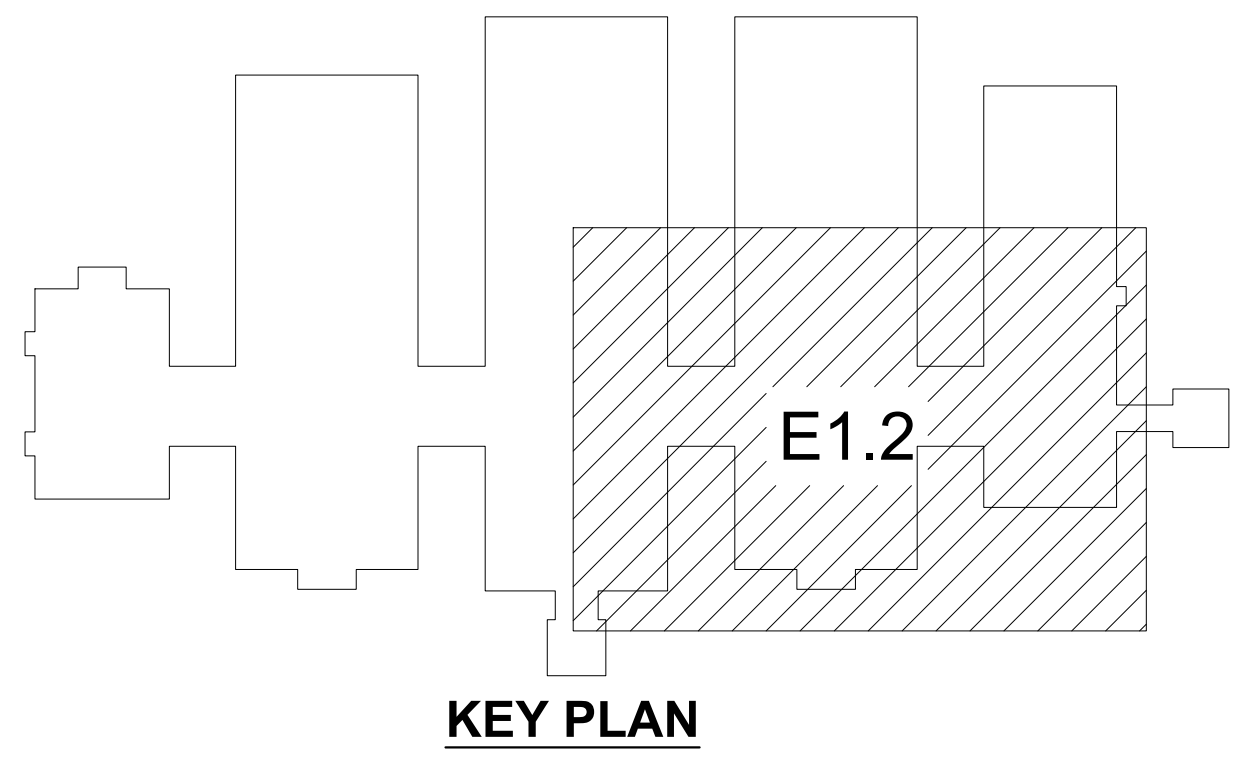


**CONSTRUCTION KEY NOTES:**

- 1 FOR INDOOR HEAT PUMP UNITS LABELED HP 8,9,10,11 EC TO VERIFY ELECTRICAL POWER PANEL OF ORIGIN (PANELS CM FOR HP-8,9, PANEL A FOR UNITS HP10,11).
- 2 EC TO REPLACE DISCONNECTS AND CABLE WHIPS TO NEW UNITS PER NAME PLATE DATA.

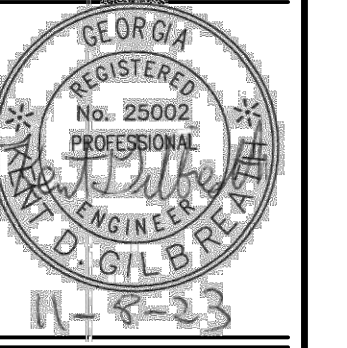
**GENERAL CONSTRUCTION NOTES:**

FOR ALL NEW DISCONNECTS EC TO LABEL WITH NEW BAK-A-LITE LABELS.  
UPDATE PANELS SCHEDULES WHERE REQUIRED

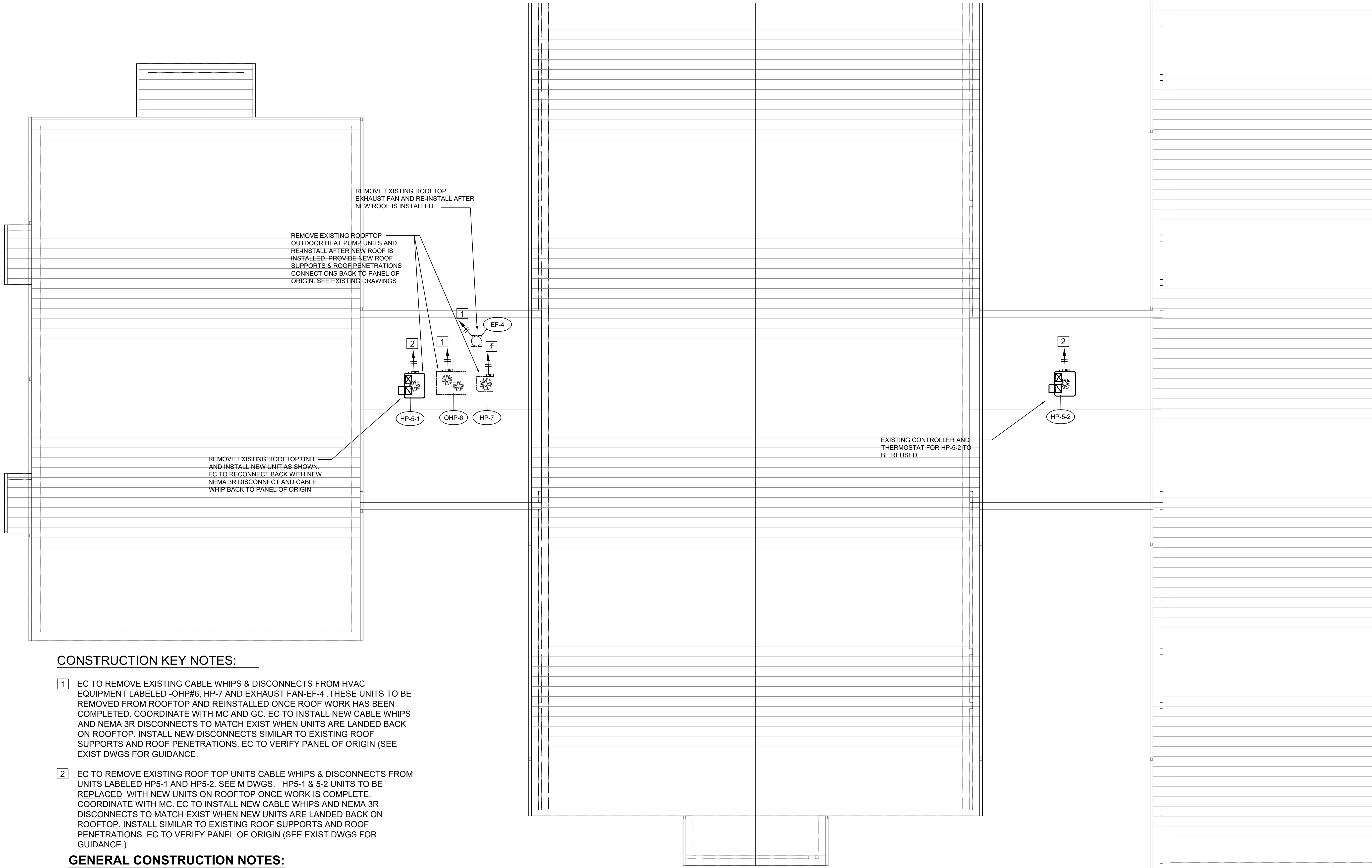


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**CONSTRUCTION KEY NOTES:**

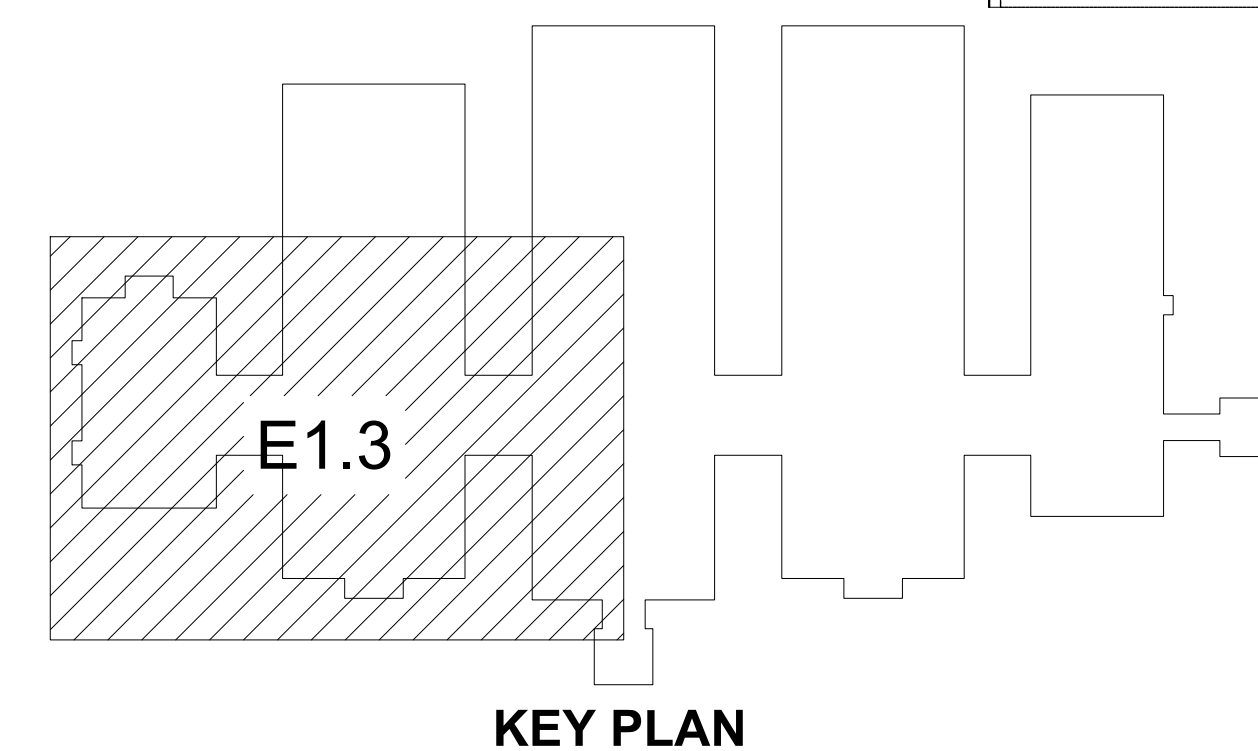
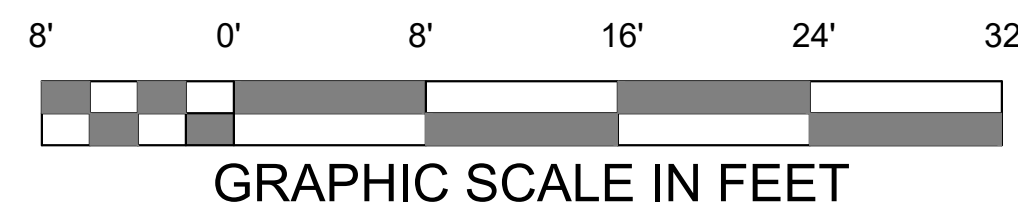
- 1 EC TO REMOVE EXISTING CABLE WHIPS & DISCONNECTS FROM HVAC EQUIPMENT LABELED -OHP#6, HP-7 AND EXHAUST FAN-EF-4. THESE UNITS TO BE REMOVED FROM ROOFTOP AND REINSTALLED ONCE ROOF WORK HAS BEEN COMPLETED. COORDINATE WITH MC AND GC. EC TO INSTALL NEW CABLE WHIPS AND NEMA 3R DISCONNECTS TO MATCH EXIST WHEN UNITS ARE LANDED BACK ON ROOFTOP. INSTALL NEW DISCONNECTS SIMILAR TO EXISTING ROOF SUPPORTS AND ROOF PENETRATIONS. EC TO VERIFY PANEL OF ORIGIN (SEE EXIST DWGS FOR GUIDANCE).
- 2 EC TO REMOVE EXISTING ROOF TOP UNITS CABLE WHIPS & DISCONNECTS FROM UNITS LABELED HP5-1 AND HP5-2. SEE M DWGS. HP5-1 & 5-2 UNITS TO BE REPLACED WITH NEW UNITS ON ROOFTOP ONCE WORK IS COMPLETE. COORDINATE WITH MC. EC TO INSTALL NEW CABLE WHIPS AND NEMA 3R DISCONNECTS TO MATCH EXIST WHEN NEW UNITS ARE LANDED BACK ON ROOFTOP. INSTALL SIMILAR TO EXISTING ROOF SUPPORTS AND ROOF PENETRATIONS. EC TO VERIFY PANEL OF ORIGIN (SEE EXIST DWGS FOR GUIDANCE.)

**GENERAL CONSTRUCTION NOTES:**

FOR ALL NEW DISCONNECTS EC TO LABEL WITH NEW BAK-A-LITE LABELS.

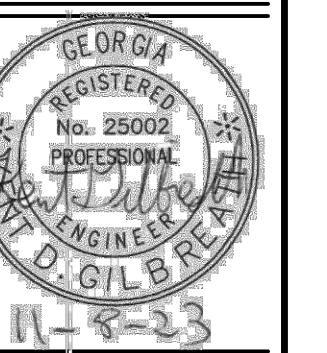
UPDATE PANELS SCHEDULES WHERE REQUIRED

1 ELECTRICAL ROOF PLAN - GYM & MEDIA CENTER  
E1.3 SCALE: 1/8" = 1' - 0"



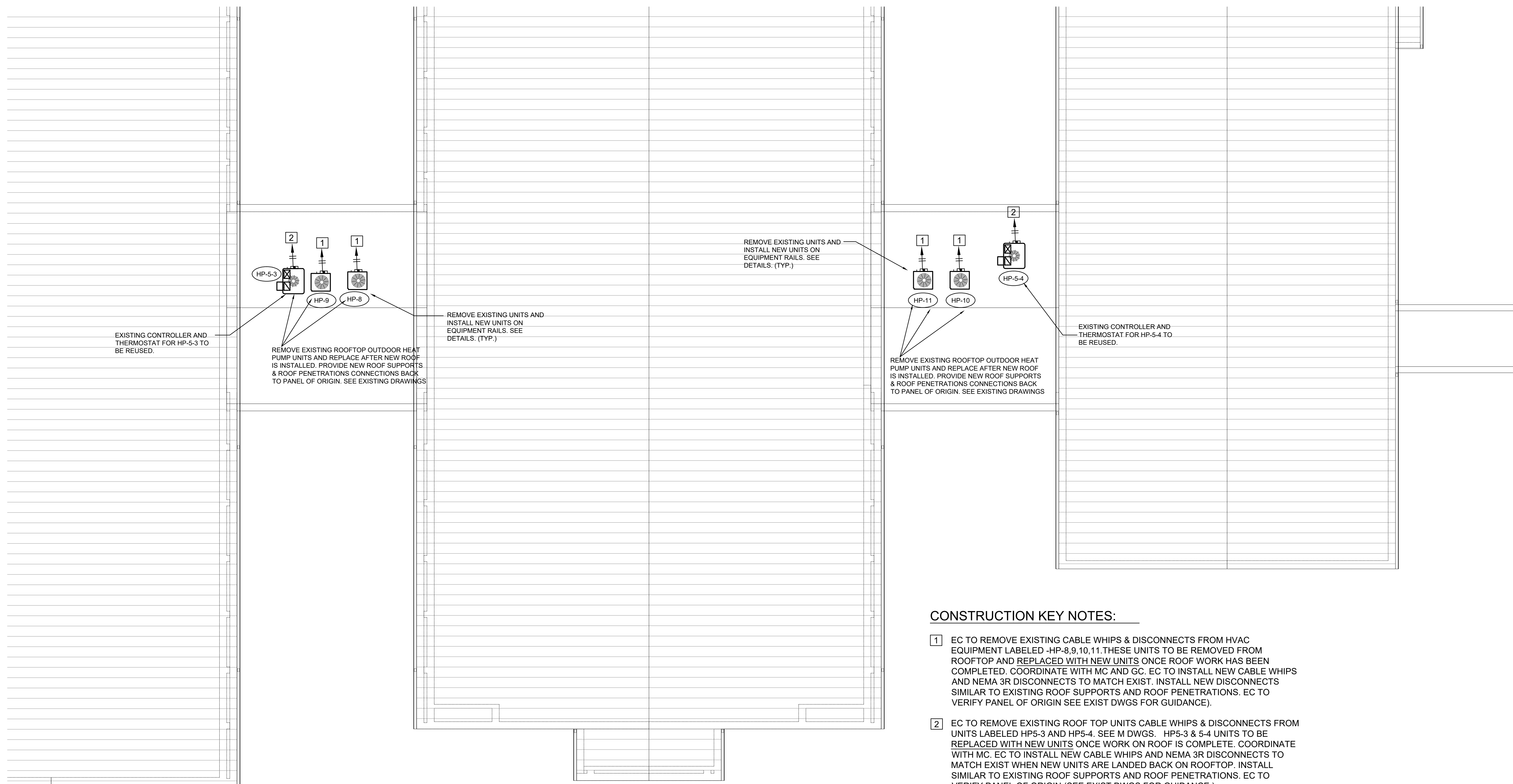
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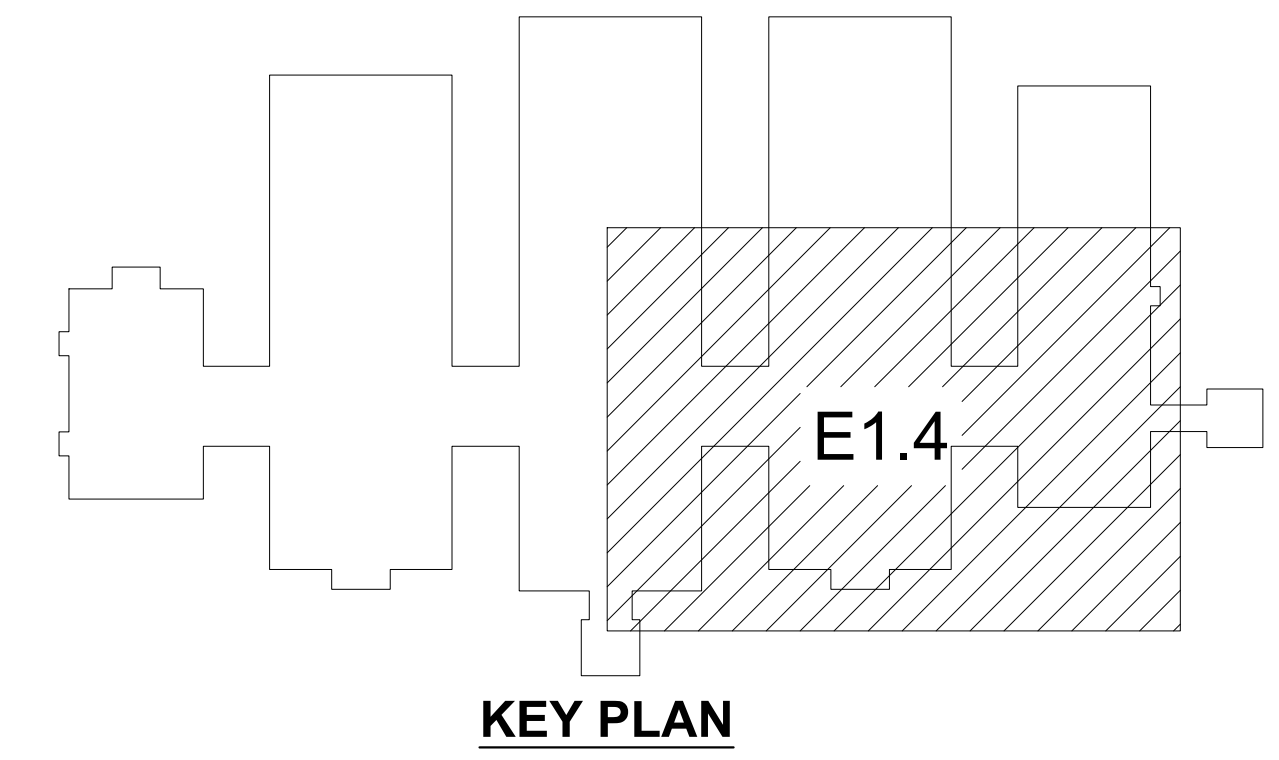
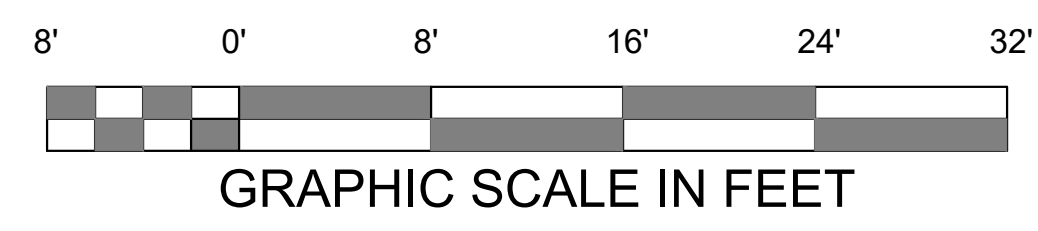
**CONSTRUCTION KEY NOTES:**

- 1 EC TO REMOVE EXISTING CABLE WHIPS & DISCONNECTS FROM HVAC EQUIPMENT LABELED -HP-8,9,10,11. THESE UNITS TO BE REMOVED FROM ROOFTOP AND REPLACED WITH NEW UNITS ONCE ROOF WORK HAS BEEN COMPLETED. COORDINATE WITH MC AND GC. EC TO INSTALL NEW CABLE WHIPS AND NEMA 3R DISCONNECTS TO MATCH EXIST. INSTALL NEW DISCONNECTS SIMILAR TO EXISTING ROOF SUPPORTS AND ROOF PENETRATIONS. EC TO VERIFY PANEL OF ORIGIN SEE EXIST DWGS FOR GUIDANCE).
- 2 EC TO REMOVE EXISTING ROOF TOP UNITS CABLE WHIPS & DISCONNECTS FROM UNITS LABELED HP5-3 AND HP5-4. SEE M DWGS. HP5-3 & 5-4 UNITS TO BE REPLACED WITH NEW UNITS ONCE WORK ON ROOF IS COMPLETE. COORDINATE WITH MC. EC TO INSTALL NEW CABLE WHIPS AND NEMA 3R DISCONNECTS TO MATCH EXIST WHEN NEW UNITS ARE LANDED BACK ON ROOFTOP. INSTALL SIMILAR TO EXISTING ROOF SUPPORTS AND ROOF PENETRATIONS. EC TO VERIFY PANEL OF ORIGIN (SEE EXIST DWGS FOR GUIDANCE.)

**GENERAL CONSTRUCTION NOTES:**

FOR ALL NEW DISCONNECTS EC TO LABEL WITH NEW BAK-A-LITE LABELS.  
 UPDATE PANELS SCHEDULES WHERE REQUIRED

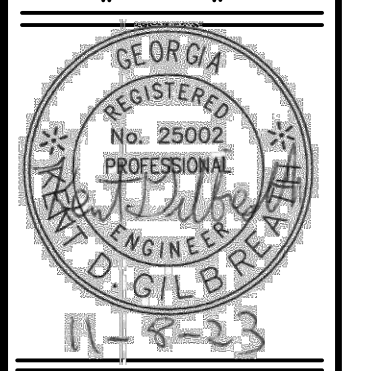
1 ELECTRICAL ROOF PLAN - CAFETERIA & ARTS  
 E1.4 SCALE: 1/8" = 1' - 0"



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



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SHEET NO. E1.4

## ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
	BRANCH CIRCUIT OR FEEDER CONDUIT CONCEALED IN WALLS OR ABOVE CEILING WITH GROUND. ARROW DENOTES HOME RUN TO PANEL. CROSS HATCHES DENOTE NUMBER OF CONDUCTORS IF OTHER THAN TWO, BUT DO NOT INCLUDE SWITCH LEGS OR THE EQUIPMENT GROUND WIRE. NUMBER 12 MINIMUM SIZE. SEE PANEL SCHEDULE FOR WIRE SIZE.
	ENCLOSED DISCONNECT SWITCH, NEMA 3R FOR OUTDOOR, NEMA 1 FOR INDOOR, MOUNTED 30" AFF TO BUILDING, EXCEPT AS NOTED ON PRINTS. SIZE DISCONNECT AND FUSE TO MEET HVAC MFRS SPECIFICATIONS.
	UNDERGROUND OR UNDER STRUCTURE RIGID METAL CONDUIT. BURY AT A DEPTH OF 24" BELOW GRADE.
	ELECTRICAL PANELBOARD (RECESSED OR FLUSH MOUNTED). SEE RISER AND PANEL SCHEDULE FOR RATINGS.
	PACKAGED HEAT PUMP UNIT, # - INDICATES SPECIFIC UNIT. (SEE MECHANICAL SCHEDULE FOR CORRECT UNIT)

## ELECTRICAL NOTES

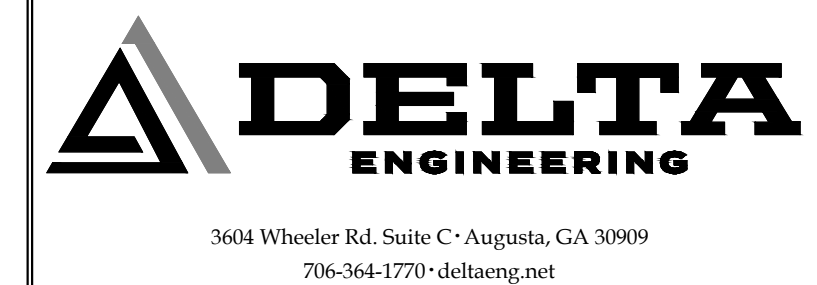
1. OUTLET BOXES ON OPPOSITE SIDES OF FIRE RESISTANT WALL OR SHAFT ENCLOSURE SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24" MINIMUM.
2. ALL CONVENIENCE OUTLETS INSTALLED TO SERVE A KITCHEN COUNT TOP SHALL BE GFI PROTECTED PER NEC.
3. INSTALL SMOKE DETECTORS PER NFPA 72 AND IBC. SEE ELECTRICAL SYMBOLS.
4. MAINTAIN CONTINUOUS GROUNDS ON ALL RECEPTACLES.
5. USE FIRE RATED MATERIALS IN RATED WALLS. FOR STOP PER NFPA.
6. CEILING PENETRATIONS SHALL MEET THE REQUIREMENT OF NEC AND IBC.
7. GROUND ELECTRICAL SERVICE PER NEC250-66 AND AS APPROVED BY LOCAL AHJ.
8. MAINTAIN 3 FT. MINIMUM CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT PER NEC 110.26 (A)
9. CONSULT LOCAL UTILITY AND BUILDING AUTHORITY FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION OF ELECTRICAL EQUIPMENT. VERIFY AVAILABLE FAULT CURRENT IS LESS THAN EQUIPMENT RATING SPECIFIED. ELECTRICAL CONTRACTOR MAY REDUCE INTERRUPTING RATING OF EQUIPMENT IF LOCAL UTILITY AVAILABLE FAULT CURRENT IS SUBSTANTIALLY LOWER THAN ANTICIPATED AND SHALL GAIN APPROVAL IN WRITING FROM ENGINEER PRIOR TO PURCHASE AND INSTALLATION. INSTALLATION SHALL MEET THE REQUIREMENTS OF NEC 110.9 AND 110.10.
10. FIRE ALARM (BY OTHERS, IF REQUIRED), GAIN APPROVAL FROM LOCAL FIRE MARSHALL ON FIRE PROTECTION EQUIPMENT LAYOUT PRIOR TO INSTALLATION AND APPROVAL. FIRE MARSHAL MAY REQUIRE ADDITIONAL EQUIPMENT (SMOKE DETECTORS, EXIT SIGNS, EGRESS LIGHTS, ETC) GREATER THAN THAT SHOWN. IF ADDITIONAL EQUIPMENT IS REQUESTED OTHER THAN THAT SHOWN, CONTRACTOR SHALL CONSULT ARCHITECT / ENGINEER PRIOR TO CONTINUING. CONTRACTOR SHALL BE RESPONSIBLE FOR FAILURE TO INFORM ENGINEER AND ARCHITECT AND SHALL INCUR ALL COST FOR ADDITIONAL CHANGES WITHOUT PRIOR APPROVAL. INSTALL FIRE ALARM EQUIPMENT PER NFPA 72.
11. HOME RUNS FOR ALL 20 AMP BRANCH CIRCUITS LONGER THAN 75 FEET SHALL BE AT LEAST 10 AWG.
12. ALL REPLACEMENT BREAKER TO MATCH SALIENT FEATURES OF EXISTING.

## ELECTRICAL MATERIALS

1. FURNISH ALL NECESSARY MATERIALS, TOOLS AND LABOR, AND INSTALL A COMPLETE AND FULLY OPERABLE SYSTEM AS SHOWN OR REASONABLY IMPLIED. ALL OUTLETS SHALL BE LEFT READY FOR USE. ALL MATERIALS SHALL BE NEW FREE OF DEFECTS AND BE UL LISTED.
2. ALL WORK SHALL BE IN ACCORDANCE WITH NEC 2020, LOCAL CODES AND ORDINANCES AND THE REQUIREMENTS OF THE UTILITY COMPANY. LOCAL CODES SHALL GOVERN IN THE EVENT OF A CONFLICT.
3. APPLY AND PAY FOR ALL REQUIRED PERMITS, INSPECTIONS, ETC.
4. UNLESS OTHERWISE NOTED, ALL WIRING SHALL BE RUN CONCEALED AND OUTLETS SHALL BE FLUSH MOUNTED IN WALLS, CEILINGS OR FLOORS.
5. OUTLET BOXES SHALL BE SIZED AND INSTALLED PER NEC AND MEET ALL LOCAL CODES.
6. PANELS SHALL HAVE INSULATED NEUTRAL BUSSES AND SEPARATE EQUIPMENT GROUNDING BUSSES. PROVIDE CIRCUIT INDEX CARDS.
7. LIGHTING FIXTURES SHALL BE COMPLETE WITH LAMPS, BALLASTS (IF APPLICABLE) AND MOUNTING ACCESSORIES AS REQUIRED. GROUND FIXTURES PER NEC ARTICLE 410-20.
8. ALL POWER WIRING AND CONNECTIONS TO MECHANICAL EQUIPMENT SHALL BE PROVIDED BY THIS CONTRACTOR.
9. SEAL ALL PENETRATIONS IN FIRE RATED ASSEMBLIES WITH 3-M. OR EQUAL FIRE STOP MATERIAL. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
10. AT THE COMPLETION OF THIS WORK, THIS CONTRACTOR SHALL REMOVE ALL RUBBISH CAUSED BY HIS WORK AND SHALL THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT.
11. GROUND SYSTEMS PER NEC ARTICLE 250 AND LOCAL CODES.
12. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND LABOR FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OR FIRS BENEFICIAL USE BY THE OWNER, WHICHEVER COMES FIRST. THE ENTIRE SYSTEM SHALL BE FREE OF SHORTS AND GROUNDS. CORRECTIONS TO THE WIRING SYSTEM, DUE TO DEFECTIVE MATERIALS AND WORKMANSHIP, WITHIN THE GUARANTEE PERIOD, SHALL BE MADE BY THE CONTRACTOR AT NO COST TO THE OWNER.
13. ALL HEATING, VENTILATION, AND AC BREAKERS SHALL BE HACR TYPE PER MANUFACTURER'S SPECIFICATIONS.
14. CONDUCTORS SHALL BE THHN/ THWN-2 COPPER, 10WG & SMALLER SHALL BE SOLID, 8 AWG AND LARGER SHALL BE STRANDED. COLOR CODE SHALL BE AS FOLLOWS: 120/208 3Ø,4W: ØA - BLACK, ØB - RED, ØC - BLUE, NEUTRAL - WHITE, EQUIPMENT GROUND - GREEN. 277/480 3Ø,4W: ØA - BROWN, ØB - ORANGE, ØC - YELLOW, NEUTRAL - GRAY, EQUIPMENT GROUND-GREEN.
15. USE OF NM, NMC AND NMS CABLE IN LIEU OF CONDUIT AND STRANDED THHN, THWN WIRE FOR BRANCH CIRCUITS PER CURRENT NEC IS ALLOWED PROVIDED LOCAL AHJ APPROVES OF ITS USE. RESIDENTIAL CLASSIFICATIONS ONLY.
16. CONDUITS CONCEALED IN WALLS AND ABOVE CEILING SHALL BE EMT. UNDERGROUND CONDUITS SHALL BE PVC, SCHEDULE 40, EXPOSED CONDUITS SHALL BE RIGID STEEL. CONDUITS SHALL BE RUN AT RIGHT ANGLES TO BUILDING WALLS. USE OF MC CABLE ALLOWED PER NEC APPROVED LOCATIONS & AHJ.
17. DEVICES AND DEVICE BOXES SHALL BE INSTALLED LEVEL AND PLUMB. DUPLEX RECEPTACLES SHALL BE INSTALLED SO THAT GROUNDS ARE AT BOTTOM. SINGLE POLE TOGGLE SWITCHES SHALL BE INSTALLED SO THAT OFF POSITION IS DOWN.
18. DEVICE AND DEVICE PLATE MATERIALS AND COLORS SHALL BE AS SPECIFIED BY OWNER / ARCHITECT.
19. ALL FUSES SHALL BE CLASS RK1 FUSES OR EQUAL WITH CURRENT LIMITING CHARACTERISTICS.
20. LABEL ALL PANELS AND DISCONNECTS W/ NEW BAK-A-LITE TAGS.

1  
E-2.1 ELECTRICAL NOTES & SCHEDULES  
SCALE: NONE

2023-182



TOBACCO ROAD ROOFING PROJECT

PROJECT No. B-21-016-0294

2397 TOBACCO ROAD  
AUGUSTA, GA 30906



ELECTRICAL NOTES & SCHEDULES

RICHMOND COUNTY BOARD OF EDUCATION  
TOBACCO ROAD ELEMENTARY SCHOOL  
FACILITY No. 721-0294

DRWN BY: KDG

CHK'D BY: KDG

DATE: 11.08.2023

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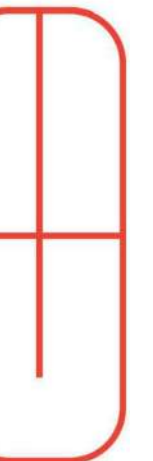
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ARCHITECTS  
Christopher Booker & Associates, PC



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