

HANNAH MORE HEALTH
CENTER HVAC REPLACEMENT
12035 REISTERSTOWN RD
REISTERSTOWN, MD 21136
FINAL CONSTRUCTION DOCUMENTS
JULY 31, 2024

PREPARED BY :



RMF ENGINEERING, INC.
5520 RESEARCH PARK DRIVE
SUITE 300
BALTIMORE, MD 21228
P: 410-576-0505 F: 410-385-0327



LOCATION MAP

PROJECT LOCATION:
• HANNAH MORE HEALTH CENTER

BASE BID AND ADD ALTERNATE

BASE BID-- ALL WORK ASSOCIATED WITH INSTALLING WORK IN MECHANICAL ROOM EXCEPT THE AHU, AND THE COOLING TOWER TO BE INSTALLED ALSO.

ADD ALTERNATE-- ALL WORK TO PROVIDE VENTILATION IN THE HEALTH CENTER. THIS INCLUDES REPLACEMENT OF TWO AHU'S, DUCTWORK MODIFICATIONS, AND CEILING/LIGHTING MODIFICATIONS.

INDEX OF DRAWINGS

SHEET NO.	DRAWING NO.	DESCRIPTION	SHEET NO.	DRAWING NO.	DESCRIPTION
1	T-001	TITLE SHEET	30	MP-401	PHASE 1 - MECHANICAL ROOM 001 - DEMOLITION
2	G-001	CONTRACTOR PARKING AND EQUIPMENT LAY-DOWN PLAN	31	MP-401A	PHASE 1A - MECHANICAL ROOM 001 - NEW WORK
		STRUCTURAL	32	MP-401B	PHASE 1B - COOLING TOWER - MECHANICAL NEW WORK
			33	MP-401C	PHASE 1C - MECHANICAL ROOM 024 - PIPING DEMOLITION
3	S-101	STRUCTURAL - NEW COOLING TOWER STRUCTURE	34	MP-402	PHASE 2 - LOWER LEVEL MECHANICAL ROOM 001 - DEMOLITION
4	S-301	STRUCTURAL - NEW COOLING TOWER STRUCTURE	35	MP-402A	PHASE 2A - MECHANICAL ROOM 001 - NEW WORK
		ARCHITECTURAL	36	MP-403	PHASE 3 - MECHANICAL ROOM 001 - DEMOLITION
			37	MP-403A	PHASE 3 - MECHANICAL ROOM 001 - NEW WORK
5	AD-101	BASEMENT REFLECTED CEILING PLAN - DEMOLITION	38	M-501	MECHANICAL SECTIONS
6	AD-102	FIRST FLOOR REFLECTED CEILING PLAN - DEMOLITION	39	M-601	MECHANICAL PIPING SCHEMATIC
7	AD-103	SECOND FLOOR REFLECTED CEILING PLAN - DEMOLITION	40	M-700	MECHANICAL CONTROLS
8	AD-104	THIRD FLOOR REFLECTED CEILING PLAN - DEMOLITION	41	M-701	MECHANICAL CONTROLS SCHEMATIC
9	A-101	BASEMENT REFLECTED CEILING PLAN - NEW WORK	42	M-702	MECHANICAL CONTROLS
10	A-102	FIRST FLOOR REFLECTED CEILING PLAN - NEW WORK	43	M-801	MECHANICAL DETAILS
11	A-103	SECOND FLOOR REFLECTED CEILING PLAN - NEW WORK	44	M-802	MECHANICAL DETAILS
12	A-104	THIRD FLOOR REFLECTED CEILING PLAN - NEW WORK	45	M-803	MECHANICAL DETAILS
		MECHANICAL/PLUMBING	46	M-804	MECHANICAL DETAILS
			47	M-901	MECHANICAL SCHEDULES
					ELECTRICAL
13	M-001	MECHANICAL LEGEND AND ABBREVIATIONS	48	E-001	ELECTRICAL LEGEND & ABBREVIATIONS
14	MD-101	BASEMENT PLAN - MECHANICAL DEMOLITION	49	ED-101	ELECTRICAL - DEMOLITION - BASEMENT
15	MD-102	FIRST FLOOR PLAN - MECHANICAL DEMOLITION	50	ED-102	ELECTRICAL - DEMOLITION - FIRST FLOOR
16	MD-103	SECOND FLOOR PLAN - MECHANICAL DEMOLITION	51	ED-103	ELECTRICAL - DEMOLITION - SECOND FLOOR
17	MD-104	THIRD FLOOR PLAN - MECHANICAL DEMOLITION	52	ED-104	ELECTRICAL - DEMOLITION - THIRD FLOOR
18	MD-401	MECHANICAL ROOM 001 - MECHANICAL DEMOLITION	53	ED-401	MECHANICAL ROOMS - ELECTRICAL DEMOLITION
19	MD-402	MECHANICAL ROOM 001 - MECHANICAL PIPING DEMOLITION	54	E-101	ELECTRICAL - NEW WORK - BASEMENT
20	MD-403	MECHANICAL ROOM 001 - PLUMBING DEMOLITION	55	E-102	ELECTRICAL - NEW WORK - FIRST FLOOR
21	MD-404	MECHANICAL ROOM 024 - HVAC DEMOLITION	56	E-103	ELECTRICAL - NEW WORK - SECOND FLOOR
22	M-101	BASEMENT PLAN - MECHANICAL NEW WORK	57	E-104	ELECTRICAL - NEW WORK - THIRD FLOOR
23	M-102	FIRST FLOOR PLAN - MECHANICAL NEW WORK	58	E-401	MECHANICAL ROOMS - ELECTRICAL DEMOLITION
24	M-103	SECOND FLOOR PLAN - MECHANICAL NEW WORK	59	E-501	ELECTRICAL - SINGLE LINE DIAGRAMS
25	M-104	THIRD FLOOR PLAN - MECHANICAL NEW WORK	60	E-601	ELECTRICAL PANEL SCHEDULES
26	M-401	MECHANICAL ROOM 001 - NEW WORK PART PLANS			
27	M-402	COOLING TOWER - MECHANICAL NEW WORK			
28	M-403	MECHANICAL ROOM 001 - PLUMBING NEW WORK			
29	M-404	MECHANICAL ROOM 024 - MECHANICAL NEW WORK			

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16961 EXPIRATION DATE 06-14-2026		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
							R.O.W NO.	KEY SHIT TNY	POINT SHIT 57N430	PLAN SCALE: NONE	APPROVED BY: <i>GM Doran</i> PROPERTY MANAGER	
									POINT SHIT 57N430	PROFILE SCALE:	DATE: 8/11/2025	
									POINT SHIT 56N430			
RMF ENGINEERING, INC. 5520 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-576-0505 (F) 410-385-0327		DGN BY: JDS	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
AS-BUILT PER RECORD PRINT		DWN BY: JDS	REVIEWED BY:									
BY: DATE:		CHKD BY: RMH	DATE REVIEWED:									

SHEET DESIGNATION T-001		CONTRACT NUMBER 24096-P00	
		JOB ORDER NUMBER	
		SHEET 1 OF 59	
		DRAWING NUMBER 2024-1227	
		FILE NO.: 8	
BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT			
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT			
TITLE SHEET			
SUBDIVISION: REISTERSTOWN		12035 Reisterstown Rd, Reisterstown, MD 21136	
		ELECTION DIST. NO.: 4 c 4	

DWG. FILENAME: TITLE SHEET



CONTRACTOR EQUIPMENT LAYDOWN/ PARKING AREA

NOTES:

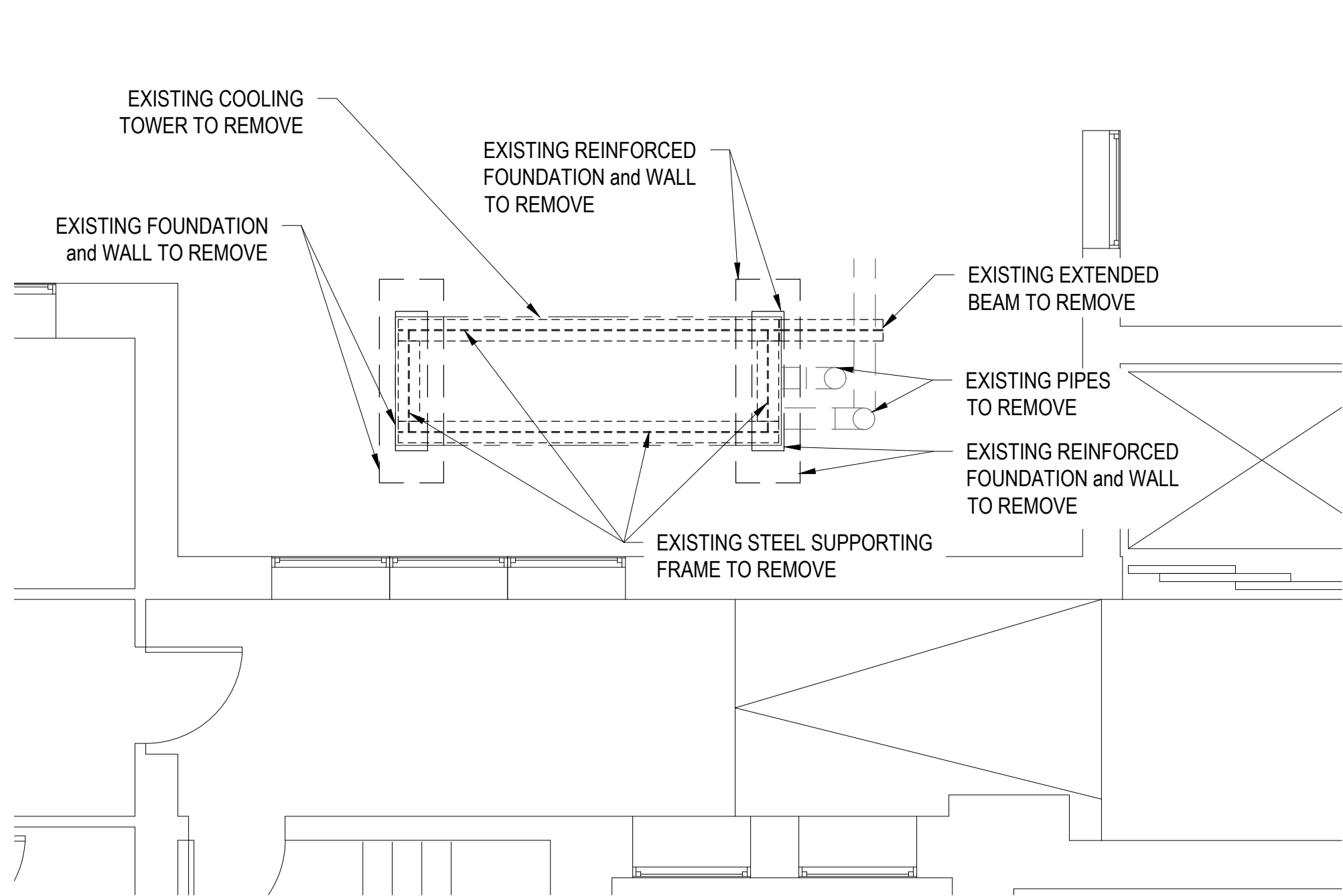
- ALL FENCING TO BE 8' HIGH CHAIN LINK WITH PRIVACY SLATS OR FABRIC. SIGNAGE SHALL BE POSTED TO SIGNIFY THE HAZARDS, PPE REQUIREMENTS, AND AUTHORIZATION REQUIRED FOR ACCESS INTO FENCED AREA.
- FIRE DEPARTMENT ACCESS AND EMERGENCY EGRESS OF PATHS OF TRAVEL FROM THE BUILDING SHALL BE MAINTAINED.
- ALL PARKING AREAS AND LAYDOWN AREAS NOT ON PAVEMENT WILL BE PREPARED FOR THE TRAFFIC INTENDED WITH FILTER FABRIC AND CRUSH STONE.
- CONTRACTOR PARKING SHALL BE IN DESIGNATED AREAS AS SHOWN.
- ALL DELIVERIES SHALL BE MONDAY TO FRIDAY FROM 10:00 AM TO 3:00 PM.

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE		PROPERTY MANAGEMENT		
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16961 EXPIRATION DATE 06-14-2026  RMF ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-528-0200 (F) 410-302-0372 AS-BUILT PER RECORD PRINT BY: DATE: CHKD BY: RMH		CONTRACT COMPLETION BOX				R.O.W. NO.	KEY SHEET TWM	POINT SH 57W930 POINT SH 57W930 POINT SH 58W930 POINT SH 58W930	PLAN SCALE: NONE PROFILE SCALE:	APPROVED BY: PROPERTY MANAGER DATE:			
			BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
			REVIEWED BY:											
			DATE REVIEWED:											

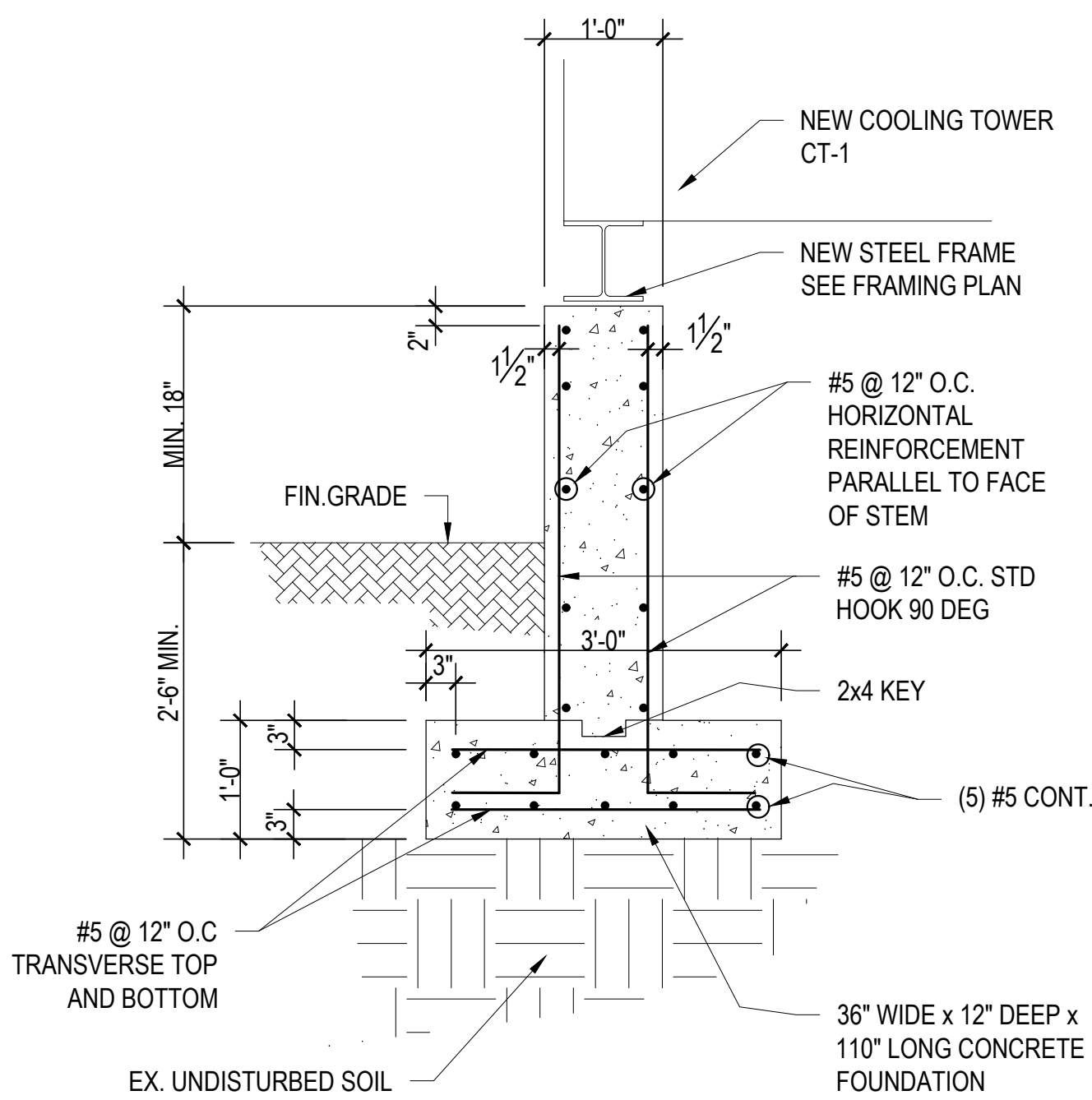
SHEET DESIGNATION		CONTRACT NUMBER	
G-001		24096-P00	
		JOB ORDER NUMBER	
		SHEET 2 OF 59	
		DRAWING NUMBER	
		2024-1228	
FILE NO.: 8		DATE: 07/31/2024	

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT			
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT			
CONTRACTOR PARKING AND EQUIPMENT LAY-DOWN PLAN			
SUBDIVISION: REISTERSTOWN		12035 Reisterstown Rd, Reisterstown, MD 21136	
		ELECTION DIST. NO.: 4 c 4	

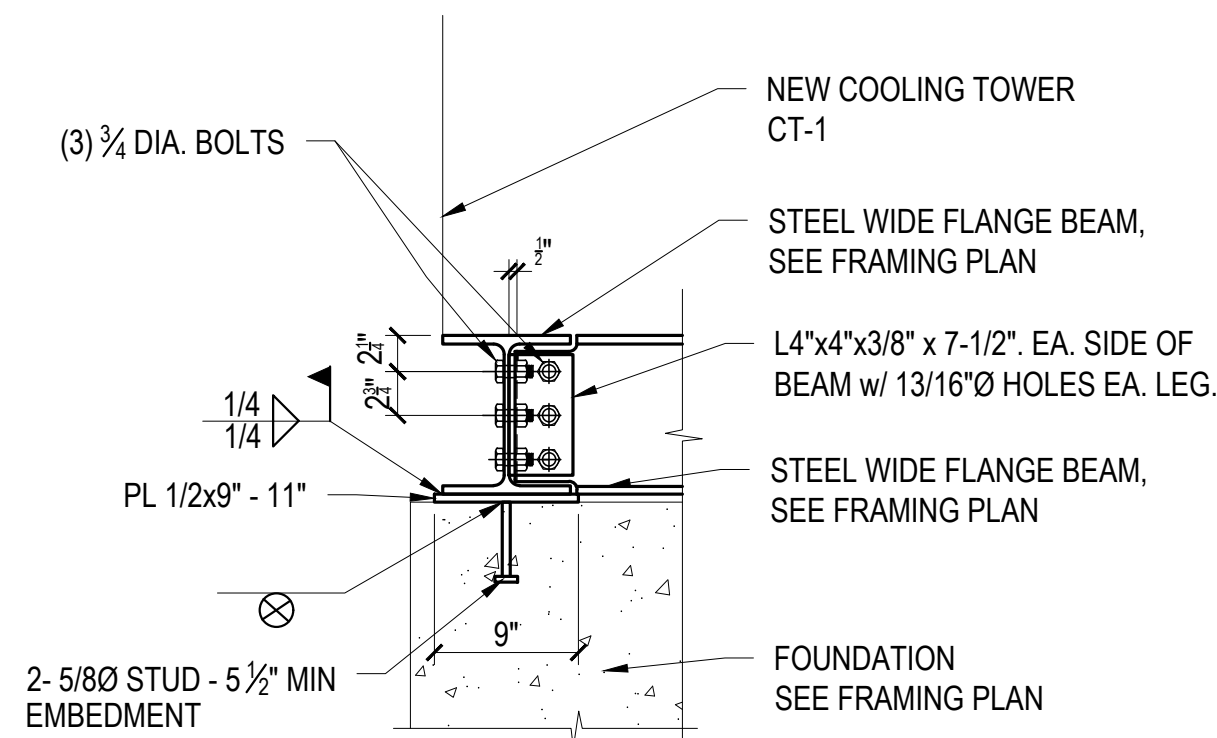
DWG. FILENAME:



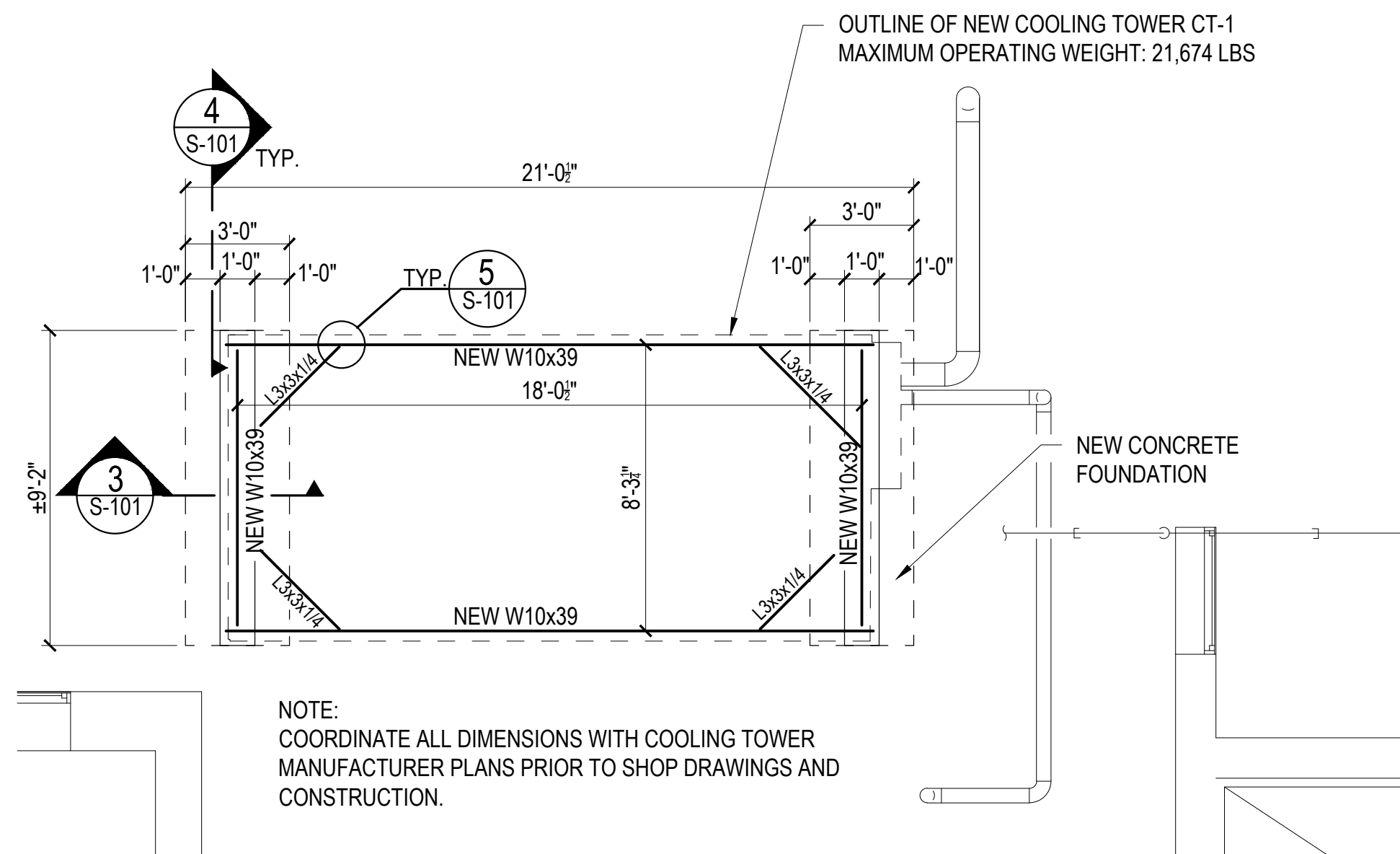
1 EXISTING COOLING TOWER DEMOLITION PLAN
1/4" = 1'-0"



3 SECTION
3/4" = 1'-0"

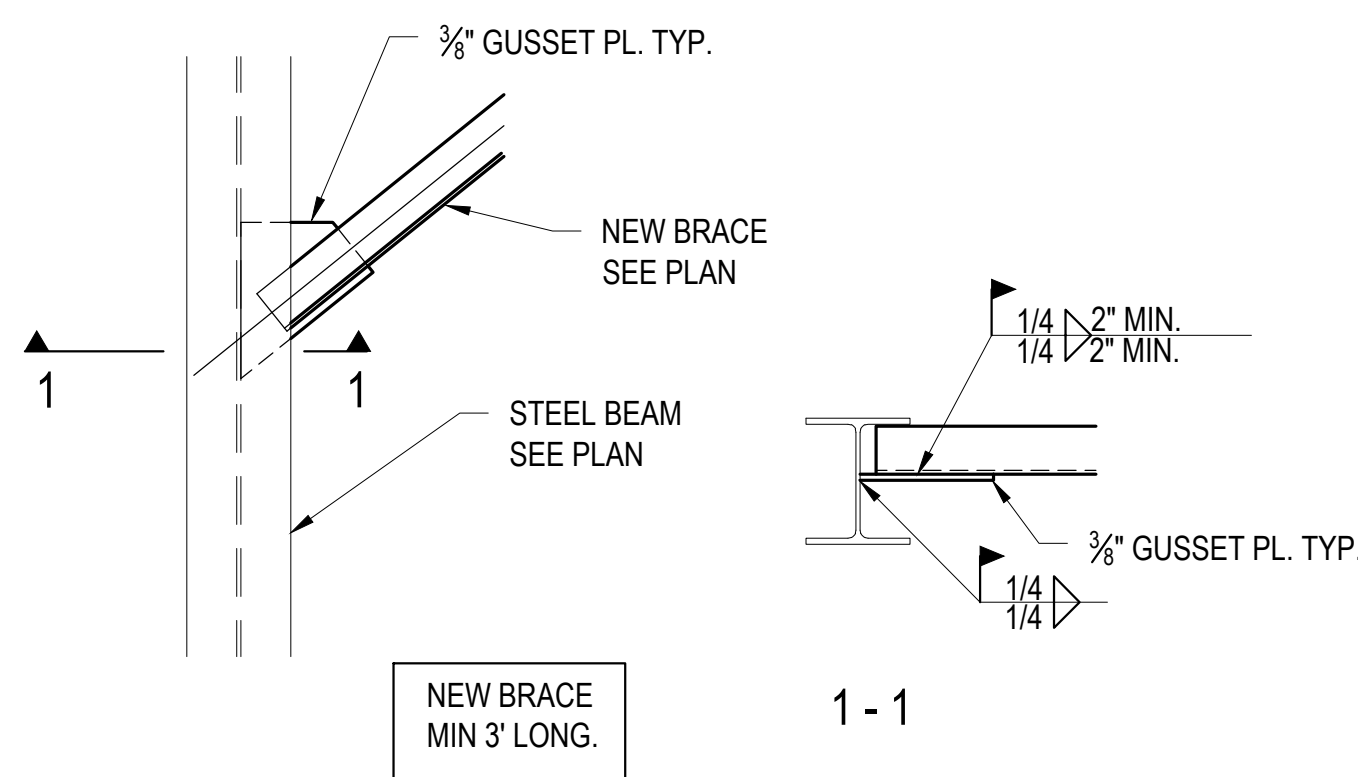


4 SECTION
1" = 1'-0"

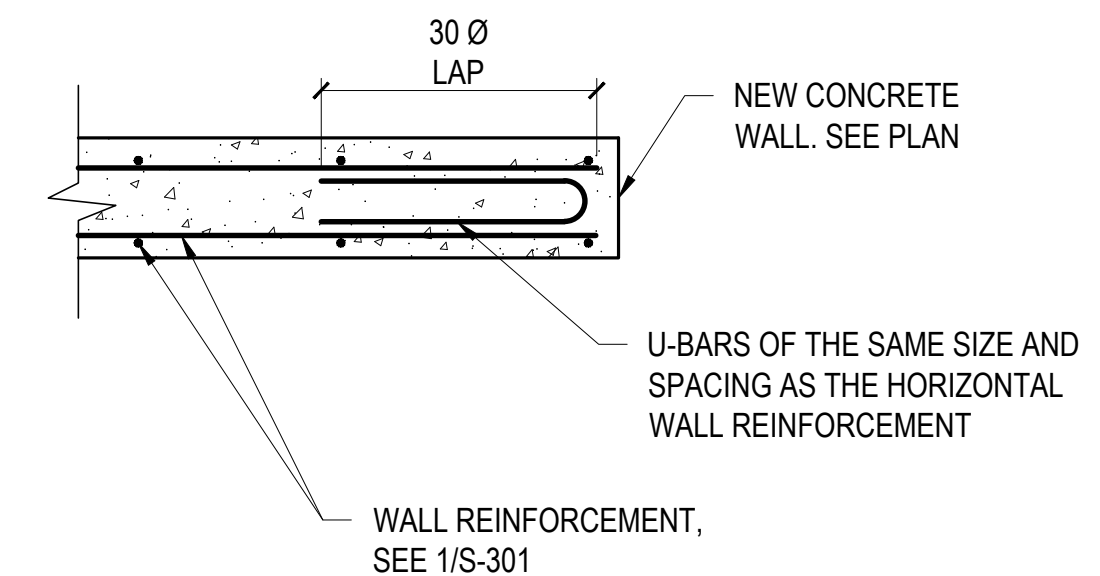


2 NEW COOLING TOWER SUPPORT FRAMING PLAN
1/4" = 1'-0"

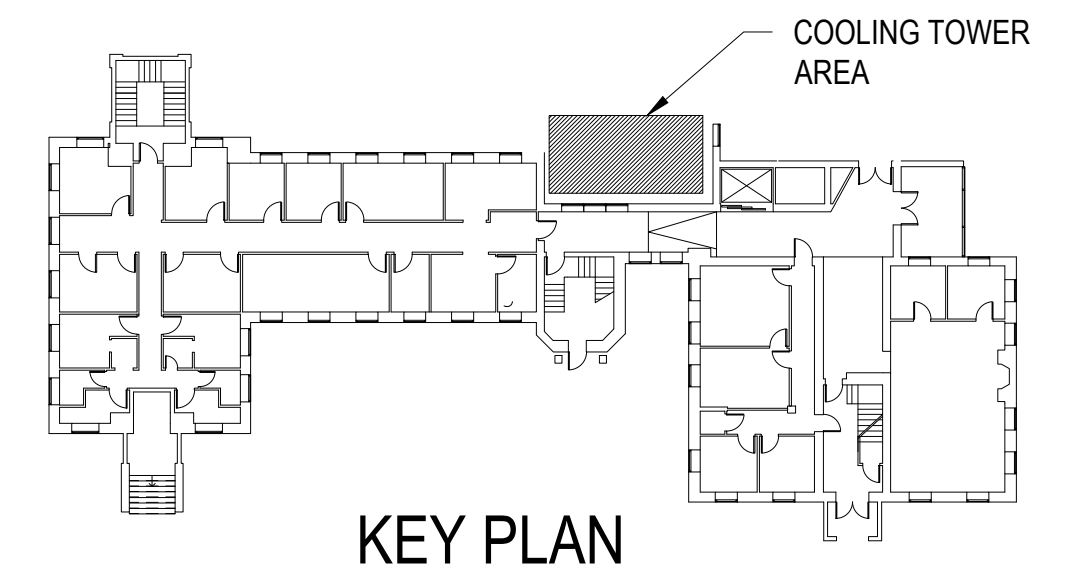
NOTE:
1. ALL STEEL AND CONNECTIONS SHALL BE HOT-DIPPED GALVANIZED
2. BEFORE FIELD WELDING WIRE BRUSH AREA OF GALVANIZED ELEMENTS



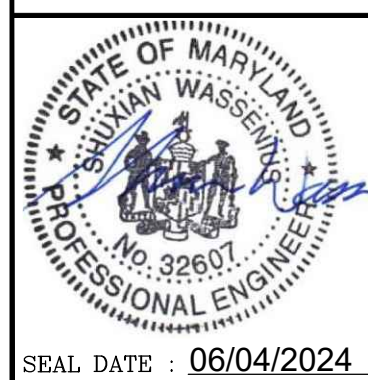
5 HORIZONTAL BRACE TO BEAM - DETAIL
1" = 1'-0"



6 TYP. CONCRETE WALL CORNER REINFORCING
3/4" = 1'-0"



KEY PLAN

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION	DRAWING SCALE	PROPERTY MANAGEMENT
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						KEY SHEET	POSITION	PLAN SCALE: AS NOTED	APPROVED BY: PROPERTY MANAGER
	LICENSE NO. 32607 EXPIRATION DATE 2/13/2028						POST. SHT 57N39	POST. SHT 57N38	PROFILE SCALE:	DATE:
	SPYDER ENGINEERS 127 COOVERS ROAD ARMDOWN, MD 21109 P: 410-451-0181 info@spyderengineers.com						POST. SHT 57N38	POST. SHT 57N39		
AS-BUILT PER RECORD PRINT		DON BY: JB	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
BY: DATE:		DWN BY: JB	REVIEWED BY:							
CHKD BY: SW			DATE REVIEWED:							

SUBDIVISION: REISTERSTOWN

STRUCTURAL - NEW COOLING TOWER STRUCTURE

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
S-101	24096-P00
JOB ORDER NUMBER	
SHEET 3 OF 61	
DRAWING NUMBER	
2024-1229	
FILE NO.: 8	

DWG. FILENAME:

GENERAL NOTES

1. CODE

A. ALL NEW CONSTRUCTION SHALL CONFORM WITH THE PROVISIONS OF THE 2018 IBC CODE
2. DESIGN LOADING

OPERATING EQUIPMENT LOAD _____ 21,674 PSF

WIND LOAD _____
RISK CATEGORY _____ I
DESIGN WIND SPEED _____ 115 MPH
EXPOSURE _____ B
3. GENERAL

A. THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING WORK PRIOR TO FABRICATION OF ANY NEW MATERIALS.

B. THE CONTRACTOR IS ADVISED THAT ALL PLANS, DIMENSIONS, AND DETAILS DEPICT FIELD CONDITION AS SHOWN. MINOR VARIATIONS ARE TO BE EXPECTED AND ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ARCHITECT IN WRITING PRIOR TO PROCEEDING.

C. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE EXISTING BUILDING DURING THE COURSE OF CONSTRUCTION AND IMMEDIATELY ADVISE THE ARCHITECT OF ANY AREAS WHERE THE STRUCTURE EXHIBITS DISTRESS OR FAILURE.

D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE LOCATION OF ANY UTILITIES IN THE IMMEDIATE VICINITY OF CONSTRUCTION SO AS TO PREVENT DAMAGE TO THEM. SHOULD ANY DAMAGE TO SUCH UTILITIES OCCUR THE CONTRACTOR SHALL BE REQUIRED TO REPAIR SUCH DAMAGE AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER.

E. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

F. ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL ORDINANCES. THE CONTRACTOR SHALL HIRE AN EXPERIENCED, QUALIFIED INSPECTOR TO PERFORM ALL THE REQUIRED INSPECTION WORK. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSPECTION AS A PART OF THEIR DESIGN SERVICES. THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. SUCH SITE VISITS ARE NOT TO BE CONSTRUED AS MEETING ANY INSPECTION REQUIREMENTS UNLESS THE ENGINEER SPECIFICALLY SO STATES IN WRITING.
4. FOUNDATIONS

A. ALL SPREAD FOOTINGS HAVE BEEN DESIGNED FOR AN ASSUMED ALLOWABLE NET SOIL BEARING PRESSURE OF 1,500 PSF. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE ASSUMED SOIL BEARING PRESSURE. SHOULD THE SOIL BEARING PRESSURE BE FOUND LESS THAN 1,500 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT.
5. STRUCTURAL AND MISCELLANEOUS STEEL

A. STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE THIRTEENTH EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND ALL ITS SUPPLEMENTS, AND TO THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."

C. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, FY = 50,00 PSI

D. ALL MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 HAVING A MINIMUM YIELD STRENGTH OF 36,000 PSI.

E. SHOP AND FIELD WELDS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR BUILDINGS AWS D1.1. WELDS SHALL DEVELOP THE FULL STRENGTH OF MATERIALS BEING WELDED, UNLESS OTHERWISE NOTED.

F. EXPOSED STRUCTURAL STEEL SHALL CONFORM TO THE "SPECIFICATION FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" AISC. ALL CONNECTIONS SHALL BE SUBJECT TO THE ARCHITECT'S APPROVAL. GRIND ALL EXPOSED BUTT OR PENETRATION WELDS FLUSH WITH SURFACES.

G. NO OPENINGS IN BEAMS SHALL BE PERMITTED WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT.

H. THE USE OF A GAS-CUTTING TORCH IN THE FIELD FOR CUTTING HOLES OR FOR CORRECTIONS FABRICATION ERRORS WILL NOT BE PERMITTED ON NEW STRUCTURAL FRAMING MEMBERS EXCEPT WITH THE WRITTEN APPROVAL OF THE ARCHITECT FOR EACH SPECIFIC CONDITION.

I. AN INDEPENDENT INSPECTION AGENCY SHALL BE EMPLOYED BY THE OWNER AND APPROVED BY THE ENGINEER TO INSPECT THE STRUCTURAL STEEL IN THE FIELD AND VERIFY THAT IT CONFORMS TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

J. ALL WELDED CONNECTIONS SHALL BE DONE WITH E70XX ELECTRODES. SHOP AND FIELD WELDS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR BUILDINGS AWS D1.1. WELDS SHALL DEVELOP THE FULL STRENGTH OF MATERIALS BEING WELDED UNLESS OTHERWISE NOTED.

K. WELDING SEQUENCE AND TECHNIQUE SHALL BE SUCH THAT DISTORTION OF STEEL MEMBERS IS MINIMIZED AND UNDUE DISTORTION IS AVOIDED.

L. CONNECTIONS DETAILED BY THE FABRICATOR SHALL MEET THE REQUIREMENTS OF THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"

M. FIELD STRUCTURAL STEEL TO BE INSPECTED BY QUALIFIED INSPECTORS APPROVED BY THE STRUCTURAL ENGINEER. FIELD INSPECTION REPORTS TO BE FILED WITH THE STRUCTURAL ENGINEER WITHIN 5 DAYS OF THE TIME OF ACTUAL INSPECTION. INSPECTIONS MUST BE NOTIFIED OF ALL PHASES OF CONSTRUCTION BY THE GENERAL CONTRACTOR.

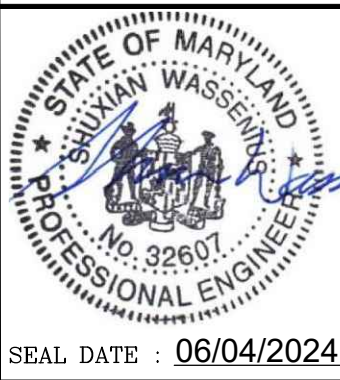
N. CONNECTIONS DETAILED BY THE FABRICATOR SHALL MEET THE FOLLOWING REQUIREMENTS:

- 1) PARAGRAPH 4.2.1 OF THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IS HEREBY MODIFIED BY DELETION OF THE FOLLOWING SENTENCE: "THIS APPROVAL CONSTITUTES THE OWNER'S ACCEPTANCE OF ALL RESPONSIBILITY FOR THE DESIGN ADEQUACY OF ANY CONNECTIONS DESIGNED BY THE FABRICATOR AS A PART OF HIS PREPARATION OF THESE SHOP DRAWINGS."
- 2) UNLESS OTHERWISE NOTED ALL CONNECTIONS DESIGNED BY THE FABRICATOR SHALL BE DESIGNED IN ACCORDANCE WITH THE "AISC MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN", 9TH EDITION AND THE "AISC MANUAL OF STEEL CONSTRUCTION, VOLUME II, CONNECTIONS" USING THE ASD 9TH EDITION PROVISIONS CONTAINED THEREIN. THE USE OF "SNUG TIGHT" BOLTED CONNECTIONS IS NOT PERMITTED. BOLTS SHALL BE SLIP CRITICAL OR BEARING. SHEAR CONNECTIONS SHALL DEVELOP THE END REACTION $W_e/2L$ WHERE "W_e" IS THE UNIFORM LOAD CONSTANT IN KIPS PER FOOT AND WHERE "L" IS THE SPAN IN FEET, AS SHOWN IN THE TABLES "UNIFORM LOAD CONSTANTS FOR BEAMS LATERALLY SUPPORTED" FOR GIVEN SHAPE, SPAN AND STEEL SPECIFIED, EXCEPT CONSIDERATION SHALL BE GIVEN TO CONCENTRATED LOADS NEAR THE ENDS OF BEAMS. BOLTED CONNECTIONS SHALL HAVE NO LESS THAN TWO BOLTS. ALL COMPOSITE STEEL BEAM CONNECTIONS SHALL BE DESIGNED FOR 150% OF THE ABOVE SPECIFIED CAPACITY.
- 3) WHERE BEARING TYPE CONNECTIONS ARE SPECIFIED, SHEAR VALUES FOR THREADS INCLUDED IN THE SHEAR PLANE SHALL BE USED, EXCEPT AS FOLLOWS: SPECIAL CONNECTIONS FOR REACTIONS EXCEEDING 45 KIPS MAY BE DESIGNED AND DETAILED USING LARGE DIAMETER BOLTS AND/OR HIGH STRENGTH BOLTS AND/OR BOLT STRENGTHS FOR THREADS EXCLUDED FROM THE SHEAR PLANE.
- 4) CONNECTIONS OTHER THAN THOSE SPECIFIED IN PARAGRAPHS (2) AND (3) ABOVE MAY BE USED PROVIDED THAT COMPLETE STRUCTURAL COMPUTATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN MARYLAND ARE SUBMITTED TO THE ARCHITECT.
- 5) BOLTS USED IN MOMENT RESISTING FRAME CONNECTIONS SHALL BE SLIP CRITICAL BOLTS.

- I. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
- J. REPAIR ALL GALVANIZED MATERIAL WITH ZINC-RICH PAINT, PER ASTM A-780.

6. CAST-IN-PLACE CONCRETE GENERAL CONSTRUCTION

- A. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST APPROVED (BY LOCAL GOVERNMENT) EDITIONS OF THE FOLLOWING A.C.I. AND A.S.T.M. DOCUMENTS:
 - ACI-301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
 - ACI-302.1R FLOOR AND SLAB CONSTRUCTION
 - ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 - ACI-214 COMPRESSION TESTS
 - ACI-306 COLD WEATHER
 - ACI-315 DETAILING
 - ACI-347 FORMWORK
 - ACI-305 HOT WEATHER
 - ACI-211 PROPORTIONS OF CONCRETE
 - ACI-304 PLACING CONCRETE
 - ASTM C94 READY-MIX CONCRETE
- B. ALL CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE STONE AGGREGATE CONCRETE HAVING THE FOLLOWING PROPERTIES:
 - MINIMUM COMPRESSIVE STRENGTH: 3500 PSI AT 28 DAY - ALL CONCRETE
 - MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO: 0.45.
 - SLUMP LIMIT: 4 INCHES PLUS OR MINUS 1 INCH.
 - AIR CONTENT: FOR CONCRETE EXPOSED TO WEATHER, 6 PERCENT, PLUS OR MINUS 1.5 PERCENT AT POINT OF DELIVERY FOR 1-INCH NOMINAL MAXIMUM AGGREGATE SIZE.
- C. ALL CONCRETE MIX DESIGNS AND ADMIXTURES SHALL BE APPROVED BY THE ENGINEER 30 DAYS PRIOR TO INITIATION OF FIRST POUR.
- D. ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60.
- E. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY AN AGENCY RETAINED BY THE OWNER. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE POURING OF ANY CONCRETE.
- F. CONCRETE EXPOSED TO PUBLIC VIEW SHALL MEET THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE OF ACI 301.
- G. ALL FORMWORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "FORMWORK FOR CONCRETE", SPECIAL PUBLICATION NO. 4 AND ACI'S "STANDARD RECOMMENDED PRACTICE FOR CONCRETE FORMWORK" (ACI-347, LATEST LOCAL APPROVED EDITION).
- H. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY AN AGENCY RETAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE POURING OF ANY CONCRETE.
- I. TESTING FREQUENCY: OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD. PLUS ONE SET OF EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF.
- J. CAST AND FIELD CURE TWO SETS OF TWO STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
- K. COMPRESSIVE STRENGTH TESTS: ASTM C39/C 39M; TEST ONE SET OF TWO LABORATORY CURED SPECIMENS AT 7 DAYS AND ONE SET OF TWO SPECIMENS AT 28 DAYS.
- L. TEST ONE SET OF TWO FIELD-CURED SPECIMENS AT 7 DAYS AND ONE SET OF TWO SPECIMENS AT 28 DAYS.
- M. A COMPRESSIVE-STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM A SET OF TWO SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TESTED AT AGE INDICATED.
- N. STEEL REINFORCING SHOP DRAWINGS: PLACING DRAWINGS THAT DETAIL FABRICATION, BENDING, AND PLACEMENT. INCLUDE BAR SIZES, LENGTHS, MATERIAL, GRADE, BAR SCHEDULES, BAR ARRANGEMENT, SPLICES, AND LAPS AND SUPPORTS FOR CONCRETE REINFORCEMENT. SHOP AND ERECTION DRAWINGS SHALL NOT BE REPRINTS OF THE CONSTRUCTION DRAWINGS NOR SHALL THEY REFERENCE THE CONSTRUCTION IN LIEU OF INDICATING THE REQUIRED INFORMATION. THEY SHALL, IN THE OPINION OF THE ENGINEER, BE COMPLETE IN ALL DETAILS AND SHALL ACCURATELY INDICATE THE LOCATION OF ALL CAST-IN-PLACE WORK AND CLEARLY INDICATE ALL DIMENSIONS, REINFORCING DETAILS, ELEVATIONS, MEMBER SIZES, CLEARANCES AND ALL APPURTENANCES AND DETAILS IN CONJUNCTION WITH THIS WORK. FIGURED DIMENSIONS ONLY SHALL BE USED; SCALING DRAWINGS IS NOT PERMITTED.
- O. CONTRACTOR SHALL ENGAGE AN INDEPENDENT AGENCY TO INSPECT ALL CONCRETE AND STEEL REINFORCING PLACEMENT.



PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION	SHEET	DRAWING SCALE	PROPERTY MANAGEMENT
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. <u>32607</u> EXPIRATION DATE <u>2/13/2028</u>						KEY SHEET	POSITION	SHEET	PLAN SCALE: <u>AS NOTED</u>	APPROVED BY: _____ PROPERTY MANAGER
					R.O.W NO.				PROFILE SCALE: _____	DATE: _____
SPIDER ENGINEERS 127 CONOVER ROAD ABINGDON, MD 21009 P: 410-483-0181 info@spiderengineers.com AS-BUILT PER RECORD PRINT		DGN BY: <u>JB</u>	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
BY: _____ DATE: _____		DWN BY: <u>JB</u>	REVIEWED BY: _____							
CHKD BY: <u>SW</u>		DATE REVIEWED: _____								

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

STRUCTURAL - NEW COOLING TOWER STRUCTURE

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
S-301	24096-P00
JOB ORDER NUMBER	
SHEET 4 OF 61	
DRAWING NUMBER	
2024-1230	
FILE NO.: 8	



DEMOLITION NOTES:

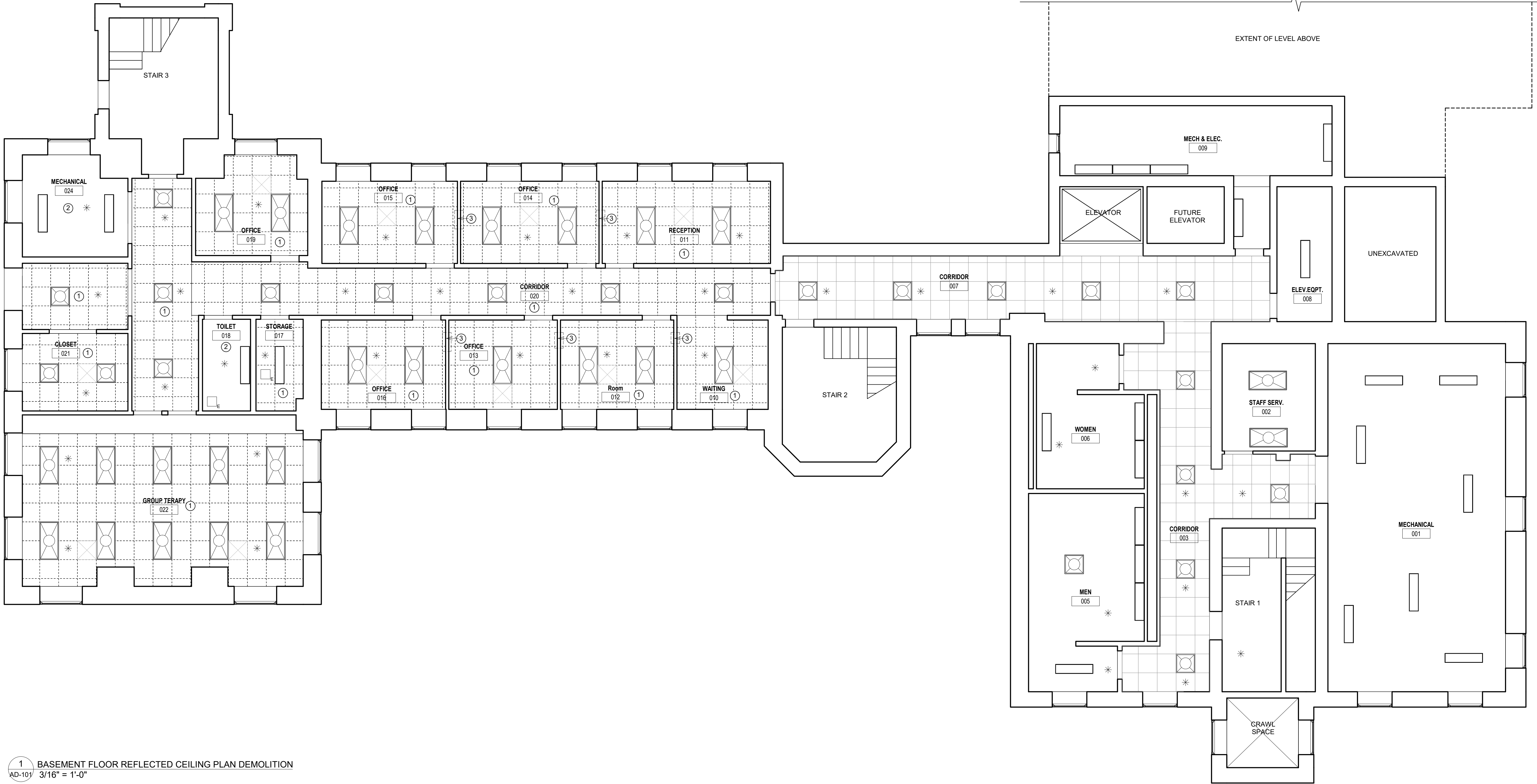
1. EXISTING CEILING GRID, TILE AND LIGHTS TO BE REMOVED. SALVAGE LIGHTS AND MEP ITEMS FOR RE-INSTALLATION AFTER ABOVE CEILING WORK IS COMPLETED. CEILING ITEMS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL & ELECTRICAL DRAWINGS.
2. EXISTING DRYWALL CEILING AND LIGHTS TO BE REMOVED. SALVAGE LIGHTS AND MEP ITEMS FOR RE-INSTALLATION AFTER CEILING WORK IS COMPLETED. CEILING ITEMS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL & ELECTRICAL DRAWINGS.
3. EXISTING TRANSFER DUCT TO BE REMOVED. INFILL OPENING WITH STUDS AND DRYWALL. MATCH EXISTING WALLS-PAINT. SEE MECHANICAL DRAWINGS.

GENERAL NOTES:

1. EXTENT OF CEILING DEMOLITION WORK TO BE DETERMINED IN FIELD. BASED ON MECHANICAL WORK. SEE MECHANICAL AND ELECTRICAL DRAWINGS.

RCP LEGEND

	EXISTING 48" LINEAR PENDANT		DEMOLISHED 2' X 2' A.C.T. CEILING
	EXISTING WALL MOUNTED LIGHT		EXISTING 2' X 2' A.C.T. CEILING TO REMAIN
	EXISTING 1' X 4' LIGHT FIXTURE		NEW 2' X 2' A.C.T. CEILING
	EXISTING 2' X 4' LIGHT FIXTURE		NEW DRYWALL CEILING
	EXISTING 2' X 2' LIGHT FIXTURE		
	EXISTING ROUND LIGHT FIXTURE		
	EXISTING SUPPLY DIFFUSER		
	EXISTING RETURN DIFFUSER		
	NEW SUPPLY DIFFUSER		
	EXHAUST DIFFUSER		
	EXISTING SPRINKLER HEAD		



1 BASEMENT FLOOR REFLECTED CEILING PLAN DEMOLITION
AD-101 3/16" = 1'-0"



SEAL 	PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A NO.	KEY SHEET	POSITION SHI	DRAWING SCALE		PROPERTY MANAGEMENT			
	I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12901 EXPIRATION DATE 09/24/2025								R.O.W NO.			PLAN SCALE:	3/16"=1'-0"		APPROVED BY: _____		
												PROFILE SCALE:	_____		DATE: _____		
					CONTRACT COMPLETION BOX												
	 MMF ENGINEERING, INC. 4000 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P-410-576-0505 F-410-385-0327				DGN BY: <u> KK </u>	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER				
AS-BUILT PER RECORD PRINT				DWN BY: <u> RM </u>	REVIEWED BY: _____												
BY: _____				CHKD BY: <u> KK </u>	DATE REVIEWED: _____												
DATE: 06/04/2024																	

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

BASEMENT REFLECTED CEILING PLAN - DEMOLITION

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
AD-101	24096-P00
JOB ORDER NUMBER	
SHEET 5 OF 61	
DRAWING NUMBER	
2024-1231	
FILE NO.: 8	

DWG. FILENAME: BASEMENT REFLECTED CEILING PLAN - DEMOLITION

DEMOLITION NOTES:

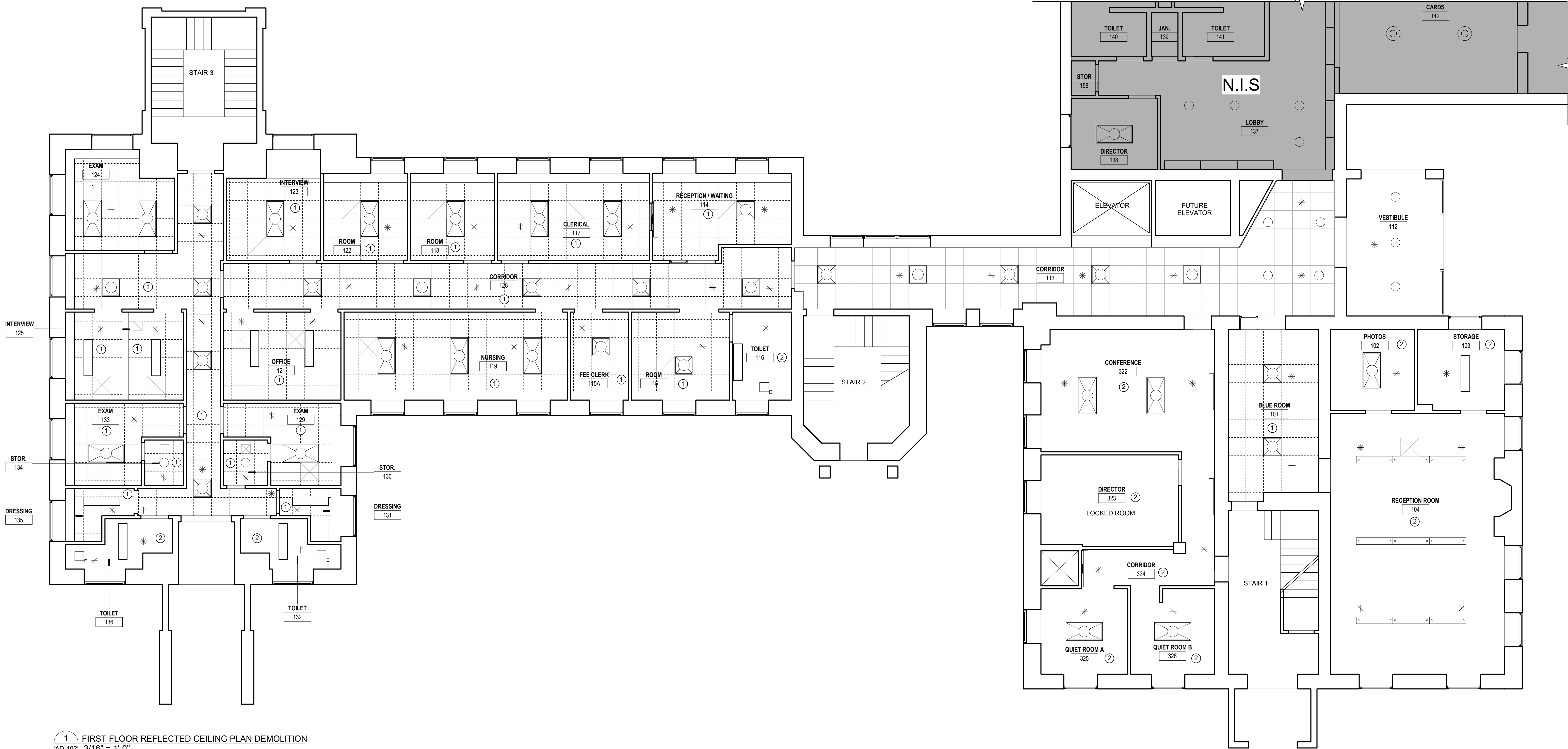
1. EXISTING CEILING GRID, TILE AND LIGHTS TO BE REMOVED. SALVAGE LIGHTS AND MEP ITEMS FOR RE-INSTALLATION AFTER ABOVE CEILING WORK IS COMPLETED. CEILING ITEMS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL & ELECTRICAL DRAWINGS.
2. EXISTING DRYWALL CEILING AND LIGHTS TO BE REMOVED. SALVAGE LIGHTS AND MEP ITEMS FOR RE-INSTALLATION AFTER CEILING WORK IS COMPLETED. CEILING ITEMS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL & ELECTRICAL DRAWINGS.

GENERAL NOTES:

1. EXTENT OF CEILING DEMOLITION WORK TO BE DETERMINED IN FIELD. BASED ON MECHANICAL WORK. SEE MECHANICAL AND ELECTRICAL DRAWINGS.

RCP LEGEND

	EXISTING 48" LINEAR PENDANT		DEMOLISHED 2' X 2' A.C.T. CEILING
	EXISTING WALL MOUNTED LIGHT		EXISTING 2' X 2' A.C.T. CEILING TO REMAIN
	EXISTING 1' X 4' LIGHT FIXTURE		NEW 2' X 2' A.C.T. CEILING
	EXISTING 2' X 4' LIGHT FIXTURE		NEW DRYWALL CEILING
	EXISTING 2' X 2' LIGHT FIXTURE		
	EXISTING ROUND LIGHT FIXTURE		
	EXISTING SUPPLY DIFFUSER		
	EXISTING RETURN DIFFUSER		
	NEW SUPPLY DIFFUSER		
	EXHAUST DIFFUSER		
	EXISTING SPRINKLER HEAD		



1 FIRST FLOOR REFLECTED CEILING PLAN DEMOLITION
AD-102 3/16" = 1'-0"



SEAL  DATE: 06/04/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12901 EXPIRATION DATE 09/24/2025						R.O.W NO.			PLAN SCALE: 3/16"=1'-0"	APPROVED BY: _____ PROPERTY MANAGER	
	 R.M. ENGINEERING, INC. 5020 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-574-0555 F: 410-385-0337		CONTRACT COMPLETION BOX							PROFILE SCALE: _____	DATE: _____	
	AS-BUILT PER RECORD PRINT		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	
BY: _____		DGN BY: <u>KK</u>		REVIEWED BY: _____		DATE REVIEWED: _____						
DATE: _____		CHKD BY: <u>KK</u>										

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

FIRST FLOOR REFLECTED CEILING PLAN - DEMOLITION

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
AD-102	24096-P00
JOB ORDER NUMBER	
SHEET 6 OF 61	
DRAWING NUMBER	
2024-1232	
FILE NO.: 8	



DWG FILENAME: FIRST FLOOR REFLECTED CEILING PLAN - DEMOLITION

DEMOLITION NOTES:

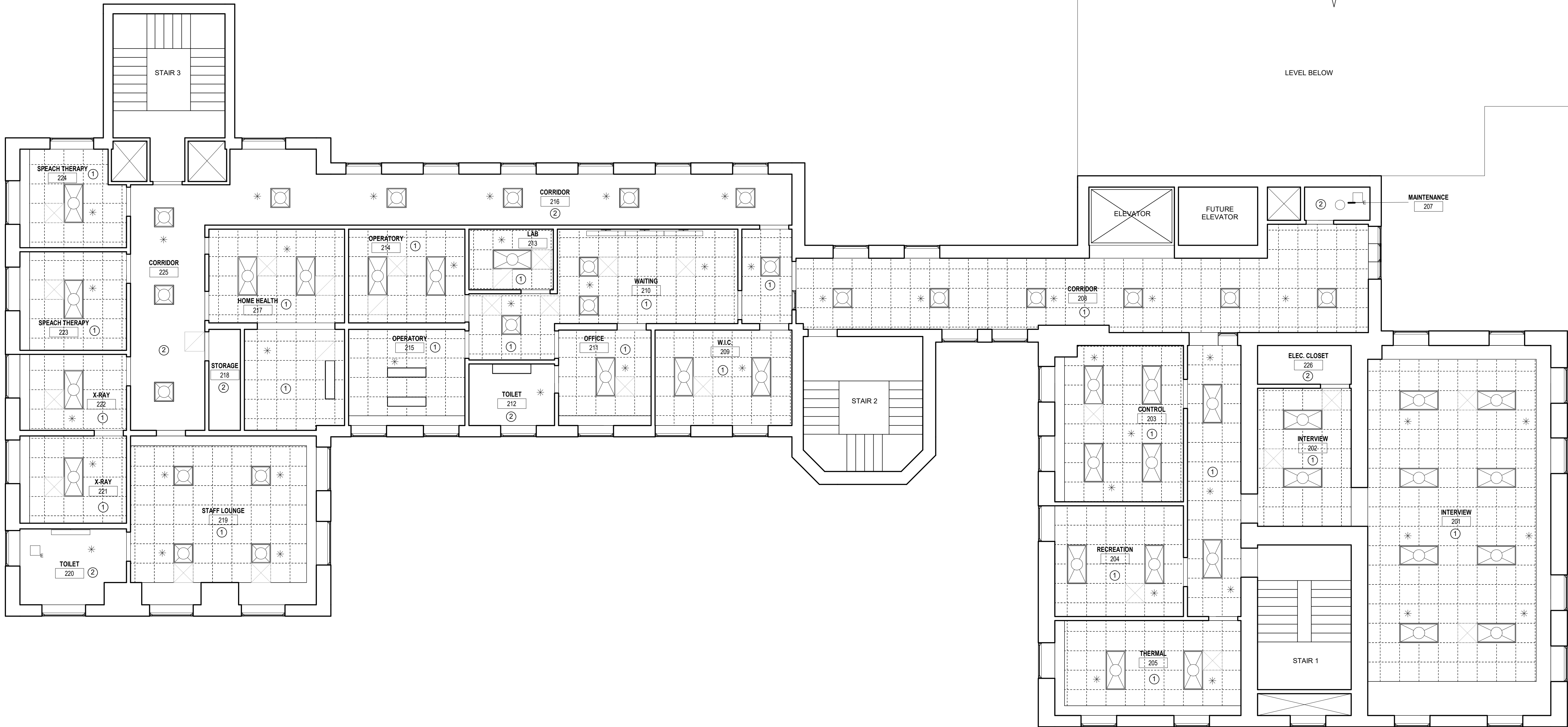
1. EXISTING CEILING GRID, TILE AND LIGHTS TO BE REMOVED. SALVAGE LIGHTS AND MEP ITEMS FOR RE-INSTALLATION AFTER ABOVE CEILING WORK IS COMPLETED. CEILING ITEMS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL & ELECTRICAL DRAWINGS.
2. EXISTING DRYWALL CEILING AND LIGHTS TO BE REMOVED. SALVAGE LIGHTS AND MEP ITEMS FOR RE-INSTALLATION AFTER CEILING WORK IS COMPLETED. CEILING ITEMS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL & ELECTRICAL DRAWINGS.

GENERAL NOTES:

1. EXTENT OF CEILING DEMOLITION WORK TO BE DETERMINED IN FIELD. BASED ON MECHANICAL WORK. SEE MECHANICAL AND ELECTRICAL DRAWINGS.

RCP LEGEND

	EXISTING 48" LINEAR PENDANT		DEMOLISHED 2' X 2' A.C.T. CEILING
	EXISTING WALL MOUNTED LIGHT		EXISTING 2' X 2' A.C.T. CEILING TO REMAIN
	EXISTING 1' X 4' LIGHT FIXTURE		NEW 2' X 2' A.C.T. CEILING
	EXISTING 2' X 4' LIGHT FIXTURE		NEW DRYWALL CEILING
	EXISTING 2' X 2' LIGHT FIXTURE		
	EXISTING ROUND LIGHT FIXTURE		
	EXISTING SUPPLY DIFFUSER		
	EXISTING RETURN DIFFUSER		
	NEW SUPPLY DIFFUSER		
	EXHAUST DIFFUSER		
	EXISTING SPRINKLER HEAD		



1 SECOND FLOOR REFLECTED CEILING PLAN DEMOLITION
AD-103 3/16" = 1'-0"



SEAL  DATE: 06/04/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W NO.			PLAN SCALE: 3/16"=1'-0"	APPROVED BY: _____ PROPERTY MANAGER	
	LICENSE NO. 12901 EXPIRATION DATE 09/24/2025		CONTRACT COMPLETION BOX							PROFILE SCALE: _____	DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY:									

BY: _____ DATE: _____	CHKD BY: _____ DATE REVIEWED: _____											
--------------------------	--	--	--	--	--	--	--	--	--	--	--	--

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

SECOND FLOOR REFLECTED CEILING PLAN - DEMOLITION

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
AD-103	24096-P00
JOB ORDER NUMBER	
SHEET 7 OF 61	
DRAWING NUMBER	
2024-1233	
FILE NO.: 8	

DWG. FILE NAME: SECOND FLOOR REFLECTED CEILING PLAN - DEMOLITION

DEMOLITION NOTES:

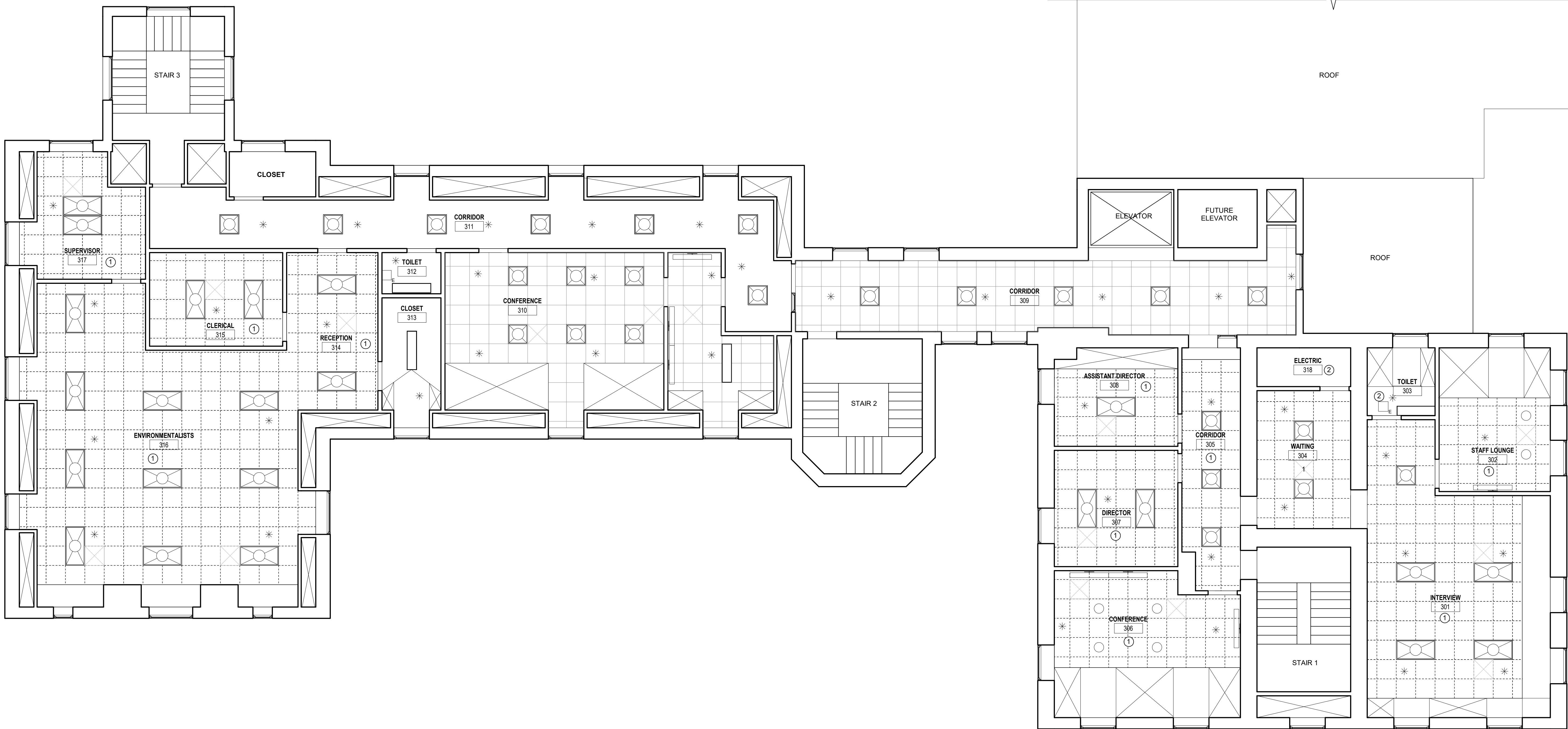
1. EXISTING CEILING GRID, TILE AND LIGHTS TO BE REMOVED. SALVAGE LIGHTS AND MEP ITEMS FOR RE-INSTALLATION AFTER ABOVE CEILING WORK IS COMPLETED. CEILING ITEMS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL & ELECTRICAL DRAWINGS.
2. EXISTING DRYWALL CEILING AND LIGHTS TO BE REMOVED. SALVAGE LIGHTS AND MEP ITEMS FOR RE-INSTALLATION AFTER CEILING WORK IS COMPLETED. CEILING ITEMS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL & ELECTRICAL DRAWINGS.

GENERAL NOTES:

1. EXTENT OF CEILING DEMOLITION WORK TO BE DETERMINED IN FIELD. BASED ON MECHANICAL WORK. SEE MECHANICAL AND ELECTRICAL DRAWINGS.

RCP LEGEND

	EXISTING 48" LINEAR PENDANT		DEMOLISHED 2' X 2' A.C.T. CEILING
	EXISTING WALL MOUNTED LIGHT		EXISTING 2' X 2' A.C.T. CEILING TO REMAIN
	EXISTING 1' X 4' LIGHT FIXTURE		NEW 2' X 2' A.C.T. CEILING
	EXISTING 2' X 4' LIGHT FIXTURE		NEW DRYWALL CEILING
	EXISTING 2' X 2' LIGHT FIXTURE		
	EXISTING ROUND LIGHT FIXTURE		
	EXISTING SUPPLY DIFFUSER		
	EXISTING RETURN DIFFUSER		
	NEW SUPPLY DIFFUSER		
	EXHAUST DIFFUSER		
	EXISTING SPRINKLER HEAD		



1 THIRD FLOOR REFLECTED CEILING PLAN DEMOLITION
AD-104 3/16" = 1'-0"



SEAL 	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT		
	I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12901 EXPIRATION DATE 09/24/2025  RNF ENGINEERING, INC. 3020 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-574-0550 F: 410-385-0327		CONTRACT COMPLETION BOX				R.O.W NO.			PLAN SCALE: 3/16"=1'-0"	APPROVED BY: _____	PROPERTY MANAGER	
			BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	DATE: _____	
			REVIEWED BY: _____										
	AS-BUILT PER RECORD PRINT		DGN BY: <u>KK</u>		DATE REVIEWED: _____								
BY: _____		DWN BY: <u>RM</u>		CHRD BY: <u>KK</u>									
DATE: 06/04/2024													

DATE: 06/04/2024

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

THIRD FLOOR REFLECTED CEILING PLAN - DEMOLITION

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
AD-104	24096-P00
JOB ORDER NUMBER	
SHEET 8 OF 61	
DRAWING NUMBER	
2024-1234	
FILE NO.: 8	

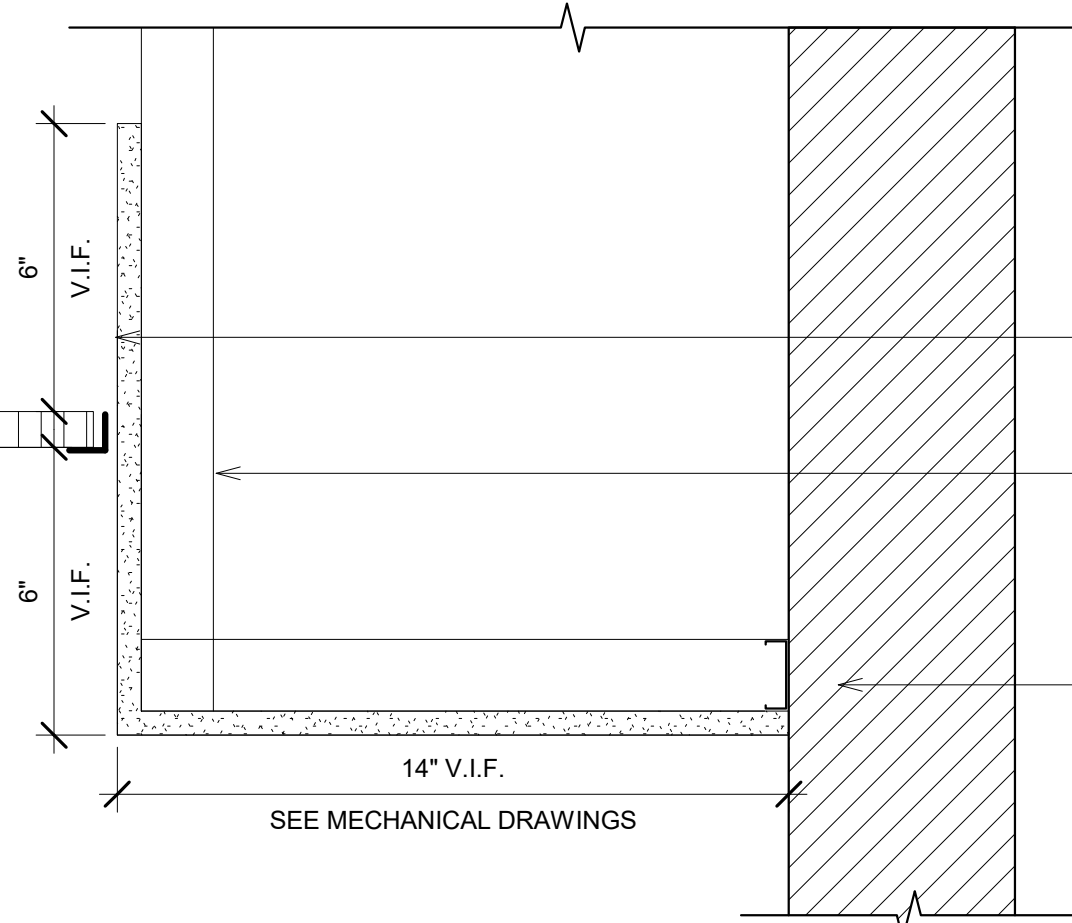
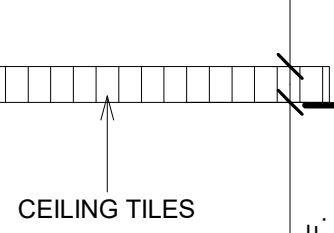
DWG. FILENAME: THIRD FLOOR REFLECTED CEILING PLAN - DEMOLITION

NEW WORK NOTES:

1. INSTALL NEW CEILING GRID AND TILES RE-INSTALL SALVAGED CEILING ITEMS IN THIS AREA. LIGHTS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
2. INSTALL NEW DRYWALL CEILING RE-INSTALL SALVAGED CEILING ITEMS IN THIS AREA. LIGHTS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL AND ELECTRICAL DRAWINGS
3. NEW BULKHEAD. V.I.F. PAINT. SEE DETAIL 2/A101. POSTION OF BULKHEAD TO BE DETERMINED IN FIELD BASED ON EXTENT OF MECHANICAL WORK. SEE MECHANICAL DRAWINGS.
4. INFILL OPENING WITH STUDS AND DRYWALL. MATCH EXISTING WALLS-PAINT. SEE MECHANICAL DRAWINGS.

GENERAL NOTES:

1. EXTENT OF CEILING WORK TO BE DETERMINED IN FIELD. BASED ON MECHANICAL WORK. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
2. CONTRACTOR TO ANTICIPATE FURNISHING AND INSTALLING PRE-FINISHED METAL CEILING ACCESS DOORS IN EACH AREA WITH DRYWALL CEILINGS. TO BE POSITIONED AS NEEDED IN FIELD. ANTICIPATE INCLUDING (20) ACCESS PANELS THAT ARE 24" X 24" IN SIZE.



RETURN DRYWALL 6"
MIN. ABOVE CEILING.

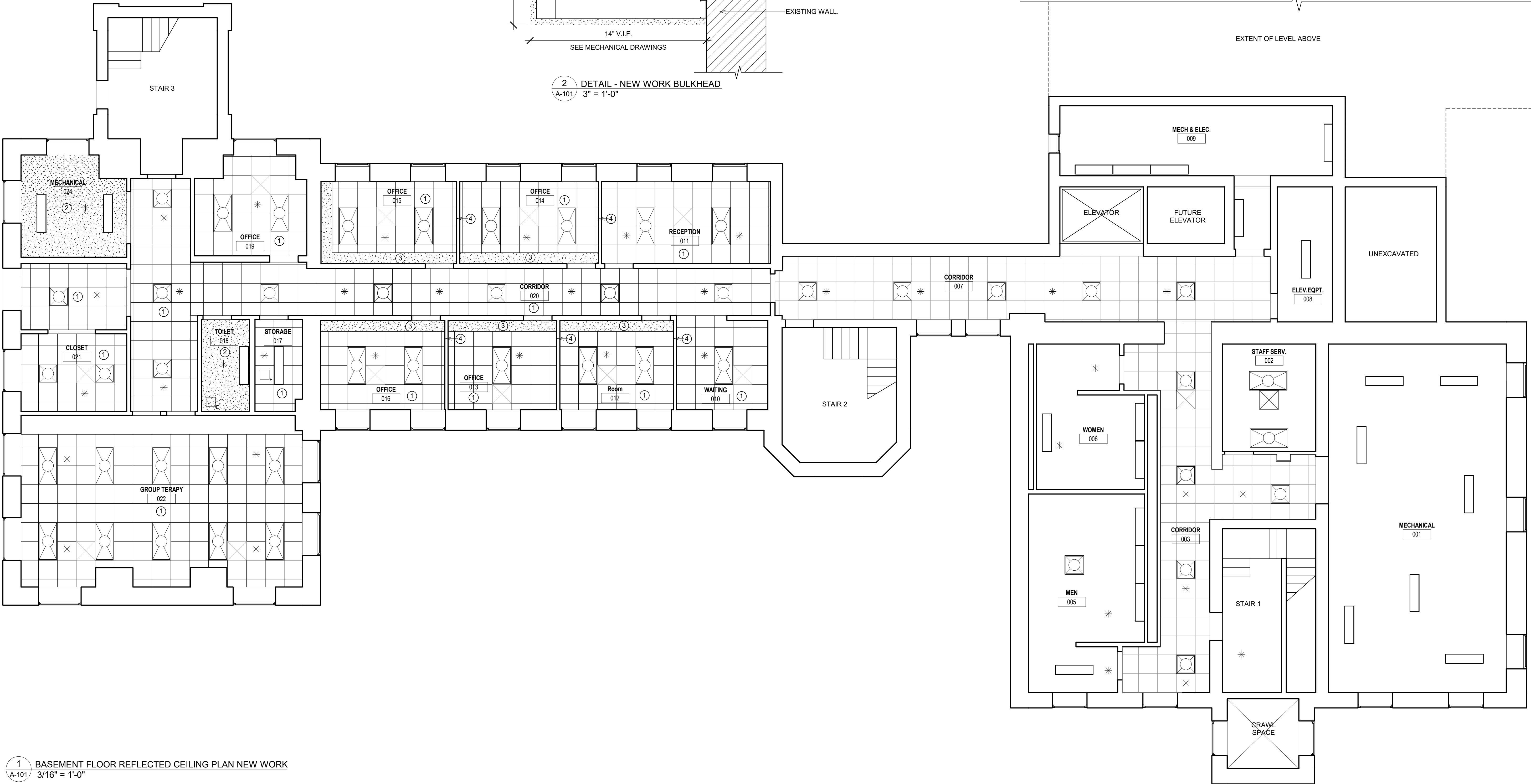
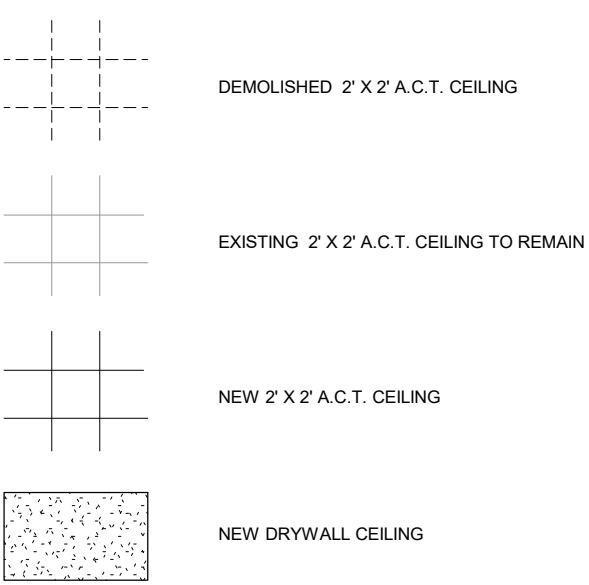
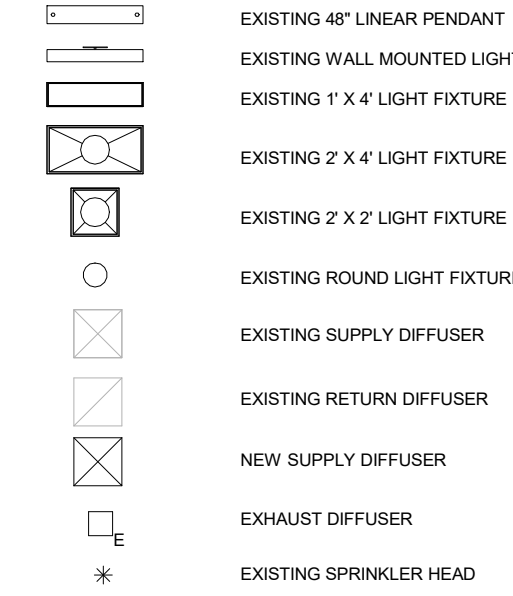
BULKHEAD CONSTRUCTION:

- 3 5/8" METAL STUDS 16" O.C. - AS NECESSARY
- 1/2" THICK GWB - PAINT

EXISTING WALL

2
A-101
DETAIL - NEW WORK BULKHEAD
3" = 1'-0"

RCP LEGEND



1
A-101
BASEMENT FLOOR REFLECTED CEILING PLAN NEW WORK
3/16" = 1'-0"



SEAL	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12901 EXPIRATION DATE 09/24/2025		CONTRACT COMPLETION BOX				R.O.W NO.			PLAN SCALE: 3/16"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	DATE:	
	REVIEWED BY:		DATE REVIEWED:									
	DATE:											

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

BASEMENT REFLECTED CEILING PLAN - NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
A-101	24096-P00
JOB ORDER NUMBER	
SHEET 9 OF 61	
DRAWING NUMBER	
2024-1235	
FILE NO. : 8	

DWG. FILE NAME: BASEMENT REFLECTED CEILING PLAN - NEW WORK

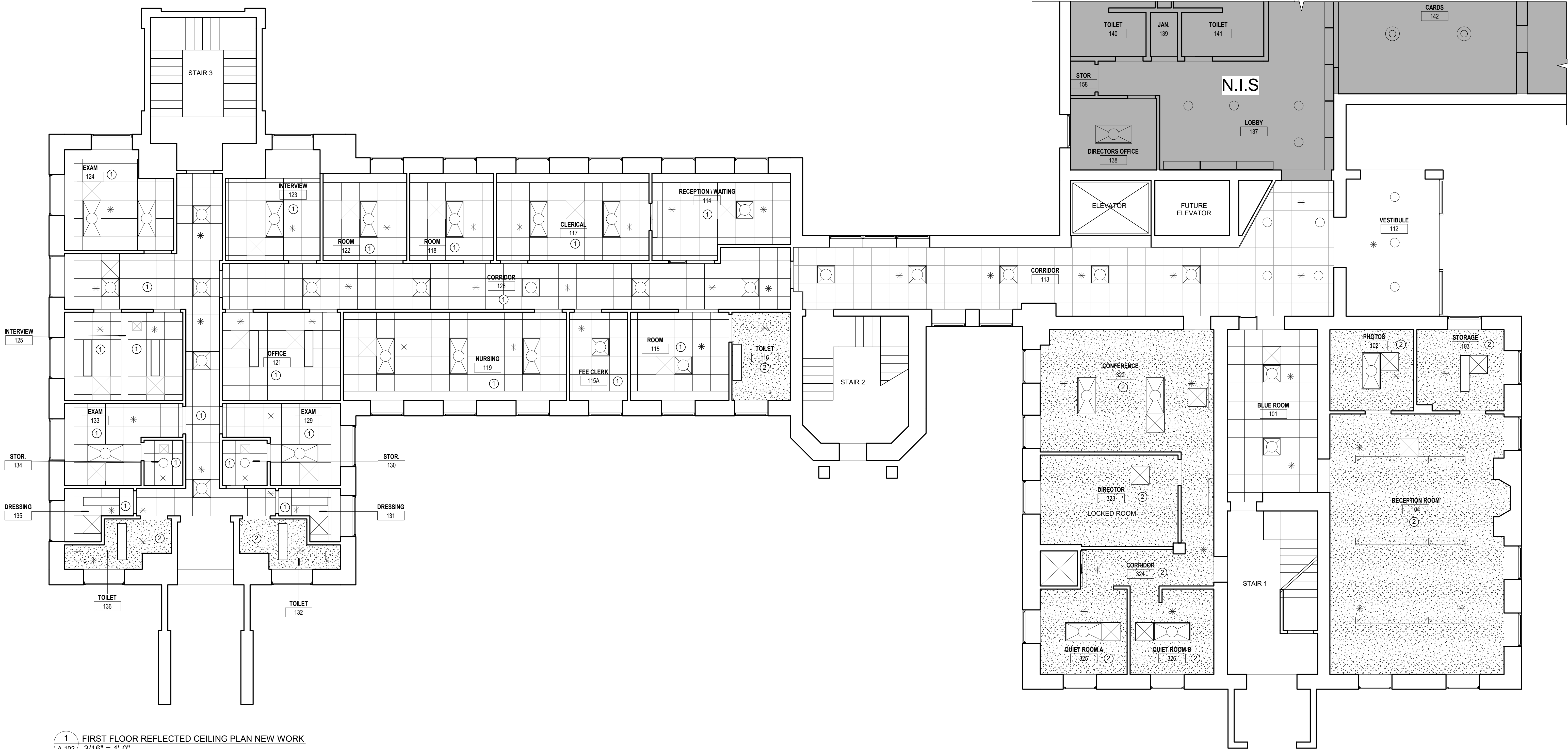
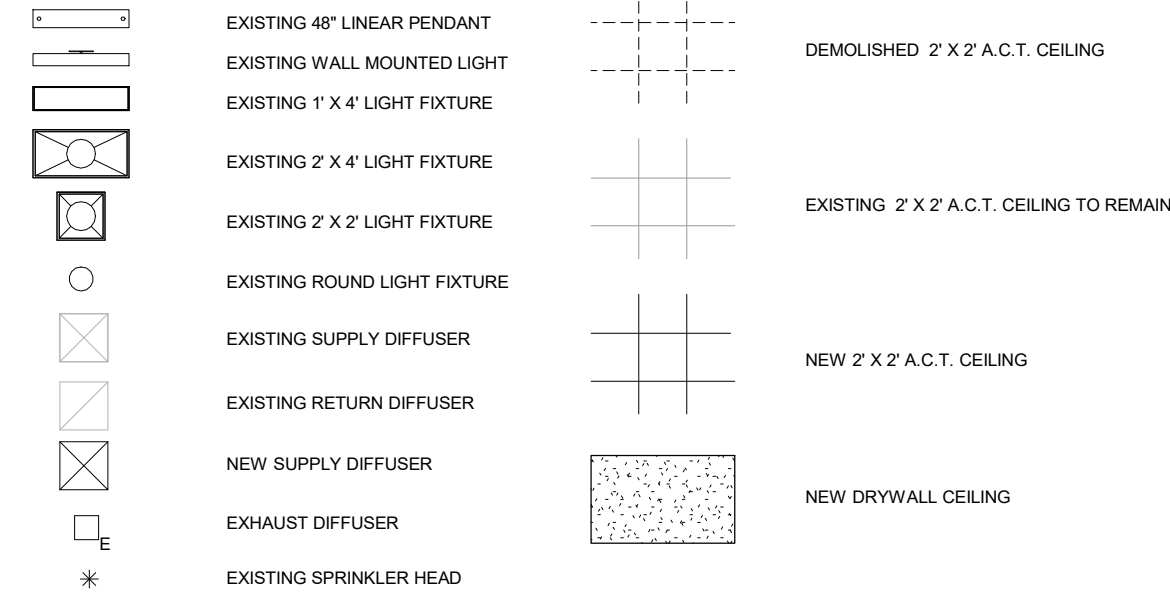
NEW WORK NOTES:

1. INSTALL NEW CEILING GRID AND TILES RE-INSTALL SALVAGED CEILING ITEMS IN THIS AREA. LIGHTS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
2. INSTALL NEW DRYWALL CEILING RE-INSTALL SALVAGED CEILING ITEMS IN THIS AREA. LIGHTS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL AND ELECTRICAL DRAWINGS

GENERAL NOTES:

1. EXTENT OF CEILING WORK TO BE DETERMINED IN FIELD. BASED ON MECHANICAL WORK. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
2. CONTRACTOR TO ANTICIPATE FURNISHING AND INSTALLING PRE-FINISHED METAL CEILING ACCESS DOORS IN EACH AREA WITH DRYWALL CEILINGS. TO BE POSITIONED AS NEEDED IN FIELD. ANTICIPATE INCLUDING (20) ACCESS PANELS THAT ARE 24" X 24" IN SIZE.

RCP LEGEND



1 FIRST FLOOR REFLECTED CEILING PLAN NEW WORK
A-102 3/16" = 1'-0"



	PROFESSIONAL CERTIFICATION				AS - BUILT / REVISION		BY	DATE	P.W.A NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT		
	I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12901 EXPIRATION DATE: 09/24/2025				CONTRACT COMPLETION BOX				R.O.W NO.			PLAN SCALE:	3/16"=1'-0"	APPROVED BY:	PROPERTY MANAGER	
									PROFILE SCALE:				DATE:			
		RMF ENGINEERING, INC. 5020 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-574-0555 F: 410-385-0337				BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
		AS-BUILT PER RECORD PRINT				REVIEWED BY:										
BY: _____ DATE: 06/04/2024				CHKD BY: KK		DATE REVIEWED:										

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

FIRST FLOOR REFLECTED CEILING PLAN - NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
A-102	24096-P00
JOB ORDER NUMBER	
SHEET 10 OF 61	
DRAWING NUMBER	
2024-1236	
FILE NO.: 8	



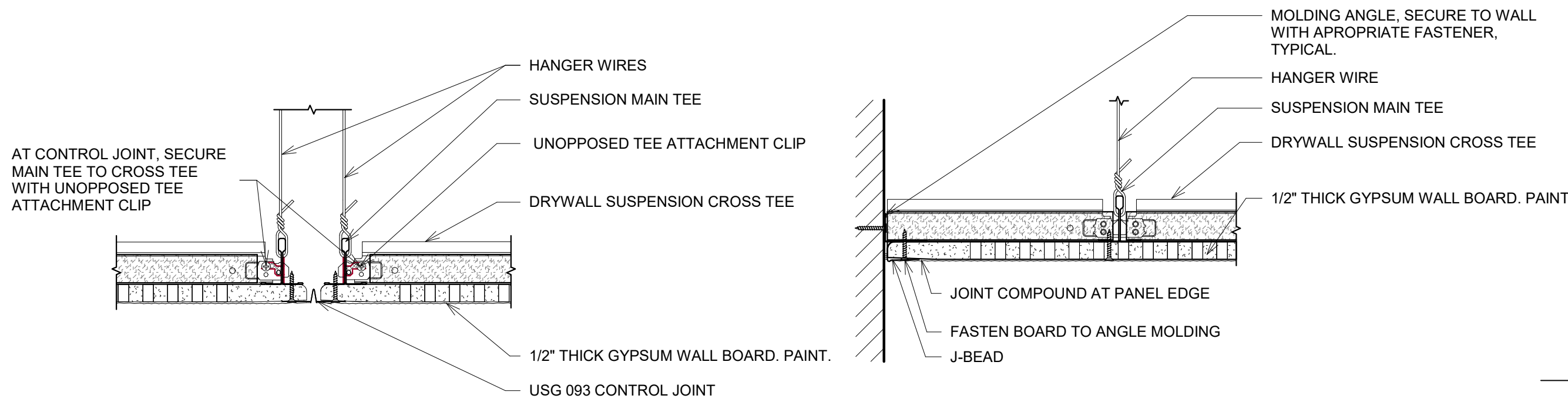
DWG FILENAME: FIRST FLOOR REFLECTED CEILING PLAN - NEW WORK

NEW WORK NOTES:

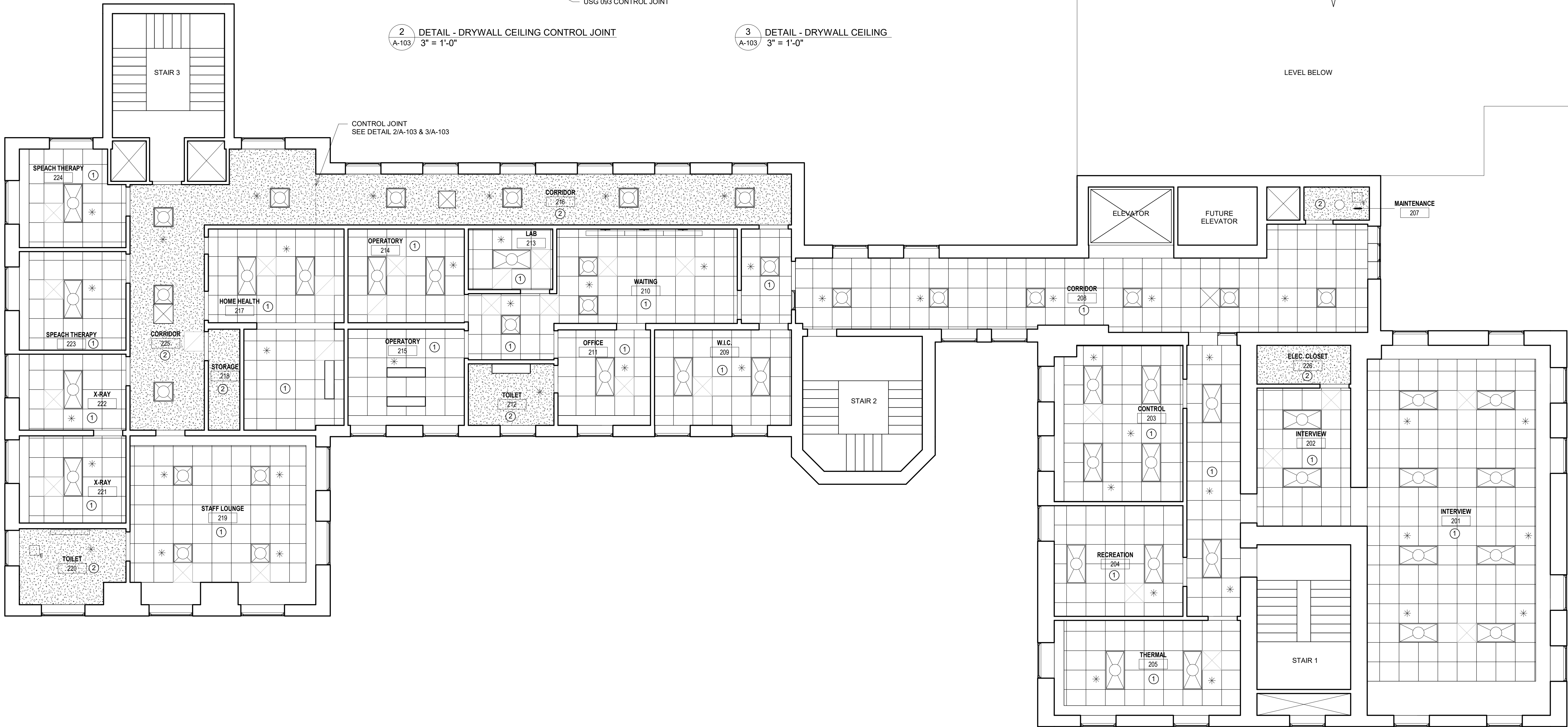
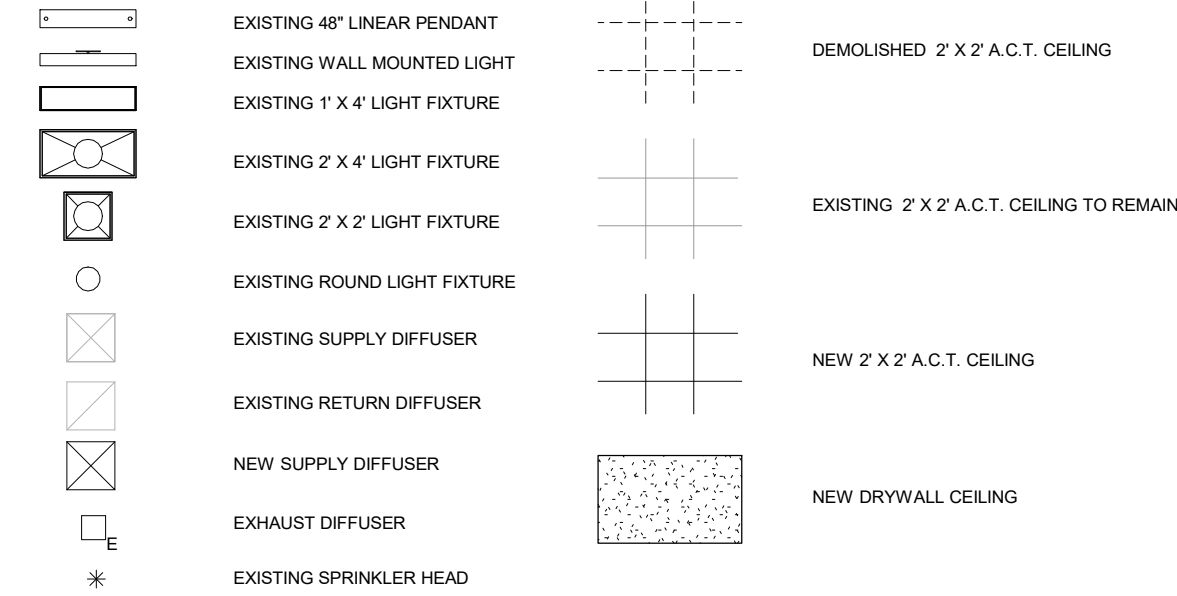
1. INSTALL NEW CEILING GRID AND TILES RE-INSTALL SALVAGED CEILING ITEMS IN THIS AREA. LIGHTS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
2. INSTALL NEW DRYWALL CEILING RE-INSTALL SALVAGED CEILING ITEMS IN THIS AREA. LIGHTS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL AND ELECTRICAL DRAWINGS

GENERAL NOTES:

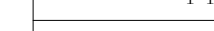
1. EXTENT OF CEILING WORK TO BE DETERMINED IN FIELD. BASED ON MECHANICAL WORK. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
2. CONTRACTOR TO ANTICIPATE FURNISHING AND INSTALLING PRE-FINISHED METAL CEILING ACCESS DOORS IN EACH AREA WITH DRYWALL CEILINGS. TO BE POSITIONED AS NEEDED IN FIELD. ANTICIPATE INCLUDING (20) ACCESS PANELS THAT ARE 24" X 24" IN SIZE.



RCP LEGEND



1 SECOND FLOOR REFLECTED CEILING PLAN NEW WORK
3/16" = 1'-0"

SEAL	PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A NO.	KEY SHEET	POSITION SHI	DRAWING SCALE	PROPERTY MANAGEMENT	
	I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.								R.O.W NO.			PLAN SCALE: 3/16"=1'-0"	APPROVED BY: _____	
	LICENSE NO. 12901 EXPIRATION DATE 09/24/2025											PROFILE SCALE: _____	DATE: _____	
	CONTRACT COMPLETION BOX													
	BUREAU OF ENGINEERING AND CONSTRUCTION				TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	 RMF ENGINEERING, INC. 502 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-574-0555 F: 410-385-0397				DGN BY: <u>KK</u>	REVIEWED BY: _____								
	AS-BUILT PER RECORD PRINT				DWN BY: <u>RM</u>	DATE REVIEWED: _____								
	BY: _____ DATE: 06/04/2024				CHKD BY: <u>KK</u>									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

SECOND FLOOR REFLECTED CEILING PLAN - NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
A-103	24096-P00
JOB ORDER NUMBER	
SHEET 11 OF 61	
DRAWING NUMBER	
2024-1237	
FILE NO.: 8	

DWG. FILE NAME: SECOND FLOOR REFLECTED CEILING PLAN - NEW WORK

NEW WORK NOTES:

1. INSTALL NEW CEILING GRID AND TILES RE-INSTALL SALVAGED CEILING ITEMS IN THIS AREA. LIGHTS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
2. INSTALL NEW DRYWALL CEILING RE-INSTALL SALVAGED CEILING ITEMS IN THIS AREA. LIGHTS TO BE RE-INSTALLED TO ORIGINAL LOCATION. SEE MECHANICAL AND ELECTRICAL DRAWINGS

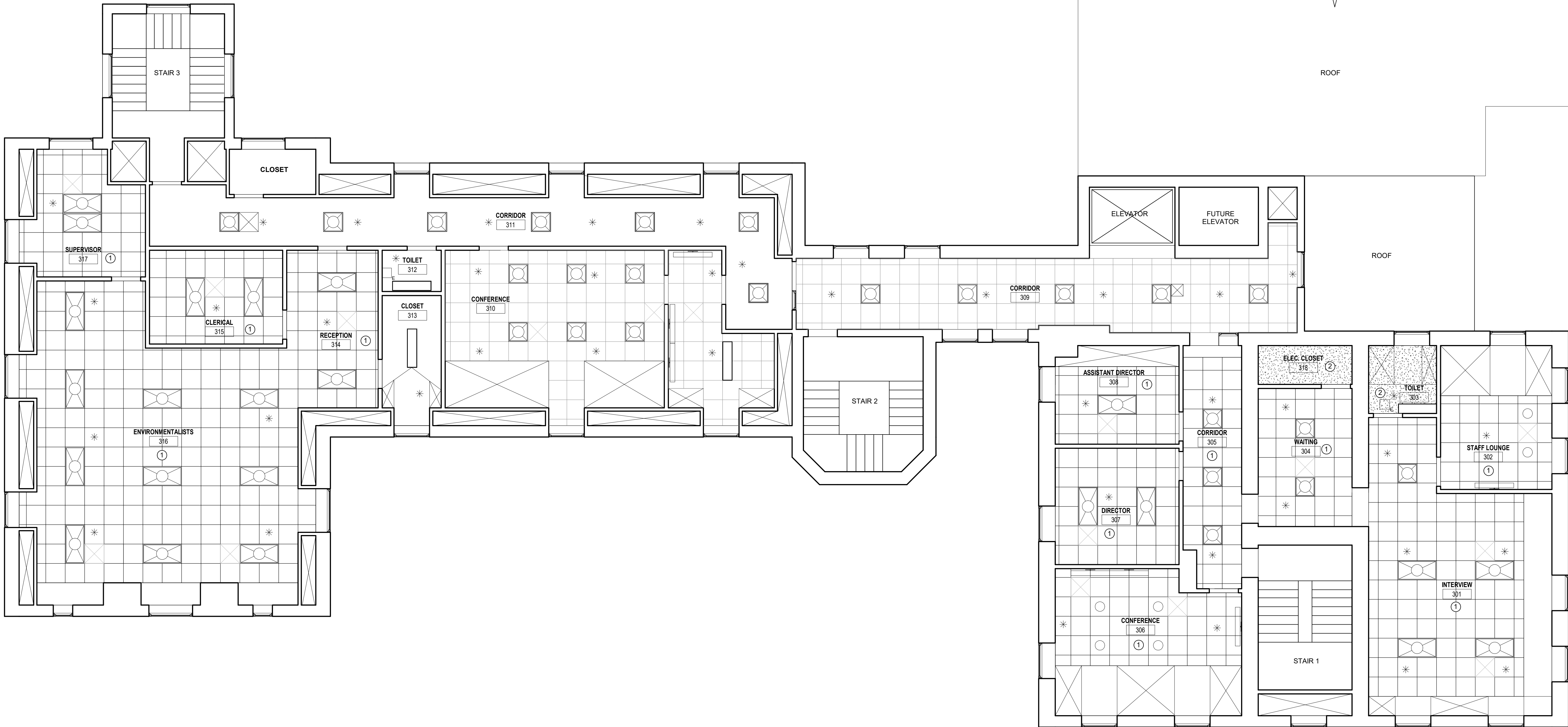
GENERAL NOTES:

1. EXTENT OF CEILING WORK TO BE DETERMINED IN FIELD. BASED ON MECHANICAL WORK. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
2. CONTRACTOR TO ANTICIPATE FURNISHING AND INSTALLING PRE-FINISHED METAL CEILING ACCESS DOORS IN EACH AREA WITH DRYWALL CEILINGS. TO BE POSITIONED AS NEEDED IN FIELD. ANTICIPATE INCLUDING (20) ACCESS PANELS THAT ARE 24" X 24" IN SIZE.

RCP LEGEND

EXISTING 48" LINEAR PENDANT
EXISTING WALL MOUNTED LIGHT
EXISTING 1' X 4' LIGHT FIXTURE
EXISTING 2' X 4' LIGHT FIXTURE
EXISTING 2' X 2' LIGHT FIXTURE
EXISTING ROUND LIGHT FIXTURE
EXISTING SUPPLY DIFFUSER
EXISTING RETURN DIFFUSER
NEW SUPPLY DIFFUSER
EXHAUST DIFFUSER
EXISTING SPRINKLER HEAD

DEMOLISHED 2' X 2' A.C.T. CEILING
EXISTING 2' X 2' A.C.T. CEILING TO REMAIN
NEW 2' X 2' A.C.T. CEILING
NEW DRYWALL CEILING



1 THIRD FLOOR REFLECTED CEILING PLAN NEW WORK
A-104 3/16" = 1'-0"



SEAL	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	1 I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12901 EXPIRATION DATE 09/24/2025 RMF ENGINEERING, INC. 5002 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-574-0550 F: 410-385-0337 mm AS-BUILT PER RECORD PRINT BY: <u>KK</u> DATE:		CONTRACT COMPLETION BOX				R.O.W NO.			PLAN SCALE: <u>3/16"=1'-0"</u>	APPROVED BY: _____ PROPERTY MANAGER	
			BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	
			REVIEWED BY:									
			DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

THIRD FLOOR REFLECTED CEILING PLAN - NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
A-104	24096-P00
JOB ORDER NUMBER	
SHEET 12 OF 61	
DRAWING NUMBER	
2024-1238	
FILE NO. : 8	REV. 01/21

DWG. FILENAME: THIRD FLOOR REFLECTED CEILING PLAN - NEW WORK

GENERAL SYMBOLS

PIPING SYMBOLS		LINETYPE SYMBOLS	
SYMBOL	DESCRIPTION	DESIGNATION	DESCRIPTION
	PIPE DROP	----	DEMOLITION WORK (SHOWN ON DEMO PLANS)
	PIPE RISE	=====	EXISTING WORK
	PIPE CAP	=====	NEW WORK
	BRANCH TAKE OFF	-----■-----	MATCHLINE
	PIPE DROP TEE	REFERENCE SYMBOLS	
	PIPE RISE TEE	DESIGNATION	DESCRIPTION
	SHUTOFF VALVE		NORTH ARROW
	AUTOMATIC CONTROL VALVE (THREE-WAY)		POINT OF CONNECTION TO EXISTING
	CHECK VALVE		POINT OF DISCONNECTION
	BALL VALVE		AIR DEVICE DESIGNATION
DUCTWORK SYMBOLS			CFM OF AIR DEVICE
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER	&	AND
	RETURN AIR GRILLE	@	DEGREE(S) FAHRENHEIT
	EXHAUST AIR GRILLE	°F	DEGREE(S) CELSIUS
	VOLUME DAMPER	°C	DIAMETER, PHASE
	FIRE DAMPER	Ø	DIVIDE BY, PER
	MOTOR OPERATED DAMPER	/	DOLLAR
	ELBOW WITH DOUBLE THICKNESS TURNING VANES	=	EQUALS, EQUAL TO
	RECTANGULAR BRANCH TAKE-OFF	>	FEET, FOOT
	ROUND BRANCH TAKE-OFF (SEE DETAILS FOR TYPES)	>	GREATER THAN
	ROUND DUCT DROP OFF BOTTOM	≥	GREATER THAN OR EQUAL TO
	DUCT TRANSITION	INCHES)	INCH(ES)
	SQUARE TO ROUND TRANSITION	<	LESS THAN
	SUPPLY/OUTSIDE AIR DUCT RISER	≤	LESS THAN OR EQUAL TO
	RETURN AIR DUCT RISER	-	MINUS
	EXHAUST/RELIEF AIR DUCT RISER	x	MULTIPLY BY, BY
		#	NUMBER, POUND
		%	PERCENT
		+	PLUS
		±	PLUS OR MINUS

MECHANICAL/PLUMBING LEGEND

PIPING SYMBOLS		COMPONENTS AND SPECIALTIES	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER (POTABLE)		FLOOR DRAIN
	DOMESTIC HOT WATER		AREA DRAIN / FLOOR SINK
	DOMESTIC HOT WATER RECIRCULATION		THERMOSTAT
	LOOP SUPPLY WATER		AIR FLOW
	LOOP RETURN WATER		
	COOLING TOWER SUPPLY WATER		
	COOLING TOWER RETURN WATER		
	NATURAL GAS		
	HEATING SUPPLY WATER		
	HEATING RETURN WATER		
EQUIPMENT DESIGNATIONS			
DESIGNATION	DESCRIPTION		
B-X	BOILER		
CP-X	CIRCULATING PUMP		
CT-X	COOLING TOWER		
CWP-X	CONDENSER WATER PUMP		
EF-X	EXHAUST FAN		
HWP-X	HEATING WATER PUMP		
HX	HEAT EXCHANGER		
LP-X	LOOP PUMP		
PFHX-X	PLATE & FRAME HEAT EXCHANGER		
PHC-X	PREHEAT COIL		
RCP-X	DOMESTIC HOT WATER RECIRCULATION PUMP		
TT-X	TEMPERATURE TRANSMITTER		
WSHP-X	WATER SOURCE HEAT PUMP		
V-X	VALVE DESIGNATION		

BTU	BRITISH THERMAL UNIT	L	LONG, LENGTH
BTUH	BRITISH THERMAL UNIT PER HOUR	LBS	POUNDS
CFM	CUBIC FEET PER MINUTE	LS	LOOP SUPPLY WATER
CR	COOLING TOWER RETURN PIPE	LR	LOOP RETURN WATER
CS	COOLING TOWER SUPPLY PIPE	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
CW	COLD WATER, CITY WATER	MOD	MOTOR OPERATED DAMPER
DB	DECIBEL, DRY BULB	NA	NOT APPLICABLE
DN	DOWN	O	OXYGEN
ETC	ETCETERA	OED	OPEN END DUCT
EX	EXISTING	PD	PRESSURE DROP, PUMP DISCHARGE
°F	DEGREE(S) FAHRENHEIT	PH	PHASE
FT	FOOT, FEET	RX	REMOVE EXISTING
H	HIGH	S	SPRINKLER PIPE, FIRE MAIN
HT	HEIGHT	SF	SQUARE FOOT
HZ	HERTZ	SQ FT	SQUARE FOOT
HW	HOT WATER	ΔT	TEMPERATURE DIFFERENCE
HWR	HOT WATER RETURN	TYP	TYPICAL
IN	INCH, INCHES	V	VACUUM, VOLTS
KW	KILOWATTS	VTR	VENT THROUGH ROOF
		W	WATTS, WIDE

PHASING MATRIX

GENERAL PHASING NOTES:		6. INSTALL NEW PIPING FROM CONDENSER WATER PUMPS CWP-1,2. LOOP PUMPS LP-1,2 AND PFHX-1. CONDENSER WATER SUPPLY SHALL BE CONNECTED TO EXISTING 5" CONDENSER WATER SUPPLY AND RETURN SERVING COOLING TOWER. CONTRACTOR SHALL PROVIDE TEMPORARY CONNECTIONS FROM THE NEW LOOP PIPING FROM PUMPS TO EXISTING LOOP SYSTEM TO ALLOW SYSTEM TO OPERATE DURING CONSTRUCTION.	6. INSTALL NEW HEATING WATER SYSTEM PIPING AND PROVIDE CONNECTION TO HWP-1, HWP-2, B-1, B-2 AND WSHP-1 DUT MOUNTED PREHEAT COIL.
1. ALL WORK WITHIN THE MECHANICAL ROOMS SHALL OCCUR DURING THE SEASONS/TIME FRAMES DEFINED IN THE PHASING NOTES TO LIMIT IMPACT TO BUILDING OCCUPANTS. IN GENERAL:	PHASE 1, A, B, C - WINTER SEASON PHASE 2, A - SUMMER SEASON PHASE 3, A - SHOULDER SEASON	PHASE 1B	PHASE 2A
2. ALL WORK OUTSIDE OF THE MECHANICAL ROOMS SHALL OCCUR DURING OFF HOURS (BETWEEN 5PM AND 5AM), ON WEEKENDS OR ANY OTHER OFF HOURS TIME AGREED TO BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING SPACE READY, AVAILABLE AND CLEANED BY 5AM EACH MORNING PRIOR TO BUILDING OCCUPANCY.		1. CONTRACTOR SHALL INSTALL NEW CONCRETE SUPPORT FOR COOLING TOWER CT-1.	1. INSTALL NEW BOILERS B-1, B-2 AND ALL ASSOCIATED PIPING VALVES, TRIM AND CONTROLS.
3. CONTRACTOR SHALL VERIFY THAT ALL NEW EQUIPMENT WILL FIT THROUGH ALL EXISTING PASSAGEWAYS PRIOR TO ANY WORK AND NOTIFY THE OWNER OF ANY DISCREPANCIES.		2. ONCE SUPPORTS ARE INSTALLED AND CURED, CONTRACTOR SHALL INSTALL NEW COOLING TOWER CT-1.	2. INSTALL NEW STAINLESS STEEL BOILER FLUE'S AND INTAKE PIPES FROM BOILER B-1 AND B-2.
PHASE 1		3. INSTALL NEW 5" CS/ CR AND PROVIDE CONNECTION TO EXISTING PIPING UNDERGROUND SERVING THE BUILDING.	3. INSTALL NEW HEATING WATER SYSTEM AND PROVIDE CONNECTION TO BOILER B-1, B-2, HWP-1, HWP-2 AND WSHP-1 DUCT MOUNTED PREHEAT COIL.
1. IN GENERAL PHASING WILL BEGIN WITH REMOVAL OF THE COOLING SYSTEM EQUIPMENT. THE BUILDING COOLING EQUIPMENT. SHALL BE DEMOLISHED AND INSTALLED DURING THE WINTER MONTHS BETWEEN OCTOBER AND APRIL.		4. INSTALL NEW 1 ½" MAKE UP WATER LINE TO CELING OF MECH/ELEC 009 AND ROUTE TO MECHANICAL ROOM AND PROVIDE CONNECTION.	4. PROVIDE GAS CONNECTIONS FROM EXISTING GAS MAIN TO NEW BOILERS B-1 AND B-2.
2. CONTRACTOR SHALL REMOVE EXISTING COOLING TOWER, COOLING TOWER CONCRETE FOOTING SUPPORTS, SUMP TANK, EXPANSION TANK, INHIBITOR TANK, PLATE FRAME HX, CONDENSER WATER PUMP AND ALL ASSOCIATED PIPING AND TRIM. ONCE LOOP CONNECTION TO EXISTING PLATE AND FRAME HX IS REMOVED, CONTRACTOR SHALL CAP EXISTING TAP AND PIPE AFTER 3-WAY VALVE TO ALLOW LOOP PIPING TO REMAIN ONLINE DURING COOLING SYSTEM WORK.		5. NEW 1 ½" MAKE UP WATER LINE SHALL BE HEAT TRACED.	5. INSTALL CHECK VALVE AND PROVIDE CONNECTIONS TO EXISTING LOOP SYSTEM TO ALLOW SYSTEM TO OPERATE WHILE HEATING EQUIPMENT IS BEING REMOVED AND REINSTALLED.
3. REMOVE ALL CONTROLS ASSOCIATED WITH COOLING TOWER, CONDENSER WATER PUMPS AND PLATE FRAME HEAT EXCHANGERS.		PHASE 1C	PHASE 3
4. ONCE COOLING TOWER IS REMOVED, EXISTING COOLING TOWER SUPPORT SHALL BE REMOVED. AREA SHALL BE PREPARED FOR NEW INSTALLATION OF COOLING TOWER SUPPORT AND SUPPORTS INSTALLED.		1. CONTRACTOR SHALL REMOVE EXISTING DUCTWORK AND PIPING SERVING EXISTING HACU-8 OA UNIT.	1. CONTRACTOR SHALL REMOVE EXISTING LOOP WATER PUMPS CP-1A, CP-1B AND ALL ASSOCIATED PIPING, VALVES, TRIM AND CONTROLS.
5. EXISTING DOAS UNIT IS CLOGGED AND NOT PROVIDING OA TO THE SPACES IT SERVES; THEREFORE, THESE UNITS CAN BE REMOVED AND INSTALLED DURING EITHER THE WINTER OR SUMMER MONTHS. CONTRACTOR SHALL REMOVE EXISTING DOAS UNIT, DUCT MOUNTED REHEAT COIL AND ALL ASSOCIATED PIPING, VALVES AND TRIM. CONTRACTOR SHALL PROVIDE A LOOP IN THE HS/R MAINS WHERE DISCONNECTED FROM THE EXISTING DUCT MOUNTED COIL TO ALLOW HEATING SYSTEM TO OPERATE DURING CONSTRUCTION.		2. ONCE DUCTWORK IS REMOVED, CONTRACTOR SHALL CLEAN EXISTING OA INTAKE LOUVER AND TEMPORARILY BLANK-OFF LOUVER WEATHERTIGHT WHILE NEW UNIT IS BEING INSTALLED.	2. CONTRACTOR SHALL REMOVE EXISTING LOOP WATER PIPING TO POINTS INDICATED ON DRAWINGS.
PHASE 1A		3. REMOVE EXISTING HACU-8 UNIT AFTER ALL CONNECTIONS ARE REMOVED.	PHASE 3A
1. ONCE ALL EXISTING COOLING EQUIPMENT IS REMOVED IN PHASE 1, THE NEW COOLING EQUIPMENT CAN BE INSTALLED.		4. PATCH OR REPAIR EXISTING CONCRETE HOUSEKEEPING PAD AS REQUIRED FOR A SMOOTH WORKING SURFACE FOR INSTALLATION OF UNIT IN NEW WORK PHASE.	1. INSTALL NEW LOOP WATER PIPING AND CONNECT TO POINTS INDICATED ON DRAWINGS.
2. INSTALL NEW CONDENSER WATER PUMPS CWP-1,2, LOOP PUMPS LP-1,2, HEATING WATER PUMPS HWP-1,2.		5. INSTALL NEW WSHP-2 OA UNIT ON EXISTING CONCRETE PAD.	
3. CONTRACTOR SHALL EXTEND EXISTING CONCRETE HOUSEKEEPING PAD A MINIMUM OF 3'-0" TO ALLOW FOR INSTALLATION OF NEW PFHX-1. NEW CONCRETE PAD SHALL BE DOWELD INTO EXISTING CONCRETE PAD CREATING A SMOOTH AND LEVEL SURFACE.		6. INSTALL OA SUPPLY DUCTWORK AND PROVIDE CONNECTION TO UNIT AND EXISTING OA SUPPLY DUCT.	
4. INSTALL NEW VFD'S FOR ALL PUMPS.		7. INSTALL NEW OA INTAKE DUCT FROM EXISTING LOUVER, MERV 13 SIDE ACCESS DUCT MOUNTED FILTER BANK, DUCT MOUNTED PREHEAT COIL AND PROVIDE CONNECTION TO WSHP-2.	
5. INSTALL NEW WATER SOURCE HEAT PUMP UNIT WSHP-1. INSTALL NEW SUPPLY DUCTWORK AND OA DUCTWORK CONNECTED TO EXISTING CLEANED OA INTAKE LOUVER. INSTALL NEW DUCT MOUNTED PREHEAT COIL PHC-1 AND DUCT MOUNTED MERV 13 FILTER BANK WITH SIDE ACCESS. PROVIDE TEMPORARY CONNECTION TO EXISTING 2" LR AND LS PIPING.		8. INSTALL NEW HS/R AND LS/R PIPING AND PROVIDE CONNECTION TO UNIT AND EXISTING PIPING MAINS IN MECHANICAL ROOM. ROUTE CONDENSATE FROM UNIT WITH INDIRECT CONNECTION TO EXISTING FLOOR DRAIN.	
		PHASE 2	
		1. CONTRACTOR SHALL DISCONNECT EXISTING 5" LR FROM SYSTEM. PROVIDE TEMPORARY CONNECTION FROM 5" LR FROM PUMPS LP-1, LP-2 TO ALLOW FOR LOOP SYSTEM TO OPERATE WHILE HEATING SYSTEM IS BEING REMOVED AND REINSTALLED.	
		2. REMOVE EXISTING HEATING WATER PUMPS CP-3A, CP-3B AND ALL ASSOCIATED PIPING, VALVES, TRIM AND CONTROLS.	
		3. REMOVE EXISTING BOILERS B-1, B-2 AND ALL ASSOCIATED VALVES, PIPING, FLUES AND CONTROLS	
		4. REMOVE EXISTING HEATING WATER SYSTEM PIPING.	
		5. INSTALL NEW BOILERS B-1, B-2 AND ALL ASSOCIATED PIPING, VALVES, TRIM, FLUES AND CONTROLS.	

GENERAL DEMOLITION NOTES

- NOTIFY THE OWNER, IN WRITING, AT LEAST SEVEN (14) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF WATER, SEWER, GAS, ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE PERFORMED BETWEEN THE HOURS OF SIX (6) P.M. AND SIX (6) A.M. OR AS DIRECTED OTHERWISE BY THE OWNER AND SHALL BE ACCOMPLISHED AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH SHUT DOWN ALL SERVICES SHALL BE RESTORED SO THAT NORMAL USE OF THE UTILITIES CAN CONTINUE.
- WHEN WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING STRUCTURE AND MECHANICAL AND ELECTRICAL SERVICES WHICH ARE TO REMAIN. REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE ARCHITECT/ENGINEER ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK.
- ALL EXISTING PIPING, EQUIPMENT, DUCTWORK, AND MATERIALS NOT REQUIRED FOR RE-USE OR RE-INSTALLATION (SHOWN OR OTHERWISE) SHALL BE REMOVED. ALL EXISTING MATERIALS AND EQUIPMENT WHICH ARE REMOVED AND ARE DESIRED BY THE OWNER, OR ARE INDICATED TO REMAIN THE PROPERTY OF THE OWNER, SHALL BE DELIVERED TO HIM ON THE PREMISES BY THE CONTRACTOR WHERE DIRECTED BY THE ARCHITECT/ENGINEER. ALL OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE PREMISES.
- EXISTING CONDITIONS, I.E., PRESENCE AND LOCATION OF DUCTWORK, PIPING, EQUIPMENT, AND MATERIALS, INDICATED ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF ALL DUCTWORK, PIPING, EQUIPMENT, AND MATERIALS IN THE FIELD PRIOR TO STARTING ALL WORK.
- EXISTING DUCT, PIPE, AND EQUIPMENT SIZES NOTED ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND ARE NOT WARRANTED TO BE CORRECT. CONTRACTOR SHALL VERIFY ALL SIZES IN THE FIELD IF THEY EFFECT HIS WORK.
- WHEN EXISTING MECHANICAL AND ELECTRICAL WORK IS REMOVED, ALL PIPES, VALVES, DUCTS, AND MATERIALS SHALL BE REMOVED TO A POINT BELOW THE FINISHED FLOORS OR BEHIND FINISHED WALLS AND CAPPED. SUCH POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.
- EXISTING PIPING NO LONGER REQUIRED TO REMAIN IN SERVICE (SHOWN OR OTHERWISE) SHALL BE DISCONNECTED AND REMOVED BACK TO SERVICE MAINS UNLESS OTHERWISE INDICATED OR NOTED ON THE PLANS. REMOVE EXISTING PIPE HANGERS, SUPPORTS, VALVES, ETC.. EXISTING PIPING INDICATED OR REQUIRED TO REMAIN IN SERVICE OR IN PLACE SHALL BE CAPPED, PLUGGED, OTHERWISE SEALED. NO EXISTING PIPING SHALL BE LEFT OPEN END.
- EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT, PIPING, DUCTWORK, AND MATERIALS AFFECTED BY DEMOLITION OR NEW WORK INSTALLATION AND REQUIRED TO REMAIN IN SERVICE SHALL BE REINSTALLED OR SUPPORTED AS REQUIRED IN ACCORDANCE WITH NEW WORK SPECIFICATION. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE ARCHITECT/ENGINEER AND AT NO ADDITIONAL CONTRACT COST.
- PATCHING OF ALL NEW AND EXISTING OPENINGS IN WALLS, CEILINGS, ROOF, AND FLOOR SURFACES DAMAGED OR CREATED BY DEMOLITION WORK SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURES, MATERIAL, AND COLOR. ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE ARCHITECT/ENGINEER AND AT NO ADDITIONAL CONTRACT COST.
- CONTRACTOR RESPONSIBLE FOR PROTECTING ALL FLOORS, CARPETS, FURNITURE AND ALL ASSOCIATED ITEMS IN ALL OFFICES AND AREAS THROUGHOUT THE HANNAH MORE CENTER. CONTRACTOR SHALL PROVIDE A WORKING SCHEDULE FOR AREAS AND DURATION OF TIME FOR WORK. SCHEDULE SHALL BE SUBMITTED TO BCPM AND FACILITY STAFF FOR FINAL APPROVAL. STAFF SHALL BE RESPONSIBLE FOR REMOVING PERSONAL ITEMS. CONTRACTOR RESPONSIBLE FOR REMOVING AND RELOCATING ALL FURNITURE IN SPACES.

SEAL DATE: 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W NO.	KEY SHEET	POINT SH 57W93	PLAN SCALE:	APPROVED BY: _____ PROPERTY MANAGER	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2028		CONTRACT COMPLETION BOX					POINT SH 57W93	PROFILE SCALE:	DATE: _____		
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY:									
BY: DATE:		CHKD BY: RMH		DATE REVIEWED:								

SUBDIVISION: REISTERSTOWN

MECHANICAL LEGENDS AND ABBREVIATIONS

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-001	24096-P00
JOB ORDER NUMBER	
SHEET 13 OF 60	
DRAWING NUMBER	
2024-1239	
FILE NO.: 8	

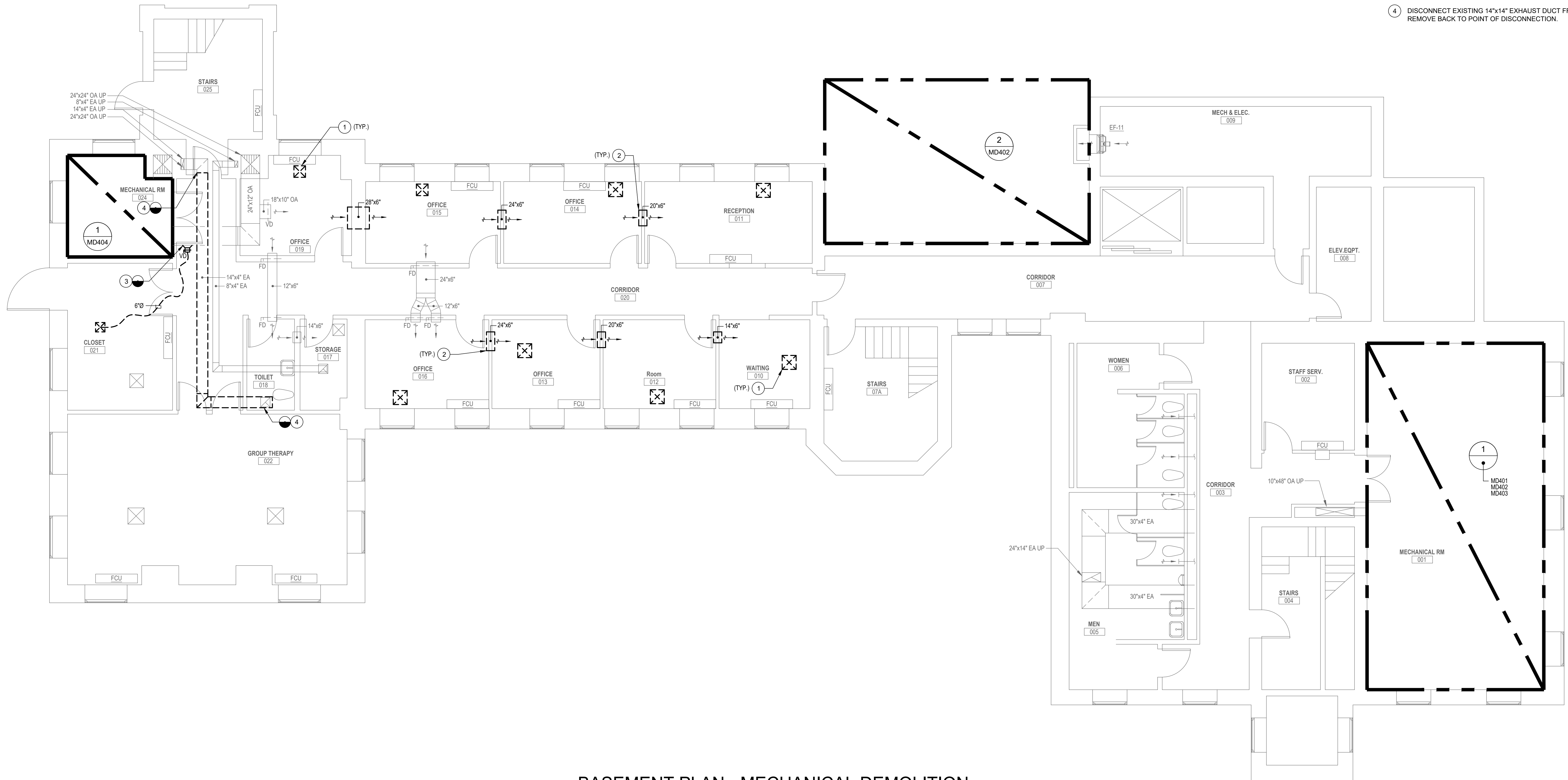
DWG. FILENAME: MECHANICAL LEGEND & ABBREVIATIONS

GENERAL NOTES:

- CONTRACTOR SHALL CLEAN ALL EXISTING DUCTWORK ASSOCIATED WITH HACU-8 AND HACU-9 DUCT SYSTEMS. REFER TO MECHANICAL ROOM PART PLANS FOR HACU LOCATIONS.

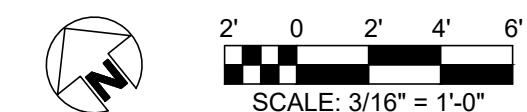
DRAWING NOTES:

- REMOVE EXISTING AIR DEVICE.
- REMOVE EXISTING TRANSFER DUCT. PATCH AND REPAIR OPENINGS ABOVE CEILING. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
- REMOVE EXISTING DUCTWORK AND ASSOCIATED DAMPERS, FLEX DUCT, DIFFUSERS, REGISTERS TO POINT OF DISCONNECTION.
- DISCONNECT EXISTING 14"x14" EXHAUST DUCT FROM DIFFUSER AND REMOVE BACK TO POINT OF DISCONNECTION.

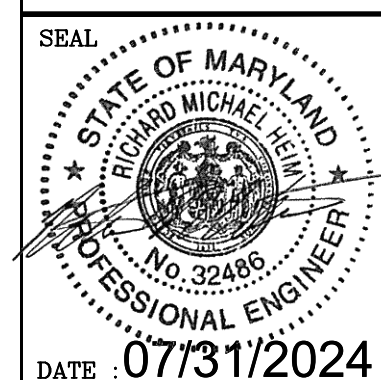


BASEMENT PLAN - MECHANICAL DEMOLITION

3/16"=1'-0"



PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 32486 EXPIRATION DATE 01-06-2028				CONTRACT COMPLETION BOX					KEY SHIT TNY	POINT SHIT 57W39	PLAN SCALE:	3/16"=1'-0"	APPROVED BY:	PROPERTY MANAGER
										POINT SHIT 57W39	PROFILE SCALE:		DATE:	
										POINT SHIT 56W39				
BUREAU OF ENGINEERING AND CONSTRUCTION				TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER				
AS-BUILT PER RECORD PRINT				REVIEWED BY:										
BY: DATE:				CHKD BY: RMH	DATE REVIEWED:									



BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT
BASEMENT PLAN - MECHANICAL DEMOLITION
SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136

SHEET DESIGNATION	CONTRACT NUMBER
MD-101	24096-P00
JOB ORDER NUMBER	
SHEET 14 OF 60	
DRAWING NUMBER	
2024-1240	
FILE NO.: 8	



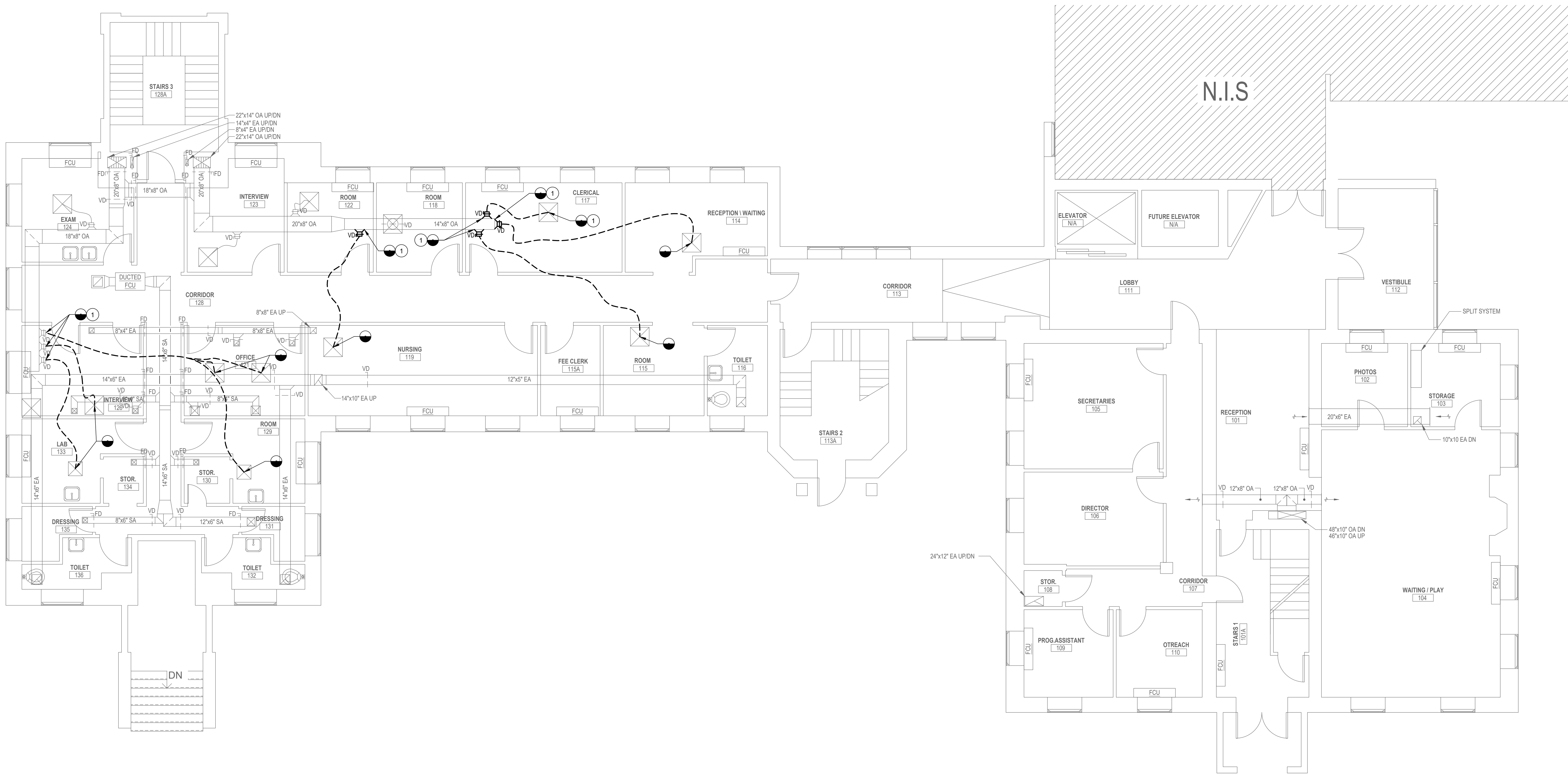
DWG. FILENAME: MECHANICAL - DEMOLITION - BASEMENT

GENERAL NOTES:

1. CONTRACTOR SHALL CLEAN ALL EXISTING DUCTWORK ASSOCIATED WITH HACU-8 AND HACU-9 DUCT SYSTEMS.

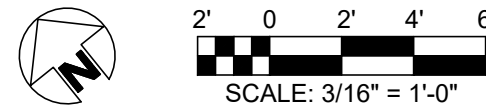
DRAWING NOTES:

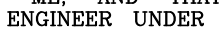
- 1 REMOVE EXISTING DUCTWORK AND ASSOCIATED DAMPERS, FLEX DUCT, ETC. TO POINT OF DISCONNECTION.



FIRST FLOOR PLAN - MECHANICAL DEMOLITION

3/16"=1'-0"



 DATE: 07/31/2024	PROFESSIONAL CERTIFICATION			AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 32486 EXPIRATION DATE 01-06-2026								KEY SHEET TNY		PLAN SCALE: 3/16"=1'-0"	APPROVED BY: _____ PROPERTY MANAGER	
									R.O.W. NO.		POST: SHIT 57W30 POST: SHIT 57W30 POST: SHIT 56W30 POST: SHIT 56W30	PROFILE SCALE: _____	DATE: _____
	 mmf ENGINEERING, INC. 5005 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-526-2000 F: 410-588-0372			CONTRACT COMPLETION BOX									
AS-BUILT PER RECORD PRINT			DGN BY: _____ JDS	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
BY: _____ DATE: _____			DWN BY: _____ JDS	REVIEWED BY: _____		DATE REVIEWED: _____							

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

FIRST FLOOR PLAN - MECHANICAL DEMOLITION

12035 Reisterstown Rd, Reisterstown, MD 21136

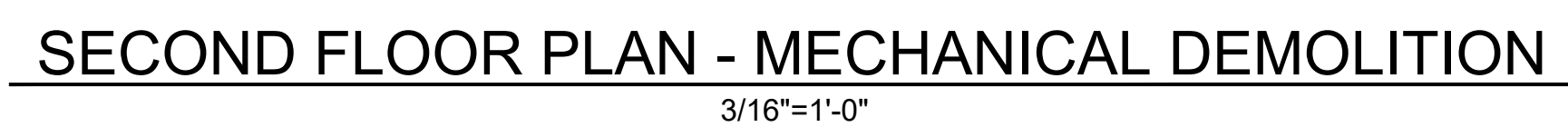
SUBDIVISION: REISTERSTOWN

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
MD-102	24096-P00
JOB ORDER NUMBER	
SHEET 15 OF 60	
DRAWING NUMBER	
2024-1241	
FILE NO.: 8	

1. CONTRACTOR SHALL CLEAN ALL EXISTING DUCTWORK ASSOCIATED WITH HACU-8 AND HACU-9 DUCT SYSTEMS.

1 REMOVE EXISTING DUCTWORK AND ASSOCIATED DAMPERS, FLEX DUCT, ETC. TO POINT OF DISCONNECTION.



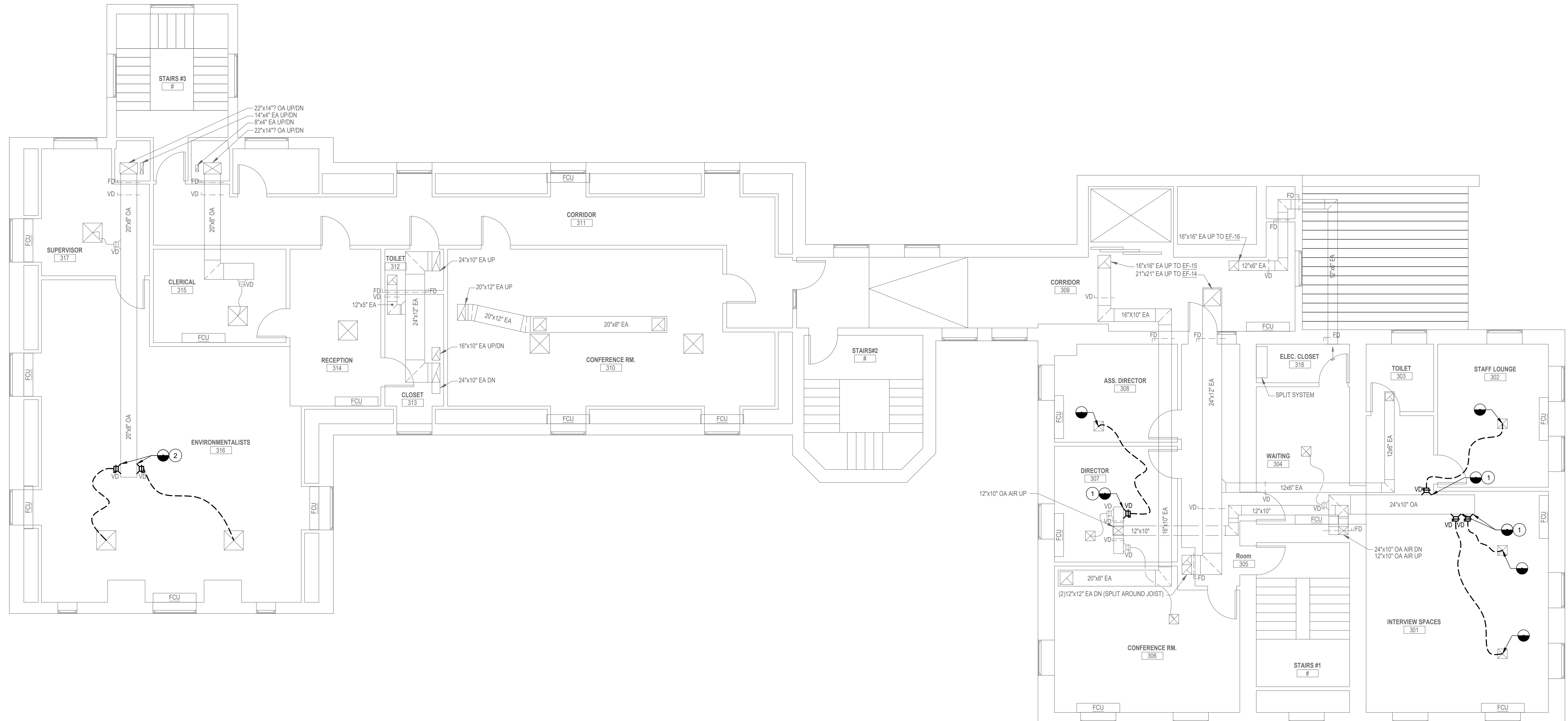
BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT		
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT		
SECOND FLOOR PLAN - MECHANICAL DEMOLITION		
SUBDIVISION: REISTERSTOWN	12035 Reisterstown Rd, Reisterstown, MD 21136	ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
MD-103	24096-P00
	JOB ORDER NUMBER
	SHEET 16 OF 60
	DRAWING NUMBER
	2024-1242
	FILE NO.: 8

DWG. FILENAME: MECHANICAL - DEMOLITION - SECOND FLOOR

1. CONTRACTOR SHALL CLEAN ALL EXISTING DUCTWORK ASSOCIATED WITH HACU-8 AND HACU-9 DUCT SYSTEMS.

- ① REMOVE EXISTING DUCTWORK AND ASSOCIATED DAMPERS, FLEX DUCT, ETC. TO POINT OF DISCONNECTION.
- ② REMOVE EXISTING FLEXIBLE DUCT AND FITTING WITH VOLUME DAMPER.



DWG. FILENAME: MECHANICAL - DEMOLITION - THIRD FLOOR



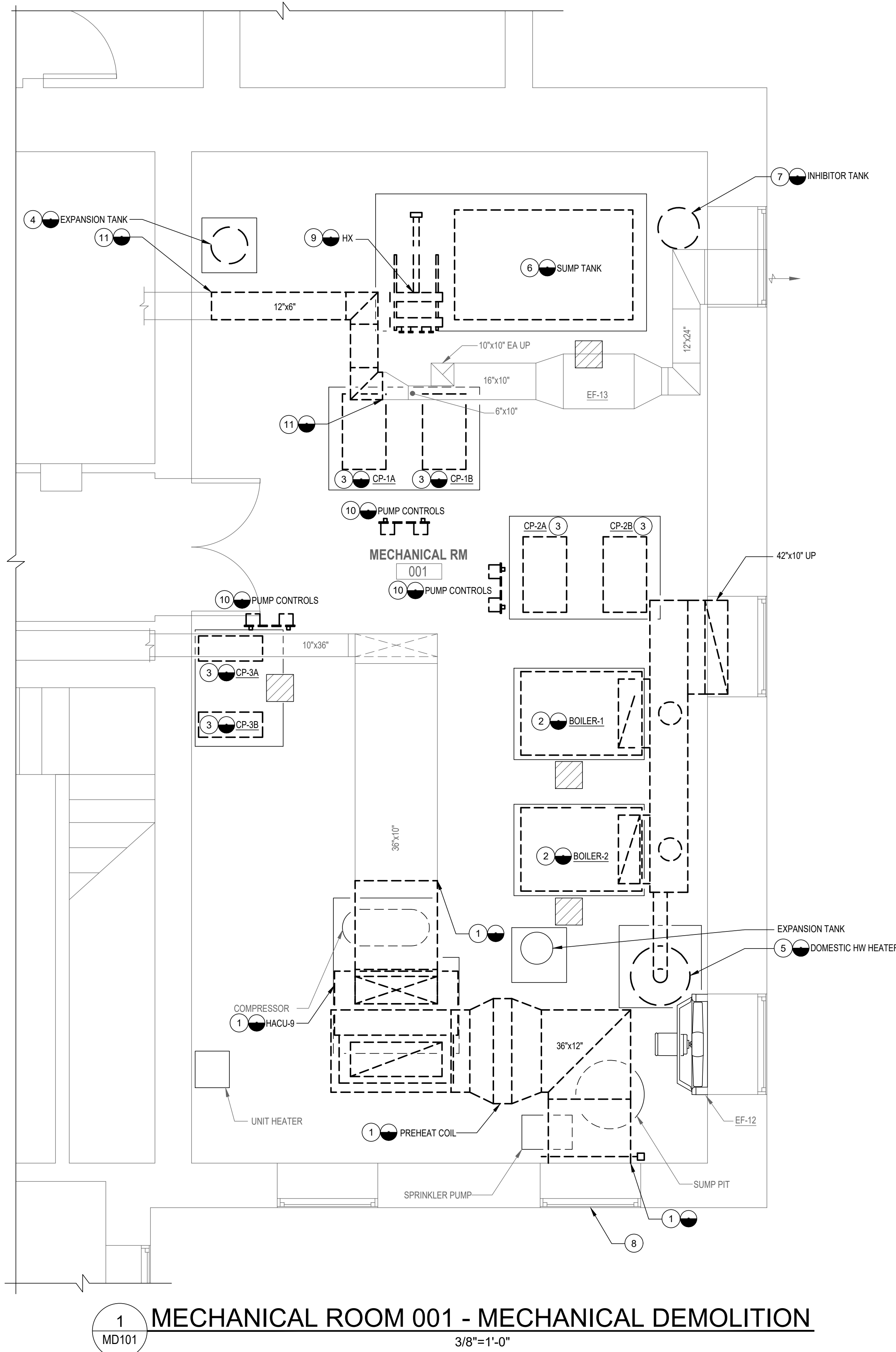
SEAL	PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.													
	LICENSE NO. 32486		EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX				R.O.W. NO.		KEY SET TKN	POST. SHT 57069	PLAN SCALE: 3/16"=1'-0"	APPROVED BY:
												POST. SHT 57069		PROPERTY MANAGER:
												POST. SHT 57069		DATE:
			DGN BY: JDS		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS		STRUCTURES		SEWER	
			DWN BY: JDS		REVIEWED BY:								WATER	
	AS-BUILT PER RECORD PRINT		CHKD BY: RML		DATE REVIEWED:								FIELD ENGINEER	
DATE	07/31/2024													

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

12035 Reisterstown Rd, Reisterstown, MD 21136

SUBDIVISION: REISTERSTOWN

SHEET DESIGNATION	CONTRACT NUMBER
MD-104	24096-P00
	JOB ORDER NUMBER
	SHEET 17 OF 60
	DRAWING NUMBER
	2024-1243
	FILE NO.: 8



1 MECHANICAL ROOM 001 - MECHANICAL DEMOLITION
MD101 3/8"=1'-0"

GENERAL NOTES:

1. REFER TO "MP" PHASING PLANS FOR PHASING OF MECHANICAL ROOM HEATING AND COOLING SYSTEMS.

DRAWING NOTES:

- 1 REMOVE EXISTING AHU AND PREHEAT COIL AND ALL ASSOCIATED DUCTWORK AND CONTROLS.
- 2 REMOVE EXISTING BOILERS AND ALL ASSOCIATED DUCTWORK, EXHAUST FLUES, AND CONTROLS.
- 3 REMOVE EXISTING CIRCULATING PUMPS AND ASSOCIATED PIPING, VALVES, AND CONTROLS.
- 4 REMOVE EXISTING EXPANSION TANK AND ASSOCIATED PIPING, VALVES, AND TRIM.
- 5 REMOVE EXISTING DOMESTIC HOT WATER HEATER AND ALL ASSOCIATED PIPING, VALVES, AND FLUE.
- 6 REMOVE EXISTING REMOTE SUMP TANK AND ALL ASSOCIATED PIPING, VALVES, AND TRIM.
- 7 REMOVE INHIBITOR TANK AND ALL ASSOCIATED PIPING AND VALVES.
- 8 CONTRACTOR SHALL CLEAN EXISTING OA LOUVER AND SCREEN.
- 9 REMOVE EXISTING HEAT EXCHANGER AND ALL ASSOCIATED PIPING, VALVES, AND TRIM.
- 10 REMOVE EXISTING PUMP CONTROLS AND ASSOCIATED FRAMING, AND WIRING.
- 11 REMOVE EXISTING EXHAUST DUCTWORK AND ASSOCIATED HANGERS, INSULATION.

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						KEY SHIT TNY	POINT SHIT 57WV39	PLAN SCALE: 3/8"=1'-0"	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026						R.O.W NO.	POINT SHIT 57WV39	PROFILE SCALE: _____	DATE: _____	
	AS-BUILT PER RECORD PRINT		CONTRACT COMPLETION BOX					POINT SHIT 56WV39	FIELD ENGINEER		
	BY: DATE:		CHKD BY: RMH	DATE REVIEWED:							

RFM ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-528-0200 (F) 410-382-0372	DGN BY: JTA	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	DWN BY: JTA	REVIEWED BY:							

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL ROOM 001 - MECHANICAL DEMOLITION

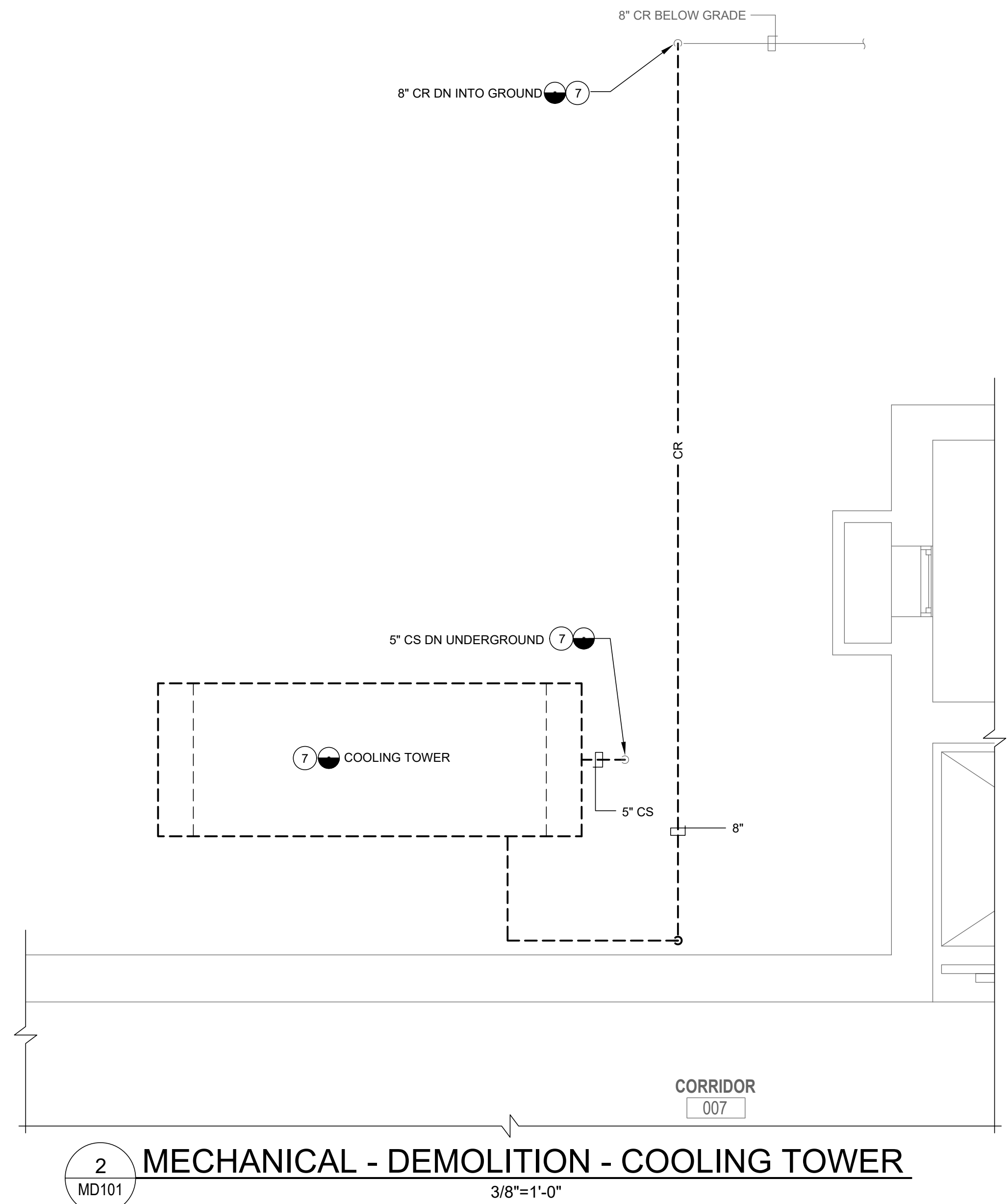
SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

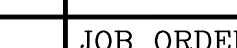
SHEET DESIGNATION	CONTRACT NUMBER
MD-401	24096-P00
JOB ORDER NUMBER	
SHEET 18 OF 60	
DRAWING NUMBER	
2024-1244	
FILE NO.: 8	

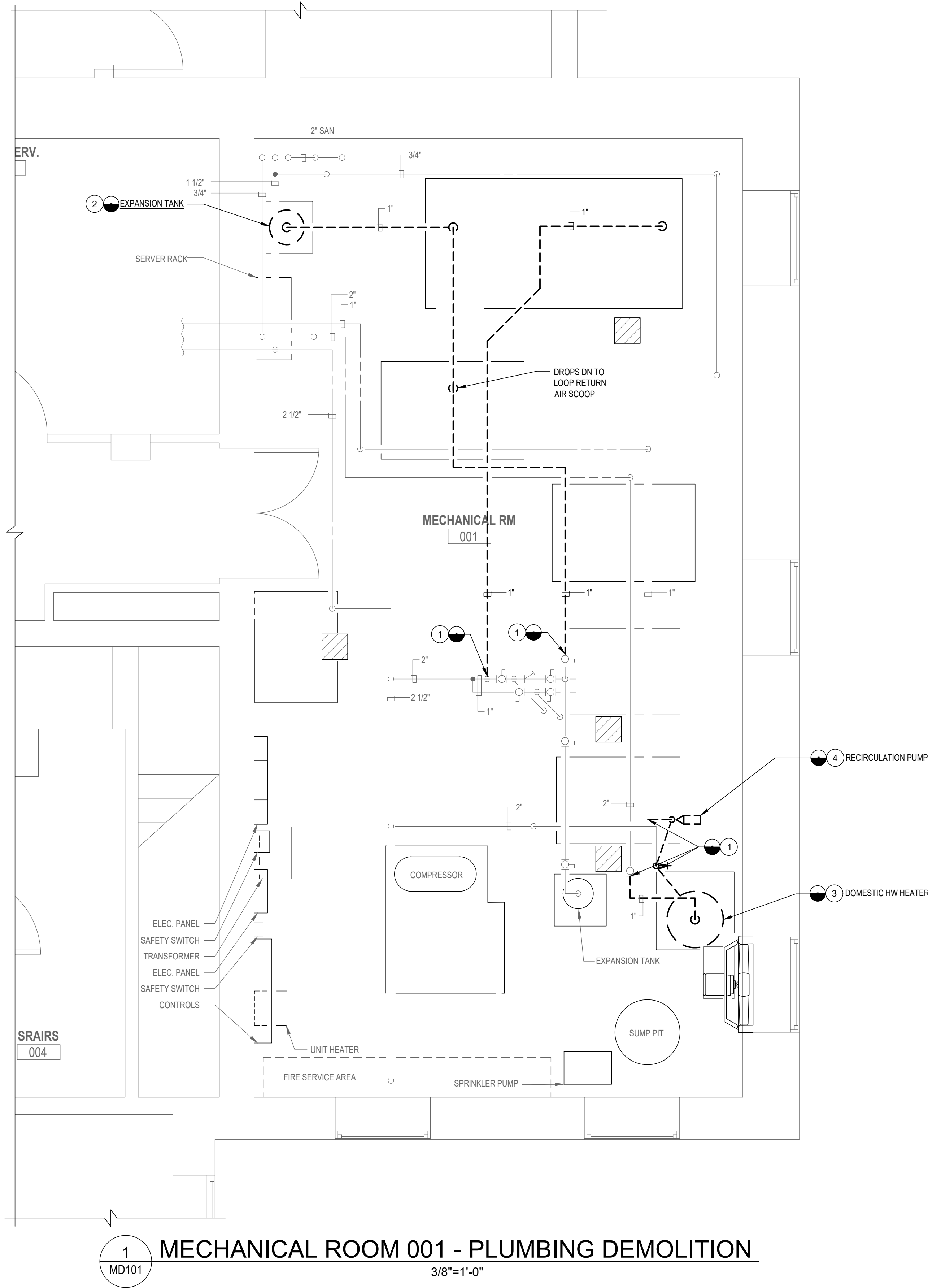
DWG. FILENAME: MECHANICAL - DEMOLITION - MECHANICAL ROOM 001



- ## GENERAL NOTES:
1. REFER TO "MP" PHASING PLANS FOR PHASING OF MECHANICAL ROOM HEATING AND COOLING SYSTEMS.
- ## DRAWING NOTES:
- 1) DISCONNECT EXISTING PIPE AT POINT OF DISCONNECT. CLEAN AND PREPARE FOR RECONNECTION IN NEW WORK PHASE.
 - 2) REMOVE EXISTING BOILERS AND ALL ASSOCIATED PIPING, VALVES, AND FITTINGS TO POINT OF DISCONNECTION.
 - 3) REMOVE EXISTING CIRCULATING PUMPS AND ASSOCIATED PIPING, VALVES, TRIM, AND CONTROLS TO POINT OF DISCONNECTION.
 - 4) REMOVE EXISTING EXPANSION TANK AND ALL ASSOCIATED PIPING AND VALVES AND TRIM. TO POINT OF DISCONNECTION.
 - 5) REMOVE EXISTING DOMESTIC HOT WATER HEATER AND ALL ASSOCIATED PIPING, VALVES AND TRIM TO POINT OF DISCONNECTION.
 - 6) REMOVE EXISTING REMOTE SUMP AND ASSOCIATED PIPING, AND VALVES AND TRIM TO POINT POINT OF DISCONNECTION.
 - 7) REMOVE EXISTING COOLING TOWER AND ALL ASSOCIATED PIPING, VALVES, AND TRIM TO POINT OF DISCONNECTION. TERMINATE PIPING AT 12" ABOVE GRADE.
 - 8) REMOVE EXISTING HEAT EXCHANGER AND ALL ASSOCIATED PIPING, VALVES AND TRIM TO POINT OF DISCONNECTION.
 - 9) REMOVE EXISTING PUMP CONTROLS AND ALL ASSOCIATED FRAMING, AND WIRING.
 - 10) REMOVE EXISTING AHU, DUCT MOUNTED PREHEAT COIL, AND ALL ASSOCIATED PIPING, CONTROLS. ETC. TO POINTS OF DISCONNECTION.

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	PROPERTY MANAGEMENT
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHT NW	POST. SHT 5W43N POST. SHT 5W45N POST. SHT 5W48N POST. SHT 5W49N	PLAN SCALE: <u>3/8"=1'-0"</u>	APPROVED BY: _____ PROPERTY MANAGER
	LICENSE NO. <u>32486</u> EXPIRATION DATE <u>01-06-2026</u>		CONTRACT COMPLETION BOX							PROFILE SCALE: _____	DATE: _____
	 MHI ENGINEERING INC. 505 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P. 410.293.2926 F. 410.385.0377		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
AS-BUILT PER RECORD PRINT		REVIEWED BY: _____									
BY: _____ DATE: <u>07/31/2024</u>		CHKD BY: <u>RM11</u>		DATE REVIEWED: _____							

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE — PROPERTY MANAGEMENT			JOB ORDER NUMBER
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT			SHEET 19 OF 60
MECHANICAL ROOM 001 - MECHANICAL PIPING DEMOLITION			DRAWING NUMBER
SUBDIVISION: REISTERSTOWN	12035 Reisterstown Rd, Reisterstown, MD 21136		ELECTION DIST. NO.: 4 c 4
			2024-1245
			FILE NO.: 8



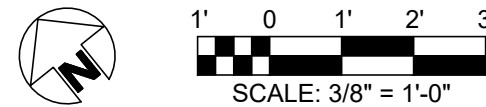
GENERAL NOTES:

1. REFER TO "MP" PHASING PLANS FOR PHASING OF MECHANICAL ROOM HEATING AND COOLING SYSTEMS.

DRAWING NOTES:

1. REMOVE EXISTING PIPING AND ALL ASSOCIATED INSULATION, HANGERS, VALVES AND TRIM TO POINT OF DISCONNECTION.
2. REMOVE EXISTING EXPANSION TANK AND ALL ASSOCIATED PIPING, VALVES AND TRIM TO POINT OF DISCONNECTION.
3. REMOVE EXISTING DOMESTIC HOT WATER HEATER AND ALL ASSOCIATED PIPING, AND VALVES, AND TRIM TO POINT OF DISCONNECTION.
4. REMOVE EXISTING RECIRCULATION PUMP AND ALL ASSOCIATED PIPING AND VALVES, ETC. TO POINT OF DISCONNECTION.

1 MECHANICAL ROOM 001 - PLUMBING DEMOLITION
MD101 3/8"=1'-0"



PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE		PROPERTY MANAGEMENT	
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 32486 EXPIRATION DATE 01-06-2026							KEY SHEET TNY	POINT SH 57W39	PLAN SCALE: 3/8"=1'-0"		APPROVED BY:	PROPERTY MANAGER
								POINT SH 57W39			DATE:	
								POINT SH 56W39	PROFILE SCALE:			
BUREAU OF ENGINEERING AND CONSTRUCTION		CONTRACT COMPLETION BOX		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
AS-BUILT PER RECORD PRINT		REVIEWED BY:										
BY: DATE:		CHKD BY: RMH		DATE REVIEWED:								



BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT
MECHANICAL ROOM 001 - PLUMBING DEMOLITION
SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136

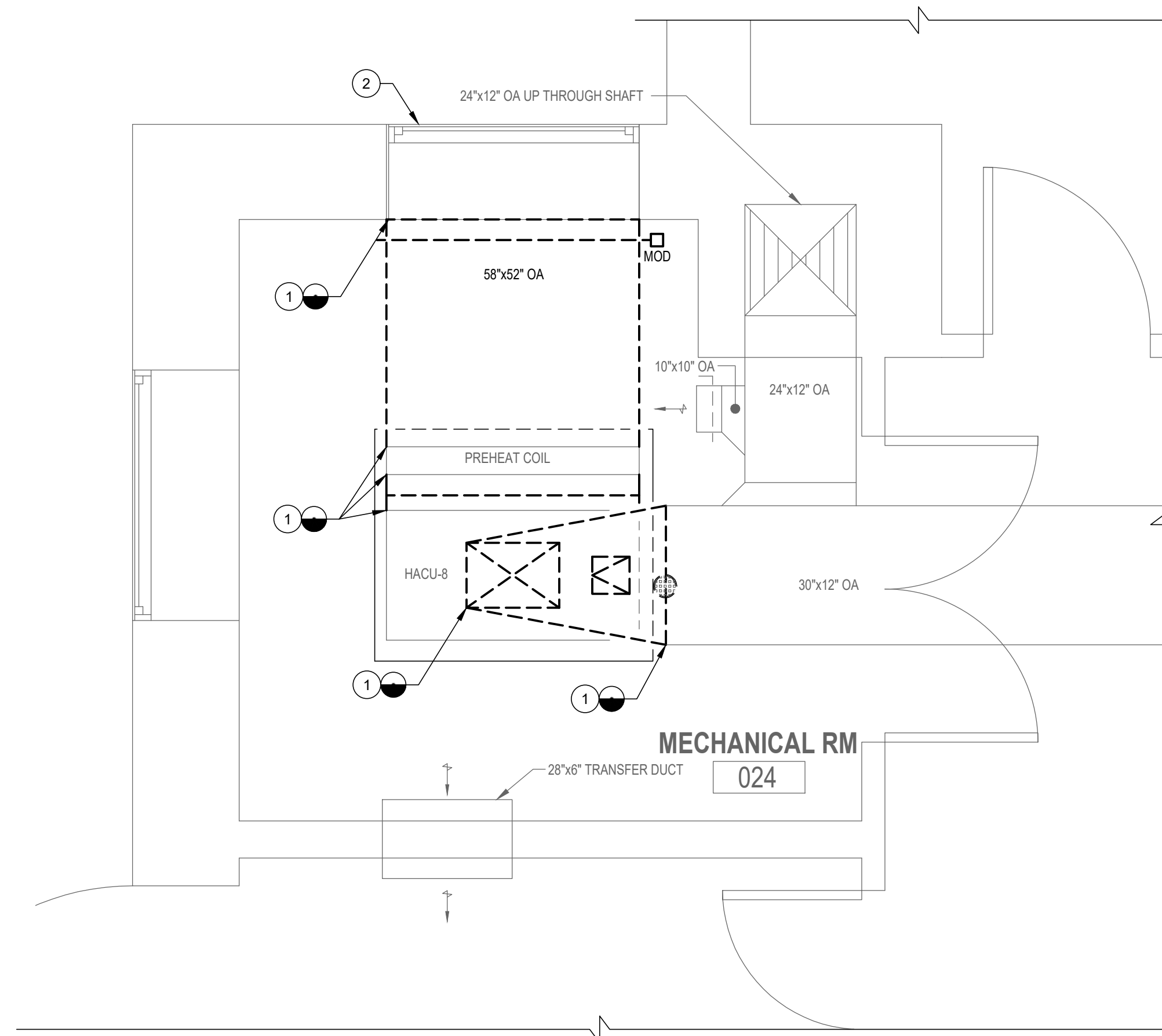
SHEET DESIGNATION	CONTRACT NUMBER
MD-403	24096-P00
JOB ORDER NUMBER	
SHEET 20 OF 60	
DRAWING NUMBER	
2024-1246	
FILE NO.: 8	



DWG. FILENAME: PLUMBING - DEMOLITION - MECHANICAL ROOM 001

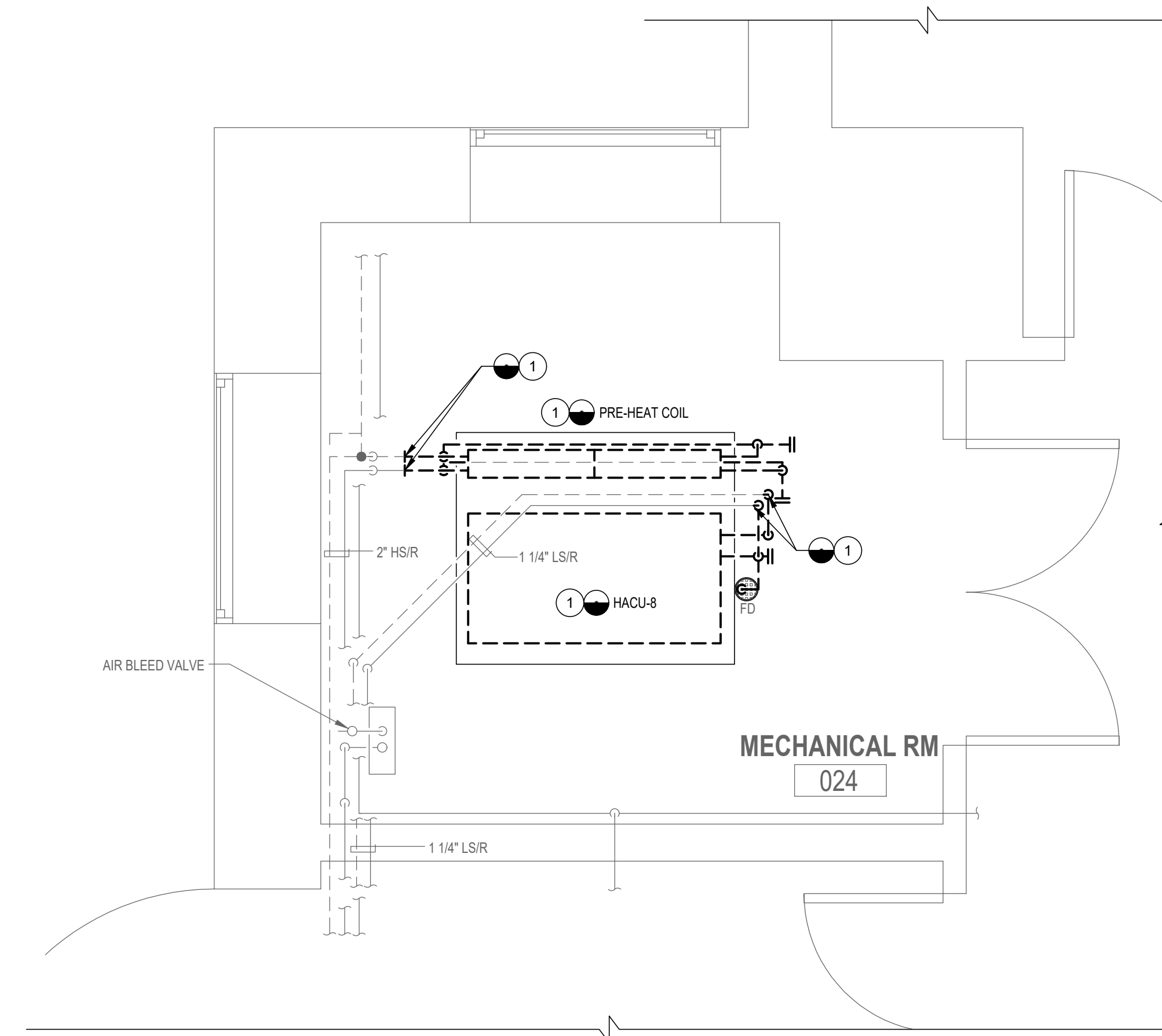
1. REFER TO "MP" PHASING PLANS FOR PHASING OF MECHANICAL ROOM HEATING AND COOLING SYSTEMS.

- 1 REMOVE EXISTING DUCTWORK TO POINT OF DISCONNECTION. CLEAN AND PREPARE DUCTWORK FOR RECONNECTION TO NEW UNIT IN NEW WORK PHASE.
- 2 CONTRACTOR SHALL CLEAN EXISTING OUTSIDE AIR INTAKE LOUVER AND SCREEN.



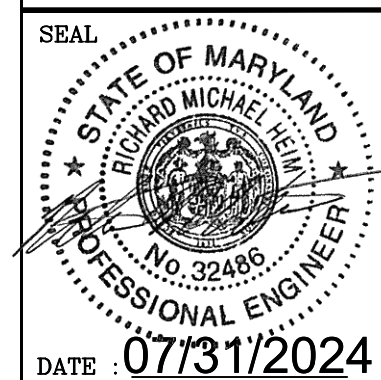
1 MECHANICAL ROOM 024 - HVAC DEMOLITION
MD101 1/2"=1'-0"

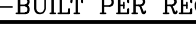
1 REMOVE EXISTING AHU AND PREHEAT COIL, AND ALL ASSOCIATED PIPING, VALVES, AND TRIM TO POINT OF DISCONNECTION. CLEAN AND PREPARE PIPING AT POINT OF DISCONNECTION FOR RECONNECTION TO NEW UNIT IN NEW WORK PHASE.



2 MECHANICAL ROOM 024 - PIPING DEMOLITION

MD101 1/2"=1'-0"



PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	PROPERTY MANAGEMENT
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						KEY SHT NW	POST. SHT SWNW POST. SHT SWNEW POST. SHT SEWNW POST. SHT SENEW	PLAN SCALE: _____ 1/2"=1'-0"	APPROVED BY: _____ PROPERTY MANAGER
LICENSE NO. <u>32486</u>	EXPIRATION DATE <u>01-06-2026</u>			R.O.W. NO.					
		CONTRACT COMPLETION BOX							
 RHP ENGINEERING, INC. 100 BIRCHCLIFF PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-478-2655 F: 410-385-2672	DGN BY: _____ _____IDS	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	DWN BY: _____ _____IDS	REVIEWED BY:							
	CHKD BY: _____ _____RMH	DATE REVIEWED:							
AS-BUILT PER RECORD PRINT									
BY:									
DATE:									

MECHANICAL ROOM 024 - PART PLANS

12035 Reisterstown Rd, Reisterstown, MD 21136

SHEET DESIGNATION	CONTRACT NUMBER
MD404	24096-P00
	JOB ORDER NUMBER
	SHEET 21 OF 60
	DRAWING NUMBER
	2024-1247
	FILE NO.: 8

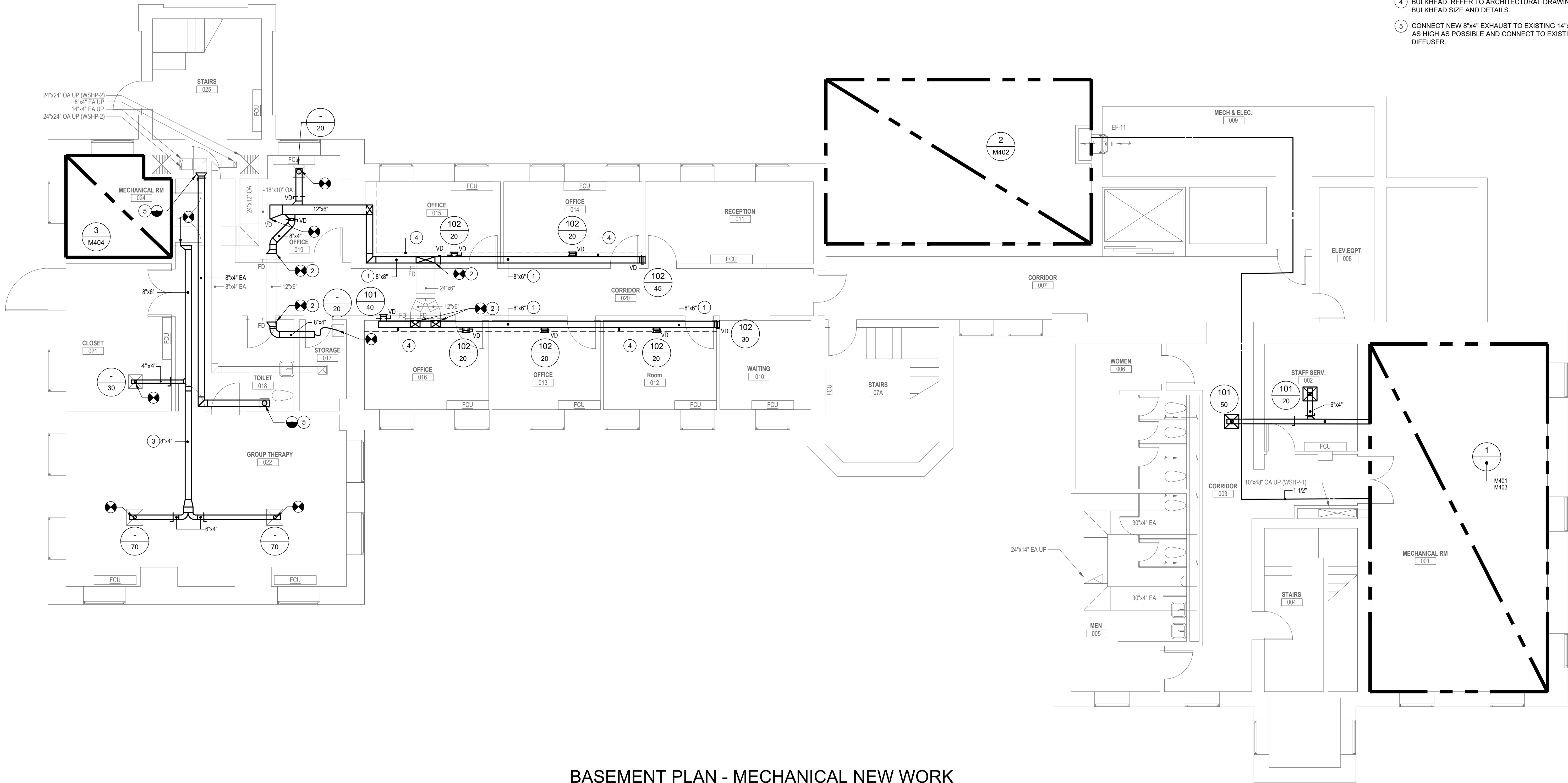
DWG. FILENAME: MECHANICAL - DEMOLITION - MECHANICAL ROOM 024

GENERAL NOTES:

- ONCE NEW OA UNITS ARE INSTALLED AND ONLINE, CONTRACTOR SHALL RE-BALANCE ALL DIFFUSERS TO CFM INDICATED ON PLAN.
- CONTRACTOR SHALL CLEAN ALL EXISTING DUCTWORK ASSOCIATED WITH DOAS-8 AND DOAS-9 DUCT SYSTEMS.

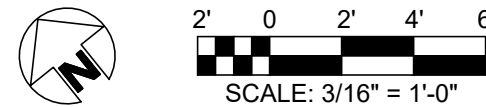
DRAWING NOTES:

- ROUTE NEW OA DUCTWORK IN NEW BULKHEAD.
- CONNECT NEW OUTSIDE AIR DUCTWORK TO EXISTING TRANSFER DUCT.
- CONTRACTOR SHALL ROUTE NEW 8"x4" DUCTWORK ABOVE CEILING COORDINATED WITH ALL EXISTING UTILITIES. 8"x4" OA DUCT SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO NEW 8"x4"EA DUCT IN CEILING.
- BULKHEAD. REFER TO ARCHITECTURAL DRAWINGS FOR BULKHEAD SIZE AND DETAILS.
- CONNECT NEW 8"x4" EXHAUST TO EXISTING 14"x4" AND ROUTE AS HIGH AS POSSIBLE AND CONNECT TO EXISTING EXHAUST DIFFUSER.



BASEMENT PLAN - MECHANICAL NEW WORK

3/16"=1'-0"



SEAL STATE OF MARYLAND RICHARD MICHAEL HILL PROFESSIONAL ENGINEER NO. 32486 DATE: 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	PROPERTY MANAGEMENT		
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.								KEY SH TNY	PLAN SCALE: 3/16"=1'-0"	APPROVED BY: _____ PROPERTY MANAGER		
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX					R.O.W. NO.	POST. SH 57W39 POST. SH 57W38 POST. SH 58N33 POST. SH 58N39	PROFILE SCALE: _____	DATE: _____		
	 RMC ENGINEERING, INC. 5050 RESEARCH PARK DRIVE SUITE 300 BAI TOWNE, MD 21228 P: 410-574-0850 F: 410-382-0277		DGN BY: _____ JDS		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	AS-BUILT PER RECORD PRINT		DWN BY: _____ JDS		REVIEWED BY: _____								
	BY: _____ DATE: _____		CHKD BY: _____ RMTL		DATE REVIEWED: _____								

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

BASEMENT PLAN - MECHANICAL NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-101	24096-P00
JOB ORDER NUMBER	
SHEET 22 OF 60	
DRAWING NUMBER	
2024-1248	
FILE NO.: 8	



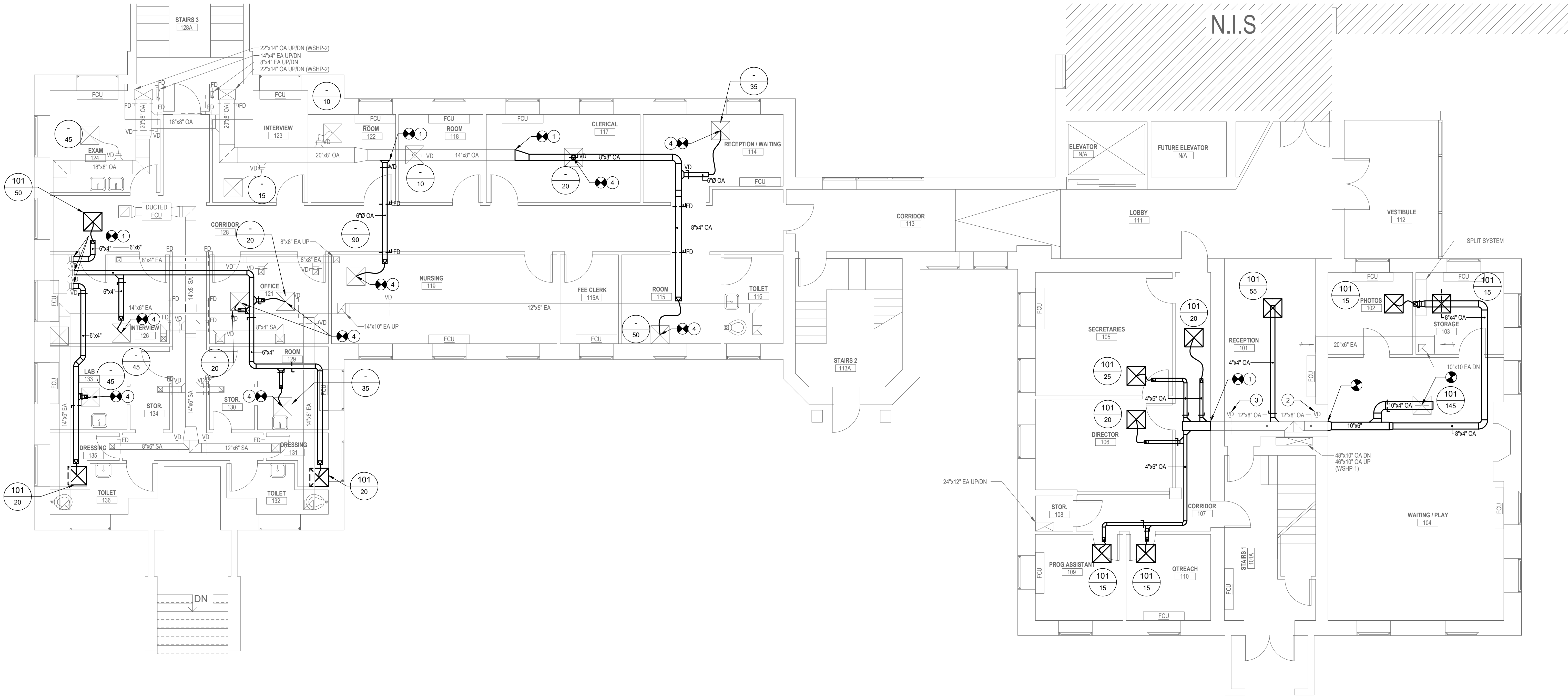
DWG. FILENAME: MECHANICAL - NEW WORK - BASEMENT

GENERAL NOTES:

- ONCE NEW OA UNITS ARE INSTALLED AND ONLINE, CONTRACTOR SHALL RE-BALANCE ALL DIFFUSERS TO CFM INDICATED ON PLAN.
- CONTRACTOR SHALL CLEAN ALL EXISTING DUCTWORK ASSOCIATED WITH DOAS-8 AND DOAS-9 DUCT SYSTEMS.

DRAWING NOTES:

- CONNECT NEW OA DUCT TO EXISTING DUCT SYSTEM AND FIELD ROUTE AS SHOWN, COORDINATED WITH EXISTING UTILITIES.
- EXISTING VOLUME DAMPER SHALL BE BALANCED FOR 175 CFM.
- EXISTING VOLUME DAMPER SHALL BE BALANCED FOR 95 CFM.
- CONTRACTOR SHALL CONNECT NEW FLEXIBLE DUCT CONNECTIONS TO EXISTING DIFFUSER.



FIRST FLOOR PLAN - MECHANICAL NEW WORK

3/16"=1'-0"

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.							KEY SHIT TWM	POINT SHIT 57WV39	PLAN SCALE:	3/16"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX						POINT SHIT 57WV39	PROFILE SCALE:		DATE:	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
AS-BUILT PER RECORD PRINT		REVIEWED BY:											
BY: DATE:		CHKD BY: RMH		DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

FIRST FLOOR PLAN - MECHANICAL NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

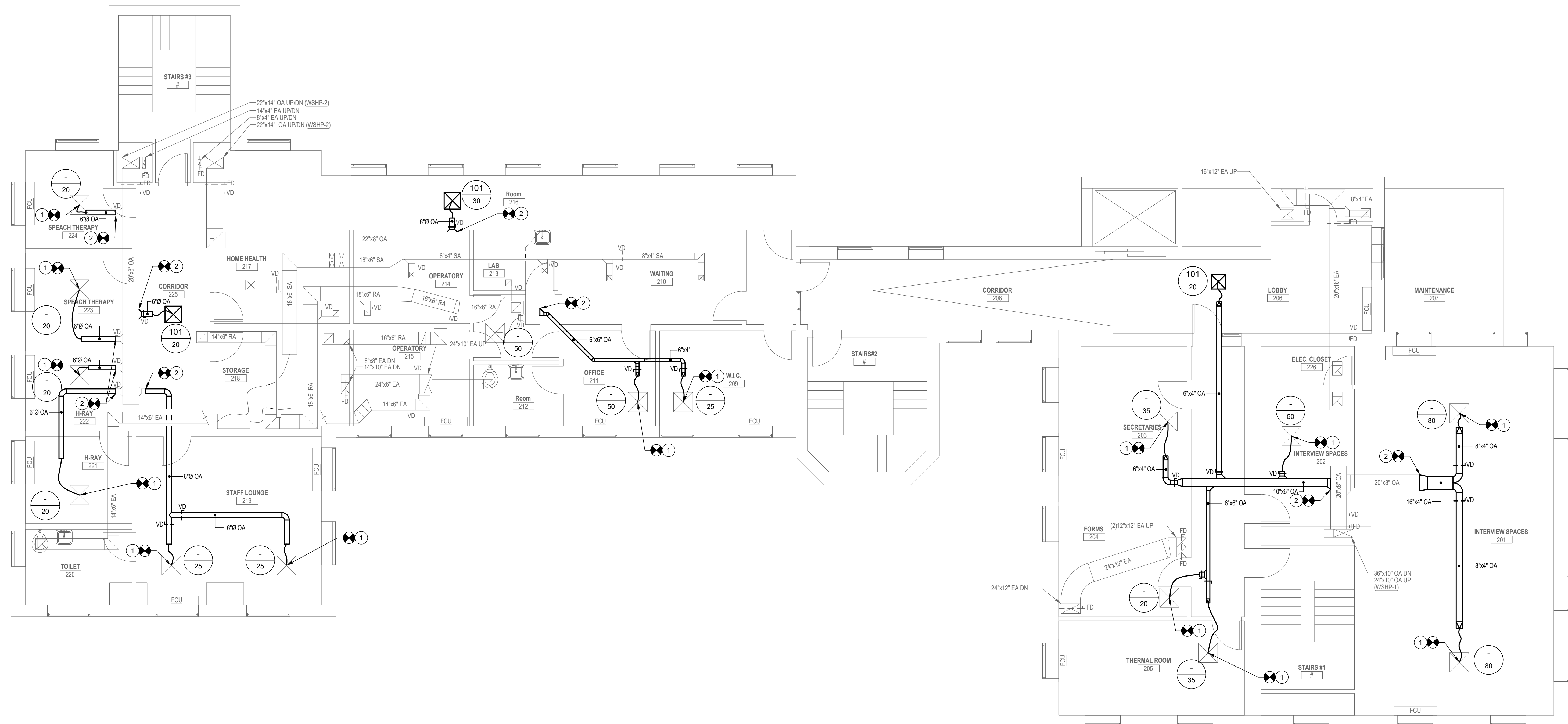
ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-102	24096-P00
JOB ORDER NUMBER	
SHEET 23 OF 60	
DRAWING NUMBER	
2024-1249	
FILE NO.: 8	

DWG. FILENAME: MECHANICAL - NEW WORK - FIRST FLOOR

1. ONCE NEW OA UNITS ARE INSTALLED AND ONLINE, CONTRACTOR SHALL RE-BALANCE ALL DIFFUSERS TO CFM INDICATED ON PLAN.
2. CONTRACTOR SHALL CLEAN ALL EXISTING DUCTWORK ASSOCIATED WITH DOAS-8 AND DOAS-9 DUCT SYSTEMS.

- ① CONTRACTOR SHALL CONNECT NEW FLEXIBLE DUCT CONNECTIONS TO EXISTING DIFFUSER.
- ② CONNECT NEW OA DUCT TO EXISTING DUCT SYSTEM AND FIELD ROUTE AS SHOWN , COORDINATED WITH EXISTING UTILITIES.


$$3/16" = 1'-0"$$


SEAL	PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.													
	LICENSE NO. 32486		EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX				R.O.W. NO.		KEY SET TYP	POST. SHT 57069	PLAN SCALE: 3/16"=1'-0"	APPROVED BY: PROPERTY MANAGER
												POST. SHT 57069		DATE: _____
												POST. SHT 57069		
			DGN BY: _____IDS		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS		STRUCTURES		SEWER	
			DWN BY: _____IDS		REVIEWED BY:						STORM DRAINS		SEWER	
	AS-BUILT PER RECORD PRINT				CHKD BY: _____RML		DATE REVIEWED:				WATER		FIELD ENGINEER	
DATE	07/31/2024													

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

12035 Reisterstown Rd, Reisterstown, MD 21136

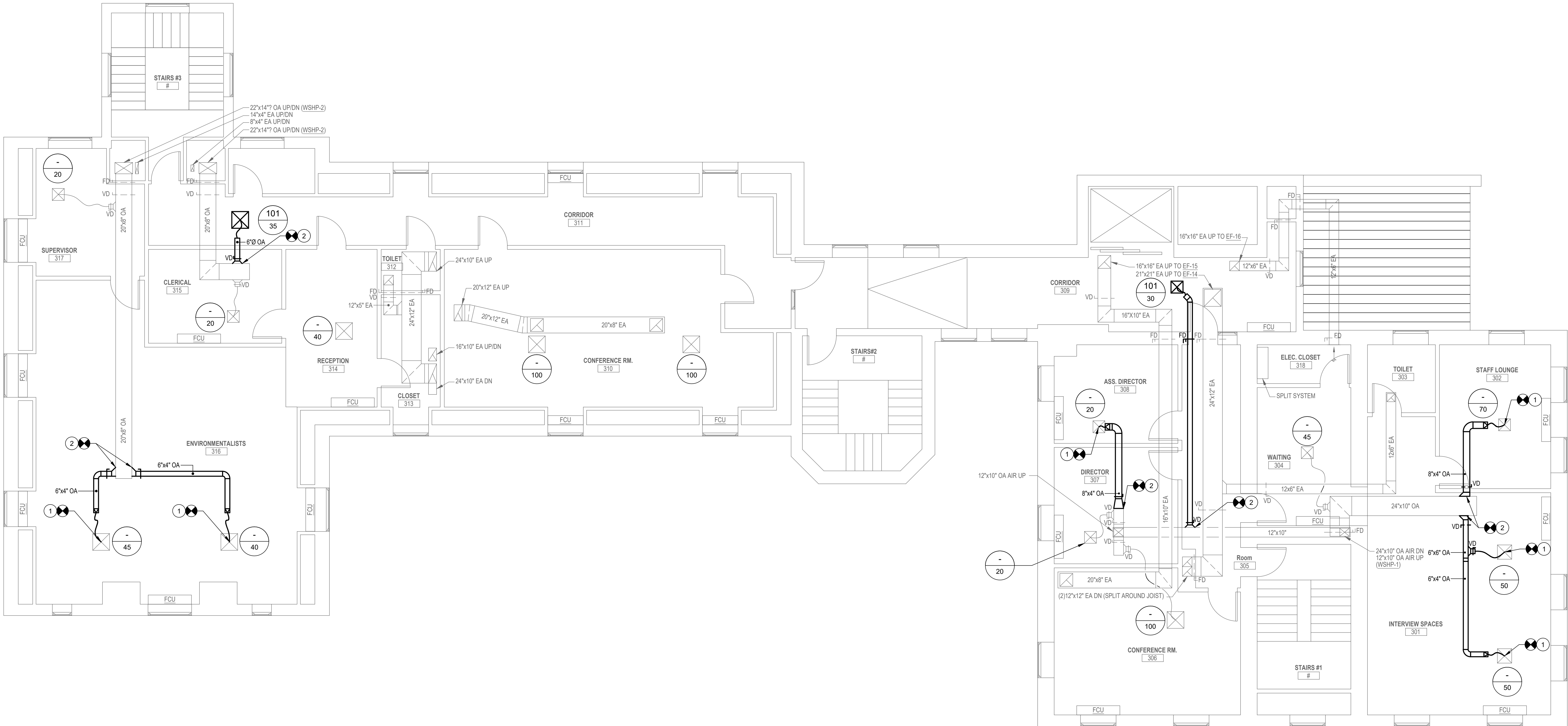
SUBDIVISION: REISTERSTOWN

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-103	24096-P00
	JOB ORDER NUMBER
	SHEET 24 OF 60
	DRAWING NUMBER
	2024-1250
	FILE NO.: 8

DWG. FILENAME: MECHANICAL - NEW WORK - SECOND FLOOR

- GENERAL NOTES:**
- ONCE NEW OA UNITS ARE INSTALLED AND ONLINE, CONTRACTOR SHALL RE-BALANCE ALL DIFFUSERS TO CFM INDICATED ON PLAN.
 - CONTRACTOR SHALL CLEAN ALL EXISTING DUCTWORK ASSOCIATED WITH DOAS-8 AND DOAS-9 DUCT SYSTEMS.
- DRAWING NOTES:**
- CONTRACTOR SHALL CONNECT NEW FLEXIBLE DUCT CONNECTIONS TO EXISTING DIFFUSER.
 - CONNECT NEW OA DUCT TO EXISTING DUCT SYSTEM AND FIELD ROUTE AS SHOWN, COORDINATED WITH EXISTING UTILITIES.



THIRD FLOOR PLAN - MECHANICAL NEW WORK
3/16"=1'-0"

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT		
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.							KEY SHIT TNY	POST: SHIT 57NW39 POST: SHIT 57NW38 POST: SHIT 56NW39 POST: SHIT 56NW38	PLAN SCALE: 3/16"=1'-0"	APPROVED BY: _____ PROPERTY MANAGER		
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX							PROFILE SCALE: _____	DATE: _____		
	 RME ENGINEERING, INC. 5050 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-574-0850 F: 410-382-0272		DGN BY: _____ JDS		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	AS-BUILT PER RECORD PRINT		DWN BY: _____ JDS		REVIEWED BY: _____								
	BY: _____ DATE: _____	CHKD BY: _____ RMTL		DATE REVIEWED: _____									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

THIRD FLOOR PLAN - MECHANICAL NEW WORK

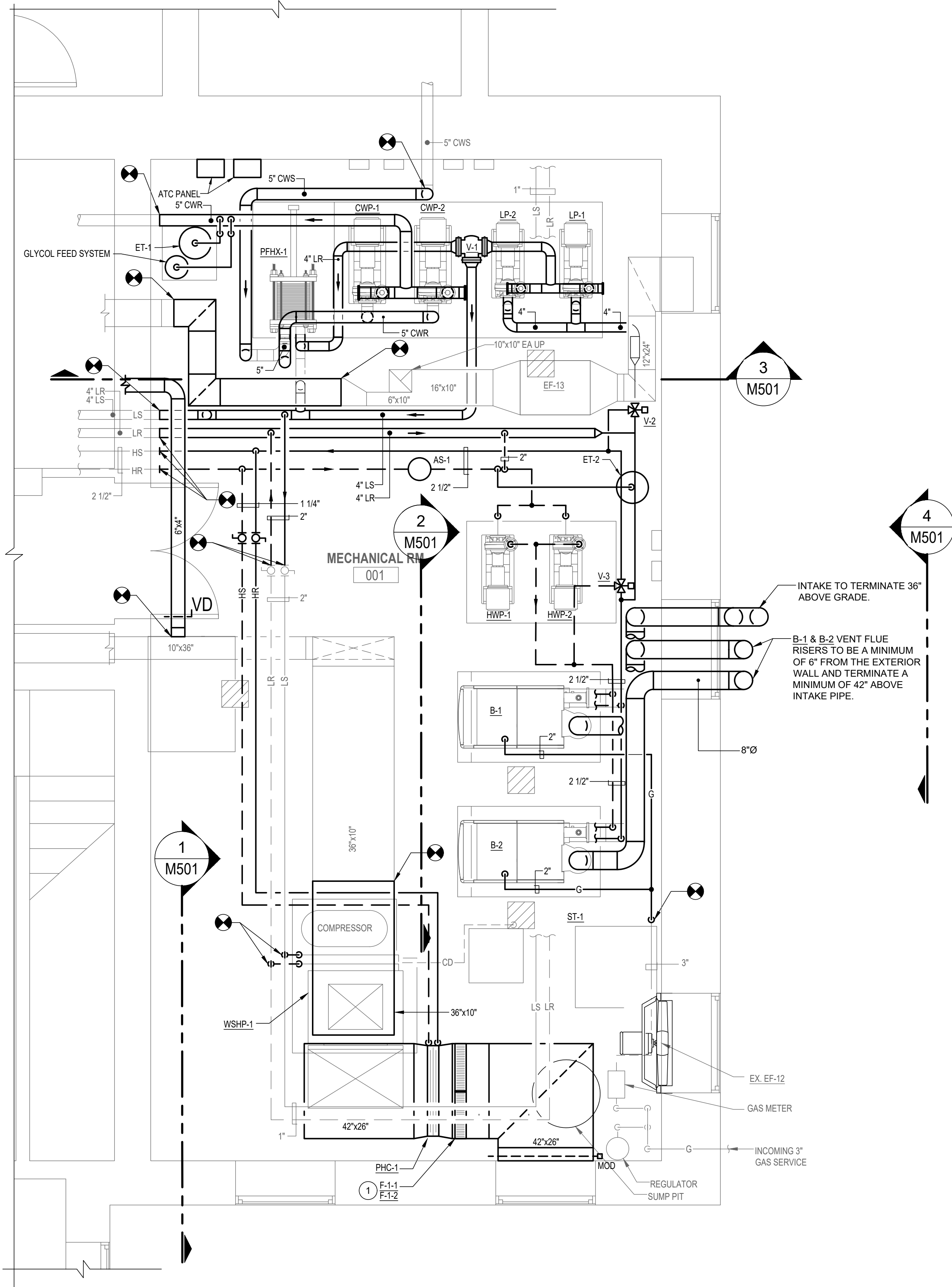
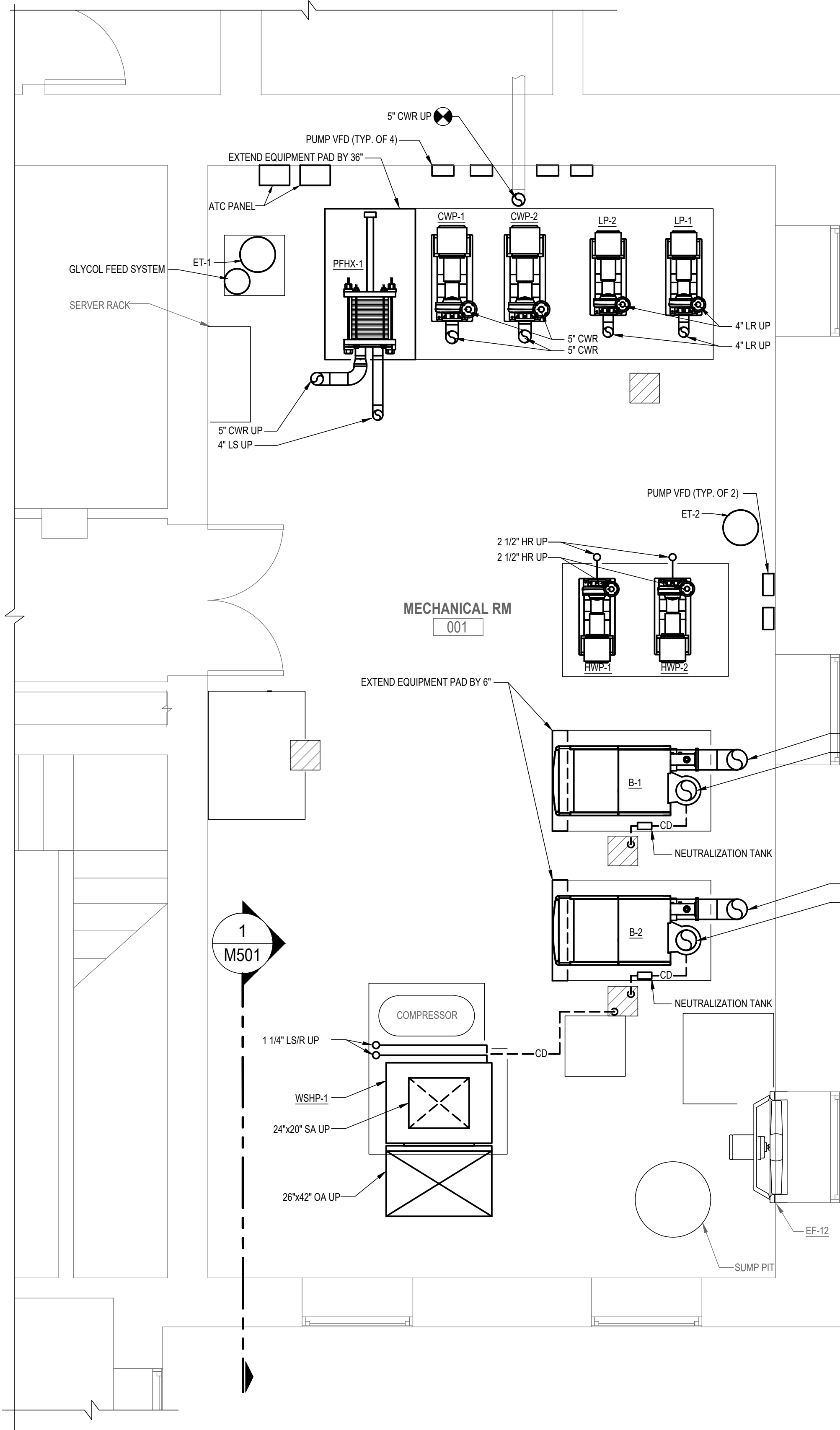
SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136



SHEET DESIGNATION	CONTRACT NUMBER
M-104	24096-P00
JOB ORDER NUMBER	
SHEET 25 OF 60	
DRAWING NUMBER	
2024-1251	
FILE NO.: 8	

DWG. FILENAME: MECHANICAL - NEW WORK - THIRD FLOOR

- GENERAL NOTES:
- REFER TO "MP" SHEETS FOR MECHANICAL ROOM PHASING OF HEATING AND COOLING SYSTEMS.
- DRAWING NOTES:
- PROVIDE 40"x30" SIDE ACCESS DUCT MOUNTED FILTER BANK



1 M101 MECHANICAL ROOM 001 - MECHANICAL NEW WORK - LOWER LEVEL
3/8"=1'-0"

1 M101 MECHANICAL ROOM 001 - MECHANICAL NEW WORK - UPPER LEVEL
3/8"=1'-0"

SEAL STATE OF MARYLAND RICHARD MICHAEL BELL PROFESSIONAL ENGINEER NO. 32486 DATE: 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TWM	POINT SHIT 57WV30	PLAN SCALE:	3/8"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX						POINT SHIT 57WV30	PROFILE SCALE:		DATE:	
	RFM ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-528-0200 (F) 410-330-0372		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY:										

BY: RMH	CHKD BY: RMH	DATE REVIEWED:											
---------	--------------	----------------	--	--	--	--	--	--	--	--	--	--	--

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL - NEW WORK - MECHANICAL ROOM 001

SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-401	24096-P00
JOB ORDER NUMBER	
SHEET 26 OF 60	
DRAWING NUMBER	
2024-1252	
FILE NO.: 8	

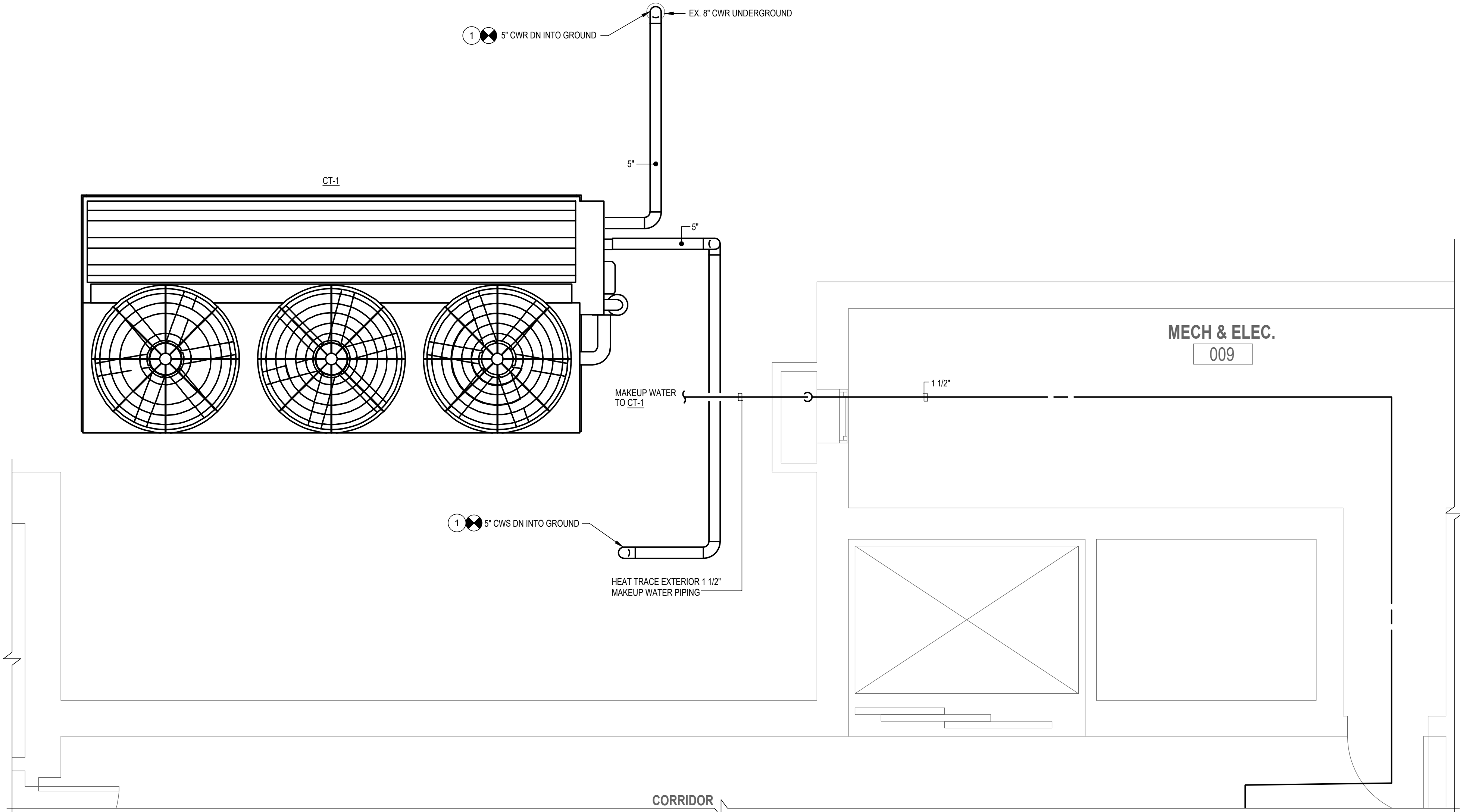
DWG. FILENAME: MECHANICAL - NEW WORK - BASEMENT ROOM 001

GENERAL NOTES:

1. REFER TO "MP" SHEETS FOR MECHANICAL ROOM PHASING OF HEATING AND COOLING SYSTEMS.

DRAWING NOTES:

① NEW 5" CWS AND 5" CWR SHALL BE ROUTED FROM NEW COOLING TOWER CT-1 AND CONNECTED TO EXISTING 5" CWS AND 8" CWR AT 12" ABOVE GRADE.



2 COOLING TOWER - MECHANICAL NEW WORK
M101
3/8"=1'-0"

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						KEY SHIT TWM	POINT SHIT 57NW39	PLAN SCALE:	3/8"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026					R.O.W NO.		POINT SHIT 57NW39	PROFILE SCALE:		DATE:	
	CONTRACT COMPLETION BOX							POINT SHIT 56NW39				
RFM ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-528-0200 (F) 410-300-0372		DGN BY: JTA	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
AS-BUILT PER RECORD PRINT		DWN BY: JTA	REVIEWED BY:									
BY: DATE:		CHKD BY: RMH	DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

COOLING TOWER - MECHANICAL NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

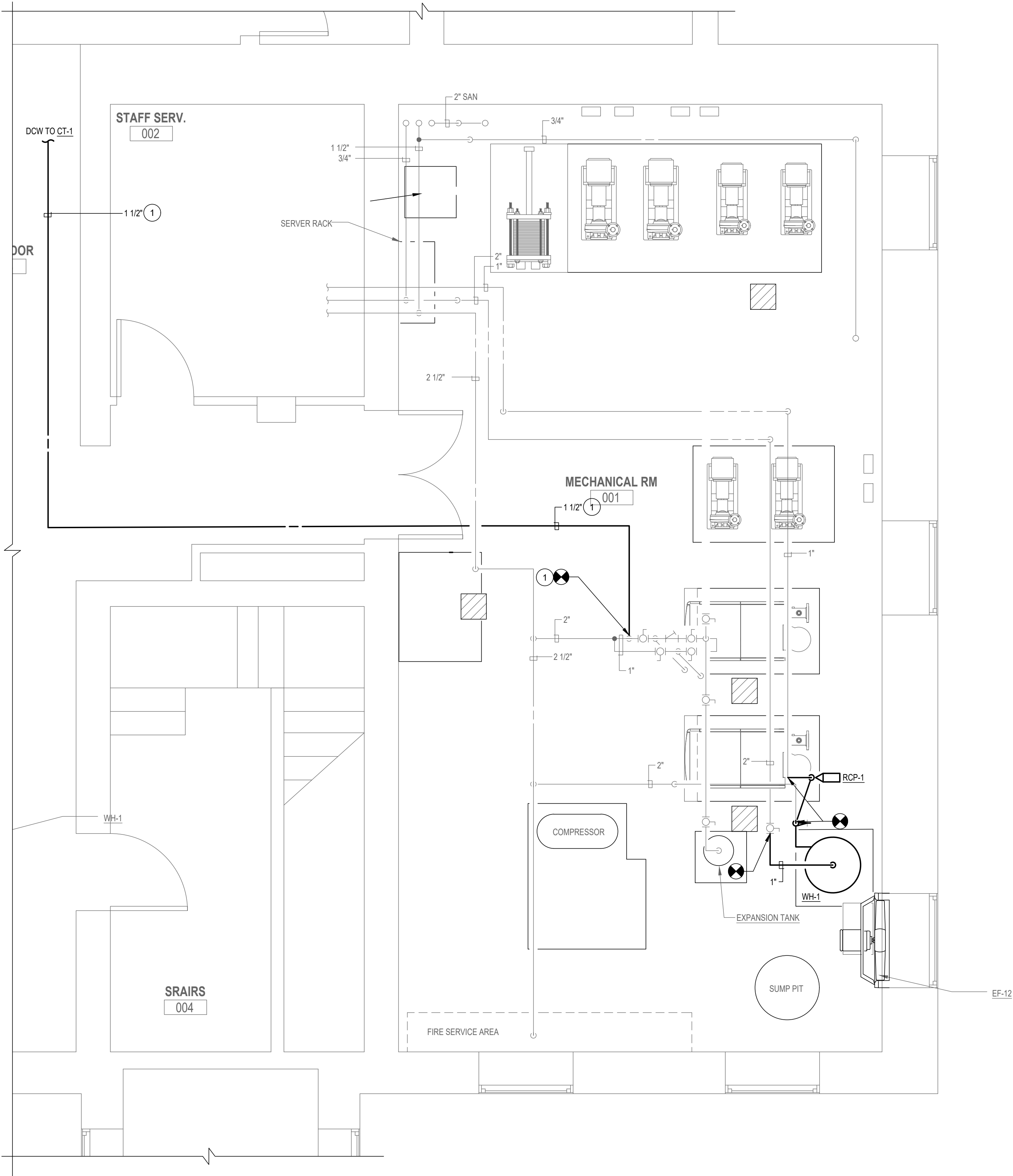


SHEET DESIGNATION	CONTRACT NUMBER
M-402	24096-P00
JOB ORDER NUMBER	
SHEET 27 OF 60	
DRAWING NUMBER	
2024-1253	
FILE NO.: 8	



DWG. FILENAME: MECHANICAL - NEW WORK - BASEMENT ROOM 001

- GENERAL NOTES:
1. REFER TO "MP" SHEETS FOR MECHANICAL ROOM PHASING OF HEATING AND COOLING SYSTEMS.
- DRAWING NOTES:
1. CONNECT 1 1/2" MAKE UP WATER AT POINT OF CONNECTION. ROUTE PIPE TO NEW COOLING TOWER CT-1 AND PROVIDE CONNECTION.



1 MECHANICAL ROOM 001 - PLUMBING NEW WORK
M101 3/8"=1'-0"

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.							KEY SHIT TWM	POINT SHIT 57NW39	PLAN SCALE:	3/8"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX					R.O.W NO.	POINT SHIT 57NW39	PROFILE SCALE:		DATE:	
	RFM ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-528-0200, F) 410-382-0372		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY:										
BY: DATE:		CHKD BY: RMH		DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL ROOM 001 - PLUMBING NEW WORK

SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136

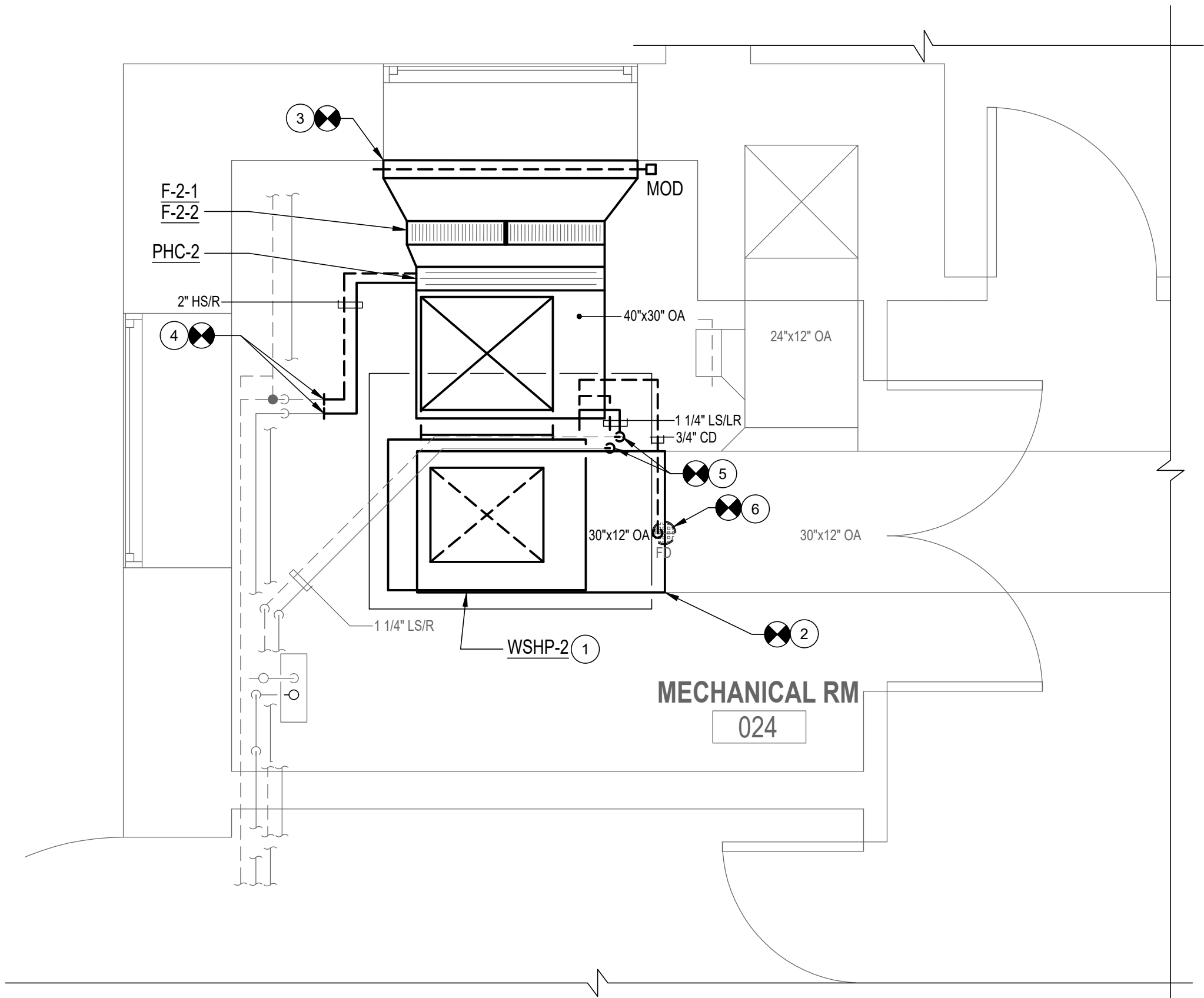


SHEET DESIGNATION	CONTRACT NUMBER
M-403	24096-P00
JOB ORDER NUMBER	
SHEET 28 OF 00	
DRAWING NUMBER	
2024-1254	
FILE NO.: 8	

DWG. FILENAME: PLUMBING - NEW WORK - MECHANICAL ROOM 001

DRAWING NOTES:

- 1
- INSTALL NEW WHP-2 ON EXISTING CONCRETE HOUSEKEEPING PAD PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
- 2
- CONNECT NEW 30"x12" OUTSIDE AIR TO EXISTING 30"x12" DUCT MAIN.
- 3
- PROVIDE DUCT TRANSITION FROM FILTER BANK TO EXISITING OUTSIDE AIR INTAKE LOUVER AND PROVIDE CONNECTION.
- 4
- CONNECT 1 1/4 " HS/HR FROM EXISTING TAP TO NEW PREHEAT COIL PHC-2 AND PROVIDE CONNECTION.
- 5
- CONNECT NEW 1 1/4" CS/CR TO EXISTING 1 1/4" LS/LR AND PROVIDE CONNECTION TO WSHP-2.
- 6
- ROUTE 3/4" CD FROM WSHP-2 CONDENSATE OUTLET SLOPED A MINIMUM 1/8" PER FOOT WITH INDIRECT DISCHARGE TO EXISTING FLOOR DRAIN.



3

MECHANICAL ROOM 024 - NEW WORK

1/2"=1'-0"

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.							KEY SHIT TWM	POINT SHIT 57NW30 POST. SHIT 57NW30 POINT SHIT 56NW30 POST. SHIT 56NW30	PLAN SCALE: 1/2"=1'-0"	APPROVED BY: _____ PROPERTY MANAGER		
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026				CONTRACT COMPLETION BOX					PROFILE SCALE:	DATE: _____		
	AS-BUILT PER RECORD PRINT												
	RMF ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-326-2000 F: 410-326-2027	DGN BY: JDS	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
		DWN BY: JDS	REVIEWED BY:										
		CHKD BY: RMH	DATE REVIEWED:										

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL ROOM 024 - NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

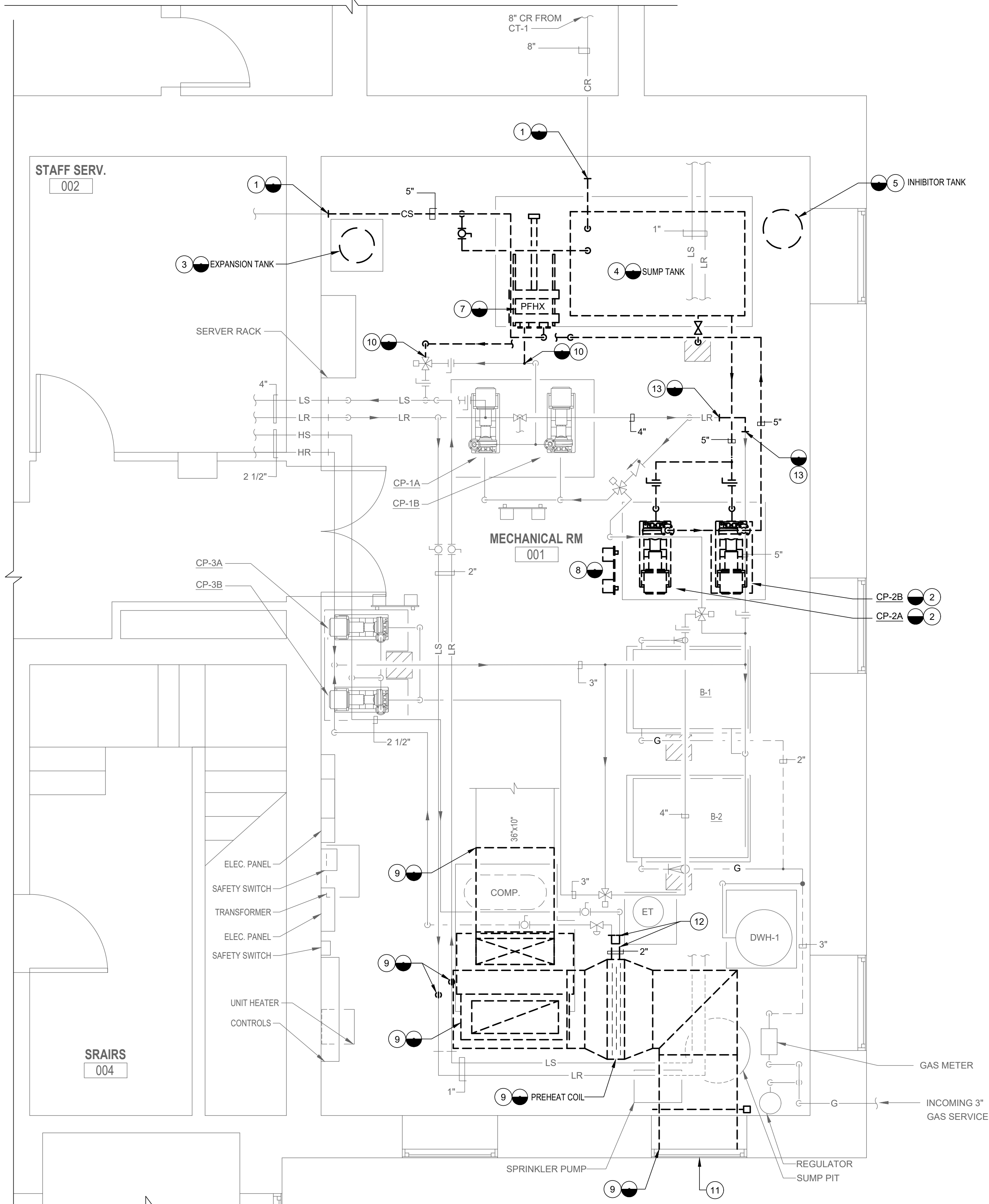
ELECTION DIST. NO.: 4 c 4



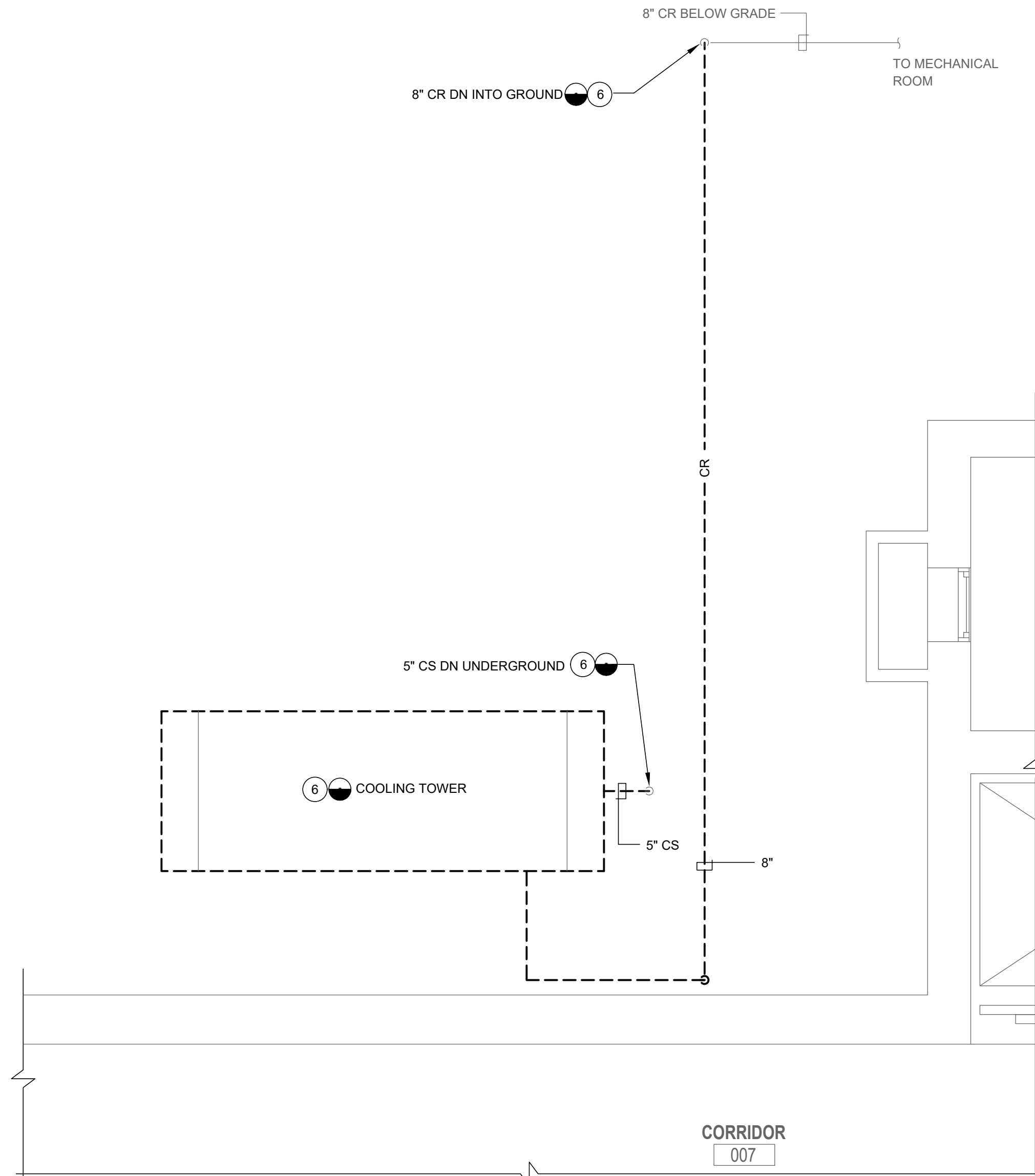
SHEET DESIGNATION	CONTRACT NUMBER
M-404	24096-P00
JOB ORDER NUMBER	
SHEET 29 OF 60	
DRAWING NUMBER	
2024-1255	
FILE NO.: 8	



DWG. FILENAME: MECHANICAL -NEW WORK - MECHANICAL ROOM 024



1 PHASE 1 - DEMOLITION - MECHANICAL ROOM 001
MD101 3/8"=1'-0"



2 PHASE 1 - DEMOLITION - COOLING TOWER
MD101 3/8"=1'-0"

PHASING 1 NOTES:

- IN GENERAL PHASING WILL BEGINS WITH REMOVAL OF THE COOLING SYSTEM EQUIPMENT. THE BUILDING COOLING EQUIPMENT SHALL BE DEMOLISHED AND INSTALLED DURING THE WINTER MONTHS BETWEEN OCTOBER AND APRIL.
- CONTRACTOR SHALL REMOVE EXISTING COOLING TOWER, COOLING TOWER CONCRETE FOOTING SUPPORTS, SUMP TANK, EXPANSION TANK, INHIBITOR TANK, PLATE FRAME HX, CONDENSER WATER PUMP AND ALL ASSOCIATED PIPING AND TRIM. ONCE LOOP CONNECTION TO EXISTING PLATE AND FRAME HX IS REMOVED, CONTRACTOR SHALL CAP EXISTING TAP AND PIPE AFTER 3-WAY VALVE TO ALLOW LOOP PIPING TO REMAIN ONLINE DURING COOLING SYSTEM WORK.
- REMOVE ALL CONTROLS ASSOCIATED WITH COOLING TOWER, CONDENSER WATER PUMPS AND PLATE FRAME HEAT EXCHANGERS.
- ONCE COOLING TOWER IS REMOVED, EXISTING COOLING TOWER SUPPORT SHALL BE REMOVED. AREA SHALL BE PREPARED FOR NEW INSTALLATION OF COOLING TOWER SUPPORT AND SUPPORTS INSTALLED.
- EXISTING DOAS UNIT DUCT MOUNTED PREHEAT COIL, UNIT COIL AND FILTERS ARE CLOGGED WITH DEBRIS AND NOT PROVIDING ANY OA TO THE SPACES IT SERVES. THEREFORE, THESE UNITS CAN BE REMOVED AND INSTALLED DURING EITHER THE WINTER OR SUMMER MONTHS. CONTRACTOR SHALL REMOVE EXISTING DOAS UNIT, DUCT MOUNTED REHEAT COIL AND ALL ASSOCIATED PIPING, VALVES AND TRIM. CONTRACTOR SHALL PROVIDE A LOOP IN THE HSR MAINS WHERE DISCONNECTED FROM THE EXISTING DUCT MOUNTED COIL TO ALLOW HEATING SYSTEM TO OPERATE DURING CONSTRUCTION.

DRAWING NOTES:

- DISCONNECT EXISTING PIPE AT POINT OF DISCONNECTION. CLEAN AND PREPARE FOR RECONNECTION IN NEW WORK PHASE.
- REMOVE EXISTING CIRCULATING PUMPS AND ASSOCIATED PIPING, VALVES, TRIM, AND CONTROLS TO POINT OF DISCONNECTION.
- REMOVE EXISTING EXPANSION TANK AND ALL ASSOCIATED PIPING AND VALVES AND TRIM TO POINT OF DISCONNECTION.
- REMOVE EXISTING REMOTE SUMP AND ASSOCIATED PIPING, AND VALVES AND TRIM TO POINT OF DISCONNECTION.
- REMOVE INHIBITOR TANK AND ALL ASSOCIATED PIPING, VALVES, AND TRIM TO POINT OF DISCONNECTION.
- REMOVE EXISTING COOLING TOWER AND ALL ASSOCIATED PIPING, VALVES, AND TRIM TO POINT OF DISCONNECTION. REMOVE EXISTING COOLING TOWER CONCRETE SUPPORT FOOTINGS.
- REMOVE EXISTING HEAT EXCHANGER AND ALL ASSOCIATED PIPING, VALVES AND TRIM TO POINT OF DISCONNECTION.
- REMOVE EXISTING PUMP CONTROLS AND ALL ASSOCIATED FRAMING, AND WIRING.
- REMOVE EXISTING AHU, DUCT MOUNTED PREHEAT COIL, AND ALL ASSOCIATED PIPING, DUCTWORK, CONTROLS, ETC. TO POINTS OF DISCONNECTION.
- CAP EXISTING LOOP MAIN AFTER PIPE TAP FROM PFHX IS REMOVED. CAP EXISTING PIPE AFTER 3-WAY VALVE AFTER PIPE IS REMOVED.
- CONTRACTOR SHALL CLEAN EXISTING OA DAMPER AND SCREEN. PROVIDE WEATHERTIGHT TEMPORARY BLANK-OFF UNTIL NEW OA DUCTWORK IS INSTALLED WITH NEW OA UNIT.
- REMOVE EXISTING CONNECTION TO EXISTING DUCT MOUNTED REHEAT COIL AT POINT OF CONNECTION. INSTALL TEMPORARY 2" LOOP ON END OF EXISTING 2" LS/R MAINS.
- CAP EXISTING LOOP RETURN AFTER PIPE IS REMOVED.

SEAL STATE OF MARYLAND RICHARD MICHAEL DELANEY Professional Engineer No. 32486 DATE: 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TWT	POINT SHIT 57W939	PLAN SCALE:	3/8"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2028		CONTRACT COMPLETION BOX						POINT SHIT 57W939	PROFILE SCALE:		DATE:	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
	AS-BUILT PER RECORD PRINT		REVIEWED BY:										

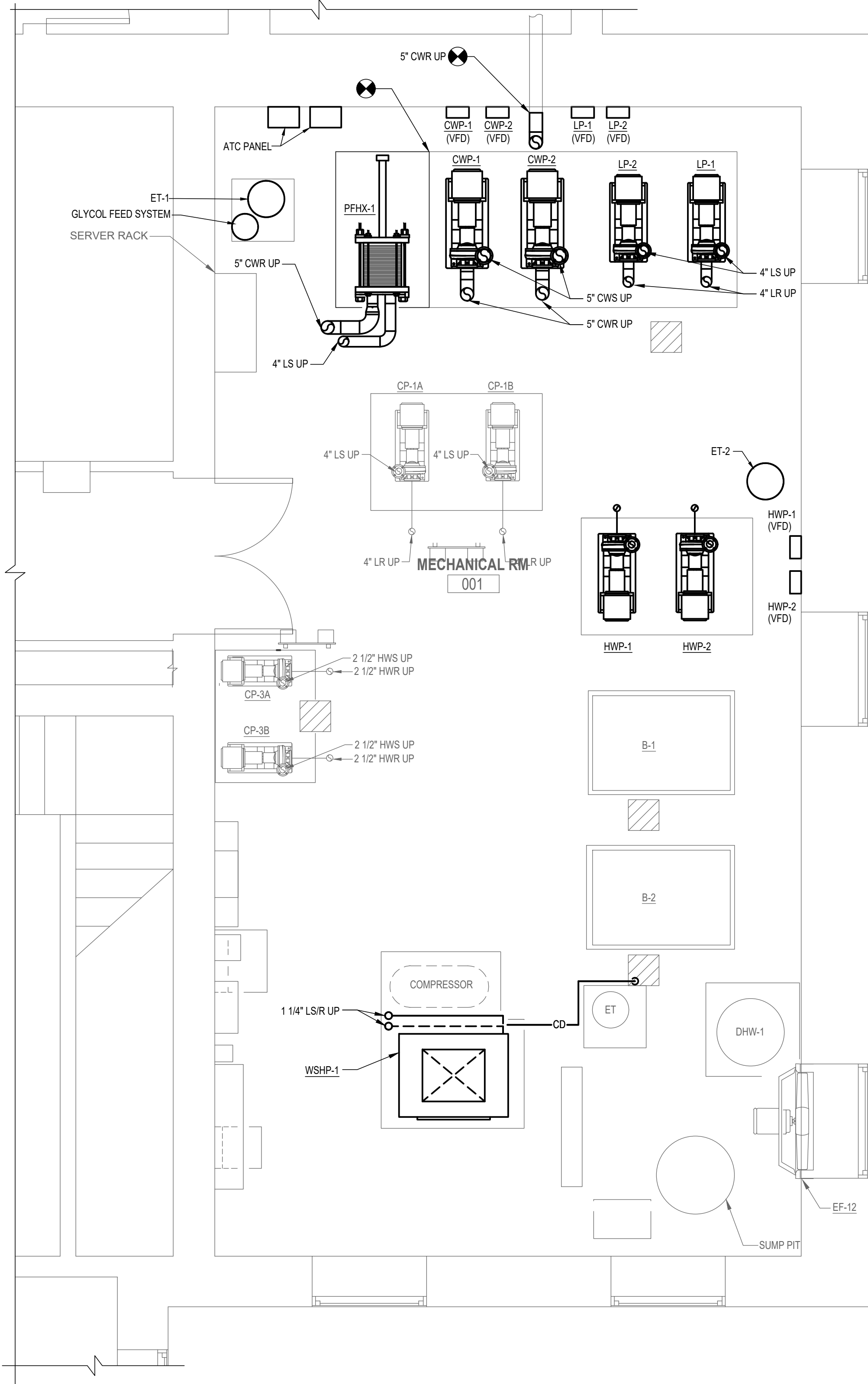
BY: DATE:	CHKD BY: RMH	DATE REVIEWED:											
-----------	--------------	----------------	--	--	--	--	--	--	--	--	--	--	--

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT		SHEET DESIGNATION	CONTRACT NUMBER
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT		MP-401	24096-P00
PHASE 1 - MECHANICAL ROOM 001 - DEMOLITION		JOB ORDER NUMBER	
SUBDIVISION: REISTERSTOWN		SHEET 30 OF 60	
12035 Reisterstown Rd, Reisterstown, MD 21136		DRAWING NUMBER	
ELECTION DIST. NO.: 4 c 4		2024-1256	
		FILE NO.: 8	

DWG. FILENAME: PHASE 1 - DEMOLITION - MECHANICAL ROOM 001

DRAWING NOTES:

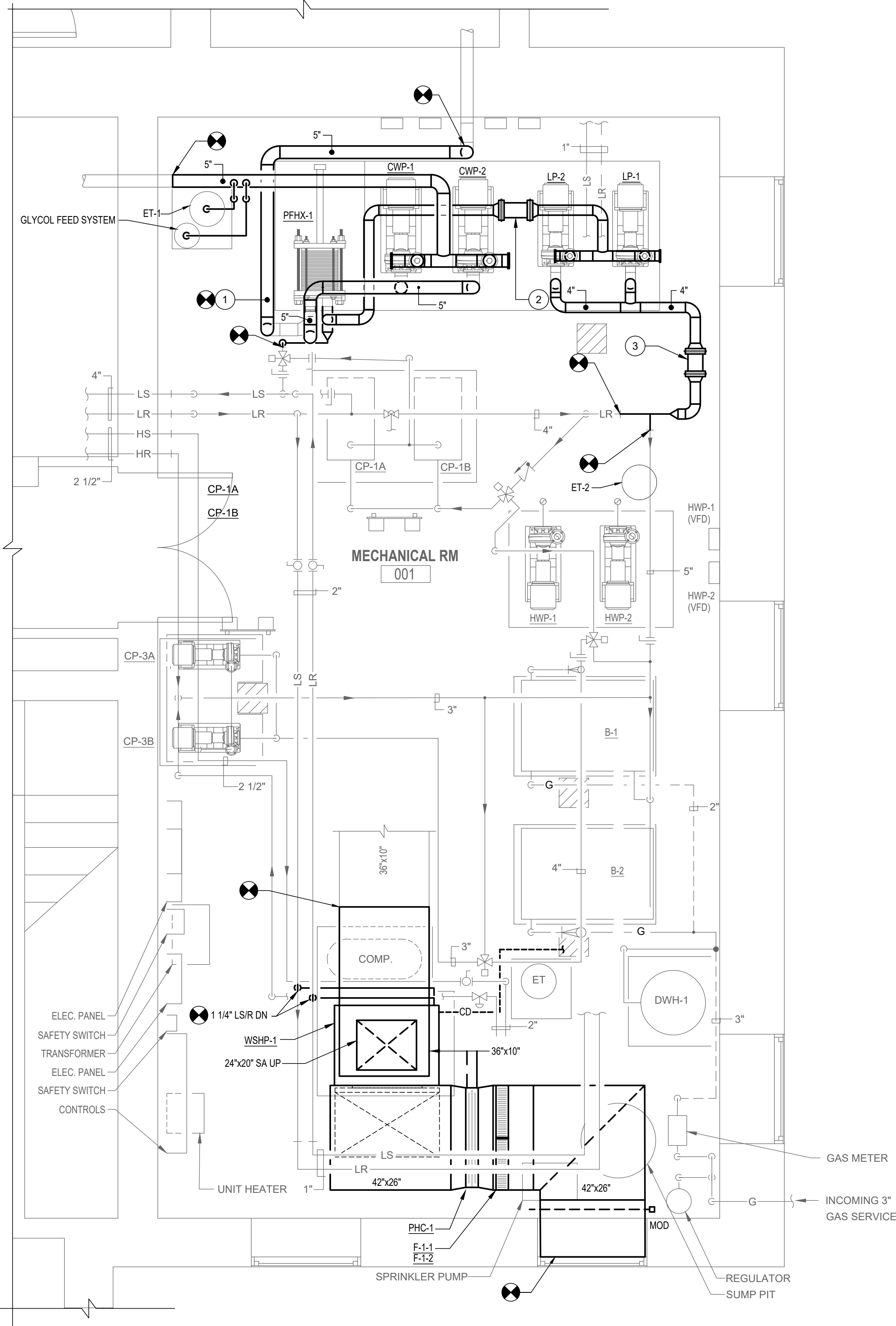
- 1 CONTRACTOR SHALL EXTEND CONCRETE PAD A MINIMUM OF 36" FOR NEW PFHX-1. CONCRETE PAD SHALL BE DOWELED INTO EXISTING CONCRETE HOUSEKEEPING PAD FLUSH WITH TOP OF EXISTING PAD.



1 PHASE 1A - NEW WORK - LOWER LEVEL
M101 3/8"=1'-0"

DRAWING NOTES:

- 1 CONTRACTOR SHALL PROVIDE TEMPORARY 5" CR CONNECTED TO EXISTING 8" CR FROM COOLING TOWER CT-1 TO PROVIDE COOLING TO BUILDING DURING CONSTRUCTION.
- 2 PROVIDE SPOOL PIECE WITH FLANGED CONNECTIONS FOR VALVE PROVIDED UNDER PHASE 3.
- 3 PROVIDE SPOOL PIECE WITH FLANGED CONNECTIONS FOR VALVE PROVIDED UNDER PHASE 2A.



1 PHASE 1A - NEW WORK - UPPER LEVEL
M101 3/8"=1'-0"

PHASING 1A NOTES:

1. ONCE ALL EXISTING COOLING EQUIPMENT IS REMOVED IN PHASE 1, THE NEW COOLING EQUIPMENT CAN BE INSTALLED.
2. INSTALL NEW CONDENSER WATER PUMPS CWP-1,2. LOOP PUMPS LP-1,2. HEATING WATER PUMPS HWP-1,2.
3. CONTRACTOR SHALL EXTEND EXISTING CONCRETE HOUSEKEEPING PAD A MINIMUM OF 3'-0" TO ALLOW FOR INSTALLATION OF NEW PFHX-1. NEW CONCRETE PAD SHALL BE DOWELED INTO EXISTING CONCRETE PAD CREATING A SMOOTH AND LEVEL SURFACE.
4. INSTALL NEW VFD'S FOR ALL PUMPS.
5. INSTALL NEW WATER SOURCE HEAT PUMP UNIT WSH-1. INSTALL NEW SUPPLY DUCTWORK AND OA DUCTWORK CONNECTED TO EXISTING CLEANED OA INTAKE LOUVER. INSTALL NEW DUCT MOUNTED PREHEAT COIL PHC-1 AND DUCT MOUNTED MERV 13 FILTER BANK WITH SIDE ACCESS. PROVIDE TEMPORARY CONNECTION TO EXISTING 2" LR AND LS PIPING.
6. INSTALL NEW PIPING FROM CONDENSER WATER PUMPS CWP-1,2. LOOP PUMPS LP-1,2 AND PFHX-1. CONDENSER WATER SUPPLY SHALL BE CONNECTED TO EXISTING 5" CONDENSER WATER SUPPLY AND RETURN SERVING COOLING TOWER. CONTRACTOR SHALL PROVIDE TEMPORARY CONNECTIONS FROM THE NEW LOOP PIPING FROM PUMPS TO EXISTING LOOP SYSTEM TO ALLOW SYSTEM TO OPERATE DURING CONSTRUCTION.

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TWT	POINT SHIT 57W93	PLAN SCALE:	3/8"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2028		CONTRACT COMPLETION BOX						POINT SHIT 57W93	PROFILE SCALE:		DATE:	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
AS-BUILT PER RECORD PRINT		REVIEWED BY:											
BY: DATE:		CHKD BY: RMH		DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT		SHEET DESIGNATION	CONTRACT NUMBER
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT		MP-401A	24096-P00
PHASE 1A - MECHANICAL ROOM 001 - NEW WORK		JOB ORDER NUMBER	
SUBDIVISION: REISTERSTOWN		SHEET 31 OF 60	
12035 Reisterstown Rd, Reisterstown, MD 21136		DRAWING NUMBER	
ELECTION DIST. NO.: 4 c 4		2024-1257	
		FILE NO.: 8	

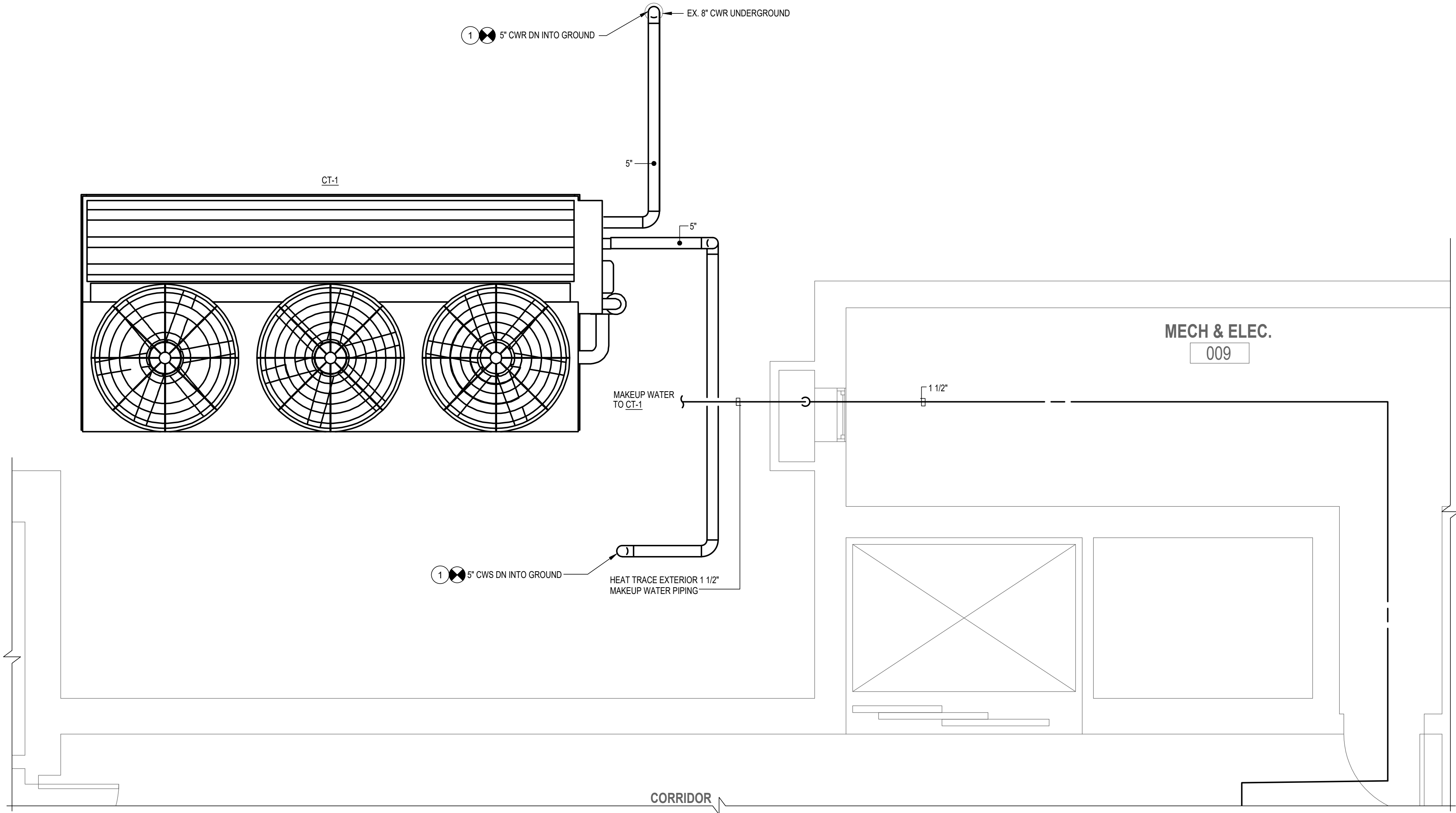
DWG. FILENAME: PHASE 1A - NEW WORK - MECHANICAL ROOM 001

PHASING 1B NOTES:

- CONTRACTOR SHALL INSTALL NEW CONCRETE SUPPORT FOR COOLING TOWER CT-1.
- ONCE SUPPORTS ARE INSTALLED AND CURED, CONTRACTOR SHALL INSTALL NEW COOLING TOWER CT-1.
- INSTALL NEW 5" CS/ CR AND PROVIDE CONNECTION TO EXISTING PIPING UNDERGROUND SERVING THE BUILDING.
- INSTALL NEW 1 1/2" MAKE UP WATER LINE TO CEILING OF MECH/ELEC 009 AND ROUTE TO MECHANICAL ROOM AND PROVIDE CONNECTION.
- NEW 1 1/2" MAKE UP WATER LINE SHALL BE HEAT TRACED.

DRAWING NOTES:

- NEW 5" CWS AND 5" CWR SHALL BE ROUTED FROM NEW COOLING TOWER CT-1 AND CONNECTED TO EXISTING 5" CWS AND 8" CWR AT 12" ABOVE GRADE.



2 PHASE 1B - COOLING TOWER - MECHANICAL NEW WORK
M101 3/8"=1'-0"

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						KEY SHIT TWM	POINT SHIT 57NW30	PLAN SCALE: 3/8"=1'-0"	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026							POINT SHIT 57NW30		PROPERTY MANAGER	
	CONTRACT COMPLETION BOX							POINT SHIT 56NW30	PROFILE SCALE: _____	DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
AS-BUILT PER RECORD PRINT		REVIEWED BY:									
BY: _____ DATE: _____		CHKD BY: RMH	DATE REVIEWED:								

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

PHASE 1B - COOLING TOWER - MECHANICAL NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

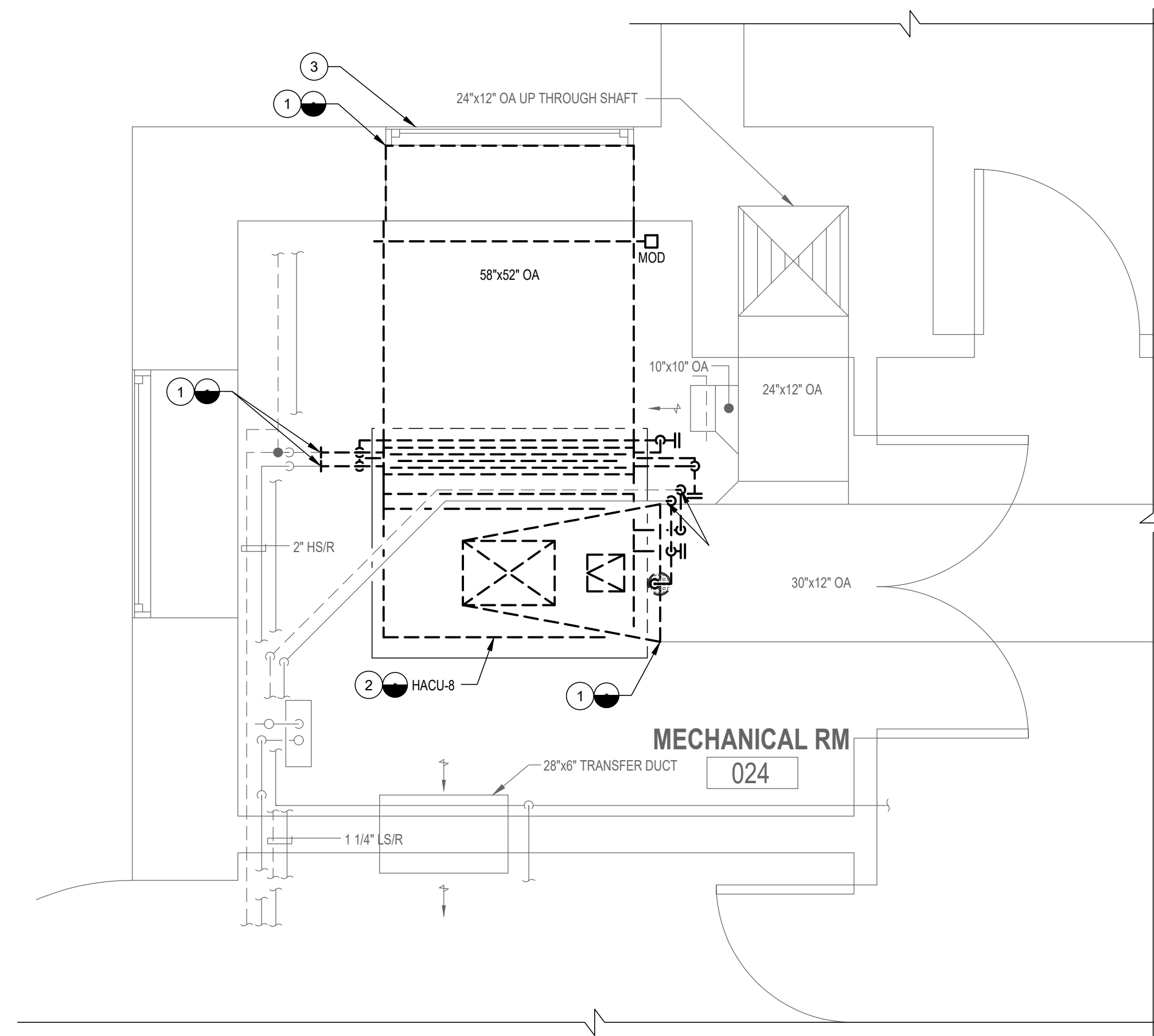


SHEET DESIGNATION	CONTRACT NUMBER
MP-401B	24096-P00
JOB ORDER NUMBER	
SHEET 32 OF 60	
DRAWING NUMBER	
2024-1258	
FILE NO.: 8	



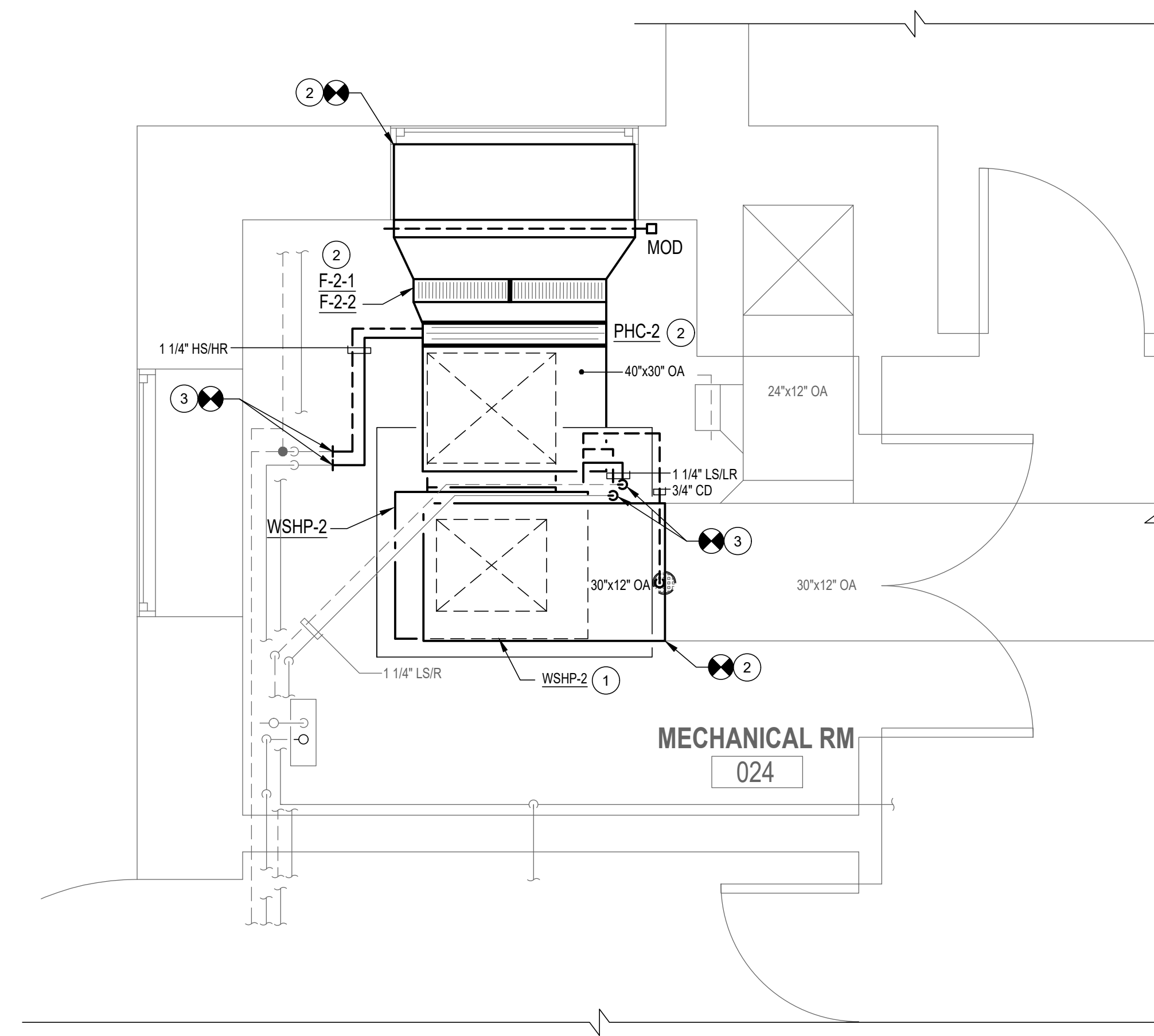
DWG. FILENAME: PHASE 1B - COOLING TOWER - MECHANICAL NEW WORK

- ① CONTRACTOR SHALL REMOVE EXISTING DUCTWORK, PIPING, DUCT MOUNTED PREHEAT COIL AND ALL ASSOCIATED PIPING VALVES AND TRIM BACK TO POINT OF DISCONNECTION.
- ② REMOVE EXISTING OUTSIDE AIR UNIT HACU-8. ONCE UNIT IS REMOVED, REPAIR EXISTING CONCRETE PAD A REQUIRED TO A SMOOTH WORKING SURFACE.
- ③ CONTRACTOR SHALL CLEAN EXISTING OA INTAKE DAMPER AND SCREEN, PROVIDE TEMPORARY WEATHERTIGHT BLANK-OFF FOR LOUVER WHILE NEW UNIT IS BEING INSTALLED.

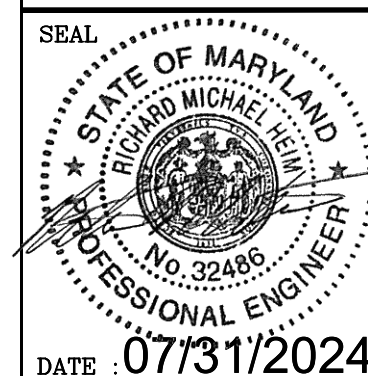


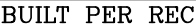
3 PHASE 1C - MECHANICAL ROOM 024 - MECHANICAL DEMOLITION
MD101 1/2"=1'-0"

- 1 CONTRACTOR SHALL INSTALL NEW WSPH-2 UNIT ON EXISTING CONCRETE PAD.
- 2 INSTALL NEW 30"x12" OA SUPPLY MAIN FROM WSPH-2 TO EXISTING 30"x12" OA SUPPLY MAIN AT POINT OF CONNECTION. INSTALL NEW 30"x12" OA INTAKE DUCT ON DUCT MOUNTED PH-2, DUCT MOUNTED MERV SIDE ACCESS FILTER BANK. REMOVE TEMPORARY BLANK-OFF AND PROVIDE DUCT TRANSITION FROM FILTER BANK TO EXISTING CLEANED OA INTAKE LOUVER AND PROVIDE CONNECTION.
- 3 INSTALL NEW H/SR, L/SR FROM EXISTING MAINS AND PROVIDE CONNECTION TO NEW WSPH-2 UNIT. PROVIDE 3/4" CONDENSATE FROM WSPH-2 UNIT CONNECTION SLOPED AT MINIMUM OF 1/8" PER FOOT WITH INDIRECT CONNECTION TO EXISTING FLOOR DRAIN.



3 PHASE 1C - MECHANICAL ROOM 024 - MECHANICAL NEW WORK
MD101 1/2"=1'-0"



PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE		PROPERTY MANAGEMENT	
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. <u>32486</u> EXPIRATION DATE <u>01-06-2026</u>							KEY SHT NW		PLAN SCALE: <u>1/2"=1'-0"</u>	APPROVED BY: _____		
							R.O.W. NO.		POST. SHT SW/WS POST. SHT SW/WS POST. SHT SW/WS POST. SHT SW/WS	PROPERTY MANAGER _____		
		CONTRACT COMPLETION BOX							PROFILE SCALE: _____	DATE: _____		
 RMP ENGINEERING INC. 100 RESEARCH PARK DRIVE SUITE 500 BALTIMORE MD 21228 P 410-338-5055 F 410-338-5057		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
DGN BY: _____ JDS		REVIEWED BY: _____										
AS-BUILT PER RECORD PRINT BY: _____ DATE: _____		CHKD BY: _____ RML		DATE REVIEWED: _____								

PHASE 1C - MECHANICAL ROOM 024 - PIPING DEMOLITION

12035 Reisterstown Rd, Reisterstown, MD 21136

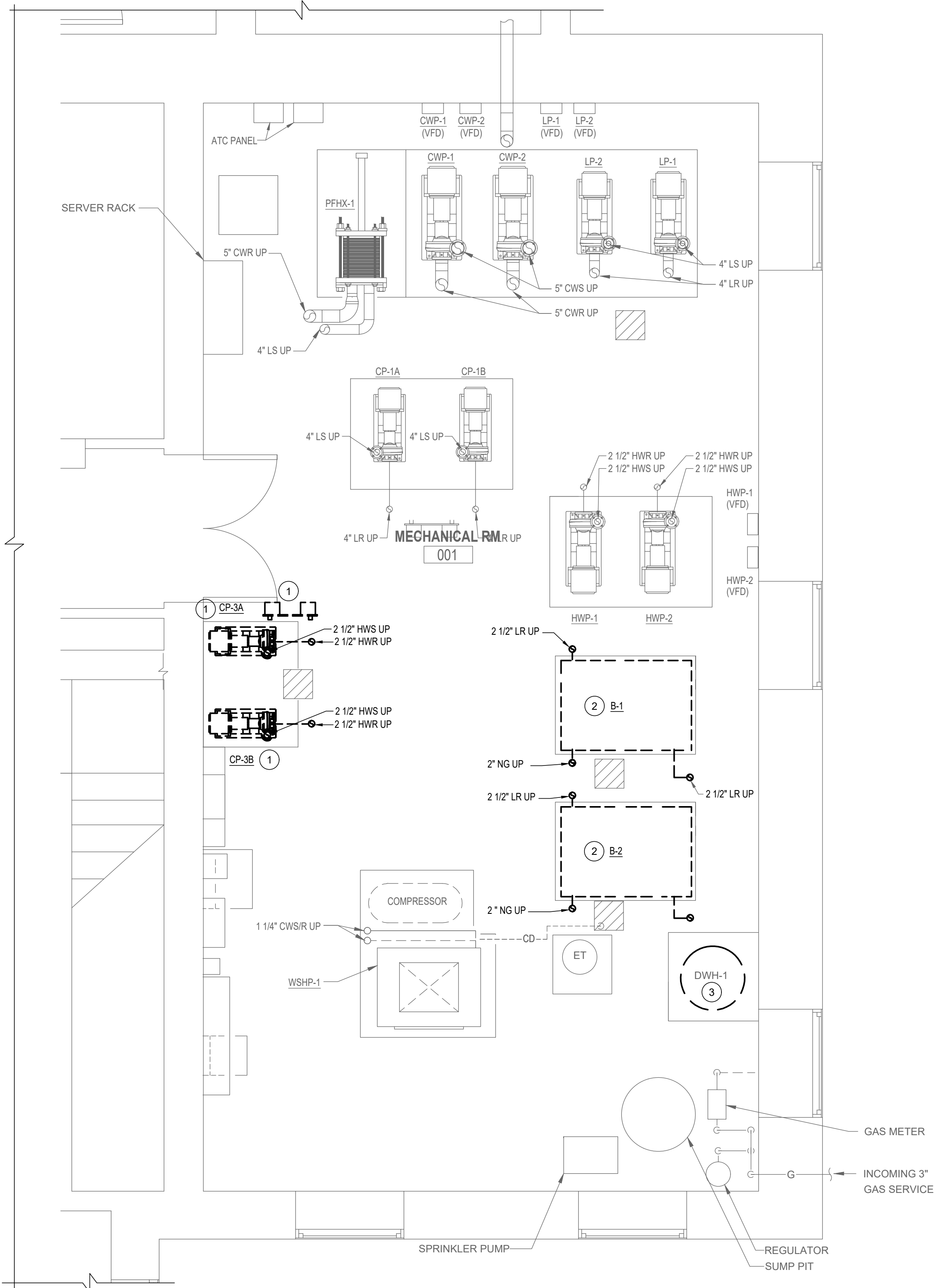
ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
MP-401C	24096-P00
	JOB ORDER NUMBER
	SHEET 33 OF 60
	DRAWING NUMBER
	2024-1259
	FILE NO.: 8

DWG. FILENAME: PHASE 1C - DEMOLITION - MECHANICAL ROOM U24

DRAWING NOTES:

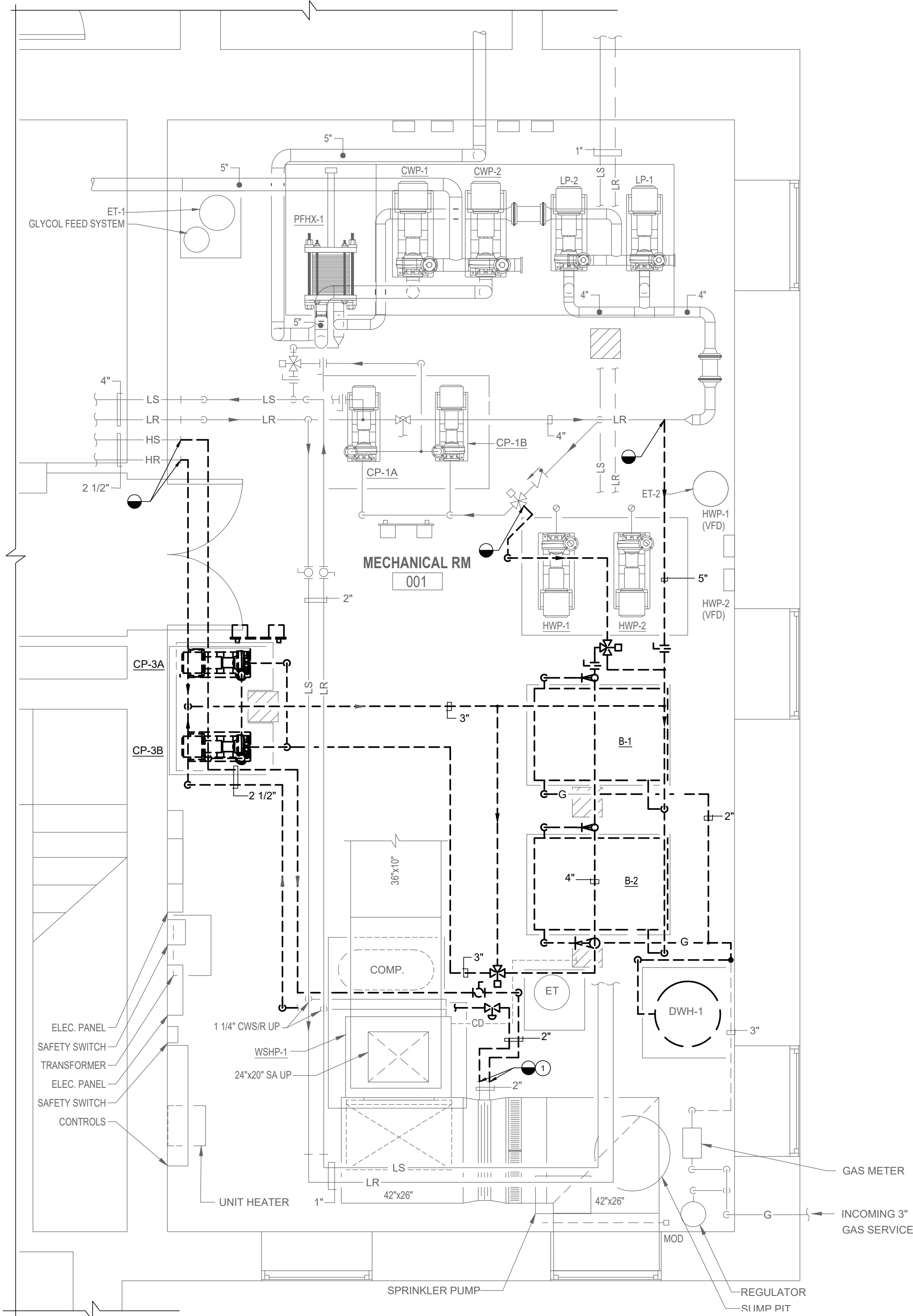
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING HEATER WATER PUMPS CP-3A, 3B AND ALL ASSOCIATED PIPING VALVES, TRIM AND CONTROLS.
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING BOILER B-1, B-2 AND ALL ASSOCIATED PIPING VALVES, TRIM AND CONTROLS.
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING WATER HEATER DWH-1 AND ALL ASSOCIATED PIPING VALVES, TRIM AND CONTROLS.



1 PHASE 2 - DEMOLITION - LOWER LEVEL MECHANICAL ROOM 001
M101 3/8"=1'-0"

DRAWING NOTES:

- CONTRACTOR SHALL DISCONNECT 2" HS/R FROM EXISTING 2" HSR MAINS AND PROVIDE TEMPORARY CAPS ON WSHP-1 DUCT MOUNTED REHEAT COIL CONNECTIONS.



1 PHASE 2 - DEMOLITION - LOWER LEVEL MECHANICAL ROOM 001
M101 3/8"=1'-0"

PHASING 2 NOTES:

- CONTRACTOR SHALL DISCONNECT EXISTING 5" LR FROM SYSTEM. PROVIDE TEMPORARY CONNECTION FROM 5" LR FROM PUMPS LP-1, LP-2 TO ALLOW FOR LOOP SYSTEM TO OPERATE WHILE HEATING SYSTEM IS BEING REMOVED AND REINSTALLED.
- REMOVE EXISTING HEATING WATER PUMPS CP-3A, CP-3B AND ALL ASSOCIATED PIPING, VALVES, TRIM AND CONTROLS.
- REMOVE EXISTING BOILERS B-1, B-2 AND ALL ASSOCIATED VALVES, PIPING, FLUES AND CONTROLS.
- REMOVE EXISTING HEATING WATER SYSTEM PIPING.
- INSTALL NEW HEATING WATER PUMPS HWP-1, HWP-2 AND ALL ASSOCIATED PIPING, VALVES, TRIM AND CONTROLS.
- INSTALL NEW BOILERS B-1, B-2 AND ALL ASSOCIATED PIPING, VALVES, TRIM, FLUES AND CONTROLS.
- INSTALL NEW HEATING WATER SYSTEM PIPING.



PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 32486 EXPIRATION DATE 01-06-2028									KEY SHIT TWT	POINT SHIT 57W93	PLAN SCALE: 3/8"=1'-0"	APPROVED BY: _____	
									R.O.W. NO.	POINT SHIT 57W93	PROFILE SCALE: _____	DATE: _____	
										POINT SHIT 56W93	FIELD ENGINEER		
BUREAU OF ENGINEERING AND CONSTRUCTION				CONTRACT COMPLETION BOX									
DGN BY: JTA				TRAFFIC									
DWN BY: JTA				REVIEWED BY:									
AS-BUILT PER RECORD PRINT				DATE REVIEWED:									
BY: _____													
CHKD BY: RMH													

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT
PHASE 2 - LOWER LEVEL MECHANICAL ROOM 001 - DEMOLITION
SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136



SHEET DESIGNATION	CONTRACT NUMBER
MP-402	24096-P00
JOB ORDER NUMBER	
SHEET 34 OF 60	
DRAWING NUMBER	
2024-1260	
FILE NO.: 8	



DWG. FILENAME: PHASE 2 - DEMOLITION - LOWER LEVEL MECHANICAL ROOM 001

DRAWING NOTES:

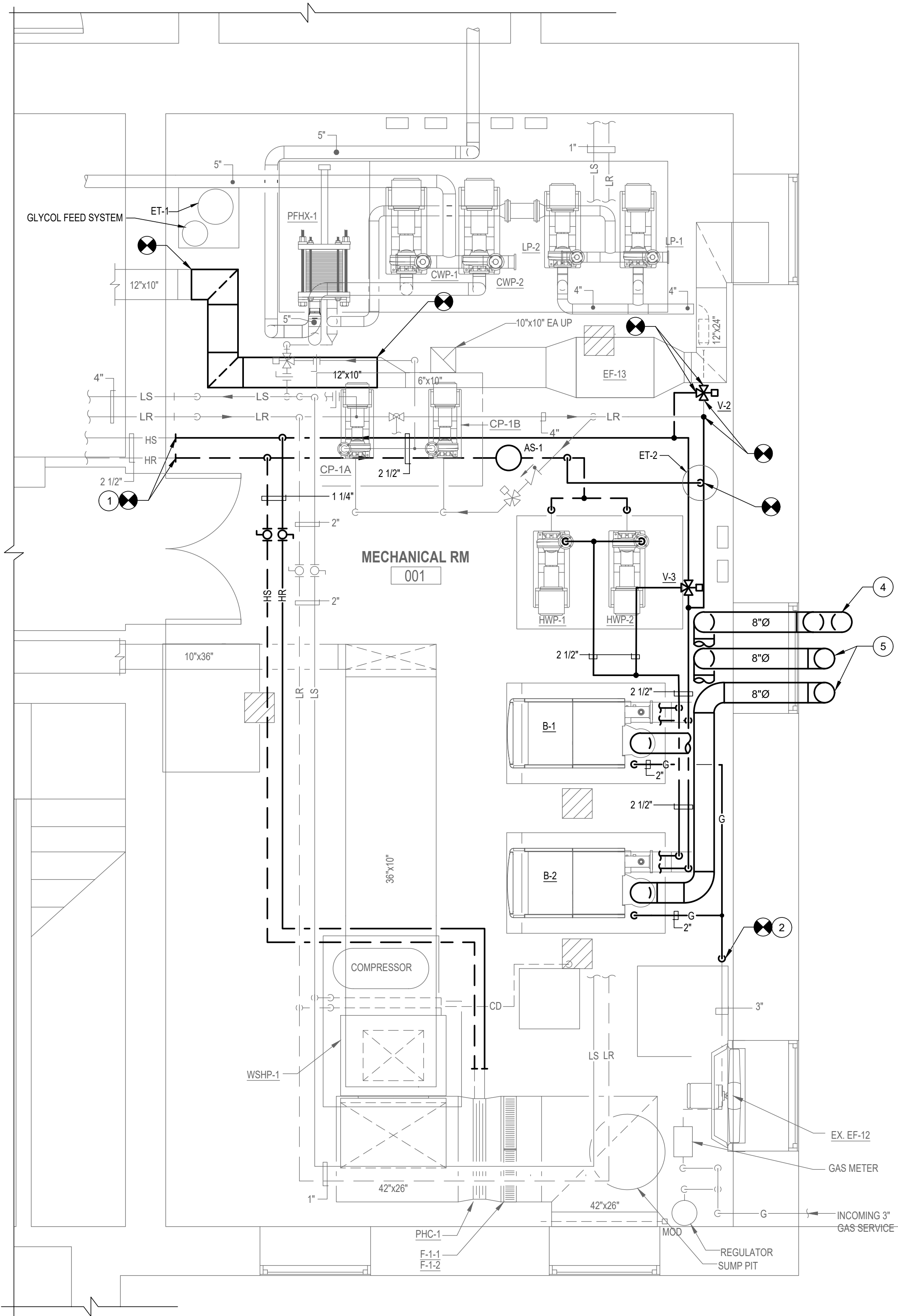
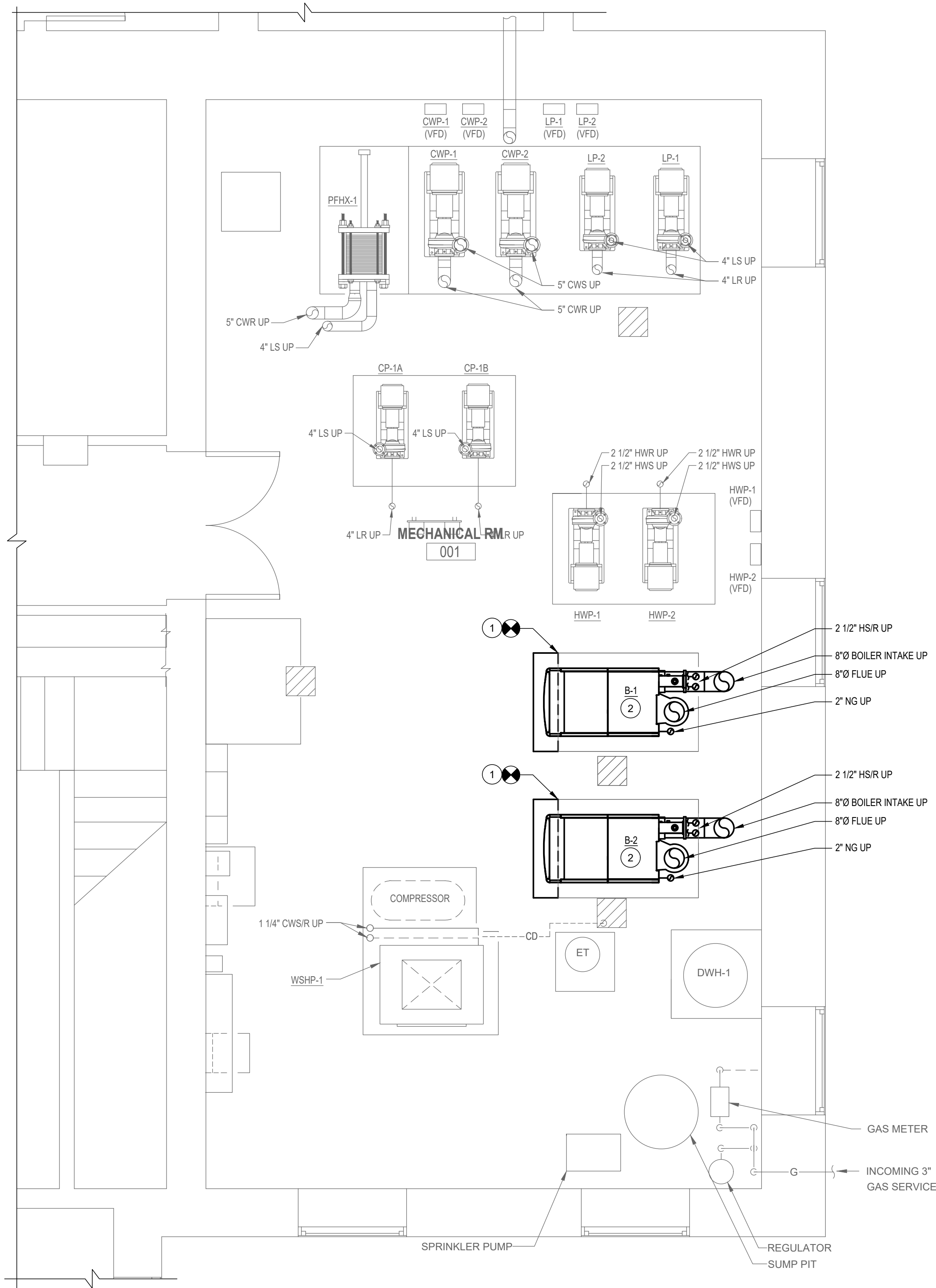
- CONTRACTOR SHALL EXTEND CONCRETE HOUSING PAD A MINIMUM OF 10". NEW PAD SHALL BE DOWELED INTO EXISTING PAD AND FLUSH FOR NEW BOILER INSTALLATION.
- FURNISH AND INSTALL NEW BOILERS B-1, B-2 AND ALL ASSOCIATED PIPING, VALVES AND TRIM PER MANUFACTURERS IOM'S.

DRAWING NOTES:

- INSTALL NEW HEATING WATER SYSTEM AND PROVIDE CONNECTION TO EXISTING HEATING WATER MAINS SERVING THE BUILDING SYSTEM. PROVIDE CONNECTIONS TO HWP-1, HWP-2, B-1, B-2 AND WSHP-1 DUCT MOUNTED PREHEAT COIL.
- CONNECT NEW 2" NG TO EXISTING 2" NG MAIN AND PROVIDE CONNECTION TO NEW BOILERS B-1 AND B-2.
- INSTALL NEW 8" BOILER STAINLESS STEEL INTAKE PIPE FROM BOILERS B-1, B-2. INTAKE PIPE SHALL BE TERMINATED A MINIMUM OF 3'-0" ABOVE GRADE WITH TURNDOWN.
- INSTALL NEW STAINLESS STEEL BOILER FLUE'S FROM BOILERS B-1 AND B-2. BOILER FLUES SHALL BE A MINIMUM OF 6" OFF WALL AND TERMINATE A MINIMUM OF 12'-0" ABOVE GRADE AND 4'-0" BELOW ANY OPERABLE WINDOWS.

PHASING 2A NOTES:

- INSTALL NEW BOILERS B-1, B-2 AND ALL ASSOCIATED PIPING VALVES, TRIM AND CONTROLS.
- INSTALL NEW STAINLESS STEEL BOILER FLUE'S AND INTAKE PIPES FROM BOILER B-1 AND B-2.
- INSTALL NEW HEATING WATER SYSTEM AND PROVIDE CONNECTION TO BOILER B-1, B-2, HWP-1, HWP-2 AND WSHP-1 DUCT MOUNTED PREHEAT COIL.
- PROVIDE GAS CONNECTIONS FROM EXISTING GAS MAIN TO NEW BOILERS B-1 AND B-2.
- INSTALL CHECK VALVE AND PROVIDE CONNECTIONS TO EXISTING LOOP SYSTEM TO ALLOW SYSTEM TO OPERATE WHILE HEATING EQUIPMENT IS BEING REMOVED AND REINSTALLED.



1 PHASE 2A - NEW WORK - LOWER LEVEL MECHANICAL ROOM 001
M101 3/8"=1'-0"

1 PHASE 2A - NEW WORK - UPPER LEVEL MECHANICAL ROOM 001
M101 3/8"=1'-0"

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHEET TNY	POINT SH 57W93	PLAN SCALE: 3/8"=1'-0"	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2028		CONTRACT COMPLETION BOX						POINT SH 57W93	PROFILE SCALE: _____	DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY:									

SHEET DESIGNATION		CONTRACT NUMBER	
MP-402A		24096-P00	
		JOB ORDER NUMBER	
		SHEET 35 OF 60	
		DRAWING NUMBER	
		2024-1261	
DATE: 07/31/2024		FILE NO.: 8	

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

PHASE 2A - MECHANICAL ROOM 001 - NEW WORK

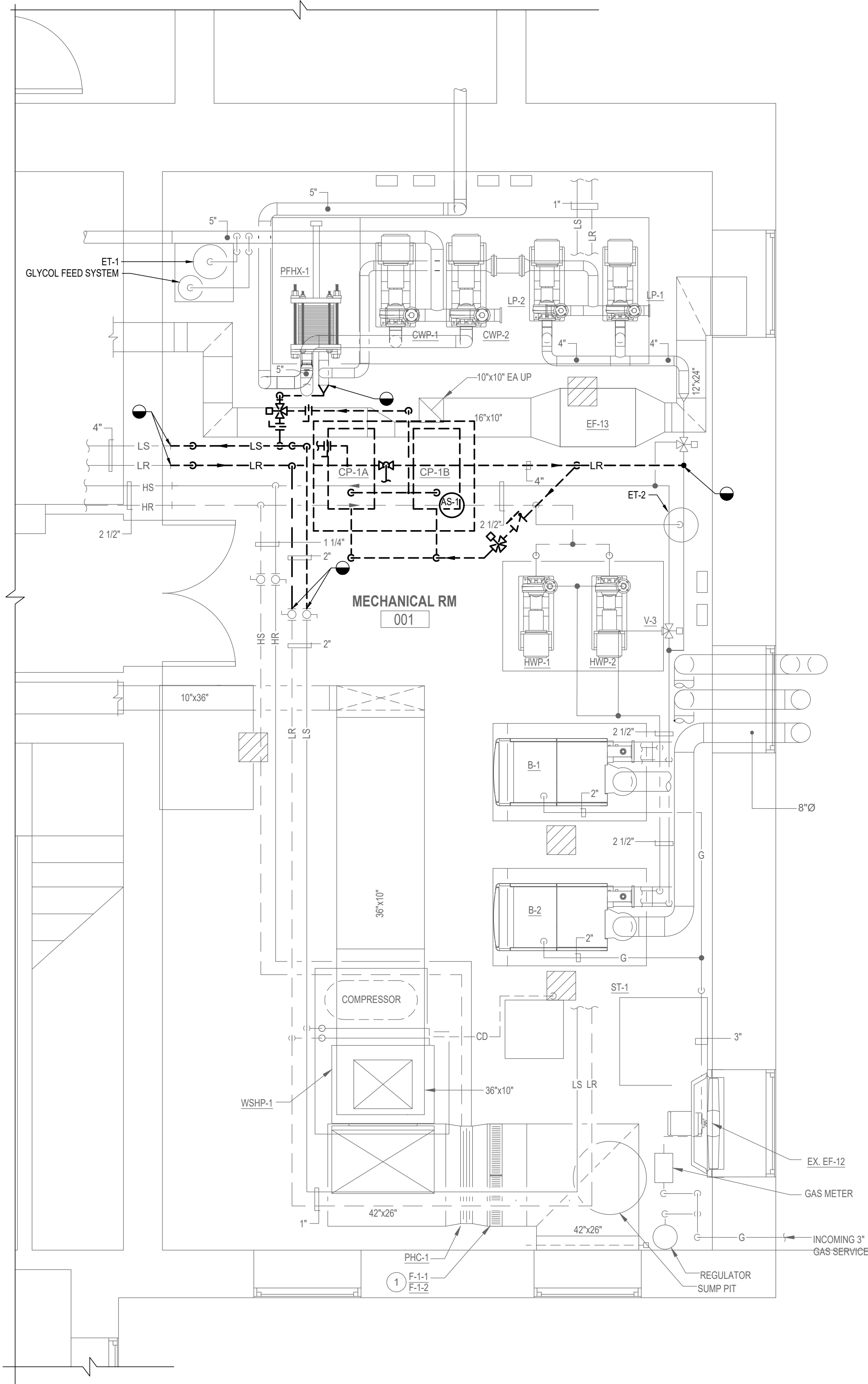
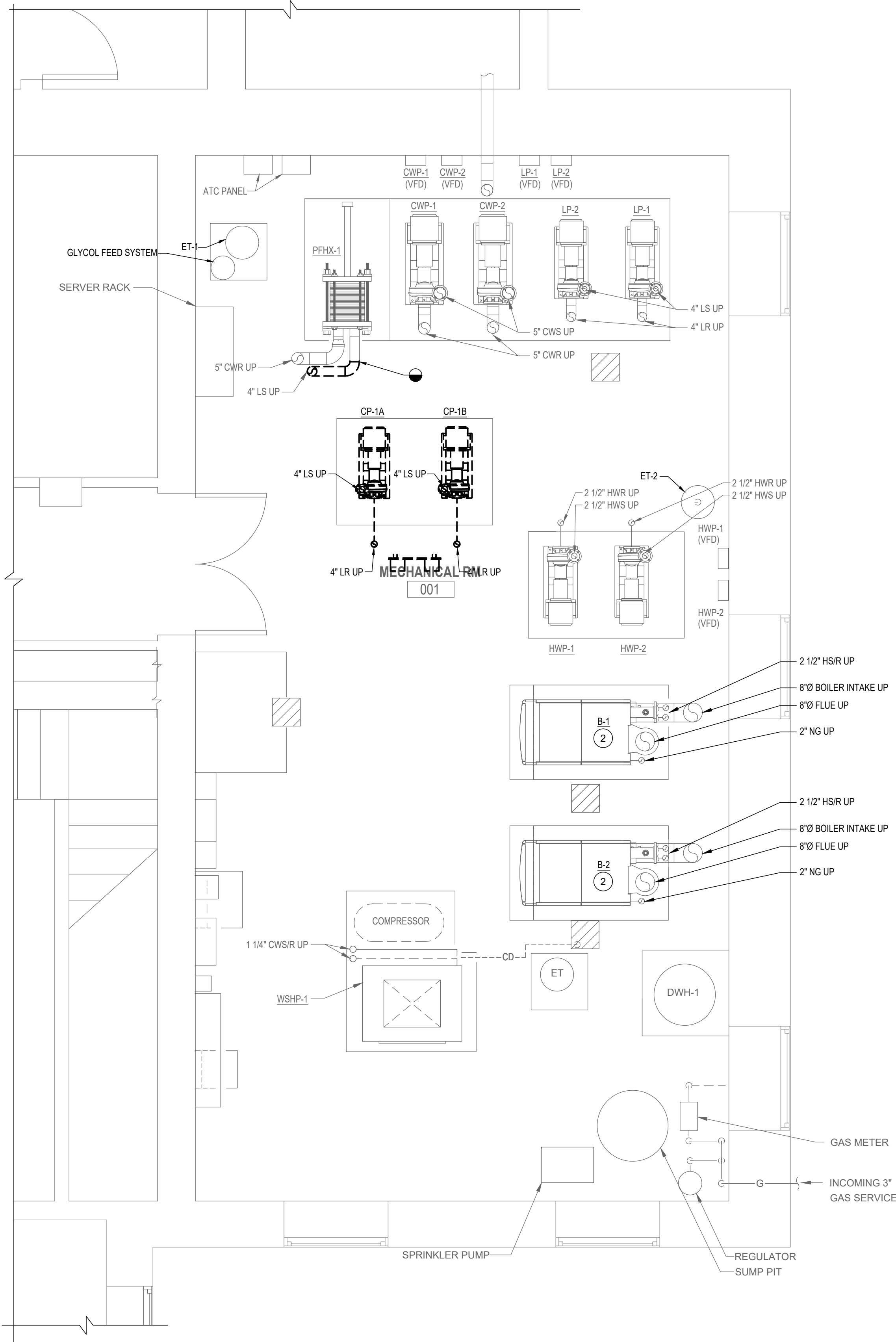
SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

DWG. FILENAME: PHASE 2A - NEW WORK - MECHANICAL ROOM 001

PHASING NOTES:
1. PHASE 3 SHALL CONSIST OF THE REMOVAL OF THE EX. LOOP PUMPS. CONTRACTOR SHALL DISCONNECT ASSOCIATED PIPES AT LOOP RETURN AND LOOP SUPPLY MAINS.



1 PHASE 3 - DEMOLITION - MECHANICAL ROOM 001 - LOWER LEVEL
M101 3/8"=1'-0"

2 PHASE 3 - DEMOLITION - MECHANICAL ROOM 001 - UPPER LEVEL
M101 3/8"=1'-0"

SEAL DATE: 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TWT	POINT SHIT 57W93	PLAN SCALE: 3/8"=1'-0"	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX						POINT SHIT 57W93	PROFILE SCALE: _____	DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY:									

SHEET DESIGNATION		CONTRACT NUMBER	
MP-403		24096-P00	
		JOB ORDER NUMBER	
		SHEET 36 OF 60	
		DRAWING NUMBER	
		2024-1262	
FILE NO.: 8			

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

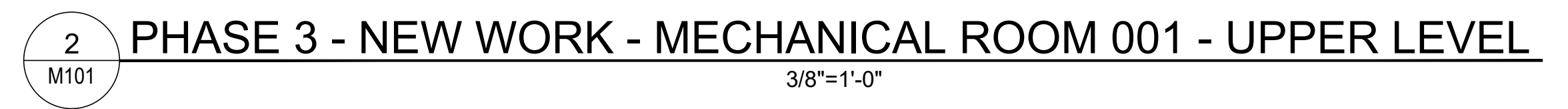
PHASE 3 - MECHANICAL ROOM 001 - DEMOLITION

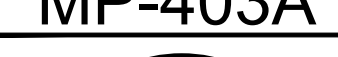
SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

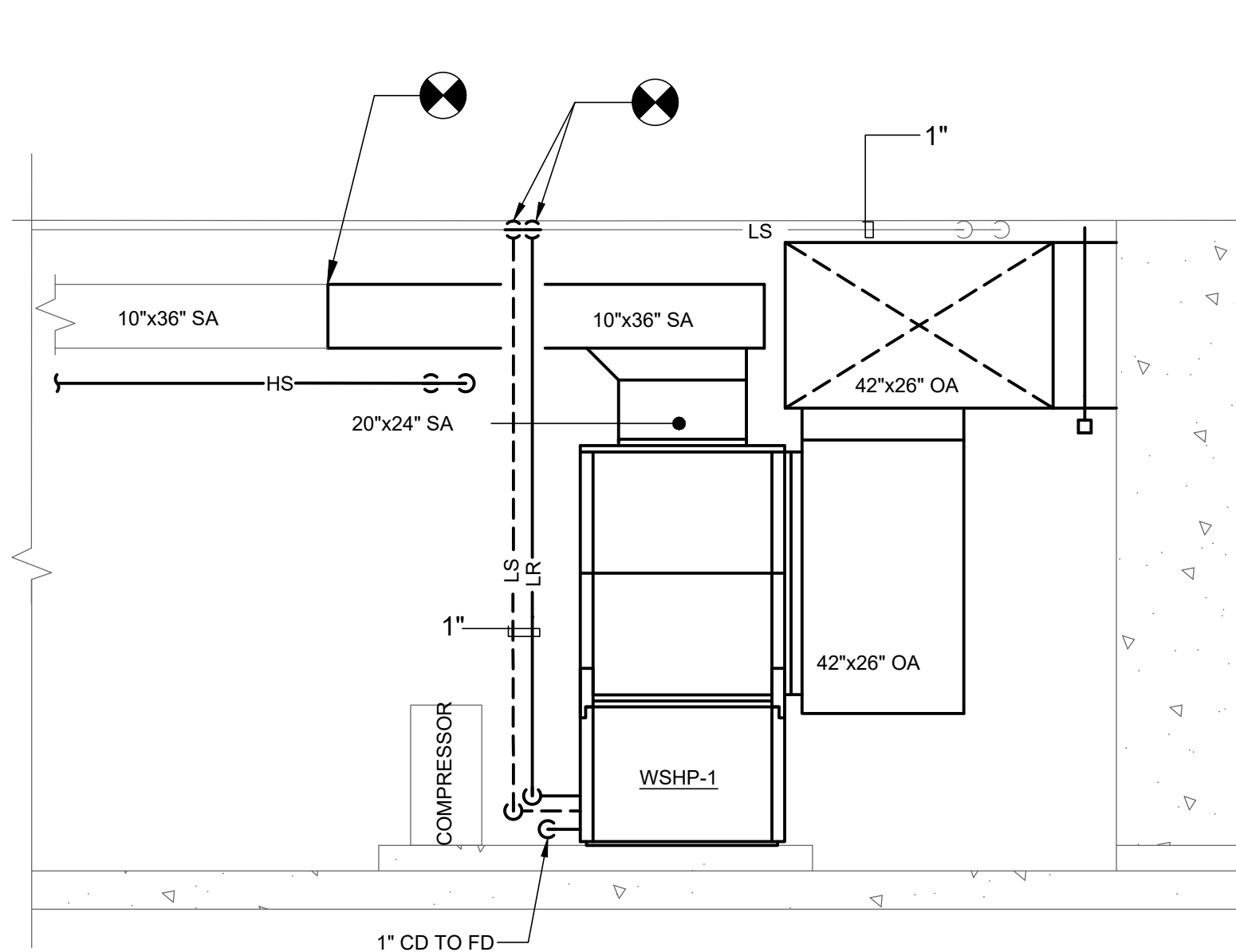
ELECTION DIST. NO.: 4 c 4

DWG. FILENAME: PHASE 3 - NEW WORK - MECHANICAL ROOM 001

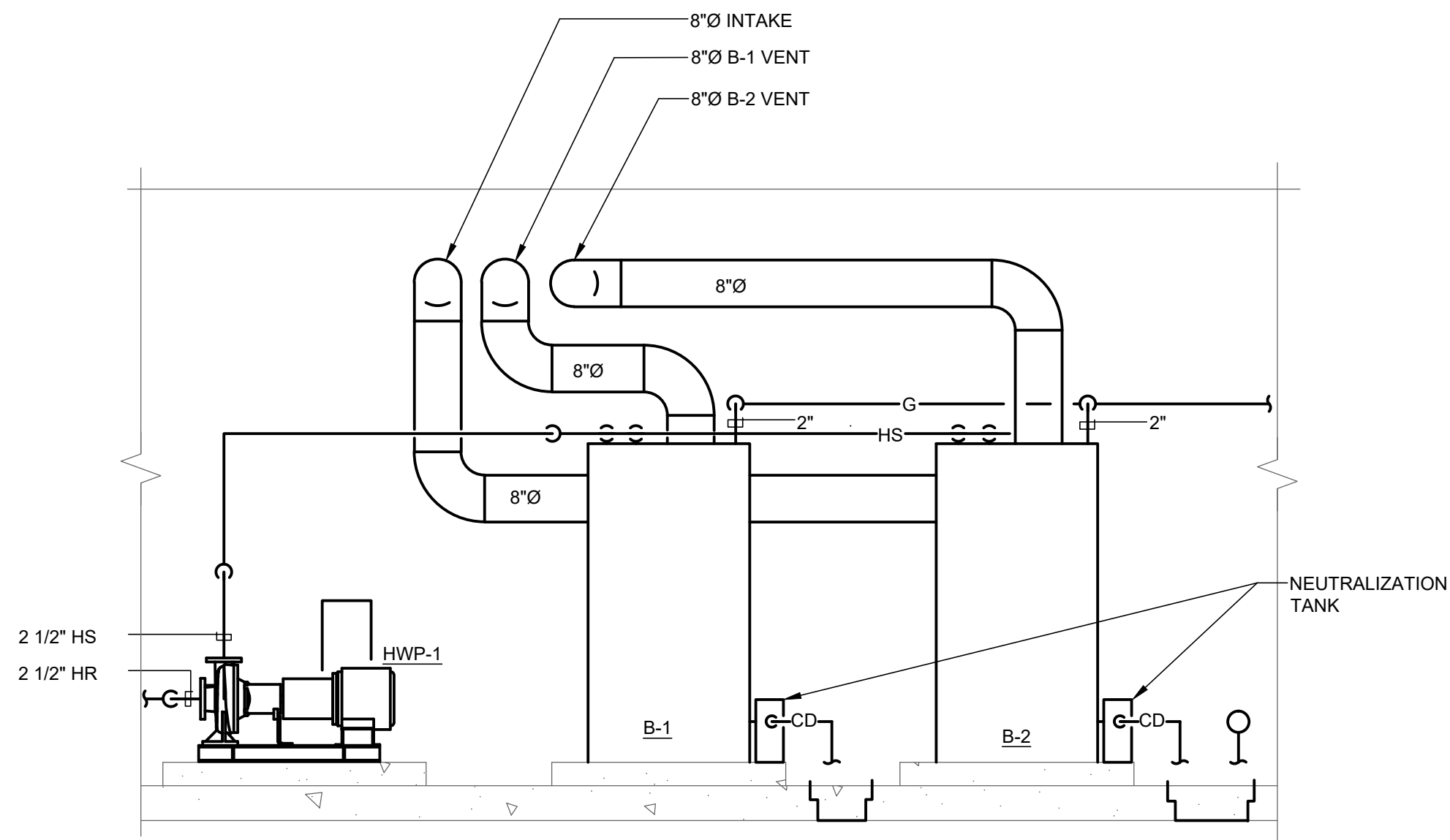


BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT			MP-403A	24096-P00
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT			JOB ORDER NUMBER	
PHASE 3 - MECHANICAL ROOM 001 - NEW WORK			SHEET 37 OF 60	
SUBDIVISION: REISTERSTOWN			DRAWING NUMBER	2024-1263
12035 Reisterstown Rd, Reisterstown, MD 21136	ELECTION DIST. NO.: 4 c 4		FILE NO.: 8	

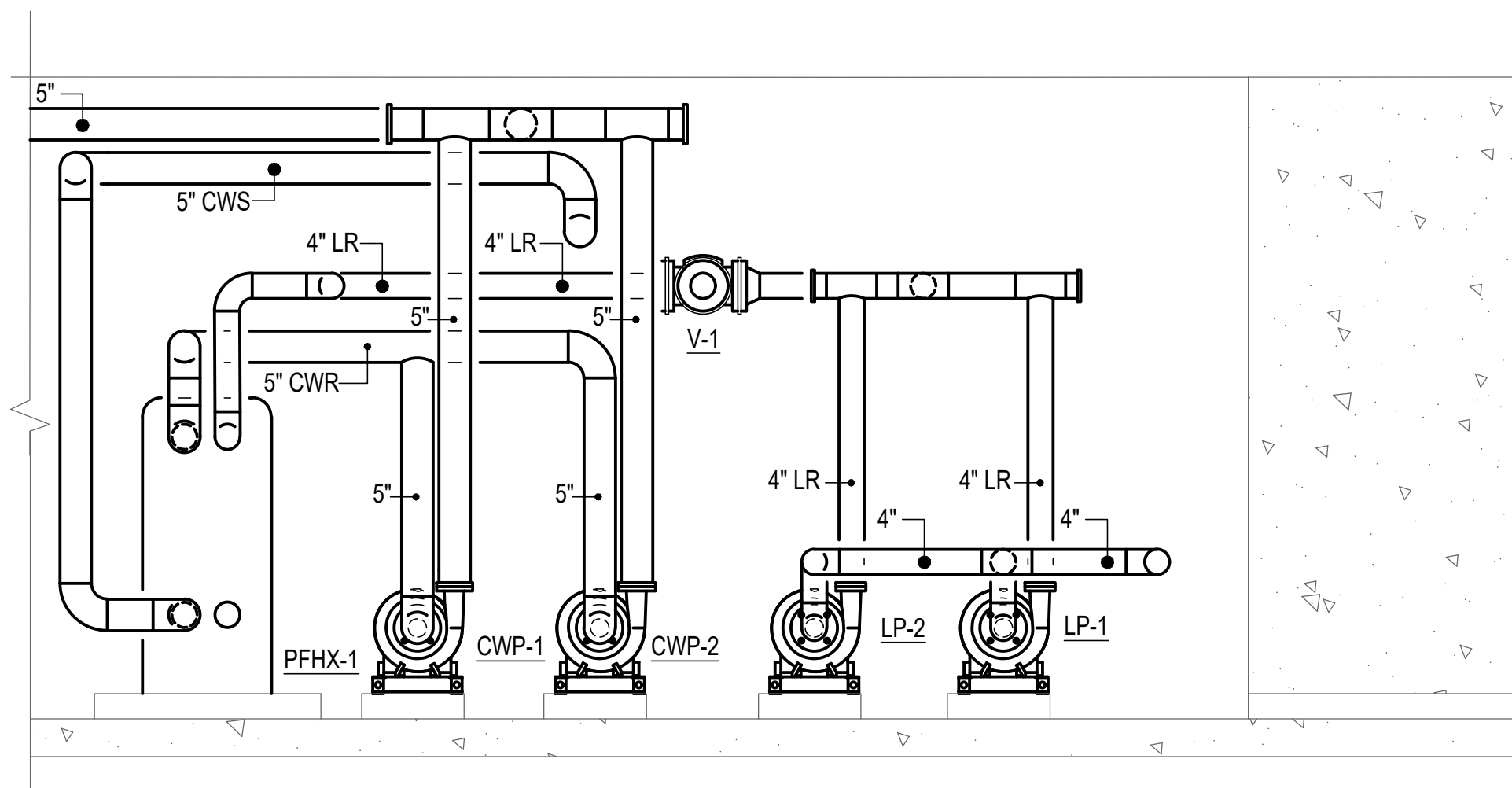
DWG. FILENAME: PHASE 3 - NEW WORK - MECHANICAL ROOM 001



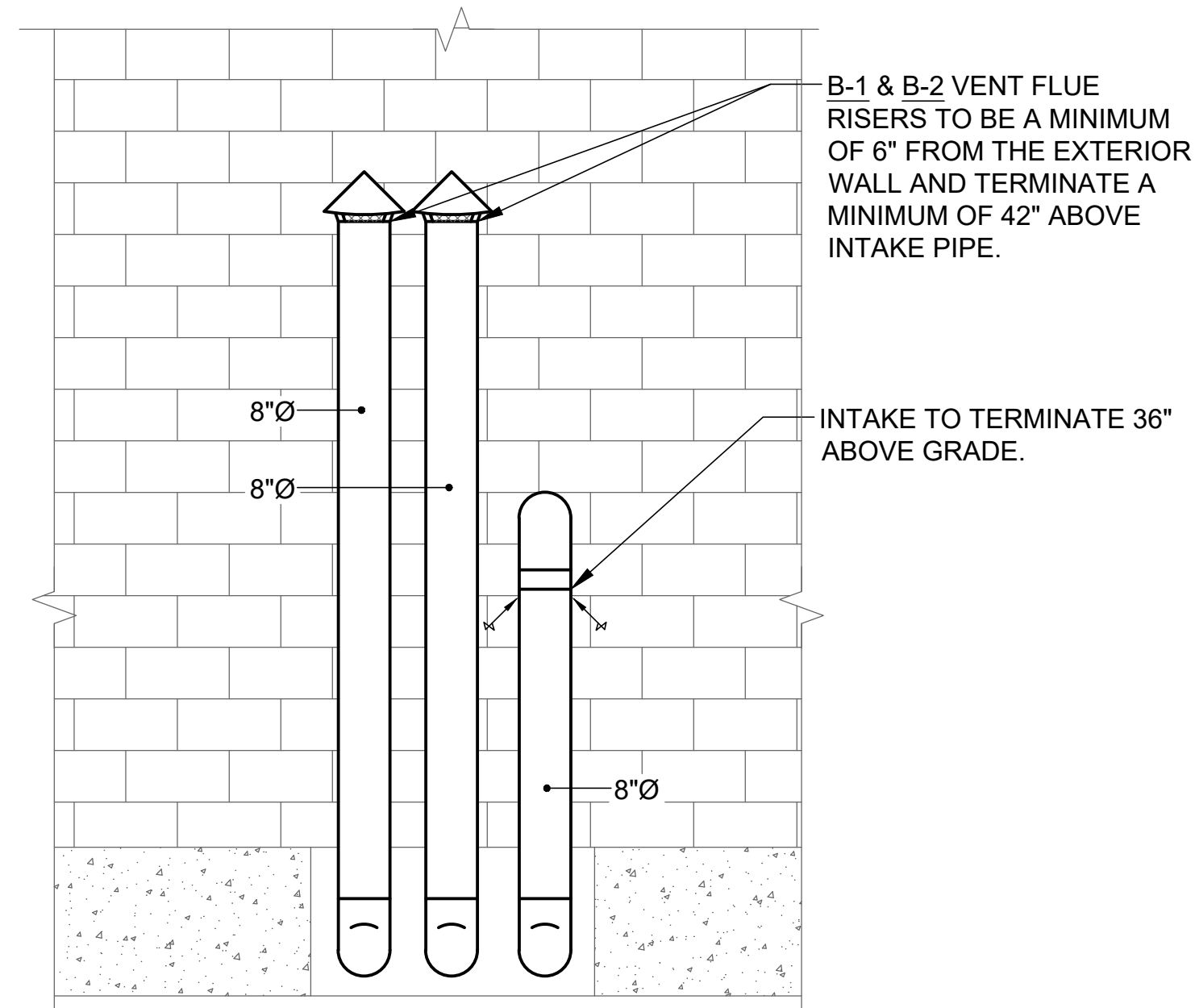
1 MECHANICAL ROOM - NEW WORK
M401 1/2"=1'-0"



2 MECHANICAL ROOM - NEW WORK
M401 1/2"=1'-0"



3 MECHANICAL ROOM - NEW WORK
M401 1/2"=1'-0"



4 MECHANICAL ROOM - NEW WORK
M401 1/2"=1'-0"

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.							KEY SHIT TNY	POINT SHIT 57NW30	PLAN SCALE: 1/2"=1'-0"	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026							R.O.W NO.	POINT SHIT 57NW30	PROFILE SCALE: _____	DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		CONTRACT COMPLETION BOX						POINT SHIT 56NW30			
	AS-BUILT PER RECORD PRINT		REVIEWED BY:									
BY: _____	DATE: _____	CHKD BY: RMH	DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL - SECTIONS

SUBDIVISION: REISTERSTOWN

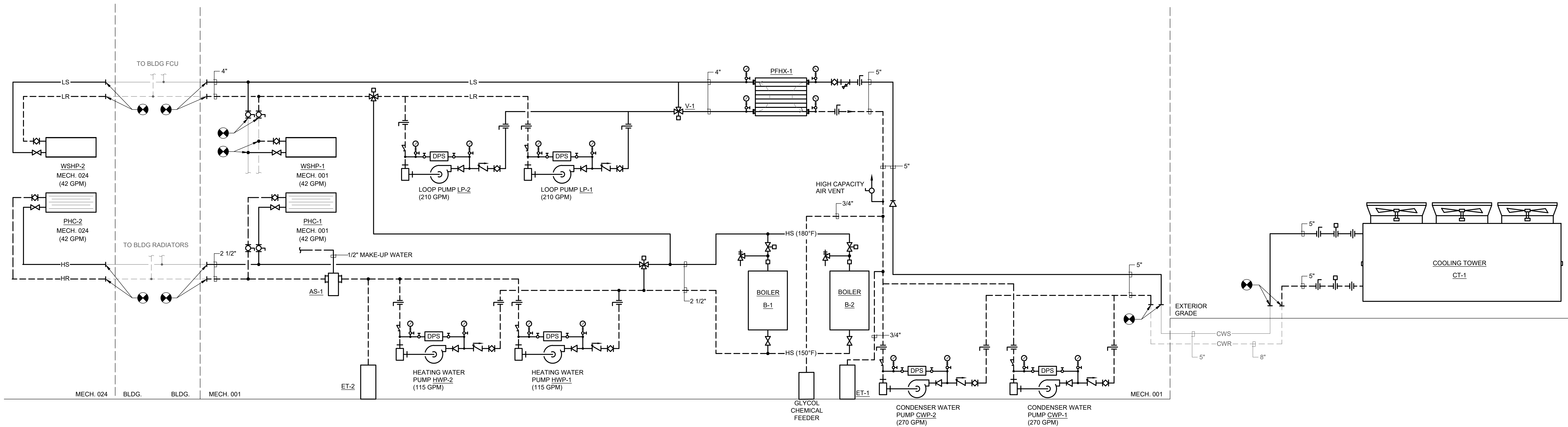
12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-501	24096-P00
JOB ORDER NUMBER	
SHEET 39 OF 60	
DRAWING NUMBER	
2024-1264	
FILE NO.: 8	



DWG. FILENAME: MECHANICAL -NEW WORK - MECHANICAL ROOM 024



MECHANICAL PIPING SCHEMATIC
NONE

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TWM	POINT SHIT 57NW39	PLAN SCALE:	APPROVED BY: _____ PROPERTY MANAGER	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX						POINT SHIT 57NW39	PROFILE SCALE:	DATE: _____	
	RFM ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 P: 410-528-0200 F: 410-302-0372		DGN BY: JTA	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	
	AS-BUILT PER RECORD PRINT		DWN BY: JTA	REVIEWED BY:								
BY: _____ DATE: 07/31/2024		CHKD BY: RMH	DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT
MECHANICAL SCHEMATIC DRAWINGS
SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136 ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-601	24096-P00
JOB ORDER NUMBER	
SHEET 39 OF 60	
DRAWING NUMBER	
2024-1265	
FILE NO.: 8	



DWG. FILENAME: MECHANICAL SCHEMATIC DIAGRAMS

ABBREVIATIONS

AI	ANALOG INPUT	LS	LEVEL SENSOR
AF	AIR FILTER	LMC	LAB MODULE CONTROLLER
AHU	AIR HANDLING UNIT	LSP	LOW STATIC PRESSURE TRANSMITTER
AMS	AIR MONITORING STATION		
AO	ANALOG OUTPUT	MBC	MODULAR BUILDING CONTROLLER
AQ	AQUASTAT	M	MAIN AIR
		MCC	MOTOR CONTROL CENTER
BAS	BUILDING AUTOMATION SYSTEM	MCP	MANUFACTURERS CONTROL PANEL
		MPS	MEDIUM PRESSURE STEAM
CAV	CONSTANT AIR VOLUME	MG	MAGNEHELIC GAUGE
CC	COOLING COIL		
CHS/CHR	CHILLED WATER SUPPLY/RETURN	NC	NORMALLY CLOSED (FAILS OPEN)
CSR	CURRENT SENSOR RELAY	NO	NORMALLY OPEN (FAILS OPEN)
D	DAMPER	PE	PNEUMATIC ELECTRIC
DB	DRY BULB	PC	PERSONAL COMPUTER
DI	DIGITAL INPUT	PCHS/PCHR	PLANT CHILLED WATER SUPPLY/RETURN
DO	DIGITAL OUTPUT	P	PUMP
DPS	DIFFERENTIAL PRESSURE SWITCH/SENSOR	PHC	PREHEAT COIL
DPT	DIFFERENTIAL PRESSURE TRANSMITTER	PHX	PLATE FRAME HEAT EXCHANGER
DDC	DIRECT DIGITAL CONTROL	PS	PRESSURE SENSOR
DSPS	DIFFERENTIAL STATIC PRESSURE SENSOR		
		R	RESISTIVITY
EF	EXHAUST FAN	RDPS	ROOM DIFFERENTIAL PRESSURE SENSOR
EP	ELECTRIC PNEUMATIC	RT	ROTATION DETECTOR
ES	END SWITCH		
		SF	SUPPLY FAN
FE	FLOW ELEMENT	SPSS	STATIC PRESSURE SENSING STATION
FCC	FINAL COOLING COIL	SD	SMOKE DETECTOR
FM	FLOW METER	SPT	STATIC PRESSURE TRANSMITTER
FS	FLOW SWITCH		
FZ	FREEZESTAT	T	THERMOSTAT
FHC	FUME HOOD CONTROLLER	TEC	TERMINAL EQUIPMENT CONTROLLER
FLC	FLOOR LEVEL CONTROLLER	TT	TEMPERATURE TRANSMITTER
H	HUMIDISTAT	VA	VALVE
HT	HUMIDITY TRANSMITTER	VAV	VARIABLE AIR VOLUME
HC	HEATING COIL	VFD	VARIABLE FREQUENCY DRIVE
HSP	HIGH STATIC PRESSURE TRANSMITTER	VPT	VELOCITY PRESSURE TRANSMITTER
HX	HEAT EXCHANGER	VT	VELOCITY TRANSMITTER
HHL	HIGH HUMIDITY LIMIT		
HRW	HEAT RECOVERY WHEEL		

KEY TO SYMBOLS

	AMS	AIR MONITOR STATION (PIEZO METRIC RINF FOR FAN)
	CSR	CURRENT SENSOR RELAY
	AQ	AQUASTAT
		CONTROL VALVE
		CONTROL DAMPER / ISOLATION DAMPER
	ES	END SWITCH
		EP RELAY
	DPS	DIFFERENTIAL PRESSURE SENSOR
	DPT	DIFFERENTIAL PRESSURE TRANSMITTER
		FREEZE STAT
	MCC	MOTOR CONTROL CENTER
	MCP	MANUFACTURER CONTROL PANEL
		FLOW ELEMENT
		DDC POINT INDICATOR
	AO	
	AI	
	DO	
	DI	
		THERMOSTAT
		TEMPERATURE TRANSMITTER
	TEC	TERMINAL EQUIPMENT CONTROLLER
		SMOKE DETECTOR
	VFD	VARIABLE FREQUENCY DRIVE OR (ECM) ELECTRICALLY COMMUTATED MOTOR
		PRE & FINAL FILTER
		PUMP
	MS	MOTOR STARTER
		FLOW METER

GENERAL:

A. THE SEQUENCES DESCRIBE THE GENERAL INTENT OF THE CONTROL SYSTEMS. PROVIDE ALL DEVICES, EQUIPMENT, AND WIRING AS REQUIRED TO PERFORM THE SEQUENCES DESCRIBED HEREIN.

B. UNLESS OTHERWISE NOTED, SIZE ALL AUTOMATIC CONTROL VALVES LOCATED IN MOST REMOTE THIRD OF FLOW SYSTEM OR MAXIMUM TEN (10) FEET WATER PRESSURE DROP AT MAXIMUM DESIGN FLOW RATE, CONTROL VALVES IN FIRST TWO THIRDS OF SYSTEM MAY BE SIZED BASED ON MANUFACTURES RECOMMENDATIONS.

C. SEE PLANS FOR LOCATIONS OF ALL DDC PANELS, DAMPERS, VALVES, AND EQUIPMENT; WHERE SUCH DEVICES ARE NOT INDICATED, HOWEVER REQUIRED BY THE SEQUENCES THEY SHALL BE PROVIDED BY THE CONTRACTOR AND LOCATED IN THE FIELD BY THE ENGINEER.

D. DIVISION 26 SHALL PROVIDE ALL DETECTION DEVICES (HEAT/SMOKE) AS REQUIRED BY NFPA STANDARD 96 AND 90A AND THE IBC CODE. THE INSTALLATION OF DETECTION DEVICES AND ALL CONTROL TUBING AND CONTROL/POWER WIRING FOR SMOKE DETECTION DEVICES AND SMOKE DAMPERS SHALL BE PROVIDED UNDER THIS SECTION. DETECTION DEVICES SHALL PROVIDE AUTOMATIC SHUTDOWN OF THE HVAC SYSTEMS IN ACCORDANCE WITH NFPA 90A.

E. LOCAL DUCT MOUNTED SMOKE DETECTORS SHALL, ON THE DETECTION OF THE PRODUCTS OF COMBUSTION SEND SIGNAL TO FIRE ALARM SYSTEM WHICH WILL IN TURN SHUT DOWN THE SUPPLY FAN. THESE DEVICES ARE WIRED IN THE MOTOR STARTER CIRCUIT AND SEND A SIGNAL TO THE BAS. THE FAS CONTRACTOR SHALL FURNISH & INSTALL A FULLY ADDRESSABLE SYSTEM CONSISTING OF CONTROL PANEL, DETECTORS, AND RELAY MOTORS.

F. ALL PUMPS AND FANS SHALL BE PROVIDED WITH CURRENT SENSOR RELAYS WITH ADJUSTABLE SETPOINTS THAT SHALL BE CAPABLE OF SENSING BELT LOSS AND COUPLING SHEAR. SENSORS SHALL PROVIDE STATUS FOR PUMP AND FAN OPERATION.

G. ALL TEMPERATURE, PRESSURE, AND TIME SET POINTS SHALL BE FULLY ADJUSTABLE FROM THE DDC GRAPHICAL USER INTERFACE.

H. PROVIDE ALL HARDWARE, SOFTWARE, DEVICES, EQUIPMENT, AND WIRING AS REQUIRED TO INTERFACE WITH THE BUILDING AUTOMATION SYSTEM (BAS). SET POINTS SHALL BE FULLY ADJUSTABLE FROM DDC GRAPHICAL USER INTERFACE (GUI).

I. ALL TWO (2) POSITION DAMPERS SHALL BE PROVEN OPEN BY THE USE OF END SWITCHES.

J. REFER TO INPUT/OUTPUT SUMMARY SCHEDULE FOR ADDITIONAL CONTROL ITEMS NOT DESCRIBED IN THE SEQUENCES. INPUT/OUTPUT SUMMARY ARE MINIMUM REQUIREMENTS, PROVIDE ALL REQUIRED POINTS FOR COMPLETE OPERATION OF SYSTEM.

K. ALL VARIABLE FREQUENCY DRIVES FOR FANS SHALL BE SOFT STARTED AT MINIMUM SPEED AND INCREASED TO OPERATING SPEED BY THE BAS.

L. EACH SUPPLY FAN SHALL BE EQUIPPED WITH AN INLET AIR MONITORING STATION AMS (2 ON DWDI FANS). THE BAS SHALL MONITOR THE AIRFLOW RATE FOR EACH FAN.

M. UPON FAILURE OF ANY DDC UNIT, AN ALARM SHALL BE INDICATED THROUGH THE BAS AND THE SYSTEM SHALL AUTOMATICALLY REVERT TO THE DEFAULT CYCLE. ALL MOTORS AND SUPPLY AND RETURN FANS SHALL REMAIN IN THEIR LAST COMMANDED STATE. THE DDC SHALL MONITOR THE EMERGENCY POWER TRANSFER SWITCH AND RAMP THE VFDs OF SELECTED FANS AND PUMPS TO THEIR LOWER LIMITS UNTIL THE EMERGENCY GENERATOR IS STABLE AND ON LINE; AT WHICH TIME THE NORMAL SEQUENCE OF OPERATIONS SHALL RESUME. CHILLERS, BOILERS AND ASSOCIATED PUMPS SHALL BE RESTARTED ONLY AFTER AHU AND FAN SYSTEMS HAVE RESUMED NORMAL OPERATION.

N. STAND-BY FANS AND PUMPS SHALL BE ALTERNATED INTO OPERATION EVERY 500 HOURS. THE DDC SHALL ALARM FOR CHANGE OVER; ACTUAL CHANGE OVER SHALL BE INITIATED BY MAINTENANCE PERSONNEL THROUGH THE BAS.

O. IN GENERAL, HEATING CONTROL VALVES SHALL FAIL OPEN, CHILLED WATER CONTROL VALVES SHALL FAIL CLOSED. ISOLATION DAMPERS AT FANS SHALL FAIL OPEN.

P. IN GENERAL, ALL HEADERED FANS UNDER AUTOMATIC CONTROL SHALL START BEHIND CLOSED DAMPERS TO A SPEED OF 25 HZ TO 30 HZ. ONCE THE VFD CONTROLLER CONFIRM THIS SPEED THROUGH THE CCMS ISOLATION DAMPERS SHALL OPEN, ONCE END SWITCHES HAVE BEEN PROVEN OPEN FANS SHALL COME UNDER CONTROL AT SYSTEM REQUIRED SPEED THROUGH THE CCMS. UNDER HAND OPERATION, DAMPERS SHALL REMAIN CLOSED UNTIL SPEED IS RAMPED TO 25HZ. THE VFD SHALL NOT ALLOW IN EXCESS OF 25HZ UNTIL DAMPER END SWITCHES HAVE BEEN PROVEN OPEN. UNDER BYPASS CONDITIONS, DAMPERS SHALL OPEN VIA HARD WIRED RELAYS.

Q. ALL INTAKE MOD'S FOR OUTDOOR AIR INTAKES (MECHANICAL ROOM VENTILATION AND AHU SUPPLY) AHU SUPPLY FANS AND EXHAUST FANS SERVING THE BUILDING SHALL BE PROGRAMMED TO DE-ENERGIZE WHEN SIGNED BY THE BUILDING EMERGENCY SWITCH. UPON ACTIVATION OF THE SWITCH FANS SHALL BE DE-ENERGIZED AND DAMPERS SHALL CLOSE.

R. CONTROL DIAGRAMS INDICATE GENERAL ARRANGEMENT OF SYSTEM COMPONENTS TO THE EXTENT THAT THEY AFFECT PROCESS FLOW OR CONTROL. NOT ALL REQUIRED COMPONENTS ARE SHOWN ON THE CONTROL DIAGRAMS. FOR INSTANCE, EACH AIR HANDLING UNIT ONLY SHOWS ONE DISCHARGE ISOLATION DAMPER, WHERE TWO ARE REQUIRED BY THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL THOROUGHLY REVIEW ALL MECHANICAL CONTROL DOCUMENTS TO ASCERTAIN THE FULL SCOPE OF HIS OR HER WORK.

S. DUCT OR PIPE THERMOMETER SHALL BE PROVIDED WHERE INDICATED ON CONTROL DIAGRAMS. THERMOMETERS ARE INDEPENDENT OF CONTROL TEMPERATURE TRANSMITTERS.

T. FREEZSTAT SHALL BE LOCATED ON ENTERING SIDE OF COOLING COIL AND SHALL BE 1 FREEZESTAT PER 40 SQ. FT. OF COIL SURFACE.

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W NO.	KEY SHP TWM	POINT SHP 57WN30	PLAN SCALE:	APPROVED BY: _____ PROPERTY MANAGER	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX						POINT SHP 57WN30	PROFILE SCALE:	DATE: _____	
	RMF ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-528-0200 (F) 410-330-0372		DGN BY: JTA	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	
	AS-BUILT PER RECORD PRINT		DWN BY: JTA	REVIEWED BY:								
BY: _____ DATE: _____		CHKD BY: RMH	DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL CONTROLS

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

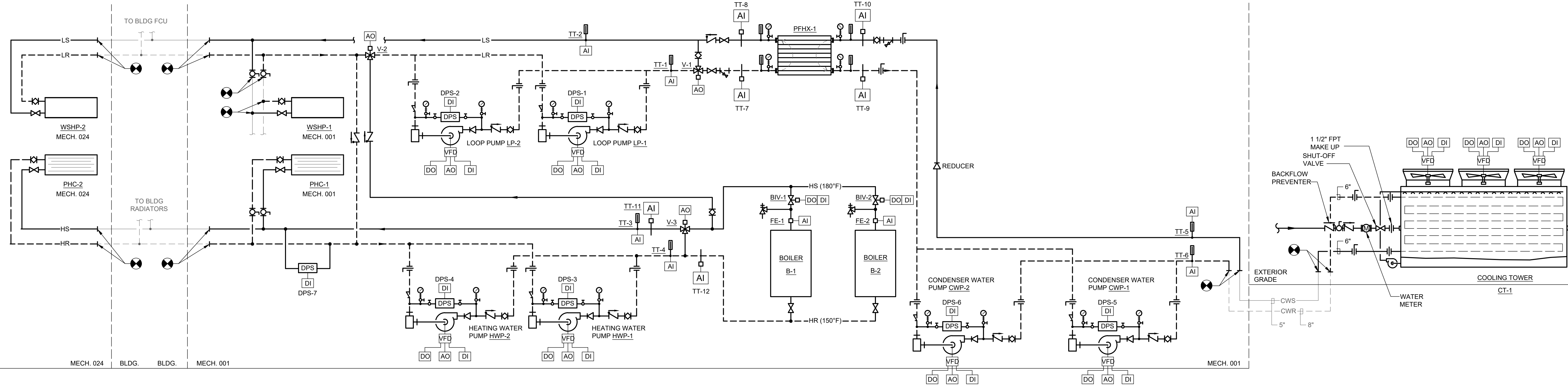
ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-700	24096-P00
	JOB ORDER NUMBER
	SHEET 40 OF 60
	DRAWING NUMBER
	2024-1266
	FILE NO.: 8

DWG. FILENAME: MECHANICAL CONTROLS

SEQUENCE OF OPERATION:

- A. GENERAL:
- THE SEQUENCES DESCRIBE THE GENERAL INTENT OF THE CONTROL SYSTEM. PROVIDE ALL DEVICES EQUIPMENT AND WIRING AS REQUIRED TO PERFORM THE SEQUENCES HEREIN.
 - UNLESS OTHERWISE NOTED, SIZE ALL AUTOMATIC CONTROL VALVES FOR MAXIMUM TEN (10) FEET WATER PRESSURE DROP AT MAXIMUM DESIGN FLOW RATE.
 - ALL TEMPERATURE, PRESSURE AND TIME SET POINTS SHALL BE FULLY ADJUSTABLE THROUGH THE BAS.
 - PROVIDE ALL HARDWARE, SOFTWARE DEVICES, EQUIPMENT AND WIRING AS REQUIRED TO INTERFACE WITH THE BAS.
 - ALL VALVES SHALL BE PROVEN OPEN BY THE USE OF END SWITCHES.
 - REFER TO INPUT/OUTPUT SUMMARY SCHEDULE FOR ADDITIONAL CONTROL ITEMS NOT DESCRIBED IN THE SEQUENCE. INPUT/OUTPUT SUMMARY ARE MINIMUM REQUIREMENTS. PROVIDE ALL REQUIRED POINTS FOR COMPLETE OPERATION OF THE SYSTEM.
 - ALL VARIABLE SPEED DRIVES FOR PUMPS SHALL BE SOFT STARTED AT MINIMUM SPEED AND INCREASED TO OPERATING SPEED THROUGH THE BAS.
- B. HEATING WATER PUMP CONTROL:
- WHEN THE BAS INDEXES THE SYSTEM ON, THE LEAD PUMP AS SELECTED BY THE LEAD/LAG PROGRAM SHALL START AND RUN CONTINUOUSLY. IF THE LEAD PUMP FAILS TO START, AS SENSED BY DPS-3 OR DPS-4, THE BAS SHALL BE ALARMED. THE BAS SHALL AUTOMATICALLY START THE LAG PUMP AND RUN CONTINUOUSLY. PUMP SPEED SHALL BE MODULATED BY A SIGNAL TO THE VFD TO MAINTAIN SYSTEM DIFFERENTIAL PRESSURE AS SEEN BY DPS.
 - LEAD/LAG PUMP SHALL BE AUTOMATICALLY ALTERNATED BY THE BAS ON AN ADJUSTABLE BI-WEEKLY SCHEDULE.
 - THE SYSTEM DIFFERENTIAL PRESSURE CONTROLLER (WITH ADJUSTABLE SETPOINT) SHALL MODULATE THE PUMP VFD TO MAINTAIN DIFFERENTIAL SETPOINT (ADJUSTABLE). ON A RISE IN DIFFERENTIAL PRESSURE, THE VFD SHALL REDUCE THE PUMP SPEED TO MAINTAIN SETPOINT. ON A FALL IN DIFFERENTIAL PRESSURE, THE REVERSE SHALL OCCUR.
- C. HEATING WATER TEMPERATURE CONTROL:
- THE 3-WAY MIXING VALVE FOR THE HEATING WATER SYSTEM V-3 SHALL MODULATE TO MAINTAIN HEATING WATER TEMPERATURE SETPOINT. A LINEAR RESET SCHEDULE SHALL ADJUST TEMPERATURE SETPOINT FROM 140°F TO 180°F (ADJUSTABLE) AS OUTSIDE AIR DECREASES FROM 50°F TO 10°F.
- D. BOILER GENERAL:
- THE BAS SHALL ENABLE THE BOILER SYSTEM TO RUN.
 - BOILER ISOLATION VALVE BIV-1 SHALL BE PROVEN OPEN.
 - LEAD BOILER PUMPS HWP-1 AND HWP-2 SHALL BE ENERGIZED.
 - INTEGRAL BOILER CONTROL PANEL SHALL MODULATE B-1 TO MAINTAIN SYSTEM TEMPERATURE SETPOINT.
- E. BOILER CONTROL:
- THE INTEGRAL BOILER CONTROLLER SHALL MODULATE BOILER B-1 BURNER TO MAINTAIN A SETPOINT TEMPERATURE AND SHALL OPEN BIV-2 AND ENERGIZE B-2 AS REQUIRED TO MEET SYSTEM LOAD.
 - WHEN HEATING LOAD IS MET BOILER B-2 SHALL DE-ENERGIZE AND ASSOCIATED ISOLATION VALVE SHALL MODULATE CLOSED.
 - LEAD/LAG PUMP SHALL BE AUTOMATICALLY ALTERNATED BY THE BAS ON AN ADJUSTABLE BI-WEEKLY SCHEDULE.
 - THE INTEGRAL BOILER CONTROLLER SHALL OPERATE B-1 AND B-2 IN PARALLEL TO OBTAIN THE HIGHEST SYSTEM EFFICIENCY
- F. COOLING TOWER AND CONDENSER WATER GENERAL:
- COOLING TOWER CT-1 SHALL BE INITIALLY MANUALLY INDEXED TO THE AUTOMATIC POSITION VIA THE H-O-A SWITCH ON THE COOLING TOWER VARIABLE FREQUENCY DRIVES. CONDENSER WATER PUMPS SHALL BE INITIALLY MANUALLY INDEXED TO THE AUTOMATIC POSITION VIA THE H-O-A SWITCH ON THE PUMP STARTERS.
- G. COOLING TOWER CONTROL:
- UPON START OF A CONDENSER WATER PUMP, THE COOLING TOWER FAN SHALL RAMP UP QUICKLY (BASED ON THE VFD RAMP SETTING) TO FULL SPEED AND MAINTAIN FULL SPEED FOR A PERIOD OF 300 SECONDS BEFORE BEING RELEASED TO AUTOMATIC CONTROL TO MAINTAIN THE CONDENSER WATER SET-POINT AS MEASURED IN THE COOLING TOWER BASIN. UPON A RISE IN CONDENSER WATER TEMPERATURE THE FOLLOWING SHALL OCCUR:
 - THE FAN SPEED SHALL BE MODULATED BY A SIGNAL TO THE VFD TO MAINTAIN THE CONDENSER WATER SUPPLY TEMPERATURE SET POINT (ADJUSTABLE THROUGH SOFTWARE) AS SENSED BY ITS ASSOCIATED TEMPERATURE SENSOR.
 - ON A DROP IN CONDENSER WATER SUPPLY TEMPERATURE BELOW THE SETPOINT, THE REVERSE SHALL OCCUR.
 - CONDENSER WATER SET POINT SHALL BE ADJUSTABLE AT USER INTERFACE. ADJUSTED THROUGH THE EMS GRAPHICAL INTERFACE AND SHALL BE INITIALLY SET TO 65°F WITH A +/- 2°F DEAD BAND. IF THE OUTDOOR AMBIENT WET BULB TEMPERATURE EXCEEDS 57°F WB, THE CONDENSER WATER TEMPERATURE SETPOINT SHALL ADJUST TO MAINTAIN 7°F (ADJUSTABLE) ABOVE THE OUTDOOR AMBIENT WET BULB TEMPERATURE. THE CONDENSER WATER SET POINT TEMPERATURE SHALL VARY BASED ON THE AMBIENT WET BULB TEMPERATURE. WHEN MEASURED WET BULB IS AT OR BELOW 57°F, THE CONDENSER WATER TEMPERATURE SET POINT SHALL BE 65°F.
 - STANDPIPE LEVEL CONTROL SHALL MAINTAIN THE PROPER LEVEL IN COOLING TOWER REMOTE BASIN BY THE ADDITION OF MAKE-UP WATER. HIGH AND LOW BASIN ALARMS SHALL BE PROVIDED FOR THE TOWER TO THE EMS. STANDARD PIPE LEVEL CONTROL SHALL MODULATE COOLING TOWER MAKE-UP WATER VALVE TO MAINTAIN ITS SETPOINT.
- H. COOLING TOWER BASIN HEATING SYSTEM:
- ON A FALL IN OUTDOOR AIR TEMPERATURE BELOW THIRTY-FIVE (35) DEGREES FAHRENHEIT (ADJUSTABLE THROUGH SOFTWARE) AS SENSED BY THE GLOBAL OUTDOOR AIR TEMPERATURE SENSOR, THE ELECTRIC SUMP HEATERS IN COOLING TOWER CT-1 SHALL ENERGIZE. UPON A RISE IN TEMPERATURE ABOVE 40°F (ADJUSTABLE THROUGH SOFTWARE) OR CONDENSER WATER PUMP ACTIVATION, THE ELECTRIC SUMP HEATERS IN COOLING TOWER CT-1 SHALL DE-ENERGIZE.
- I. COOLING TOWER ALARMS AND FAILURE MODES
- POWER FAILURE: UPON A LOSS IN POWER TO THE CENTRAL PLANT ALL EQUIPMENT WILL DE-ENERGIZE. UPON A RETURN IN POWER, CONDENSER WATER PUMPS AND COOLING TOWER FANS SHALL AUTOMATICALLY BE ENERGIZED TO THE LAST KNOWN CONDITION THROUGH THE BMS.
- J. CONDENSING WATER PUMP CONTROL:
- WHEN THE BAS INDEXES THE SYSTEM ON, THE LEAD PUMP AS SELECTED BY THE LEAD/LAG PROGRAM SHALL START AND RUN CONTINUOUSLY. IF THE LEAD PUMP FAILS TO START, AS SENSED BY DPS-5 OR DPS-6, THE BAS SHALL BE ALARMED. THE BAS SHALL AUTOMATICALLY START THE LAG PUMP AND RUN CONTINUOUSLY.
 - LEAD/LAG PUMP SHALL BE AUTOMATICALLY ALTERNATED BY THE BAS ON AN ADJUSTABLE BI-WEEKLY SCHEDULE.
- K. LOOP WATER PUMP CONTROL:
- WHEN THE BAS INDEXES THE SYSTEM ON, THE LEAD PUMP AS SELECTED BY THE LEAD/LAG PROGRAM SHALL START AND RUN CONTINUOUSLY. IF THE LEAD PUMP FAILS TO START, AS SENSED BY DPS-1 OR DPS-2, THE BAS SHALL BE ALARMED. THE BAS SHALL AUTOMATICALLY START THE LAG PUMP AND RUN CONTINUOUSLY.
 - LEAD/LAG PUMP SHALL BE AUTOMATICALLY ALTERNATED BY THE BAS ON AN ADJUSTABLE BI-WEEKLY SCHEDULE.



CONTROL - MECHANICAL SCHEMATIC

SCALE: 1
NONE

SEAL STATE OF MARYLAND RICHARD MICHAEL BELMONT PROFESSIONAL ENGINEER 32486 DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W NO.	KEY SHEET TWT	POINT SHT 57W30	PLAN SCALE:	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX						POINT SHT 57W30	PROFILE SCALE:	DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL CONTROLS

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-701	24096-P00
JOB ORDER NUMBER	
SHEET 41 OF 60	
DRAWING NUMBER	
2024-1267	
FILE NO.: 8	

DWG. FILENAME: MECHANICAL CONTROLS

SEQUENCE OF OPERATION:

- A. GENERAL:

1. WHEN THE WATER SOURCE HEAT PUMP (WSHP) UNIT IS DE-ENERGIZED, ALL CONTROLS SHALL RETURN TO THEIR NORMAL POSITION READY FOR RESTARTING. COMPRESSOR SHALL BE DE-ENERGIZED.

2. THE BAS SHALL DETERMINE THE OCCUPIED/UNOCCUPIED MODE BASED ON A 365 DAY/24 HR GRAPHIC INTERFACE SCHEDULER PROGRAM.

B. OCCUPIED MODE:

1. WARM-UP/PULL DOWN:

a. THE UNIT SHALL NOT BE ENERGIZED DURING WARM-UP AND PULL DOWN CYCLE.

2. PREHEAT MODE (PREHEAT COIL):

a. WHEN OUTSIDE AIR TEMPERATURE IS BELOW 50°F (ADJUSTABLE) THE HEATING WATER VALVE V-1 SHALL MODULATE. PREHEAT COIL SHALL MAINTAIN THE TEMPERATURE SENSOR AT TS-2 (ADJUSTABLE) AT 50°F.

3. COOLING MODE:

a. THE UNIT WILL ENERGIZE TO MAINTAIN DISCHARGE AIR TEMPERATURE TS-1 AT 69°F.

4. HEATING MODE:
- a. THE UNIT WILL ENERGIZE TO MAINTAIN DISCHARGE AIR TEMPERATURE TS-1 AT 70°F.

5. FILTERS:

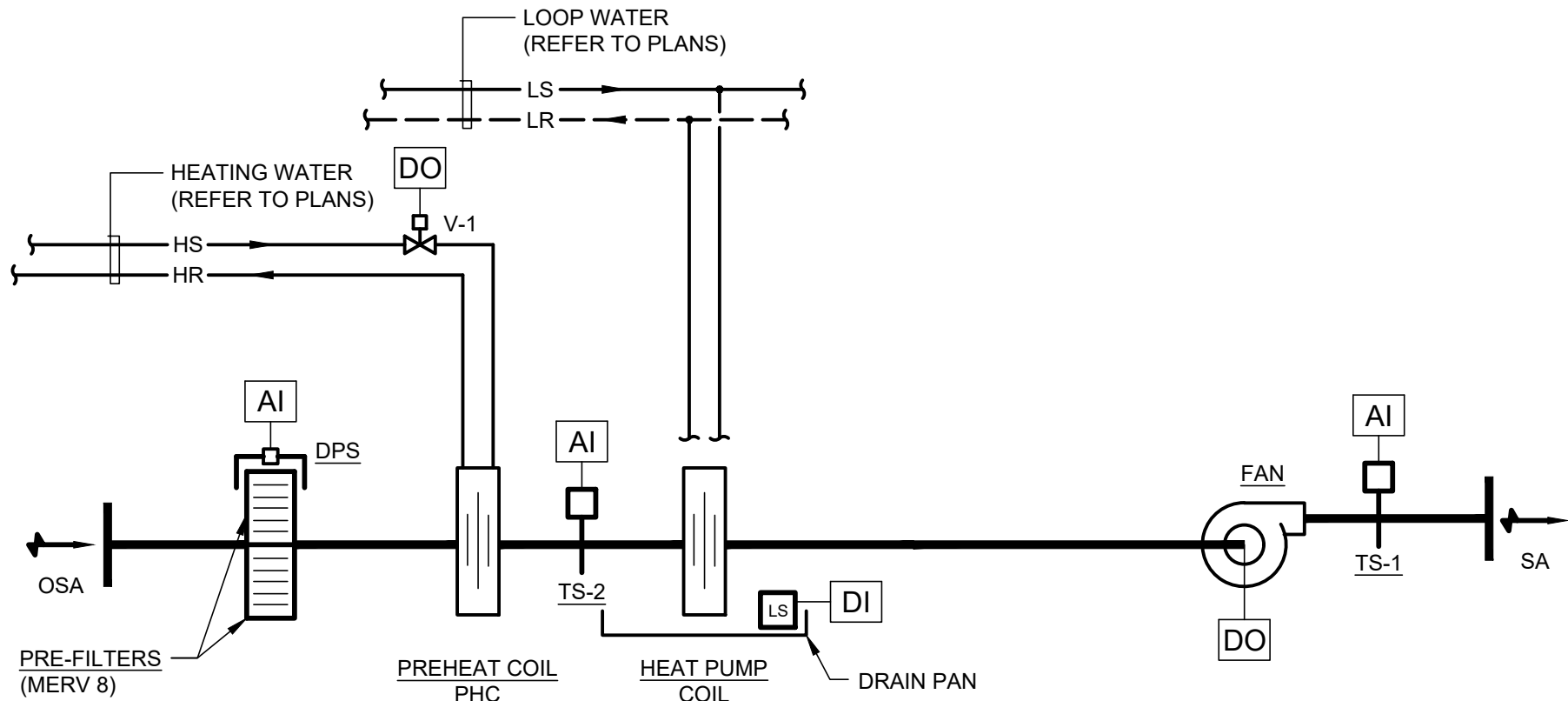
e. DIFFERENTIAL PRESSURE TRANSMITTER INSTALLED ACROSS THE FILTER BANK SHALL ALARM THE BAS WHEN IT'S RESPECTIVE SETTINGS IS REACHED.

C. UNOCCUPIED MODE:

1. THE UNITS SHALL BE DE-ENERGIZED.

D. DRAIN PAN ALARM

1. PROVIDE A FLOAT SWITCH/WATER LEVEL SENSOR IN HIGH POINT OF THE CONDENSATE DRAIN PAN. WHEN ACTIVATED FLOAT SWITCH SHALL DISABLE THE FAN COIL UNIT AND ALARM THE BAS.



INPUT/OUTPUT SUMMARY

HANNAH MORE CONTROL POINTS LIST									
POINT DESCRIPTION DEVICE	AI	AO	DO	DO	DI				
	ANALOG READING	MODULATING CONTROL SIGNAL	ON/OFF	OPEN/CLOSE	DIGITAL STATUS	ALARM	SCHEDULE	REMARKS	
COOLING TOWER ISOLATION VALVE - V-1 (OUTLET)				X	X				
COOLING TOWER ISOLATION VALVE - V-2 (INLET)				X	X				
COOLING TOWER FANS VFD (TYP OF 3)		X	X		X				
CONTROL VALVE V-1		X						FLOW	
CONTROL VALVE V-2		X							
CONTROL VALVE V-3		X							
BOILER B-1 (BIV-1)				X	X				
BOILER B-2 (BIV-2)				X	X				
BOILER B-1 (FE-1)	X								
BOILER B-2 (FE-2)	X								
TT-1	X								
TT-2	X								
TT-3	X								
TT-4	X								
TT-5	X								
TT-6	X								
PFXH-1									
CONTROL VALVE V-4		X						FLOW	
PRIMARY SUPPLY TEMPERATURE TT-7	X								
PRIMARY RETURN TEMPERATURE TT-8	X								
SYSTEM RETURN TEMPERATURE TT-9	X					X			
SYSTEM SUPPLY TEMPERATURE TT-10	X								
TT-11									
TT-12									
LOOP WATER PUMP (VFD) LP-1		X	X		X	X			
DPS-1					X	X	X		
LOOP WATER PUMP (VFD) LP-2		X	X		X	X			
DPS-2					X	X	X		
HEATING WATER PUMP (VFD) HWP-1		X	X		X	X			
DPS-3					X	X	X		
HEATING WATER PUMP (VFD) HWP-2		X	X		X	X			
DPS-4					X	X	X		
CONDENSOR WATER PUMP (VFD) CWP-1		X	X		X	X			
DPS-5					X	X	X		
CONDENSOR WATER PUMP (VFD) CWP-2		X	X		X	X			
DPS-6					X	X	X		
DPS-7									

INPUT/OUTPUT SUMMARY

HANNAH MORE CONTROL POINTS LIST									
POINT DESCRIPTION DEVICE	AI	AI	DO	DO	DI				
	ANALOG READING	MODULATING CONTROL SIGNAL	ON/OFF	OPEN/CLOSE	DIGITAL STATUS	ALARM	SCHEDULE	REMARKS	
FAN			X						
TS-1	X								
TS-2	X								
V-1			X						
F-1	X								
LS (LIQUID SENSOR)				X					

CONTROL - WATER SOURCE HEAT PUMP WSHP-1 & WSHP-2

SCALE:
NONE

2

CONTROL - INPUT/OUTPUT SUMMARY

SCALE:
NONE

3

SEAL

STATE OF MARYLAND

RICHARD MICHAEL BELMONT

PROFESSIONAL ENGINEER

No. 32486

DATE : 07/31/2024

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO. 32486 EXPIRATION DATE 01-06-2026

RFM ENGINEERING, INC.

5025 RESEARCH PARK DRIVE

SUITE 300

BALTIMORE, MD 21228

P: 410-528-0200 F: 410-300-0372

DGN BY: JTA

BUREAU OF ENGINEERING AND CONSTRUCTION

TRAFFIC

HIGHWAYS

STRUCTURES

STORM DRAINS

SEWER

WATER

FIELD ENGINEER

AS-BUILT PER RECORD PRINT

BY: DATE:

CHKD BY: RMH

DATE REVIEWED:

AS-BUILT / REVISION

BY

DATE

P.W.A. NO.

KEY SHEET

POSITION SHIT

DRAWING SCALE

PROPERTY MANAGEMENT

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION

TRAFFIC

HIGHWAYS

STRUCTURES

STORM DRAINS

SEWER

WATER

FIELD ENGINEER

APPROVED BY:

DATE:

PROPERTY MANAGER

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL CONTROLS

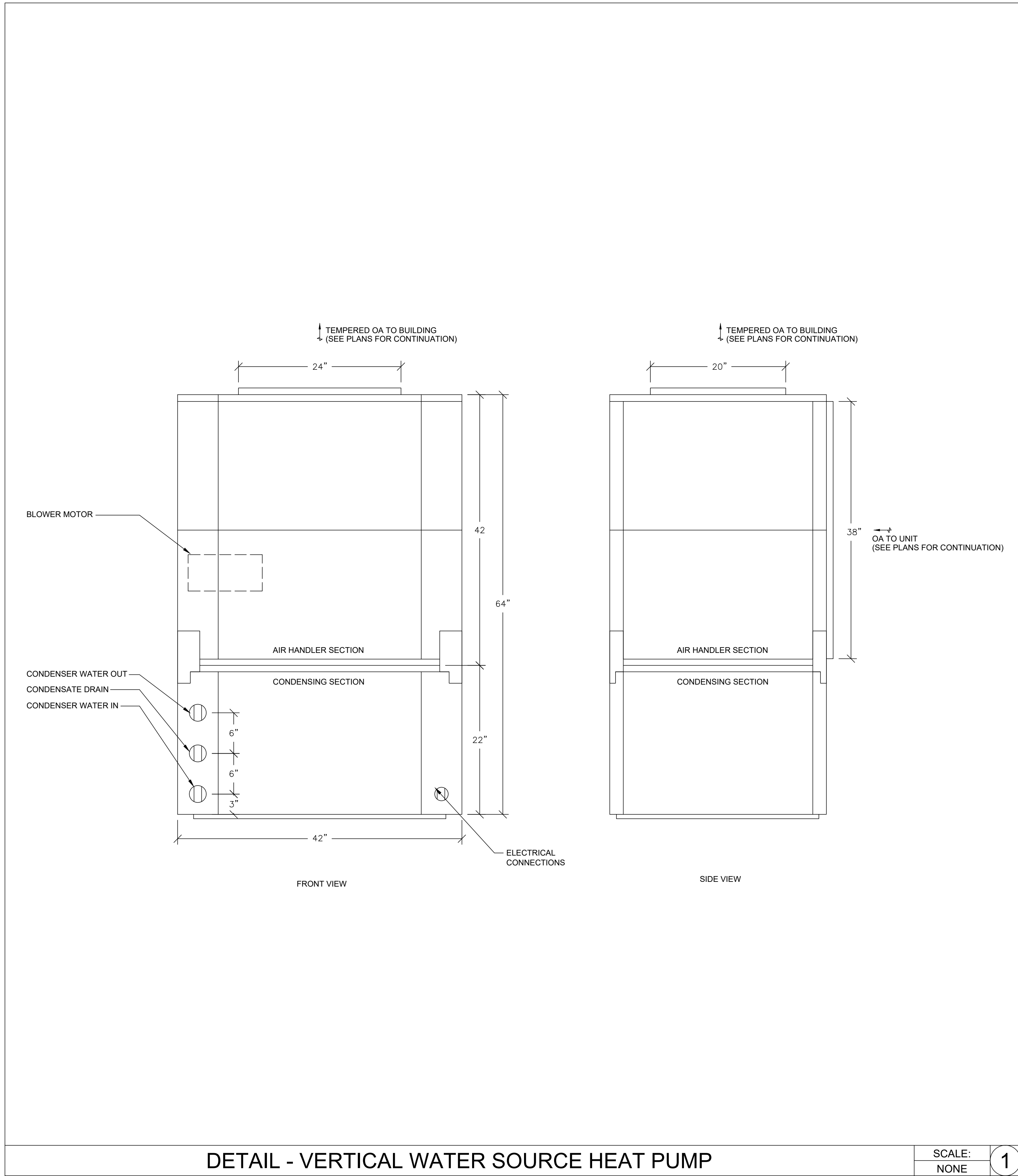
SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

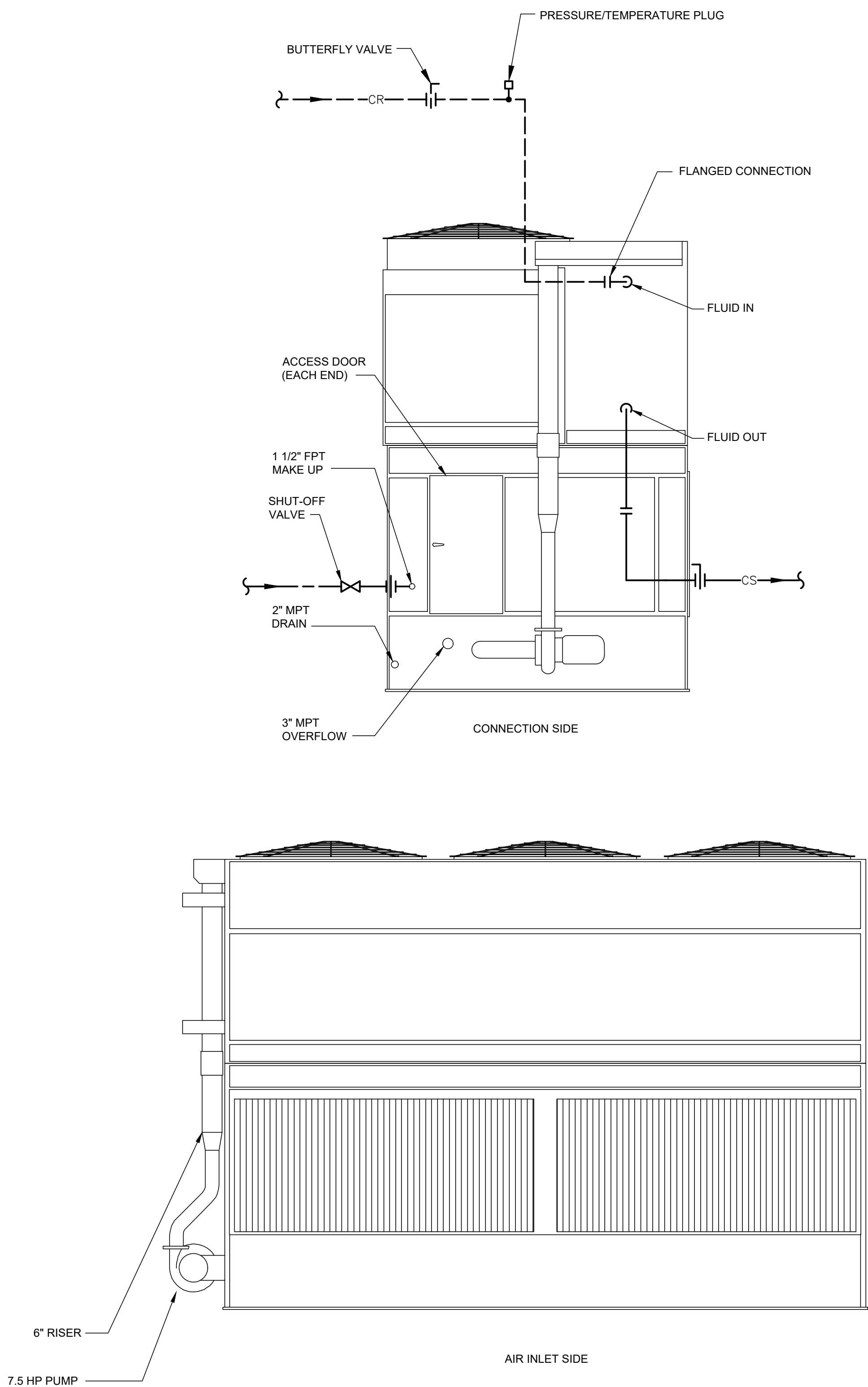
SHEET DESIGNATION	CONTRACT NUMBER
M-702	24096-P00
JOB ORDER NUMBER	
SHEET 42 OF 60	
DRAWING NUMBER	
2024-1268	
FILE NO.: 8	

DWG. FILENAME: MECHANICAL CONTROLS



DETAIL - VERTICAL WATER SOURCE HEAT PUMP

SCALE: NONE 1



DETAIL - CLOSED CIRCUIT COOLING TOWER

SCALE: NONE 2

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						KEY SHIT TWM	POINT SHIT 57NW30	PLAN SCALE: NONE	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026							POINT SHIT 57NW30		PROPERTY MANAGER	
	BUREAU OF ENGINEERING AND CONSTRUCTION		CONTRACT COMPLETION BOX					POINT SHIT 56NW30	PROFILE SCALE: _____	DATE: _____	
	AS-BUILT PER RECORD PRINT							POINT SHIT 56NW30			
	DGN BY: JTA	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	DWN BY: JTA	REVIEWED BY:									
	CHKD BY: RMH	DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL DETAILS

SUBDIVISION: REISTERSTOWN

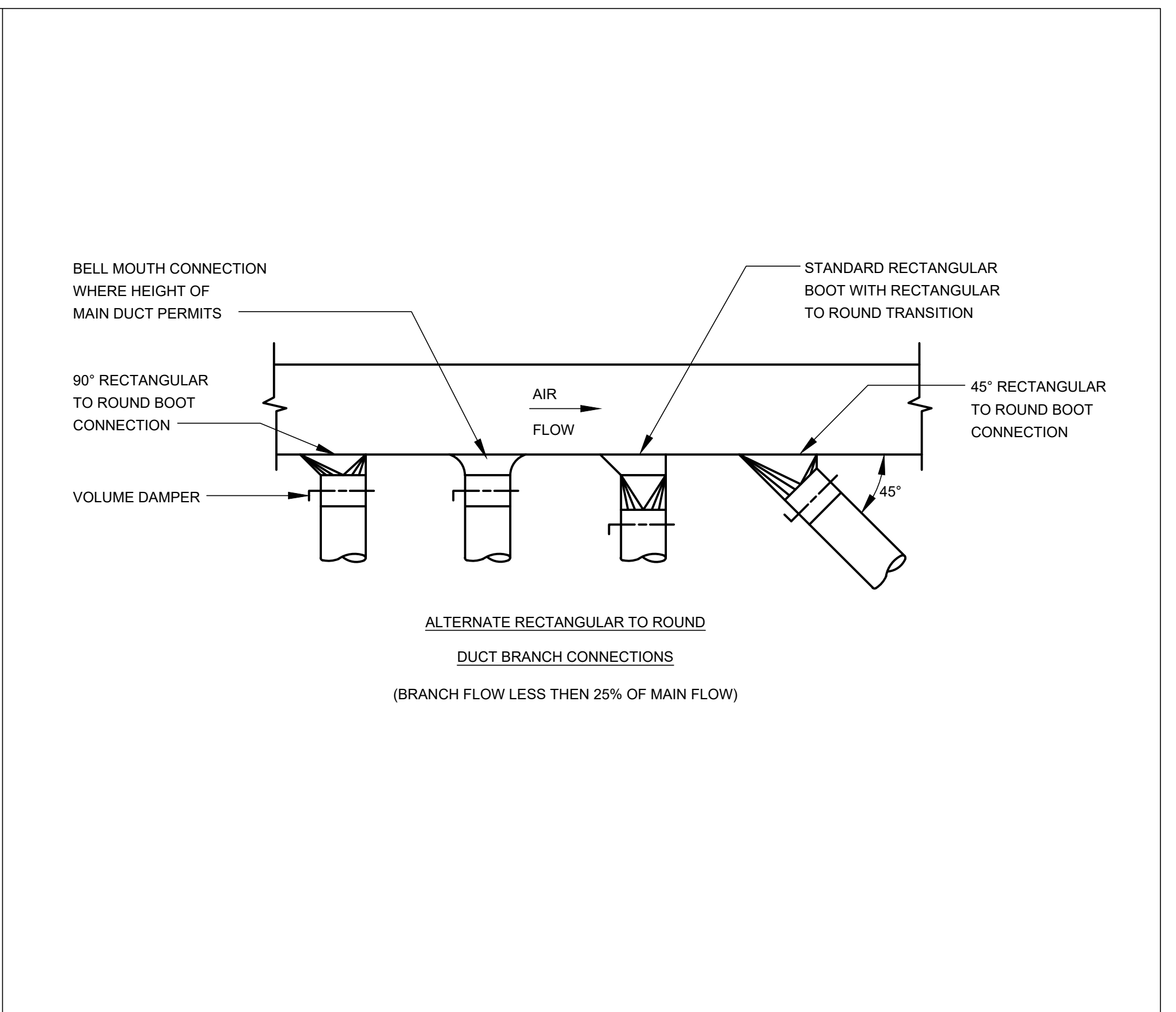
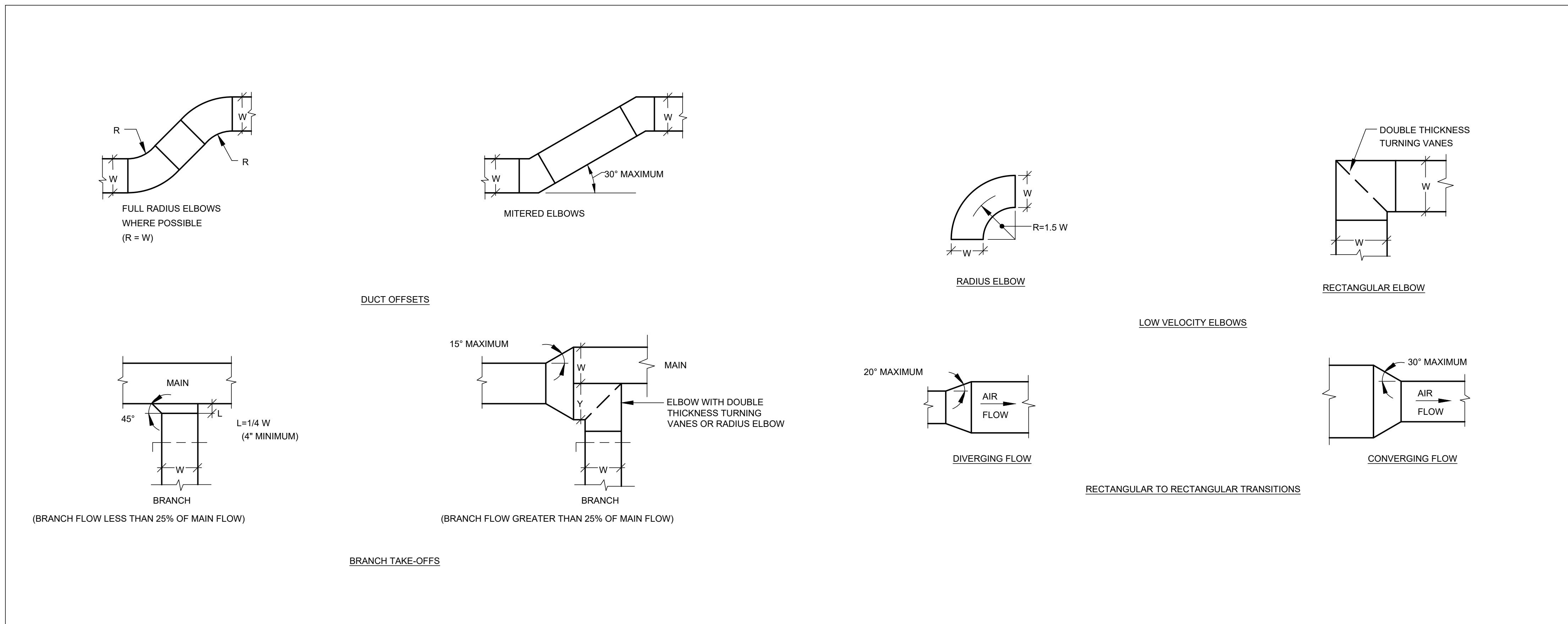
12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-801	24096-P00
JOB ORDER NUMBER	
SHEET 43 OF 60	
DRAWING NUMBER	
2024-1269	
FILE NO.: 8	



DWG. FILENAME: MECHANICAL DETAILS



DETAIL - RECTANGULAR DUCT FITTINGS

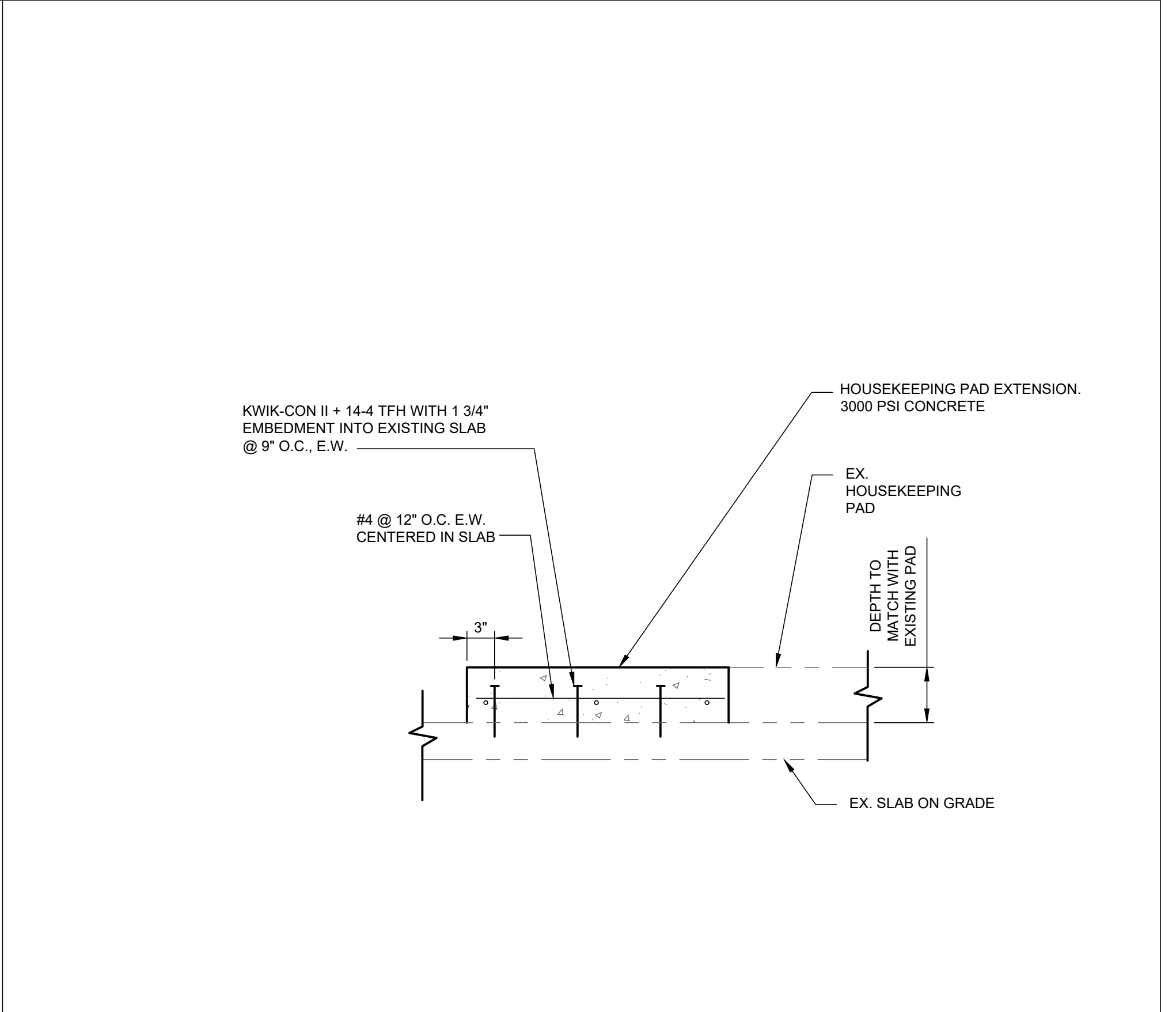
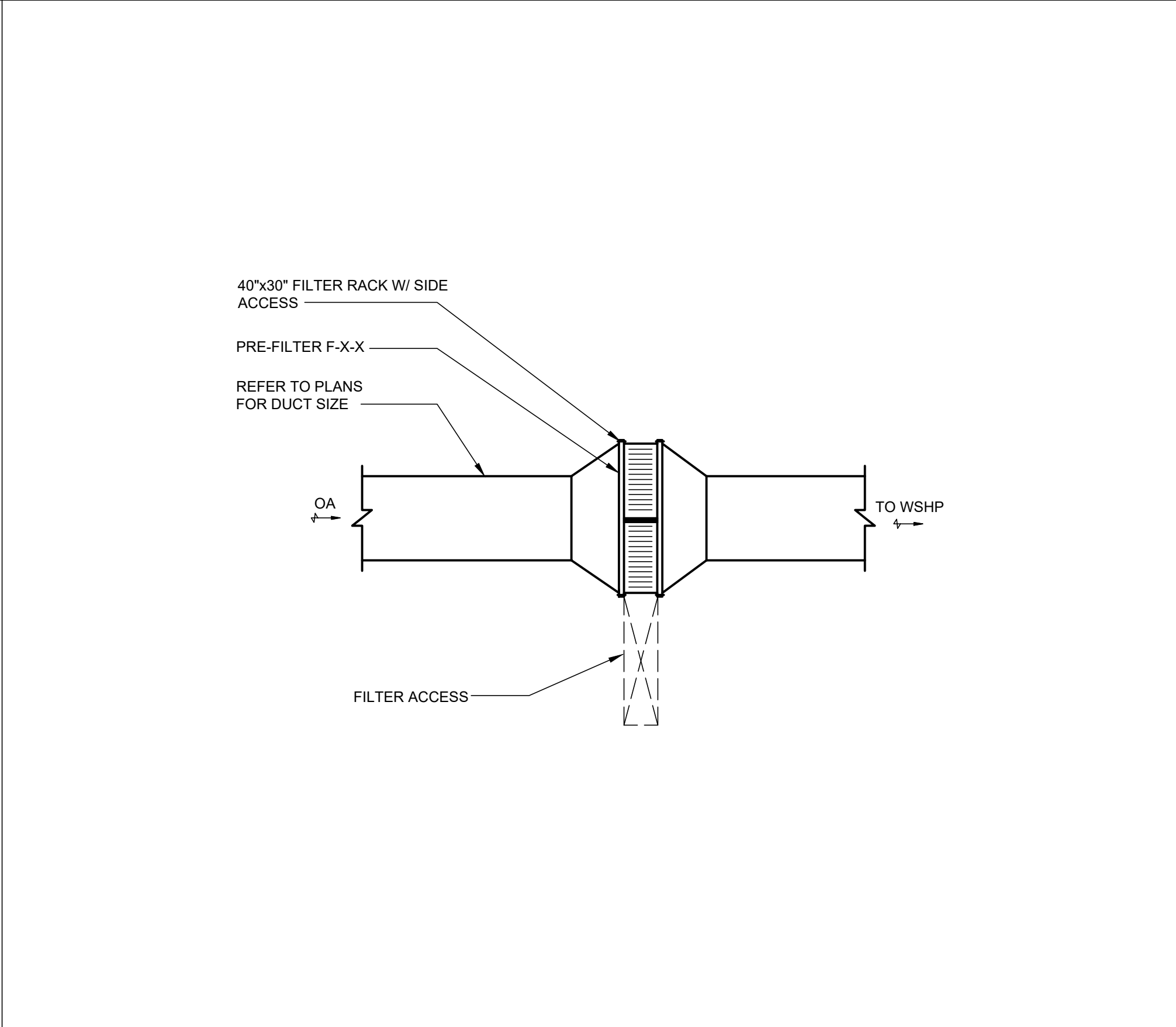
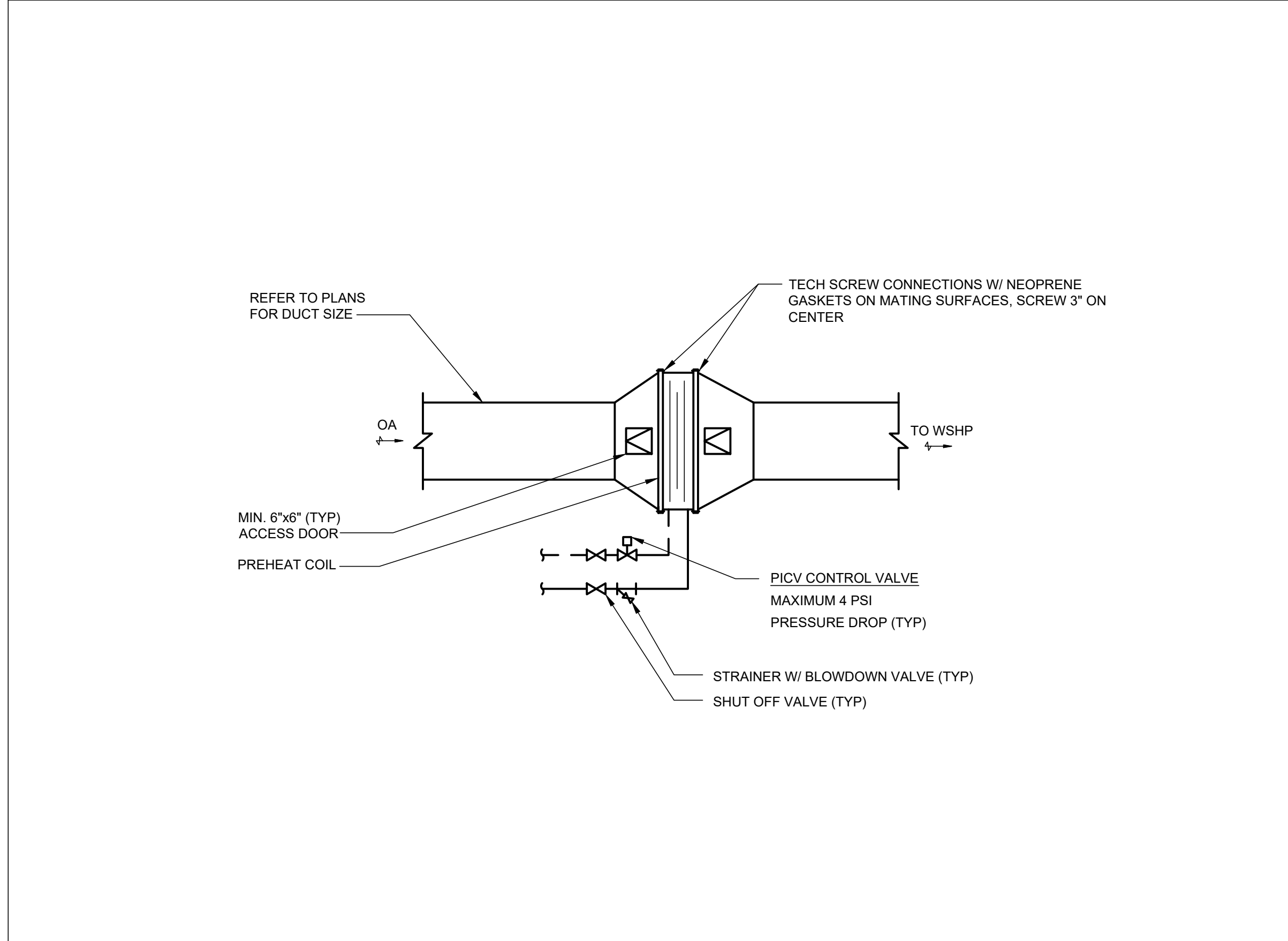
SCALE: NONE

3

DETAIL - LOW VELOCITY BRANCH TAKE-OFFS

SCALE: NONE

4



DETAIL -DUCT MOUNTED REHEAT COIL

SCALE: NONE

5

DETAIL -DUCT MOUNTED FILTER BANK

SCALE: NONE

6

DETAIL - EQUIPMENT PAD EXTENSION

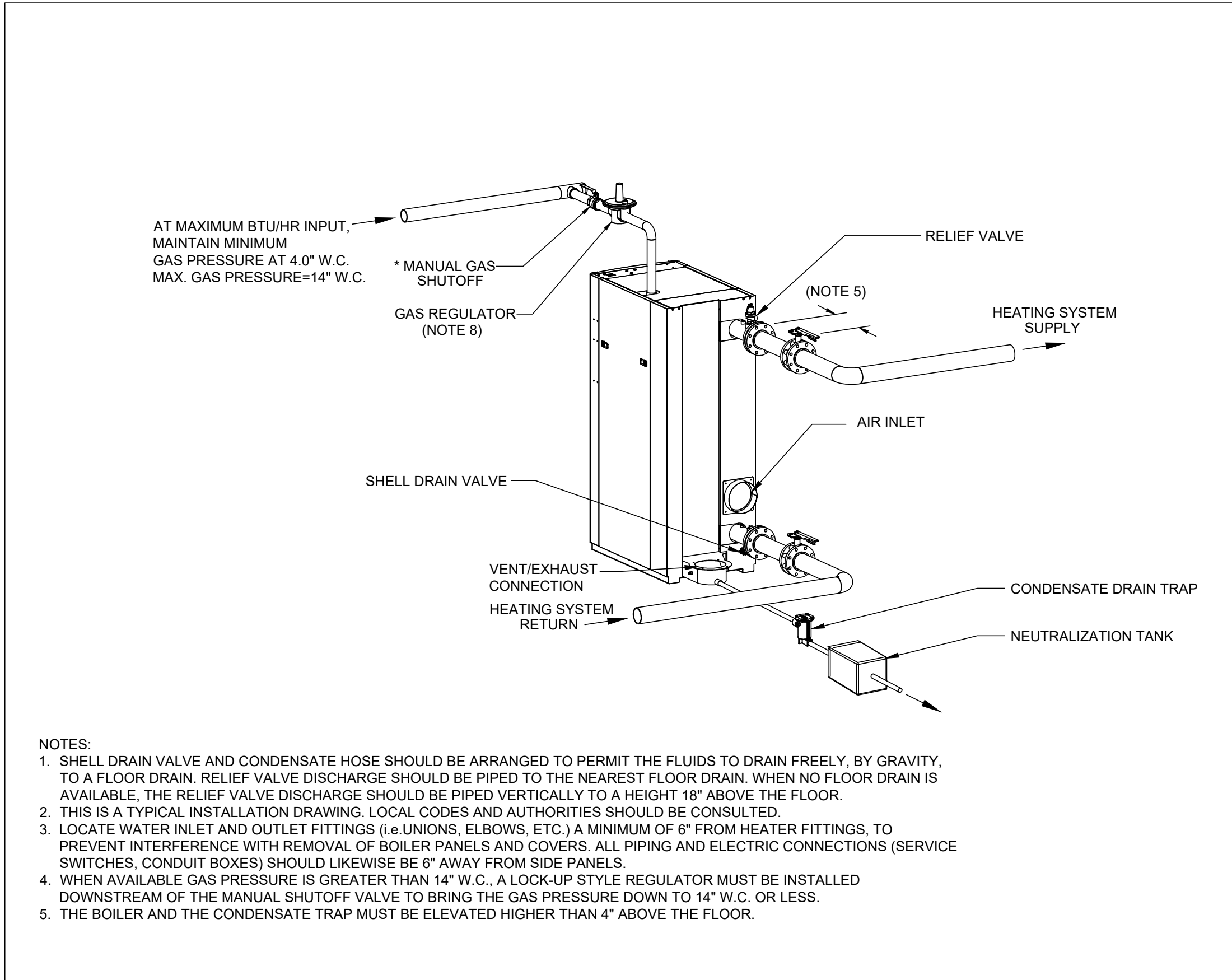
SCALE: NONE

7

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						KEY SHIT TWM	POINT SHIT 57NW30	PLAN SCALE:	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026						R.O.W NO.	POINT SHIT 57NW30	NONE	PROPERTY MANAGER	
	BUREAU OF ENGINEERING AND CONSTRUCTION		CONTRACT COMPLETION BOX					POINT SHIT 56NW30	FIELD ENGINEER	DATE: _____	
	AS-BUILT PER RECORD PRINT							POINT SHIT 56NW30			
	DGN BY: JTA	REVIEWED BY:									
	DWN BY: JTA	DATE REVIEWED:									
	CHKD BY: RMH										

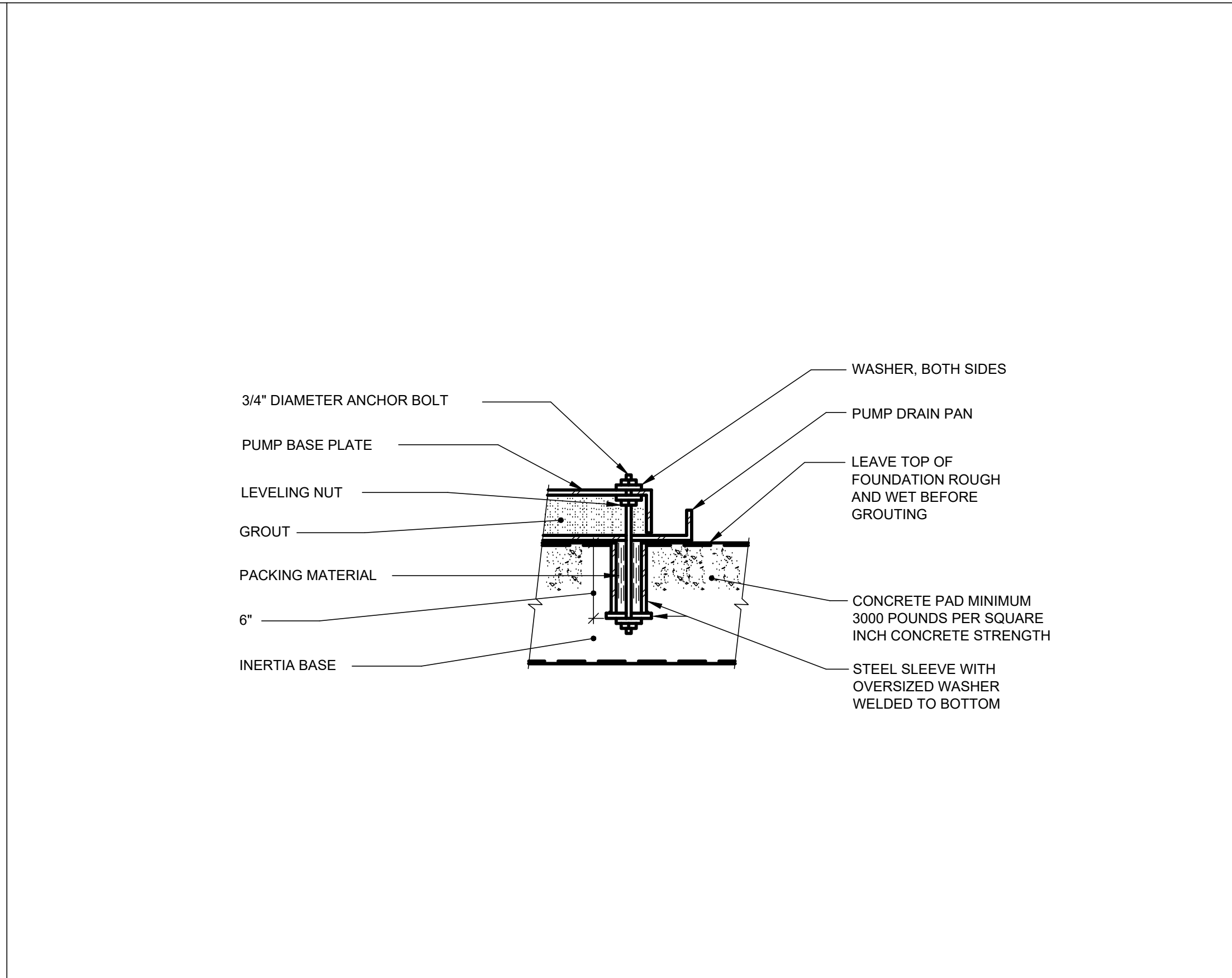
SHEET DESIGNATION			CONTRACT NUMBER		
M-802			24096-P00		
			JOB ORDER NUMBER		
			SHEET 44 OF 60		
			DRAWING NUMBER		
			2024-1270		
SUBDIVISION: REISTERSTOWN			ELECTION DIST. NO.: 4 c 4		

DWG. FILENAME: MECHANICAL DETAILS



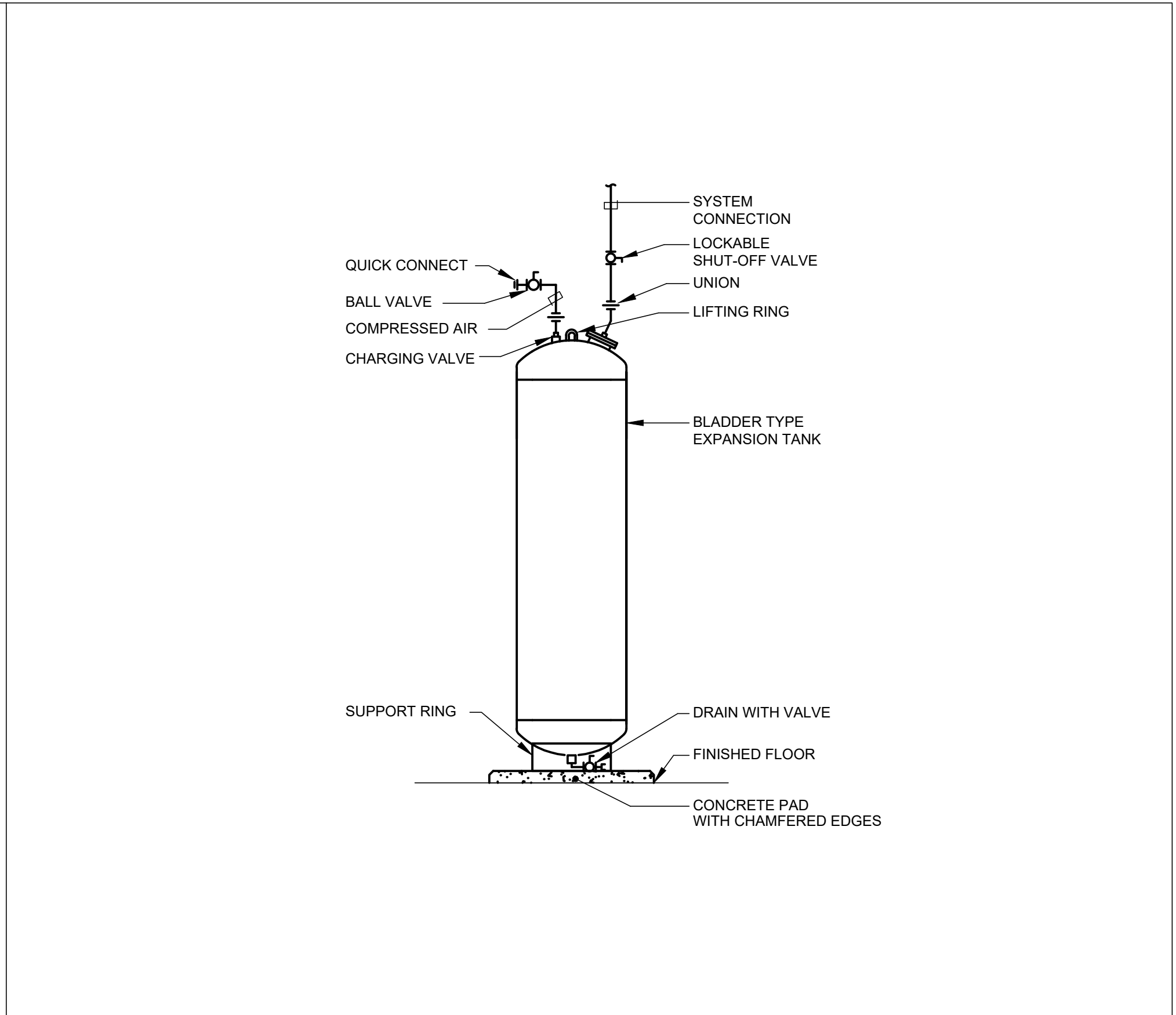
DETAIL - BOILER

SCALE: NONE 8



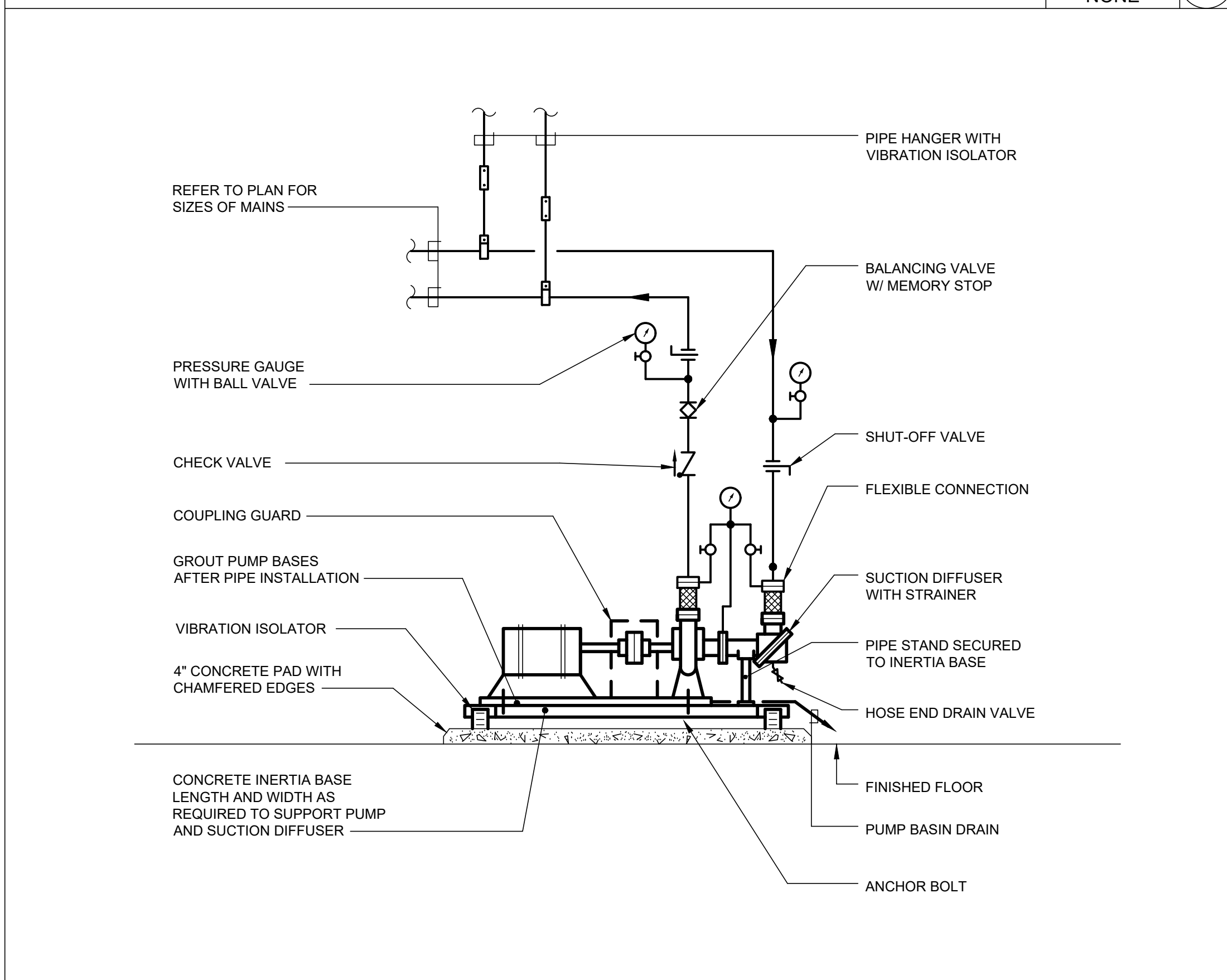
DETAIL - PUMP BASE ANCHOR SUPPORT

SCALE: NONE 9



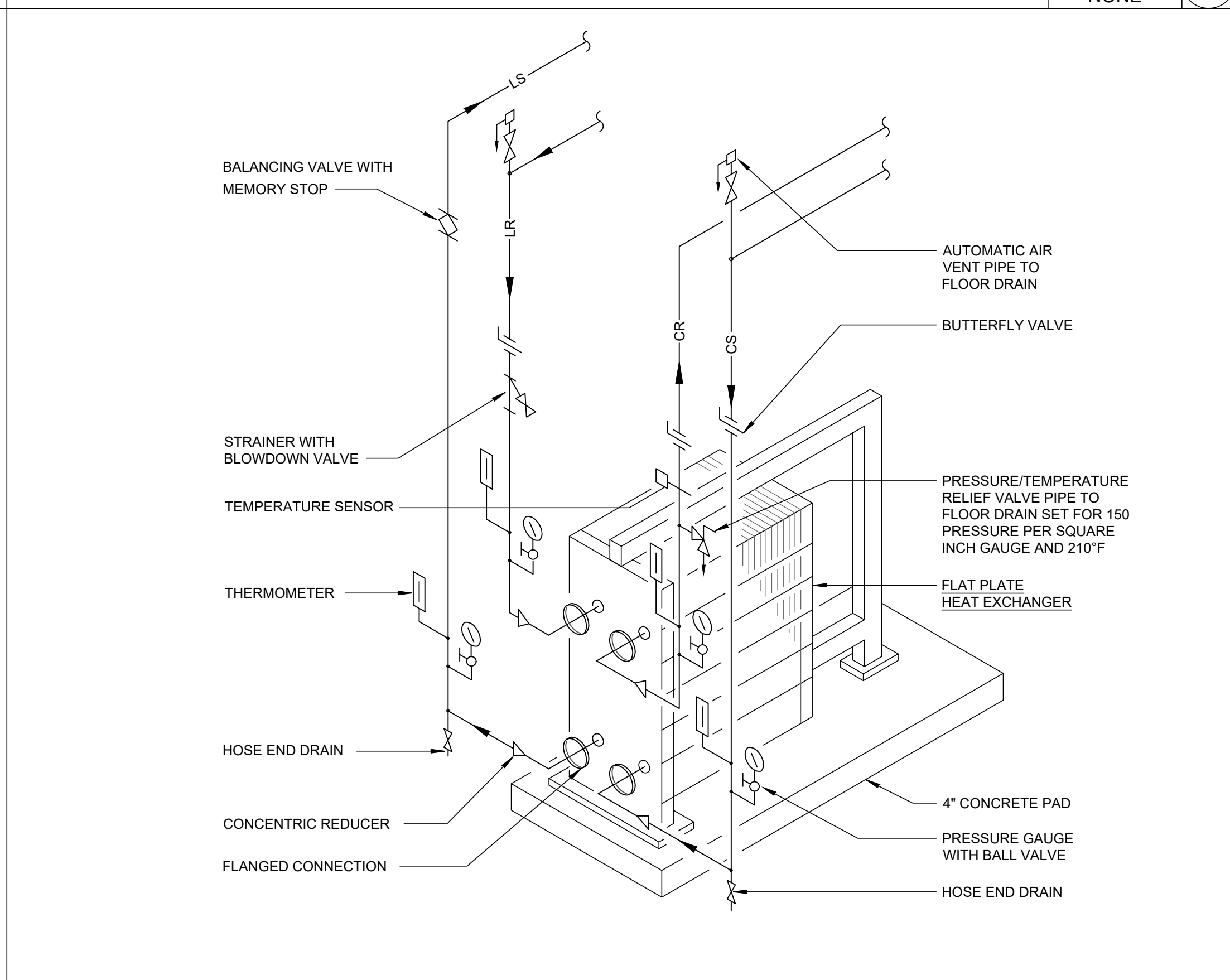
DETAIL - EXPANSION TANK

SCALE: NONE 10



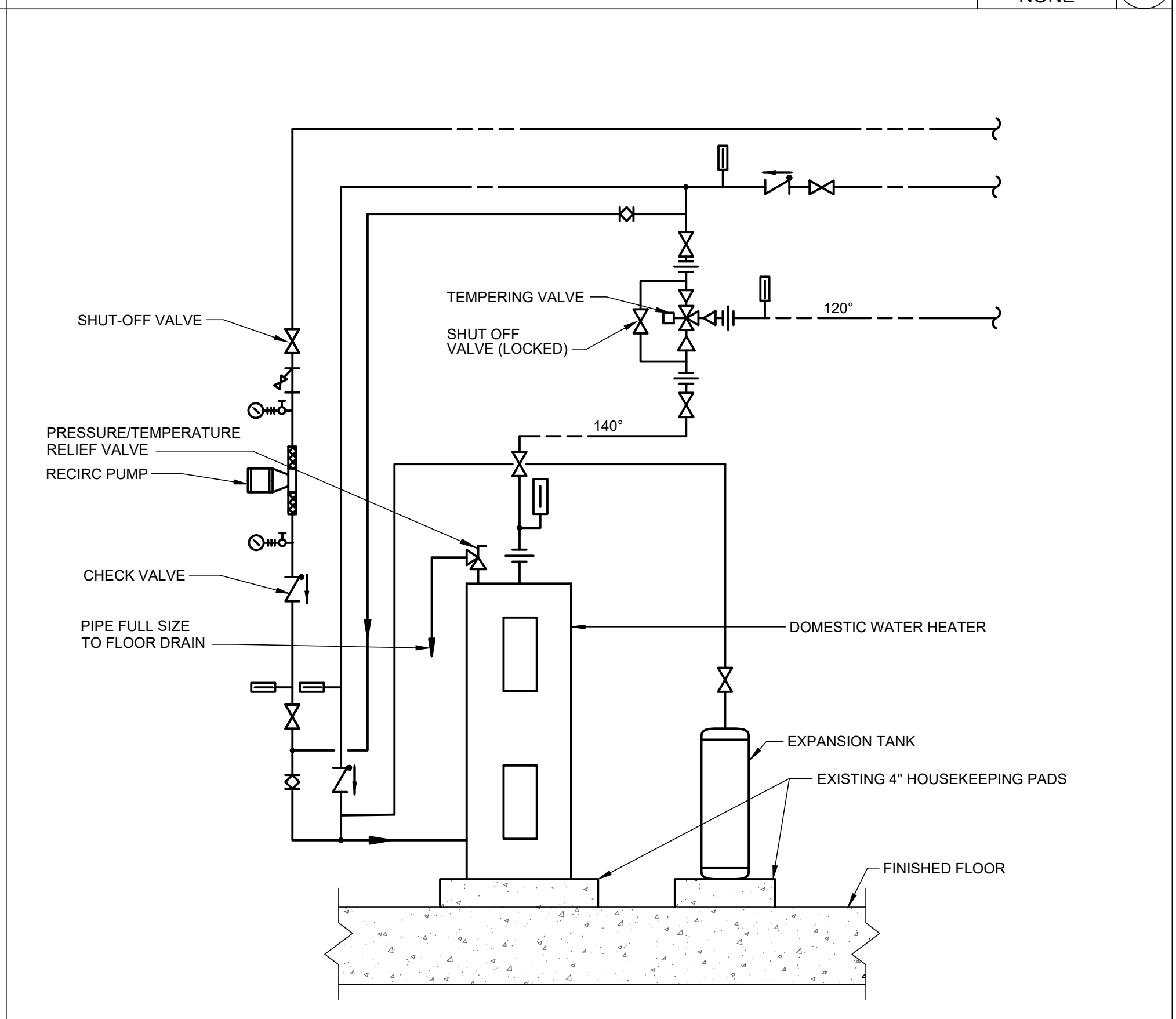
DETAIL - BASE MOUNTED END SUCTION PUMP

SCALE: NONE 11



DETAIL - FLAT PLATE HEAT EXCHANGER

SCALE: NONE 12



DETAIL - ELECTRIC DOMESTIC WATER HEATER

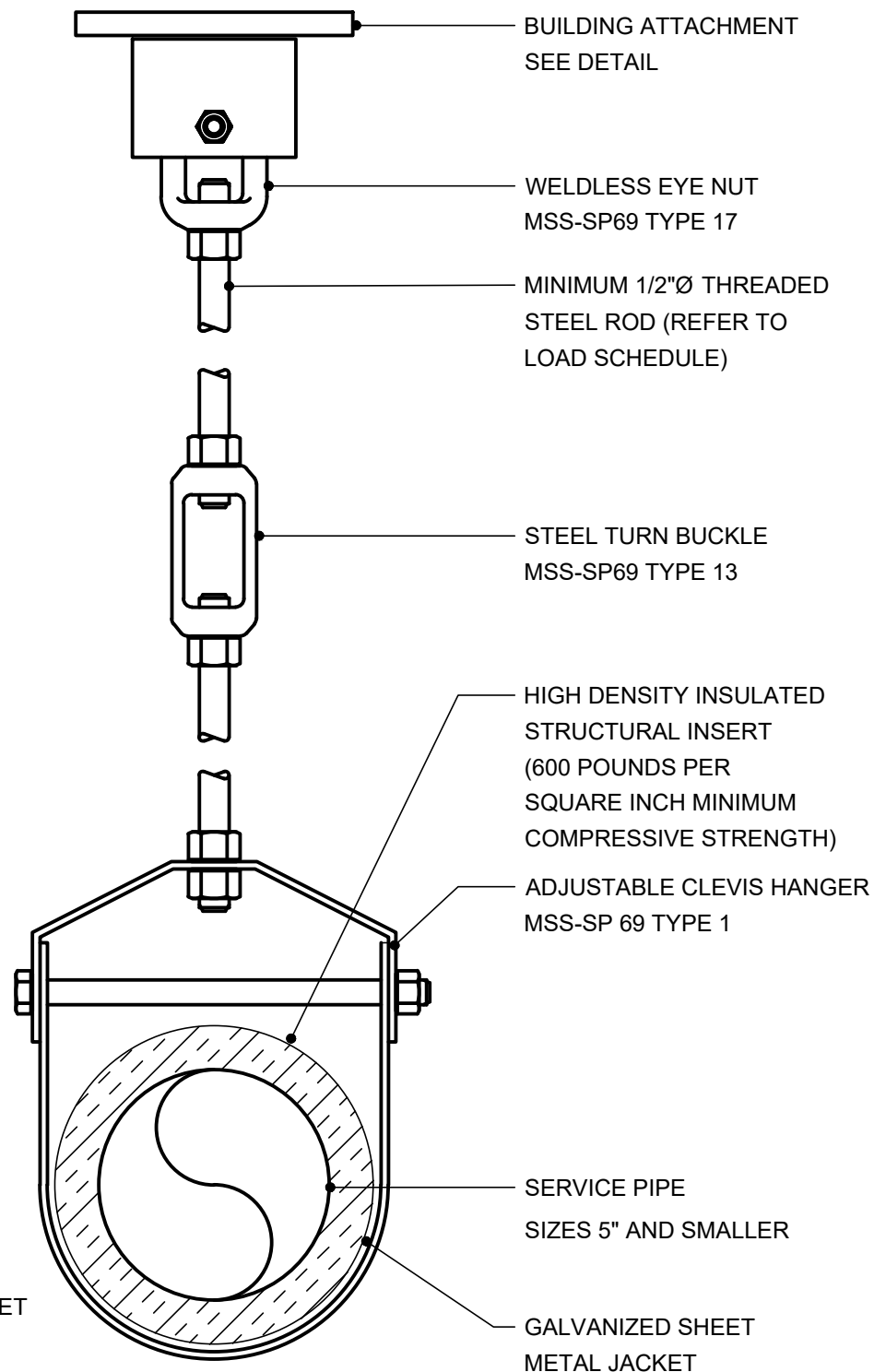
SCALE: NONE 13

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TWM	POINT SHIT 57W930	PLAN SCALE: NONE	APPROVED BY: _____	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2028		CONTRACT COMPLETION BOX						POINT SHIT 57W930	PROFILE SCALE: _____	DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY: _____									

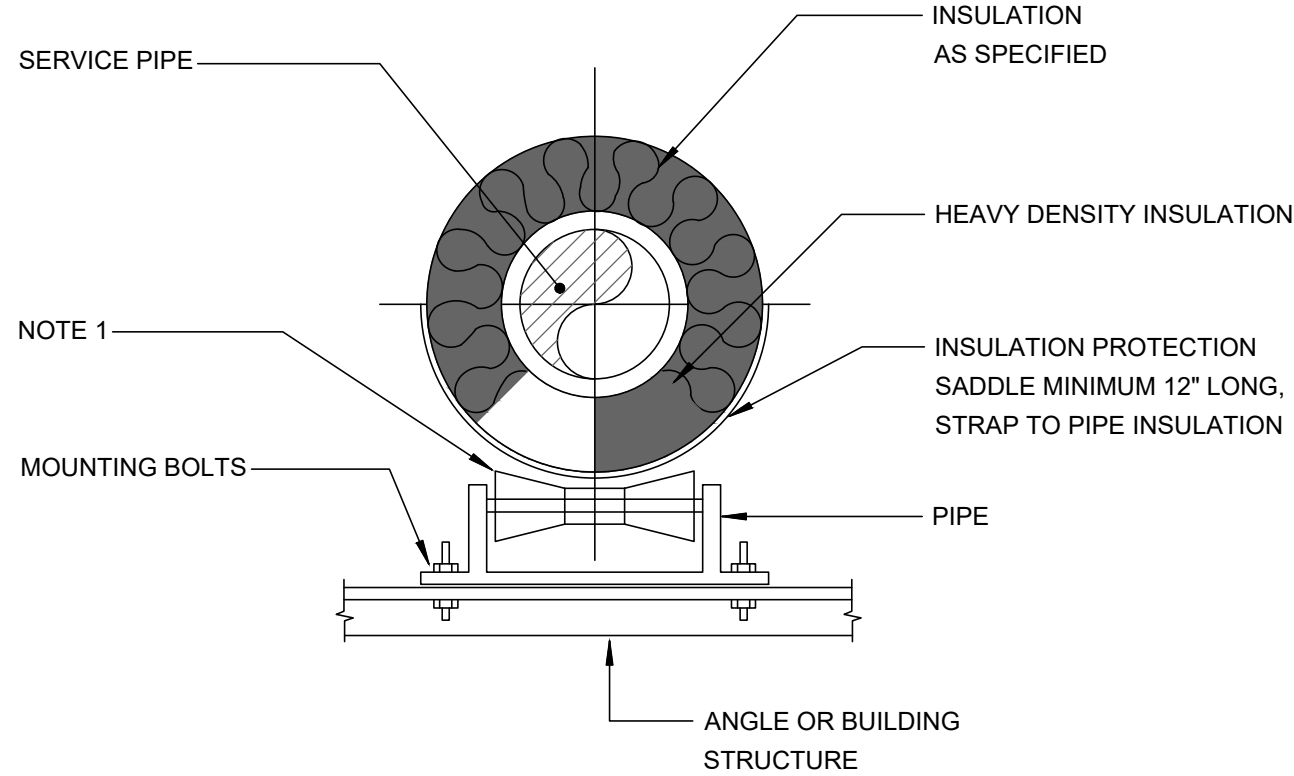
SHEET DESIGNATION		CONTRACT NUMBER	
M-803		24096-P00	
		JOB ORDER NUMBER	
		SHEET 45 OF 60	
		DRAWING NUMBER	
		2024-1271	
SUBDIVISION: REISTERSTOWN		12035 Reisterstown Rd, Reisterstown, MD 21136	
ELECTION DIST. NO.: 4 c 4		FILE NO.: 8	

DWG. FILENAME: MECHANICAL DETAILS

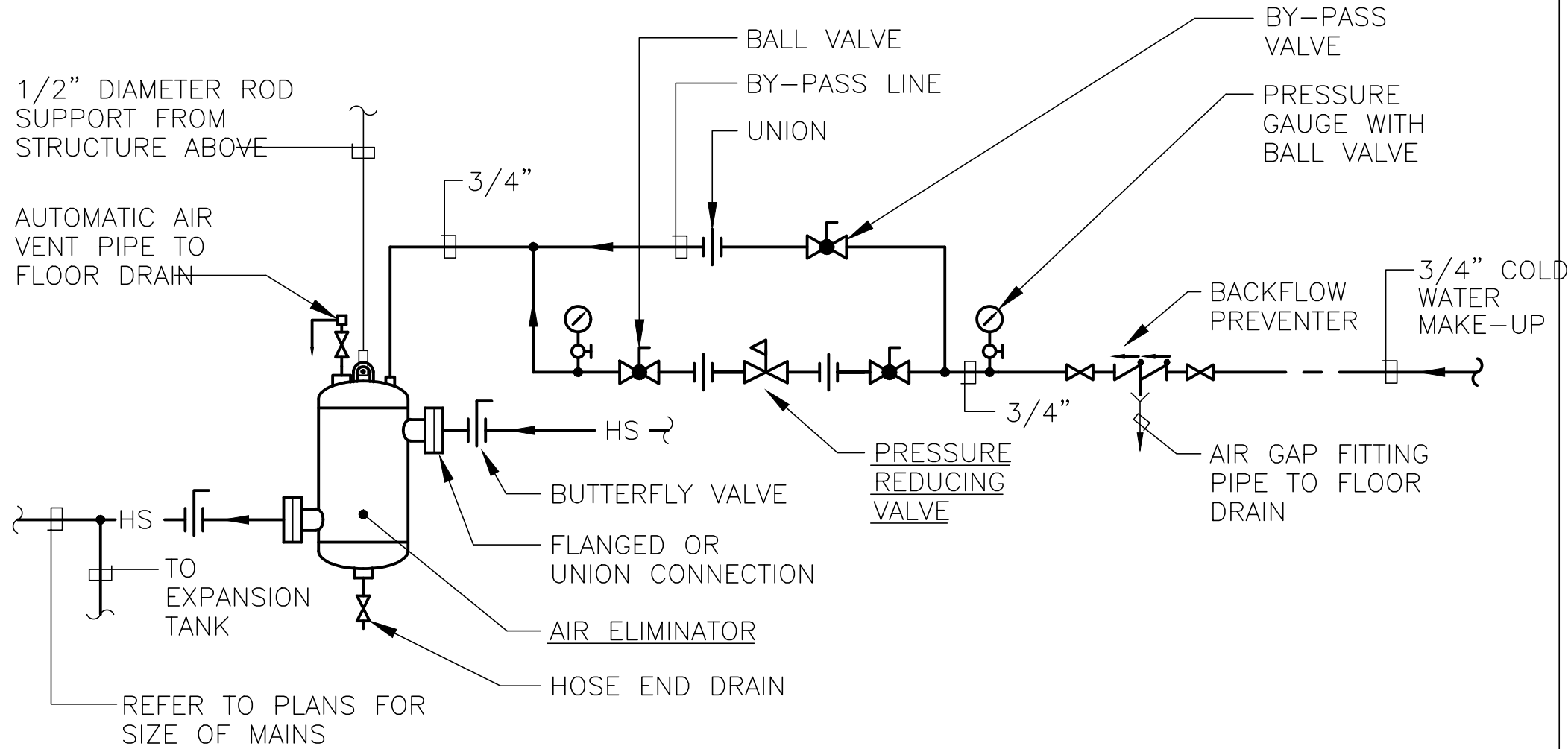
LOAD SCHEDULE		
PIPE SIZE	MAXIMUM SPACING	ROD SIZE
1/2" - 2"	8'	1/2" Ø
2 1/2"	10'	5/8" Ø
3"	10'	5/8" Ø
4"	14'	5/8" Ø
5"	14'	5/8" Ø



NOTE:
1. THIS DETAIL SHALL BE USED AS A GUIDE. ALL HANGERS SHALL MEET THE REQUIREMENTS OF SPECIFICATION.



NOTES:
1. SERVICE PIPING AS INDICATED IN SPECIFICATIONS SHALL BE INSTALLED ON ROLLER HANGERS.



DETAIL - 5" PIPE AND SMALLER HANGER SUPPORT

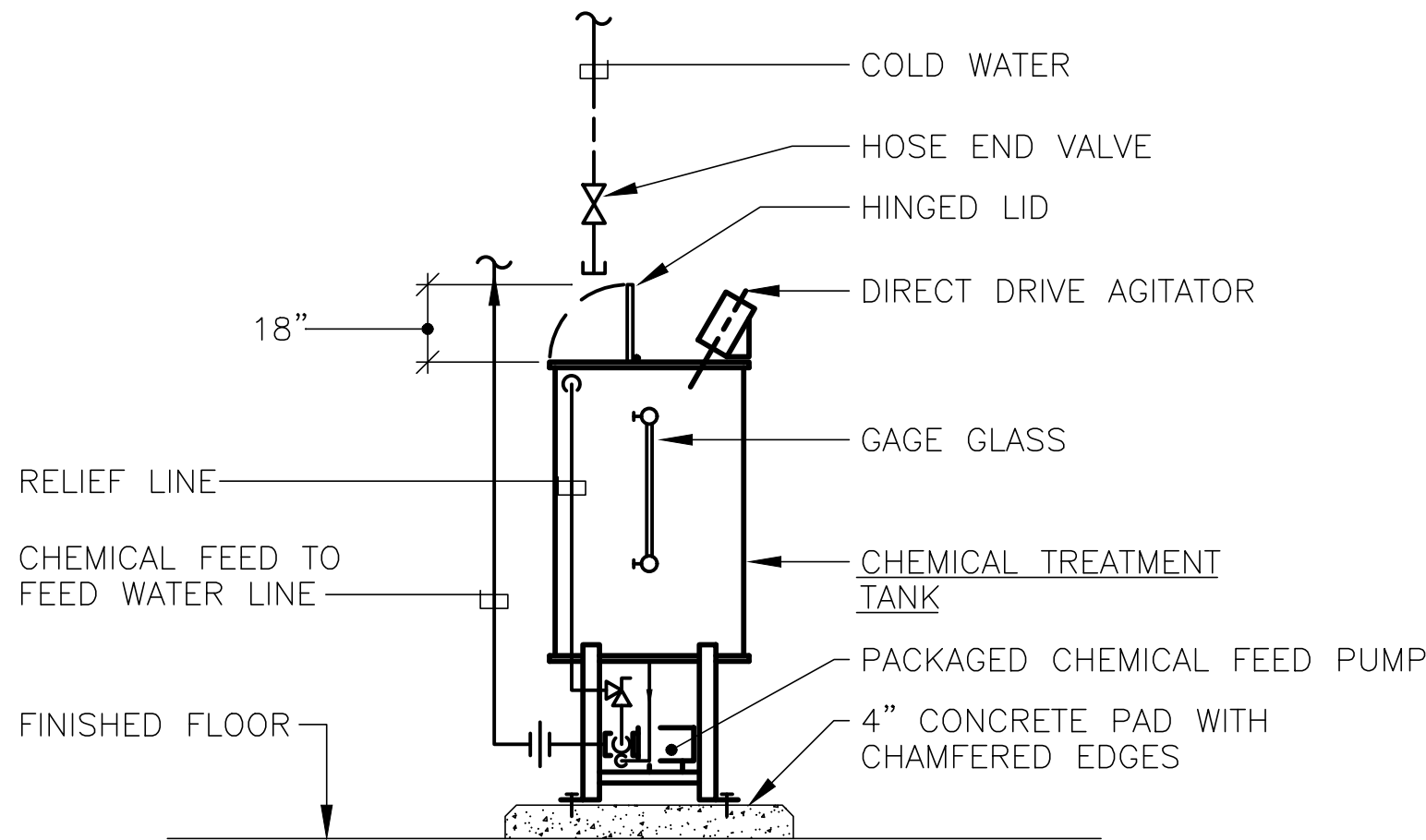
SCALE: NONE 14

DETAIL - PIPE ROLLER

SCALE: NONE 15

DETAIL - HEATING WATER MAKE-UP SYSTEM

SCALE: NONE 16



DETAIL - GLYCOL CHEMICAL FEEDER

SCALE: NONE 17

-

SCALE: NONE 18

-

SCALE: NONE 19

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHEET TNY	POINT SH 57W930	PLAN SCALE: NONE	APPROVED BY: PROPERTY MANAGER	
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026		CONTRACT COMPLETION BOX						POINT SH 57W930	PROFILE SCALE:	DATE:	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
	AS-BUILT PER RECORD PRINT		REVIEWED BY:									
BY: DATE:	CHKD BY: RMH	DATE REVIEWED:										

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT
MECHANICAL DETAILS
SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136
ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-804	24096-P00
JOB ORDER NUMBER	
SHEET 46 OF 60	
DRAWING NUMBER	
2024-1272	
FILE NO.: 8	

DWG. FILENAME: MECHANICAL DETAILS

HEATING WATER BOILER SCHEDULE																				
DESIGNATION	LOCATION	SERVICE	BOILER TYPE	NET OUTPUT (MBH) (160/180 DEG F RWT)	AHRI EFFICIENCY (BTS-2000) (%)	WATER DATA					PRESSURE DROP	BURNER DATA			ELECTRICAL DATA			DIMENSIONS L x W x H (IN)	UNIT OPERATING WEIGHT (LBS)	REMARKS
						RELIEF VALVE PRESSURE (PSIG)	BOILER PRESSURE RATING (PSIG)	DESIGN DELTA T (DEG F)	DESIGN FLOW (GPM)	BOILER MIN/MAX WATER FLOW (GPM)		FUEL	GAS INPUT (CFH)	MIN-MAX GAS INLET PRESSURE (IN W.C.)	VOLT/PHASE/HZ	FLA	BURNER MOTOR HP			
B-1	MECH. 001	HEATING	CONDENSING FIRE TUBE	1305 / 1425	94.6	50 PSI	160	30	115	25 / 250	3.0 PSIG @ 170 GPM	NATURAL GAS	1500	4 - 14	120/1/60	16	1.6	43.6 x 28 x 78	1650	AERCO
B-2	MECH. 001	HEATING	CONDENSING FIRE TUBE	1305 / 1425	94.6	50 PSI	160	30	115	25 / 250	3.0 PSIG @ 170 GPM	NATURAL GAS	1500	4 - 14	120/1/60	16	1.6	43.6 x 28 x 78	1650	AERCO

NOTES: ① VENTLESS GAS TRAIN. ② MINIMUM TURNDOWN: 20:1. ③ BOILER MANUFACTURER TO PROVIDE CONTROL, FIEL SINTALLED, MOTORIZED ISOLATOIN VALVES ON EACH BOILER. ④ PROVIDE CONDENSATE NEUTRALIZER FOR EACH BOILER AND COMMON FLUE DRAINS. ⑤ BMK STANDARD 2000 WITH EDGE.

WATER SOURCE HEAT PUMP SCHEDULE																																			
DESIGNATION	LOCATION	SUPPLY FAN DATA								CONDENSER WATER		COOLING COIL DATA								HEATING COIL DATA					COMPRESSOR				HGR			ELECTRICAL			REMARKS
		CFM	MIN. OA CFM	FAN QTY.	TSP INCH WG	ESP INCH WG	MOTOR BHP	HP	MAX RPM	GPM	MAX. WATER PD FT WG	EAT °F DB	WB	LAT °F DB	WB	TOTAL MBH	SENS. MBH	GPM @ 90°F EWT 103°F LWT	MAX. WATER PD FT WG	EAT °F	LAT °F	MBH	GPM @ 70°F EWT 57°F LWT	MAX. WATER PD FT WG	NO.	RLA EACH	LRA EACH	FLA EACH	LAT °F DB	WB	MBH	V/Ø/HZ	FLA	MCA	
WSHP-1	MECH. 001	3330	3370	1	1.63	1.10	1.46	2	904	20	6.9	95	78	69	67	138	97	20	6.9	50	70	150.5	20	7.2	2	7.8	52	3.1	93	74	87	460/3/60	18.7	20.7	BOSCH EC 120
WSHP-2	MECH. 024	3300	3370	1	1.63	1.10	1.46	2	904	20	6.9	95	78	69	67	138	97	20	6.9	50	70	150.5	20	7.2	2	7.8	52	3.1	93	74	87	460/3/60	18.7	20.7	BOSCH EC 120

NOTES: ① WSHP DESIGNED FOR 100% OUTSIDE AIR APPLICATION, TO INCLUDE MODULATING VFD ON SUPPLY FAN, MODULATING HGRH AND REFRIGERANT SYSTEM DESIGNED FOR 95F EAT.

ELECTRIC WATER HEATER DUTY	
DESIGNATION :	WH-1
SERVICE :	DOMESTIC WATER
STORAGE CAPACITY :	80 GALLONS
ENTERING WATER TEMP :	40 °F
LEAVING WATER TEMP :	140 °F
RECOVERY RATE :	98 GPH
ELEMENT WATTAGE :	24 KW
ELECTRICAL :	480V/3PH/60H
BASIS OF DESIGN :	HUBBELL
REMARKS :	PROVIDE 32" DIAM. PLASTIC DRAIN PAN

PLATE AND FRAME HEAT EXCHANGER DUTY	
DESIGNATION :	PFHX-1
LOCATION :	MECHANICAL 001
PLANT SIDE	
GPM :	270
EWT :	85
LWT :	98
MAX PRESSURE DROP (PSI):	10
PLATE ARRANGEMENT	COUNTER CURRENT
DESIGN PRESSURE (PSIG)	150
BUILDING SIDE	
GPM :	210
EWT :	106
LWT :	90
MAX PRESSURE DROP (PSI):	10
PLATE ARRANGEMENT	COUNTER CURRENT
DESIGN PRESSURE (PSIG)	150 PSI
TOTAL SURFACE AREA:	302 SQ. FT.
TOTAL NO. OF PLATES:	119
TOTAL HEAT EXCHANGED	1672 (MBH)
TOTAL HEAT TRANSFER CLEAN/DIRTY	870/870 FT ²
APPROX. DIMENSIONS (LxWxH)	40"x20.5"47"
WEIGHT (LBS)	1187
BASIS OF DESIGN :	BELL AND GOSSETT GPX
REMARKS:	

DUCT MOUNTED PREHEAT COIL SCHEDULE														
DESIGNATION	SERVICE	HEATING AIRFLOW CFM	MAXIMUM AIR PD INCH WG	HEATING COIL PERFORMANCE								COIL SIZE W"xH"	REMARKS	
				EAT °F	LAT °F	CAPACITY (MBH)	EWT °F	LWT °F	COIL DELTA	MAXIMUM WATER PD FT WG	NUMBER OF ROWS			GPM @20°F T
PHC-1	WSHP-1	3370	-	13	57	157	180	160	20	5	1	16.1	40x30	GREENHECK
PHC-2	WSHP-2	3370	-	13	57	157	180	160	20	5	1	16.1	40x30	GREENHECK

COOLING TOWER SCHEDULE											
DESIGNATION	GPM	AMBIENT TEMPERATURE (DB/WB)(°F)	EWT (°F)	LWT (°F)	CFM	MOTOR SIZE	NO. BASIN HEATERS	TOTAL PUMPING HEAD (PSI)	ELECTRICAL VOLTS/Ø/HZ	OPERATING WEIGHT (LBS)	REMARKS
CT-1	270	95/78	98	85	85,160	15 HP	1	6.4	460/3/60	21,674	BAC FXV-0818A-16D-K

NOTES: ① COOLING TOWER TO BE MOUNTED ON EXISTING STRUCTURAL STEEL FRAMING. PROVIDE ANY MODIFICATIONS TO THE TOWER AS NECESSARY TO ACCOMMODATE THESE EXISTING CONDITIONS AS DISCUSSED WITH SPECIFIED COOLING TOWER MANUFACTURER'S REPRESENTATIVE. ② COOLING TOWER DESIGNED WITH 40% PROPYLENE GLYCOL.

FILTER SCHEDULE										
DESIGNATION	SERVICE	NOMINAL CFM	APPROX BANK DIMENSION LxHxD	No CARTRIDGES	CARTRIDGE SIZE LxHxD	FACE VEL FFM	MAXIMUM INITIAL PD IN WG	EFFICIENCY	REMARKS	
F-1-1	WSHP-1	3370	42"x32"x6"	2	20"x30"	444	0.25	MERV 13	ULINE PLEAT	①
F-1-2	WSHP-1	3370	42"x32"x6"	2	20"x30"	444	0.25	MERV 13	ULINE PLEAT	①
F-2-1	WSHP-2	3370	42"x32"x6"	2	20"x30"	444	0.25	MERV 13	ULINE PLEAT	①
F-2-2	WSHP-2	3370	42"x32"x6"	2	20"x30"	444	0.25	MERV 13	ULINE PLEAT	①

NOTES: ① FILTERS LOCATED OA DUCT MOUNTED FILTER RACK.

PUMP SCHEDULE													
DESIGNATION	SERVICE	TYPE	GPM	HEAD FEET	SUCTION X DISCHARGE	MOTOR		RPM	EFFICIENCY %	ELECTRICAL V/Ø/HZ	REMARKS		
						BHP	HP						
LP-1	LOOP PUMP	END SUCTION	210	70	3x2.5	4.9	7.5	1750	74.8	480/3/60	B&G E-1510 2BB, VFD		
LP-2	LOOP PUMP	END SUCTION	210	70	3x2.5	4.9	7.5	1750	74.8	480/3/60	B&G E-1510 2BB, VFD		
CWP-1	CONDENSER WATER PUMP	END SUCTION	270	76	3x2.5	6.8	10	1750	77.4	480/3/60	B&G E-1510 2.5BB, VFD		
CWP-2	CONDENSER WATER PUMP	END SUCTION	270	76	3x2.5	6.8	10	1750	77.4	480/3/60	B&G E-1510 2.5BB, VFD		
HWP-1	HEATING WATER PUMP	END SUCTION	115	50	2.5x2	1.96	3	1750	65.4	480/3/60	B&G E-1510 2BD, VFD		
HWP-2	HEATING WATER PUMP	END SUCTION	115	50	2.5x2	1.96	3	1750	65.4	480/3/60	B&G E-1510 2BD, VFD		
RCP-1	DOMESTIC WATER RECIRC	INLINE	5	40	-	-	.5	1750	-	120/1/60	B&G PL-55		

AIR DEVICE SCHEDULE						
⑩ No	DUTY	CFM	NECK SIZE	FACE AREA	BLOW	REMARKS
101	SUPPLY	0-150	6"	24"x24"	-	TITUS PAS
102	SUPPLY	0-150	-	8"x6"	-	TITUS RS

	PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.								R.O.W NO.	KEY SHEET TWT	POINT, SHIT 57W930 POINT, SHIT 57W930 POINT, SHIT 56W930 POINT, SHIT 56W930	PLAN SCALE: NONE PROFILE SCALE:	APPROVED BY: _____ DATE: _____	PROPERTY MANAGER
	LICENSE NO. 32486 EXPIRATION DATE 01-06-2026				CONTRACT COMPLETION BOX									
	 RFM ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-528-0200 (F) 410-330-0372				DGN BY: JTA	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	
	AS-BUILT PER RECORD PRINT				DWN BY: JTA	REVIEWED BY:								
BY: DATE: 07/31/2024				CHKD BY: RMH				DATE REVIEWED:						

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL SCHEDULES

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
M-901	24096-P00
JOB ORDER NUMBER	
SHEET 47 OF 60	
DRAWING NUMBER	
2024-1273	
FILE NO.: 8	



DWG. FILENAME: MECHANICAL SCHEDULES

POWER SYMBOLS

SYMBOL	DESCRIPTIONS	MH (UON)
	DOUBLE DUPLEX (QUAD) RECEPTACLE	18" CTR
	DUPLEX RECEPTACLE	18" CTR
	GROUND FAULT INTERRUPTER TYPE RECEPTACLE	18" CTR
	RECEPTACLE OUTLET MOUNTED HIGH	84" CTR
	DUPLEX RECEPTACLE MOUNTED AT 6" ABOVE BACKSPLASH OR COUNTER.	
	GROUND FAULT INTERRUPTER TYPE RECEPTACLE DUPLEX RECEPTACLE MOUNTED AT 6" ABOVE BACKSPLASH OR COUNTER.	18" CTR
	EMERGENCY POWER OFF SWITCH	84" CTR
	JUNCTION BOX	
	WALL MOUNTED JUNCTION BOX	
	EQUIPMENT CONNECTION AS NOTED	
	ENCLOSED CIRCUIT BREAKER	
	NON-FUSED DISCONNECT SWITCH	
	FUSED DISCONNECT SWITCH	
	THERMAL MAGNETIC MOTOR STARTER	
	MANUAL MOTOR STARTER WITH THERMAL OVERLOADS	
	COMBINATION MAGNETIC MOTOR STARTER.	
	VARIABLE FREQUENCY DRIVE W/FUSED DISCONNECT SWITCH	
	PANELBOARD	
	DISTRIBUTION PANELBOARD TRANSFORMER	
	CIRCUIT CONCEALED IN WALLS OR CEILING SPACE. CONDUCTORS SHALL BE MINIMUM 2#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT, (UNLESS OTHERWISE NOTED)	
	RACEWAY CONCEALED IN SLAB OR BELOW GRADE.	
	BRANCH CIRCUIT HOMERUN TO PANELBOARD. QUANTITY OF CIRCUITS INDICATED BY ARROWS (↗↘). NUMBER OF CONDUCTORS SHALL BE MINIMUM 4#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT, (UNLESS OTHERWISE NOTED)	
	RACEWAY RUN EXPOSED. CONDUCTORS SHALL BE MINIMUM 2#12 AWG AND 1#12 AWG IN 3/4" CONDUIT, (UNLESS OTHERWISE NOTED)	
	SMOKE DETECTOR (IONIZATION)	
	FIRE ALARM STROBE, CEILING MOUNTED	
	DUCT SMOKE DETECTOR	

LIGHTING SYMBOLS

SYMBOL	DESCRIPTIONS	MH (UON)
	SINGLE POLE TOGGLE SWITCH	48" TOD
	THREE-WAY TOGGLE SWITCH. SEE GEN NOTE 6.	48" TOD
	LIGHTING FIXTURE - RECESSED, SURFACE, OR PENDANT MOUNTED, TYPE AS SPECIFIED	
	LINEAR LIGHTING FIXTURE - RECESSED, SURFACE, OR PENDANT MOUNTED	
	LINEAR LIGHTING FIXTURE - WALL MOUNTED.	
	LIGHTING FIXTURE - WALL MOUNTED TYPE AS SPECIFIED	
	WALL WASHER	
	ADJUSTABLE WALL WASHER	
	LIGHTING FIXTURE ON EMERGENCY	
	EMERGENCY BATTERY PACK WITH REMOTE HEADS	
	EXIT SIGN - CEILING OR PENDANT MOUNTED (SHADED PORTION INDICATES FACE)	

ELECTRICAL ABBREVIATIONS

A, AMP	- AMPERE	KVAR	- KILOVOLT AMPERES REACTIVE
AC	- ALTERNATING CURRENT	KW	- KILOWATTS
A/C	- AIR CONDITIONING	KWH	- KILOWATT HOUR
AFC	- ABOVE FINISHED CEILING	LA	- LIGHTNING ARRESTOR
AFCI	- ARC FAULT CIRCUIT INTERRUPTOR	LC	- LIGHTING CONTACTOR
AFF	- ABOVE FINISHED FLOOR	LTG	- LIGHTING
AFG	- ABOVE FINAL GRADE	LTNG	- LIGHTNING
AHU	- AIR HANDLING UNIT	LP	- LIGHTING PANEL
AIC	- AMPS INTERRUPTING CAPACITY	LRA	- LOCKED ROTOR AMPERES
ALT	- ALTERNATE	MATV	- MASTER ANTENNA TELEVISION
ANN	- ANNUNCIATOR	MCB	- MAIN CIRCUIT BREAKER
APPROX	- APPROXIMATELY	MCC	- MOTOR CONTROL CENTER
ARCH	- ARCHITECT	MEH	- METAL HALIDE
ATC	- AUTOMATIC TEMPERATURE CONTROL	MH	- MANHOLE, MOUNTING HEIGHT
ATS	- AUTOMATIC TRANSFER SWITCH	MLO	- MAIN LUGS ONLY
AWG	- AMERICAN WIRE GAUGE	MS	- THERMAL MANUAL MOTOR STARTER
BAS	- BUILDING AUTOMATION SYSTEM	MSP	- MOTOR STARTER PANEL
BFC	- BELOW FINISHED CEILING	MTD	- MOUNTED
BFG	- BELOW FINISHED GRADE	MV	- MERCURY VAPOR
BLDG	- BUILDING	NC	- NORMALLY CLOSED
BOD	- BOTTOM OF DEVICE	NEC	- NATIONAL ELECTRICAL CODE
C, CND	- CONDUIT	NFSS	- NON-FUSED SAFETY SWITCH
CATV	- CABLE TELEVISION	NO	- NUMBER, NORMALLY OPEN
CB	- CIRCUIT BREAKER	OC	- ON CENTER
CCTV	- CLOSED CIRCUIT TELEVISION	OFCI	- OWNER FURNISHED CONTRACTOR INSTALLED
CKT	- CIRCUIT	OFOI	- OWNER FURNISHED OWNER INSTALLED
CL	- CURRENT LIMITING	OH	- OVERHEAD
CLG	- CEILING	Ø, PH	- PHASE
CONN	- CONNECT	P	- POLE
CPT	- CONTROL POWER TRANSFORMER	PB	- PUSHBUTTON
CT	- CURRENT TRANSFORMER	PF	- POWER FACTOR
CTR	- CENTER	PFCC	- POWER FACTOR CORRECTION CAPACITOR
CU,CO	- COPPER	PL	- PILOT LIGHT
CX	- CONNECT TO EXISTING	PLC	- PROGRAMMABLE LIGHTING CONTROL
DC	- DIRECT CURRENT	PNL	- PANEL
DISC	- DISCONNECT	PP	- POWER PANEL
DN	- DOWN	PR	- PAIR
DP	- DISTRIBUTION PANEL	PT	- POTENTIAL TRANSFORMER
DPST	- DOUBLE POLE SINGLE THROW	PVC	- POLYVINYL CHLORIDE
DPDT	- DOUBLE POLE DOUBLE THROW	Pp	- PUMP
DT	- DOUBLE THROW	QTY	- QUANTITY
DWG	- DRAWING	RCS	- REMOTE CONTROL SWITCH
E,EM,EMRG	- EMERGENCY	REC,RECPT	- RECEPTACLE
EA	- EACH	REL, RL	- EXISTING TO BE RELOCATED/RELOCATED
EC	- EMPTY CONDUIT	REQ'D	- REQUIRED
EF	- EXHAUST FAN	RFI	- RADIO FREQUENCY INTERFERENCE
EH	- ELECTRIC HEATER	RGS	- RIGID GALVANIZED STEEL
ELEC	- ELECTRIC	RLA	- RUNNING LOAD AMPERES
ELEV	- ELEVATION	RM	- ROOM
ELR	- EMERGENCY LTG CONTROL RELAY	RVAT	- REDUCED VOLTAGE AUTO TRANSFORMER
EMT	- ELECTRICAL METALLIC TUBING	RX	- REMOVE EXISTING
ETR	- EXISTING TO REMAIN	SC	- SURGE CAPACITOR
EX	- EXISTING	SEC	- SECONDARY
EXP	- EXPOSED	SN, S/N	- SOLID NEUTRAL
EWC	- ELECTRIC WATER COOLER	SP	- SURGE PROTECTION
FR	- FRAME	SPDT	- SINGLE POLE DOUBLE THROW
FA	- FIRE ALARM	SS	- SAFETY SWITCH
FAAP	- FIRE ALARM ANNUNCIATOR PANEL	SST	- SOLID STATE
FACP	- FIRE ALARM CONTROL PANEL	ST	- SINGLE THROW
FBO	- FURNISHED BY OTHERS	SW	- SWITCH
FC	- FAN COIL	SWBD	- SWITCHBOARD
FDR	- FEEDER	SWGR	- SWITCHGEAR
FLA	- FULL LOAD AMPERES	T	- TRANSFORMER
FLR	- FLOOR	TBR	- TO BE REMOVED
FU	- FUSED AND FUSIBLE	TC	- TIME CLOCK
FUSS	- FUSED SAFETY SWITCH	TEL, TELE	- TELEPHONE
FVR	- FULL VOLTAGE REVERSING	TOD	- TOP OF DEVICE
FVNR	- FULL VOLTAGE NON-REVERSING	TH	- TUNGSTEN HALOGEN
GEN	- GENERATOR, GENERAL	TTB	- TELEPHONE TERMINAL BOARD
GFI	- GROUND FAULT INTERRUPTER	TW	- TWISTED
GFR	- GROUND FAULT RELAY	TYP	- TYPICAL
GRD, GND	- GROUND	UC	- UNDERCABINET
GRS	- GALVANIZED RIGID STEEL	UG	- UNDERGROUND
HID	- HIGH INTENSITY DISCHARGE	UH	- UNIT HEATER
HOA	- HAND-OFF-AUTOMATIC	UON	- UNLESS OTHERWISE NOTED
HP	- HORSEPOWER	V	- VOLTS
HPS	- HIGH PRESSURE SODIUM	VFD	- VARIABLE FREQUENCY DRIVE
HTR	- HEATER	W	- WATTS, WIRE
HV	- HIGH VOLTAGE	W/	- WITH
HZ	- HERTZ	WP	- WEATHER-PROOF
IG	- ISOLATED GROUND	XFMR	- TRANSFORMER
JB	- JUNCTION BOX	XP	- EXPLOSION PROOF
KCMIL	- THOUSAND CIRCULAR MILS	2S1W	- 2 SPEED SINGLE WINDING
KV	- KILOVOLTS	2S2W	- 2 SPEED DOUBLE WINDING
KVA	- KILOVOLT AMPERES		

ELECTRICAL DRAWING PRESENTATION

	REVISION NUMBER 2
	DRAWING NOTE NUMBER 2
	EXISTING LINE TYPE
	NEW ELECTRICAL WORK LINE TYPE
	FUTURE ELECTRICAL WORK LINE TYPE
	DEMOLITION ELECTRICAL WORK LINE TYPE

CONDUCTOR RATING SCHEDULE

Conductor Length (ft) for 12A Load at 3% voltage drop		
	120V	277V
#12	80	185
#10	130	310
#8	200	470
#6	315	735

LIGHTING CIRCUIT FIXTURE DESIGNATIONS

CIRCUIT NUMBER	#		O	CONTROL ZONE DESIGNATION
			X	FIXTURE TYPE

CIRCUIT

CIRCUIT DESIGNATION	#
* SEE NOTES FOR PANEL DESIGNATIONS FOR EACH AREA.	

SEAL 	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	PROPERTY MANAGEMENT
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.					R.O.W NO.	KEY SHP TWT	POINT SHP 57W930	PLAN SCALE: NONE	APPROVED BY: PROPERTY MANAGER
	LICENSE NO. 16961 EXPIRATION DATE 06-14-2026		CONTRACT COMPLETION BOX					POINT SHP 57W930	PROFILE SCALE:	DATE:
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	
	AS-BUILT PER RECORD PRINT		REVIEWED BY:							
DATE : 07/31/2024	BY: DATE:	CHKD BY: RMH	DATE REVIEWED:							

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

ELECTRICAL LEGEND & ABBREVIATIONS

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

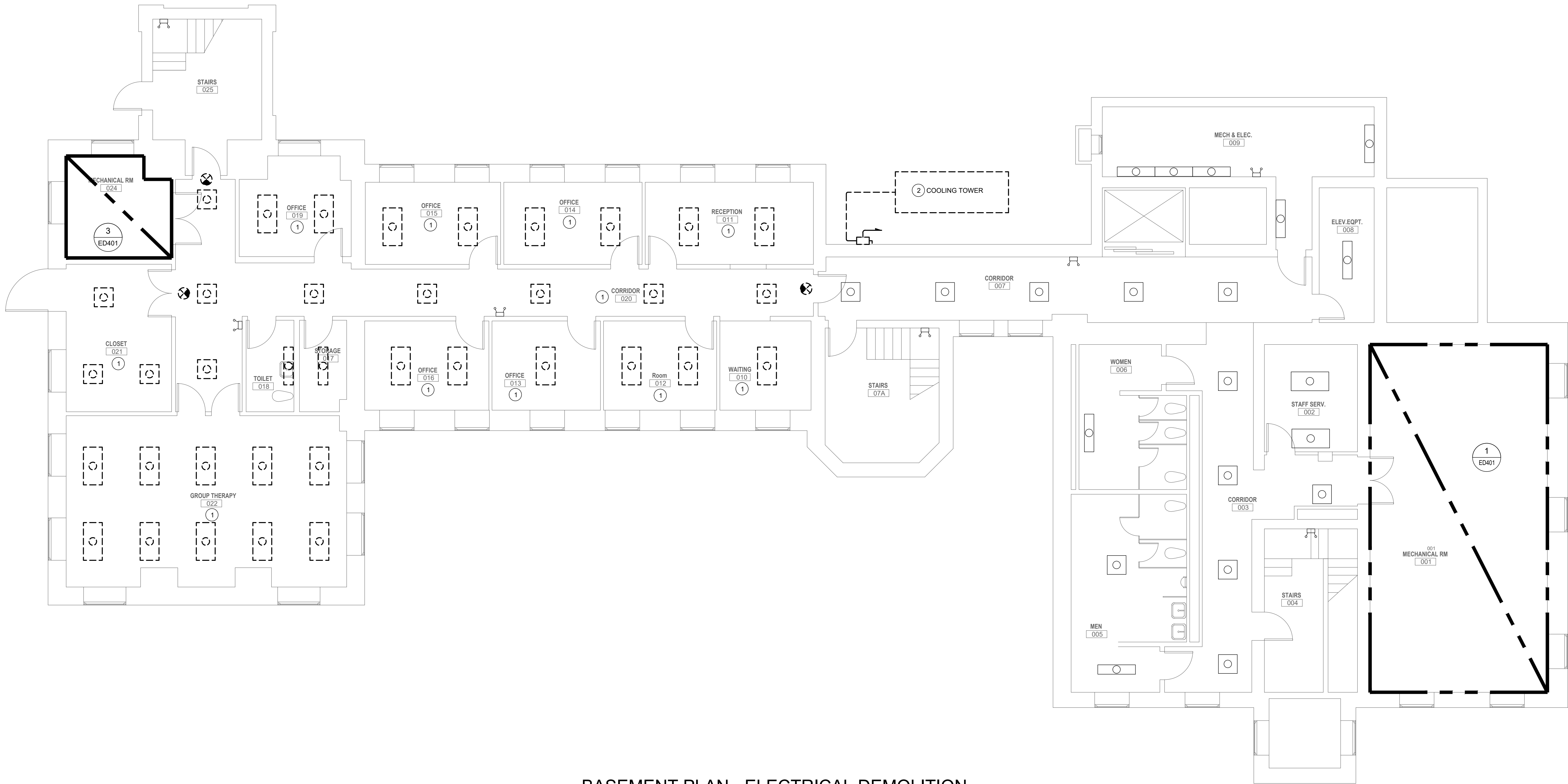
ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
E-001	24096-P00
JOB ORDER NUMBER	
SHEET 48 OF 60	
DRAWING NUMBER	
2024-1274	
FILE NO.: 8	

DWG. FILENAME: ELECTRICAL LEGEND & ABBREVIATIONS

DRAWING NOTES:

- 1 LIGHTING FIXTURES IN THIS AREA TO BE REMOVED AND STORED. FIXTURES ARE TO BE RE-INSTALLED IN ORIGINAL LOCATION ONCE CEILING WORK IS COMPLETE.
- 2 DISCONNECT AND REMOVE CIRCUITRY BACK TO SOURCE ALONG WITH DISCONNECT AND CONTROL DEVICES.



BASEMENT PLAN - ELECTRICAL DEMOLITION

3/16"=1'-0"



SEAL  DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHEET TWM	POINT SHIT 57NW30	PLAN SCALE:	3/16"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 16961 EXPIRATION DATE 06-14-2026		CONTRACT COMPLETION BOX						POINT SHIT 57NW30	PROFILE SCALE:		DATE:	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
	AS-BUILT PER RECORD PRINT		REVIEWED BY:										

SHEET DESIGNATION		CONTRACT NUMBER	
ED-101		24096-P00	
		JOB ORDER NUMBER	
		SHEET 49 OF 60	
		DRAWING NUMBER	
		2024-1275	
SUBDIVISION: REISTERSTOWN		12035 Reisterstown Rd, Reisterstown, MD 21136	
ELECTION DIST. NO.: 4 c 4		FILE NO.: 8	

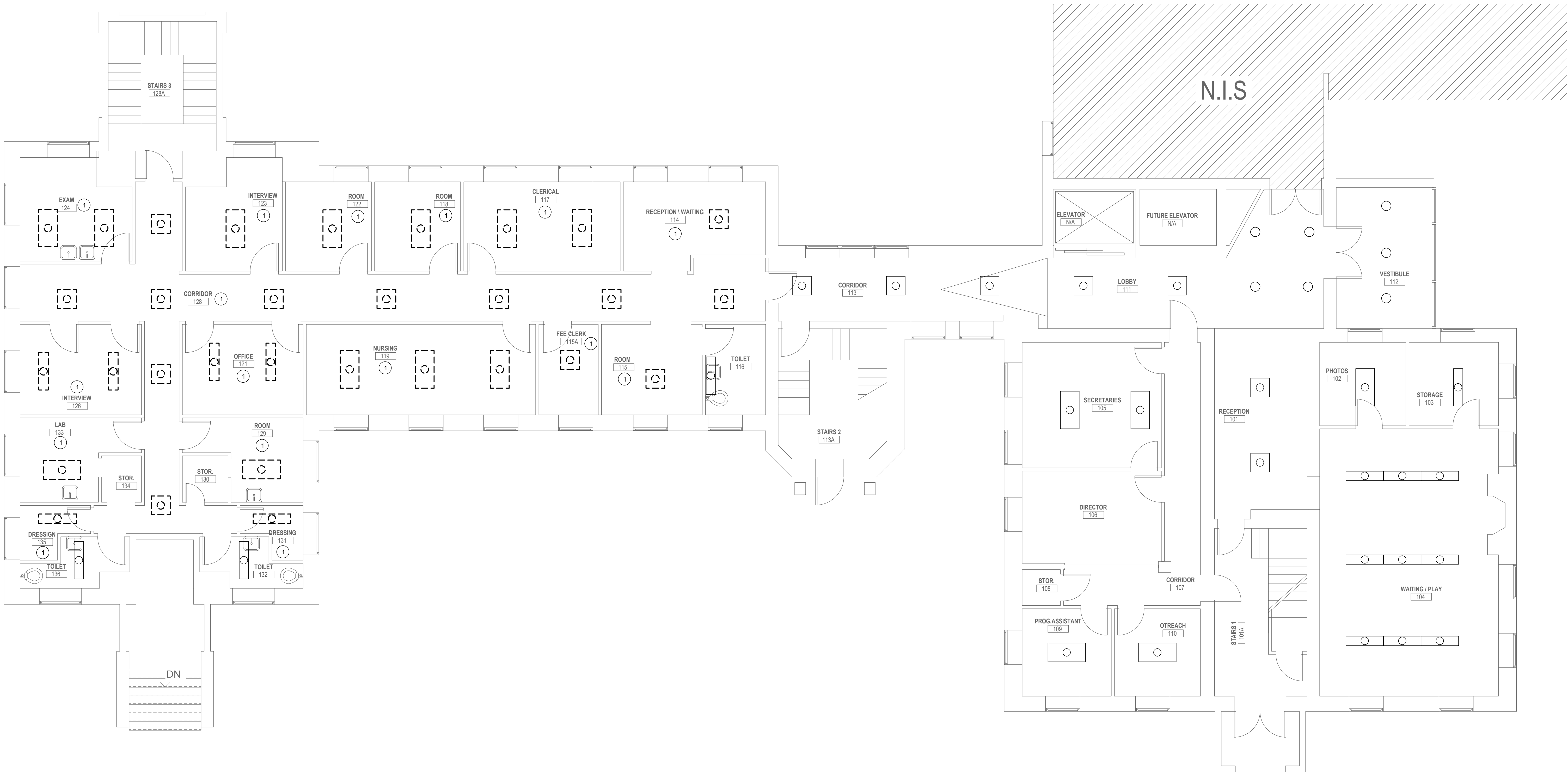
DWG. FILENAME: ELECTRICAL - DEMOLITION - BASEMENT

GENERAL NOTES:

1. XXX

DRAWING NOTES:

- 1 LIGHTING FIXTURES IN THIS AREA TO BE REMOVED AND STORED. FIXTURES ARE TO BE RE-INSTALLED IN ORIGINAL LOCATION ONE CEILING WORK IS COMPLETE.



FIRST FLOOR PLAN - ELECTRICAL DEMOLITION
3/16"=1'-0"

SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TNY	POINT SHIT 57NW39	PLAN SCALE:	3/16"=1'-0"	APPROVED BY: _____	
	LICENSE NO. 16961 EXPIRATION DATE 06-14-2026		CONTRACT COMPLETION BOX						POINT SHIT 57NW39	PROFILE SCALE:		DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
	AS-BUILT PER RECORD PRINT		REVIEWED BY:										

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT
FIRST FLOOR PLAN - ELECTRICAL DEMOLITION
SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136



SHEET DESIGNATION	CONTRACT NUMBER
ED-102	24096-P00
JOB ORDER NUMBER	
SHEET 50 OF 60	
DRAWING NUMBER	
2024-1276	
FILE NO.: 8	



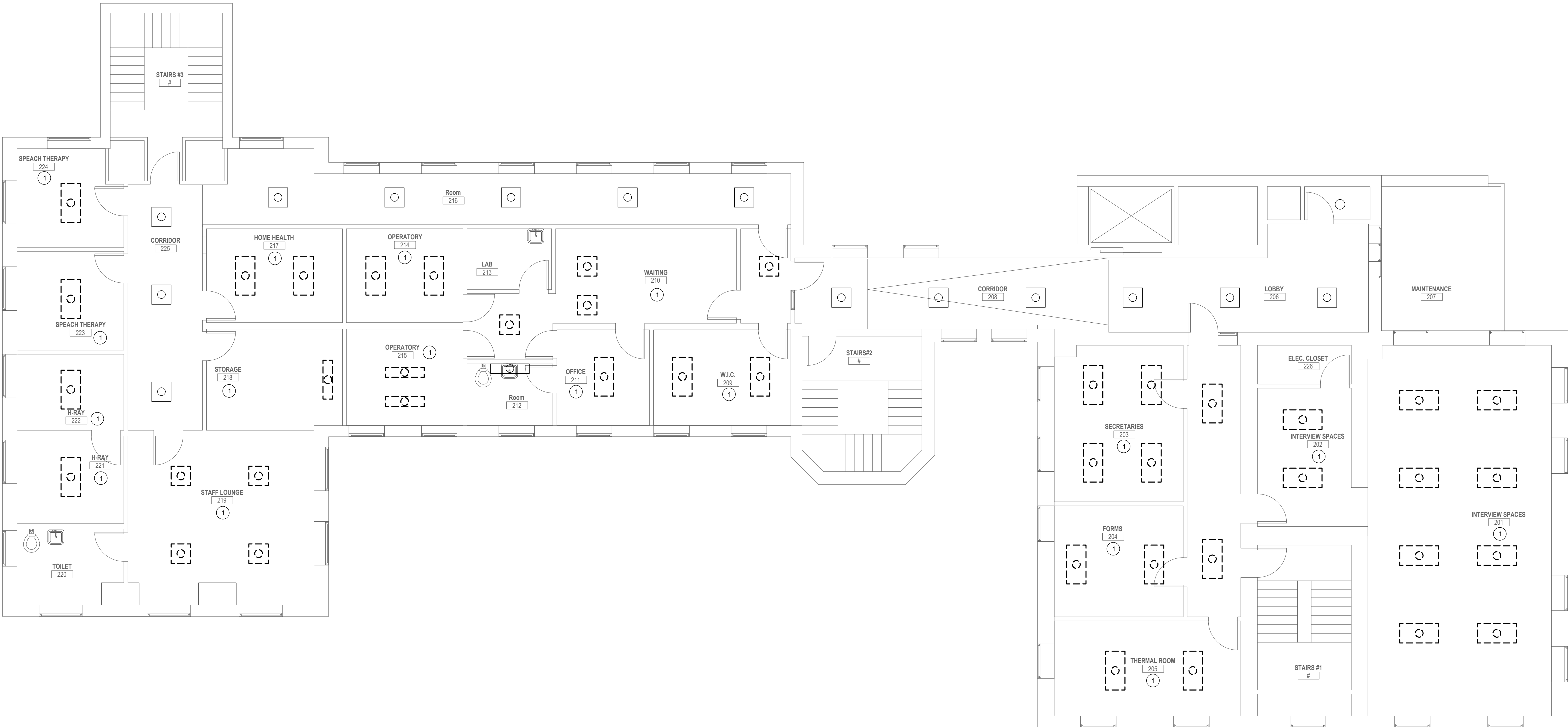
DWG. FILENAME: ELECTRICAL - DEMOLITION - FIRST FLOOR

GENERAL NOTES:

1. XXX

DRAWING NOTES:

- 1 LIGHTING FIXTURES IN THIS AREA TO BE REMOVED AND STORED. FIXTURES ARE TO BE RE-INSTALLED IN ORIGINAL LOCATION ONE CEILING WORK IS COMPLETE.



SECOND FLOOR PLAN - ELECTRICAL DEMOLITION

3/16"=1'-0"



SEAL	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16961 EXPIRATION DATE 06-14-2026							KEY SHIT TNY	POINT SHIT 57NW39	PLAN SCALE:	3/16"=1'-0"	APPROVED BY:	PROPERTY MANAGER
									POINT SHIT 57NW39			DATE:	
			CONTRACT COMPLETION BOX						POINT SHIT 56NW39	PROFILE SCALE:			
RFM ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (P) 410-528-0200 (F) 410-330-0372		DGN BY: VMV	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
AS-BUILT PER RECORD PRINT		DWN BY: VMV	REVIEWED BY:										
BY: DATE: 07/31/2024		CHKD BY: SLD	DATE REVIEWED:										

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

SECOND FLOOR PLAN - ELECTRICAL DEMOLITION

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
ED-103	24096-P00
JOB ORDER NUMBER	
SHEET 51 OF 60	
DRAWING NUMBER	
2024-1277	
FILE NO.: 8	



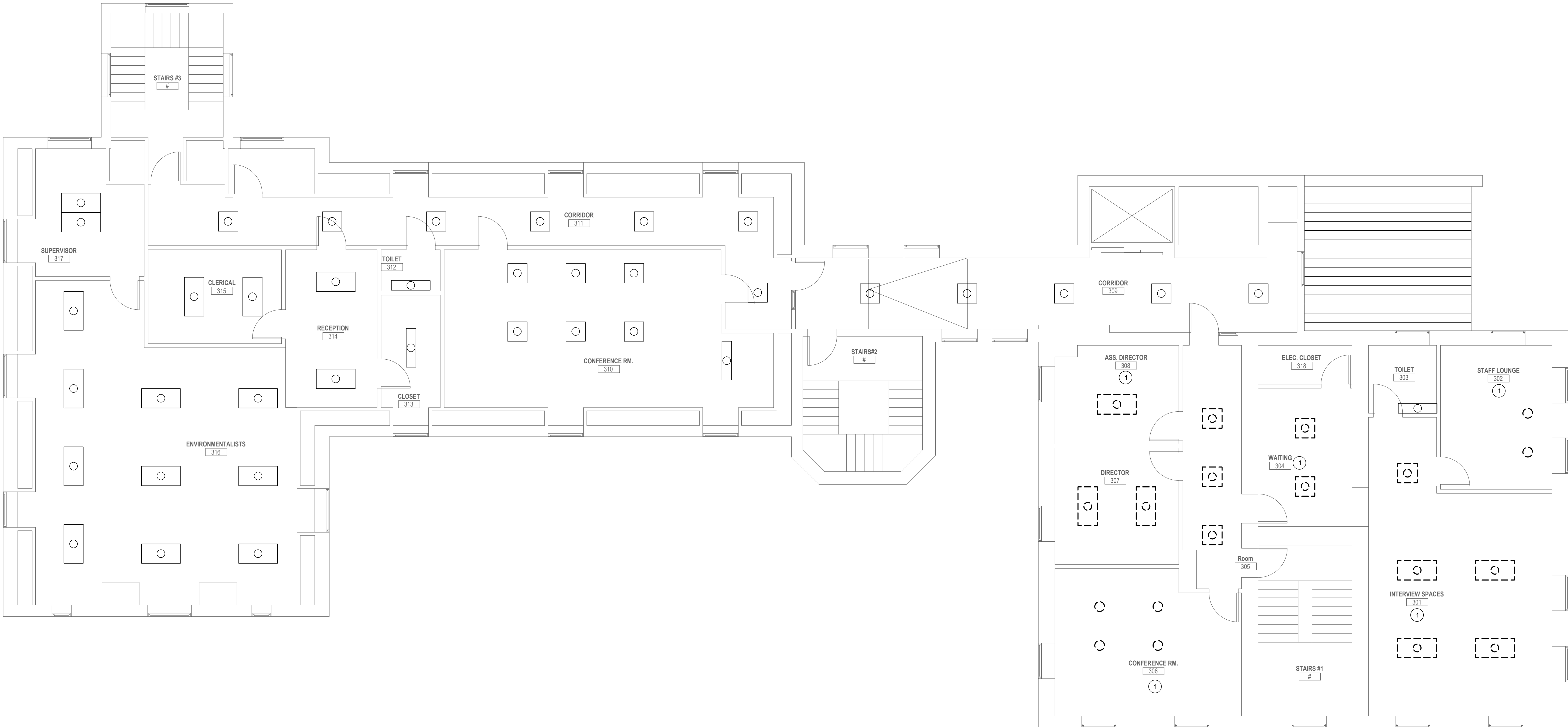
DWG. FILENAME: ELECTRICAL - DEMOLITION - SECOND FLOOR

GENERAL NOTES:

1. XXX

DRAWING NOTES:

- ① LIGHTING FIXTURES IN THIS AREA TO BE REMOVED AND STORED. FIXTURES ARE TO BE RE-INSTALLED IN ORIGINAL LOCATION ONE CEILING WORK IS COMPLETE.



THIRD FLOOR PLAN - ELECTRICAL DEMOLITION
3/16"=1'-0"



SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TNY	POINT SHIT 57NW39	PLAN SCALE:	3/16"=1'-0"	APPROVED BY: _____	
	LICENSE NO. 16961 EXPIRATION DATE 06-14-2026		CONTRACT COMPLETION BOX						POINT SHIT 57NW39	PROFILE SCALE:		DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
	AS-BUILT PER RECORD PRINT		REVIEWED BY:										

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

THIRD FLOOR PLAN - ELECTRICAL DEMOLITION

SUBDIVISION: REISTERSTOWN

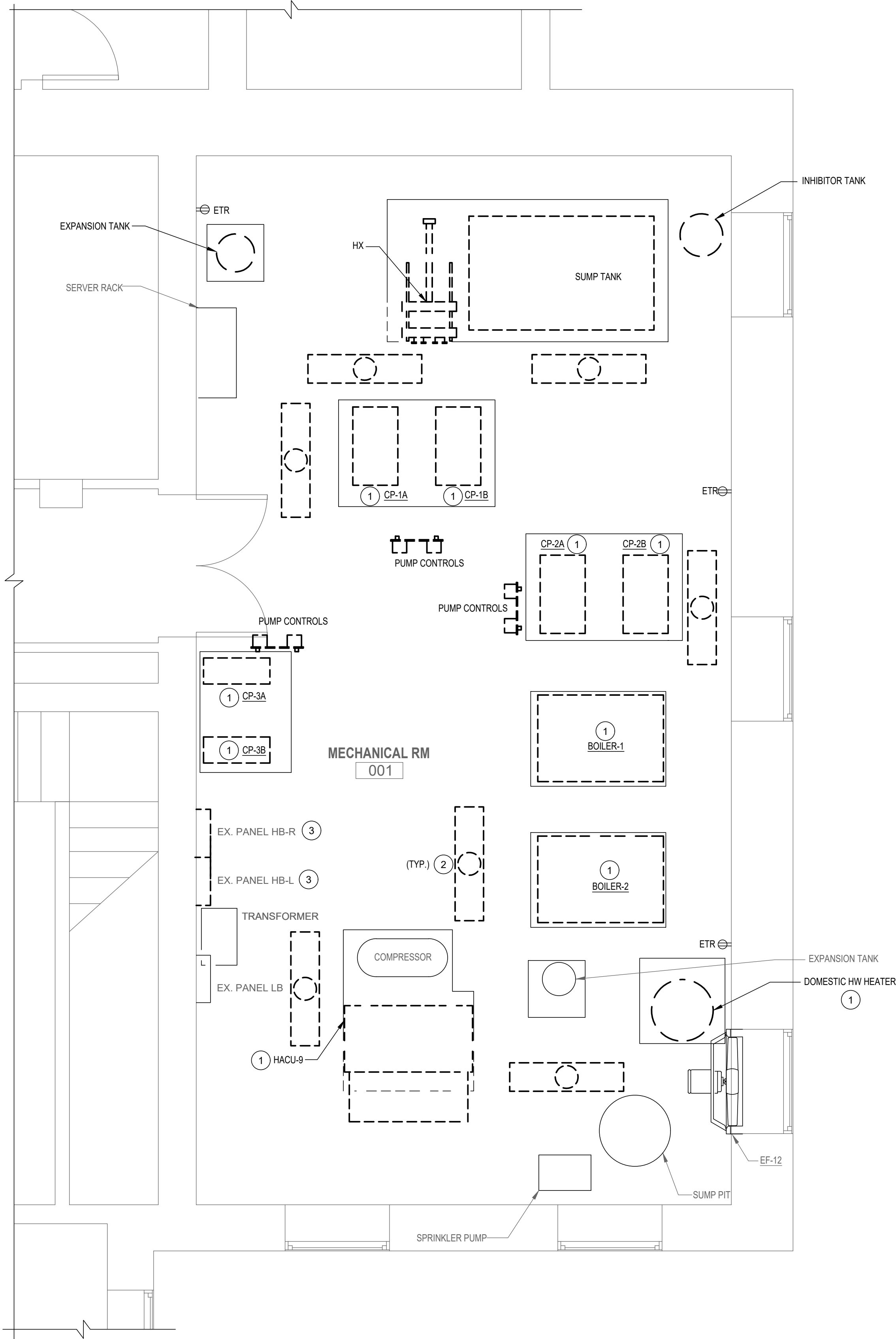
12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

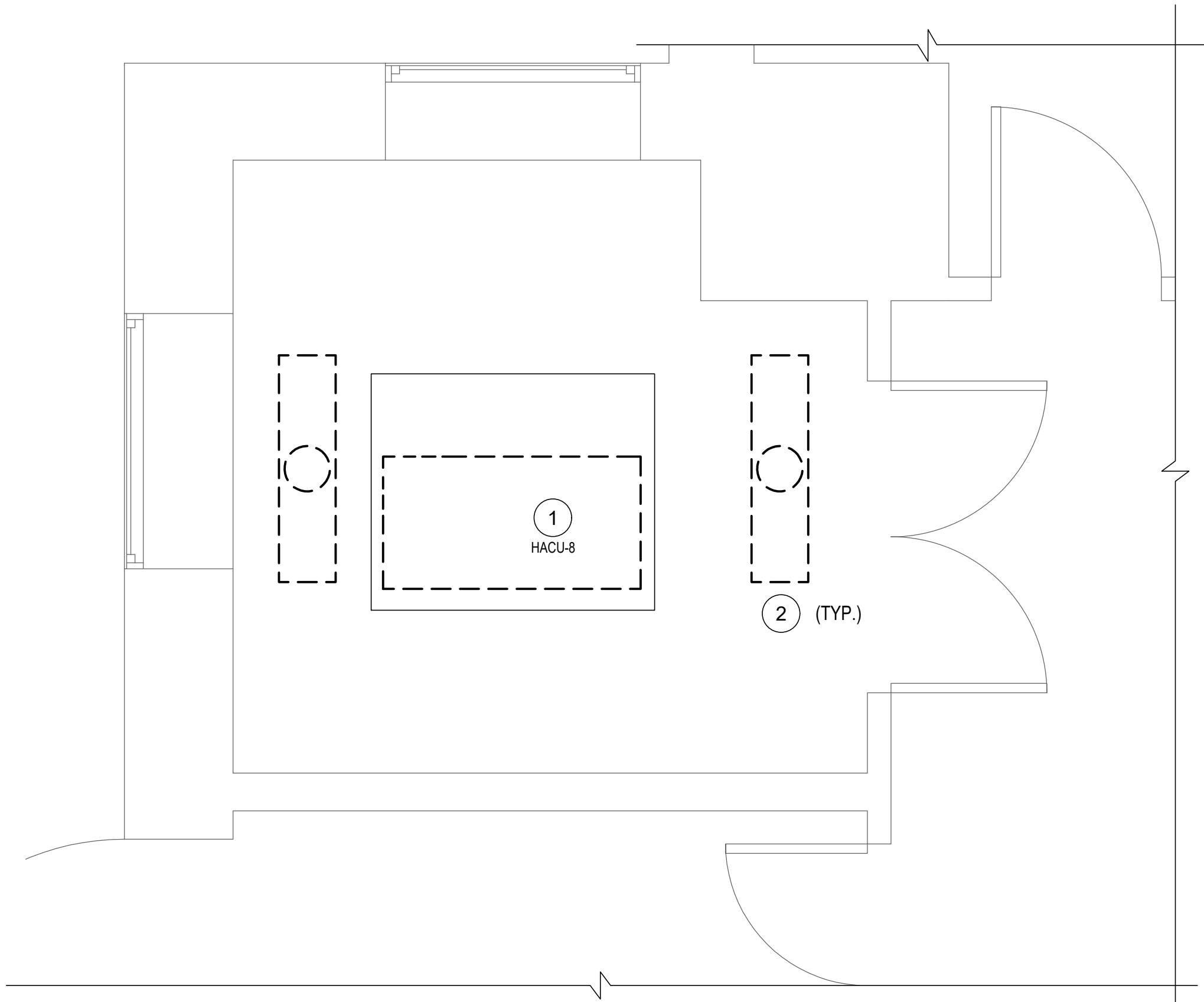
SHEET DESIGNATION	CONTRACT NUMBER
ED-104	24096-P00
JOB ORDER NUMBER	
SHEET 52 OF 60	
DRAWING NUMBER	
2024-1278	
FILE NO.: 8	

DWG. FILENAME: ELECTRICAL - DEMOLITION - THIRD FLOOR

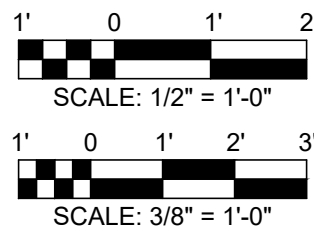
- DRAWING NOTES:**
- 1 DISCONNECT AND REMOVE CIRCUITRY BACK TO SOURCE ALONG WITH DISCONNECT AND CONTROL DEVICES.
 - 2 REMOVE LIGHT FIXTURE- EXISTING CIRCUIT TO BE REUSED.
 - 3 REMOVE EXISTING PANEL AND FEEDER BACK TO MAIN SWITCHBOARD.



1 MECHANICAL ROOM 001 - ELECTRICAL DEMOLITION
ED101 3/8"=1'-0"



2 MECHANICAL ROOM 024 - DEMOLITION
ED101 1/2"=1'-0"



SEAL  DATE: 07/31/2024	PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT		
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16961 EXPIRATION DATE 06-14-2026				CONTRACT COMPLETION BOX				R.O.W. NO.	KEY SHIT TYP	POINT SHIT 57W930 POINT SHIT 57W935 POINT SHIT 58W335 POINT SHIT 58W935	PLAN SCALE: AS SHOWN	APPROVED BY: _____ PROPERTY MANAGER			
					BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	DATE: _____		
					REVIEWED BY:											
	AS-BUILT PER RECORD PRINT				DATE REVIEWED:											
	BY: _____				DGN BY: VML											
	DATE: _____				DWN BY: VML											
	CHKD BY: SLD															

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

MECHANICAL ROOMS - ELECTRICAL DEMOLITION

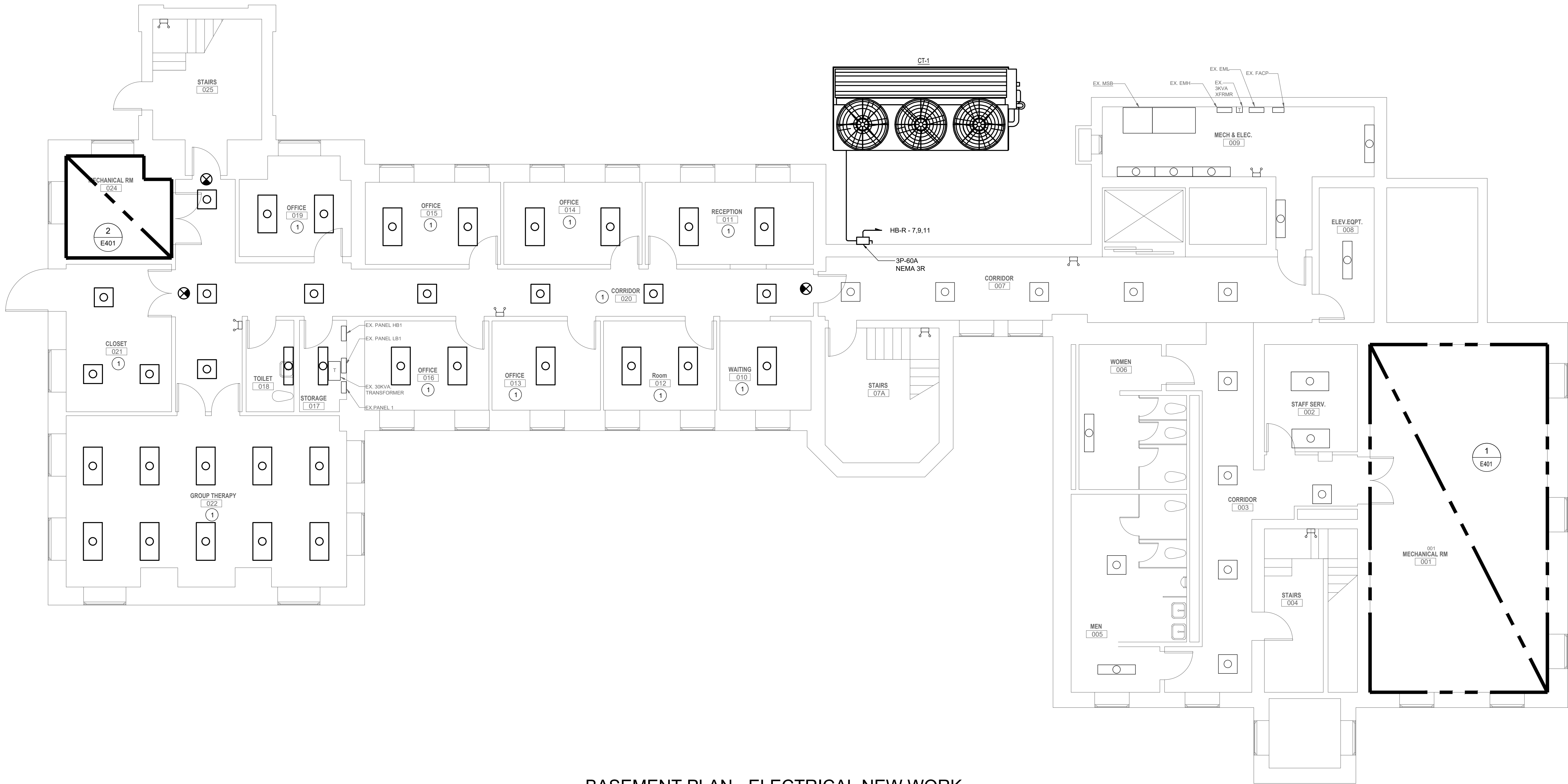
SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136 ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
ED-401	24096-P00
JOB ORDER NUMBER	
SHEET 53 OF 60	
DRAWING NUMBER	
2024-1279	
FILE NO.: 8	

DWG. FILENAME: ELECTRICAL - DEMOLITION - MECHANICAL ROOMS

DRAWING NOTES:

- 1 STORED LIGHTING FIXTURES ARE TO BE RE-INSTALLED IN ORIGINAL LOCATION. CONNECT TO EXISTING LIGHTING CIRCUIT SERVING AREA. RELAMP FIXTURES WITH LED TUBES RATED 4000K.



BASEMENT PLAN - ELECTRICAL NEW WORK

3/16"=1'-0"



SEAL	PROFESSIONAL CERTIFICATION				AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE				PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16961 EXPIRATION DATE 06-14-2026								R.O.W. NO.	KEY SHEET TNY	POSITION SH	PLAN SCALE:	3/16"=1'-0"			APPROVED BY:	PROPERTY MANAGER
					CONTRACT COMPLETION BOX						POSITION SH	PROFILE SCALE:				DATE:	
					BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER				
AS-BUILT PER RECORD PRINT				DGN BY: VMV	REVIEWED BY:												
BY: DATE:				CHKD BY: SLD	DATE REVIEWED:												

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

BASEMENT PLAN - ELECTRICAL NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

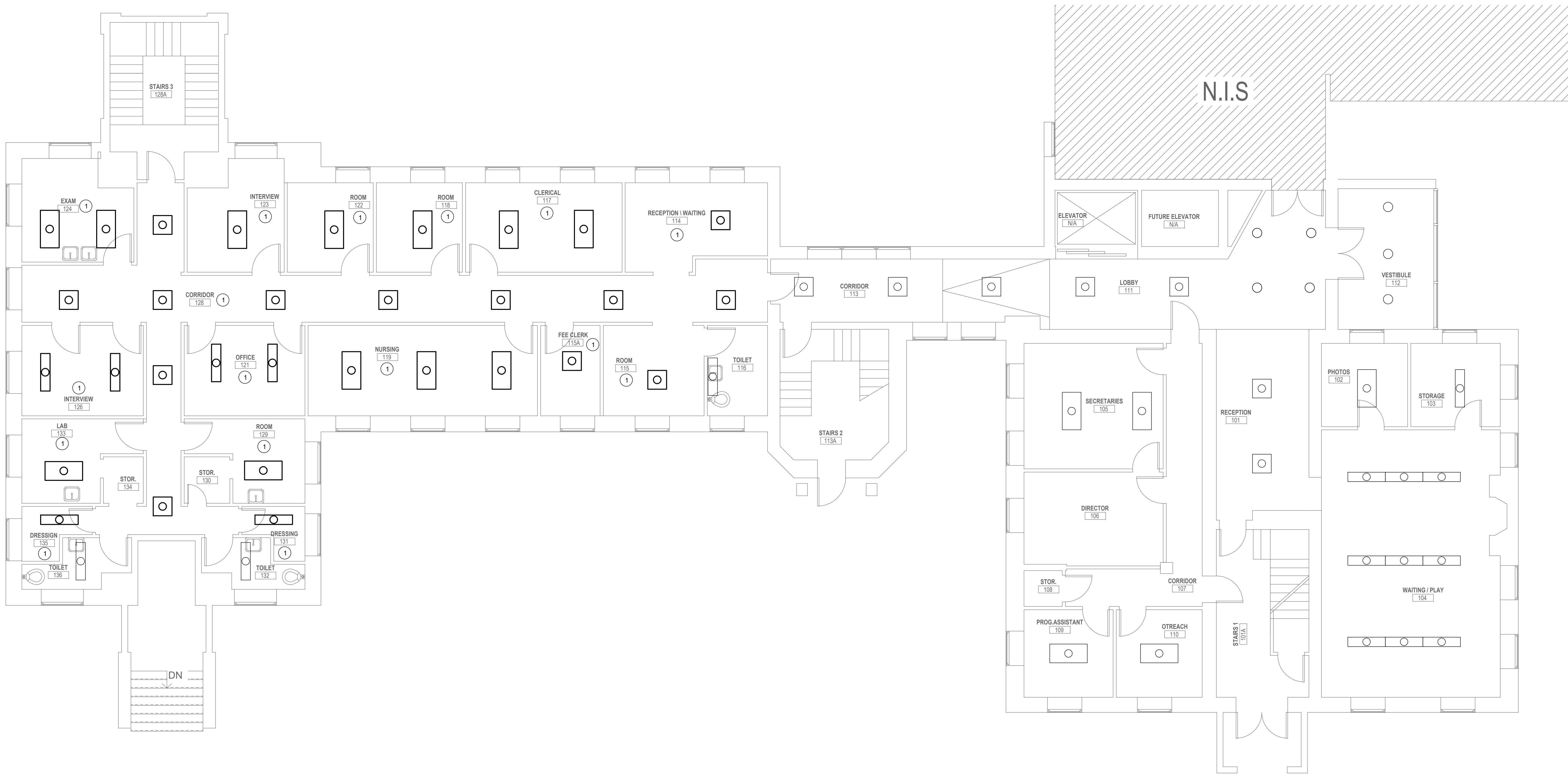
SHEET DESIGNATION	CONTRACT NUMBER
E-101	24096-P00
JOB ORDER NUMBER	
SHEET 54 OF 60	
DRAWING NUMBER	
2024-1280	
FILE NO.: 8	



DWG. FILENAME: ELECTRICAL - NEW WORK - BASEMENT

DRAWING NOTES:

- 1 STORED LIGHTING FIXTURES ARE TO BE RE-INSTALLED IN ORIGINAL LOCATION. CONNECT TO EXISTING LIGHTING CIRCUIT SERVING AREA. RELAMP FIXTURES WITH LED TUBES RATED 4000K.



FIRST FLOOR PLAN - ELECTRICAL NEW WORK

3/16"=1'-0"



SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHIT TNY	POINT SHIT 57NW39	PLAN SCALE:	3/16"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 16961 EXPIRATION DATE 06-14-2026		CONTRACT COMPLETION BOX						POINT SHIT 57NW39	PROFILE SCALE:		DATE:	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
	AS-BUILT PER RECORD PRINT		REVIEWED BY:										

BY: DATE:	CHKD BY: VMV	DATE REVIEWED:											
-----------	--------------	----------------	--	--	--	--	--	--	--	--	--	--	--

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

FIRST FLOOR PLAN - ELECTRICAL NEW WORK

SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136

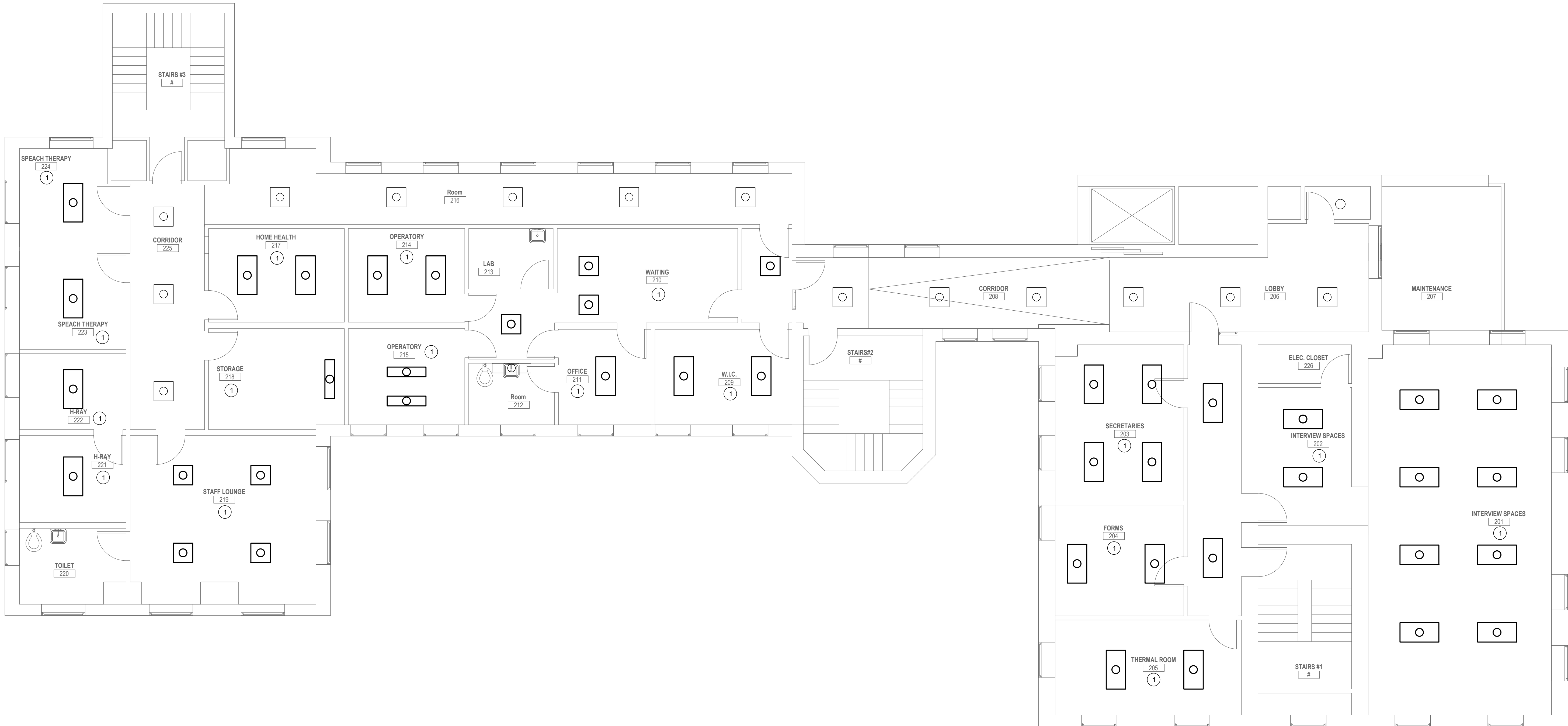
ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
E-102	24096-P00
JOB ORDER NUMBER	
SHEET 55 OF 60	
DRAWING NUMBER	
2024-1281	
FILE NO.: 8	

DWG. FILENAME: ELECTRICAL - NEW WORK - FIRST FLOOR

DRAWING NOTES:

- 1 STORED LIGHTING FIXTURES ARE TO BE RE-INSTALLED IN ORIGINAL LOCATION. CONNECT TO EXISTING LIGHTING CIRCUIT SERVING AREA. RELAMP FIXTURES WITH LED TUBES RATED 4000K.



SECOND FLOOR PLAN - ELECTRICAL NEW WORK

3/16"=1'-0"



	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.							KEY SHIT TNY	POINT SHIT 57NW39	PLAN SCALE:	3/16"=1'-0"	APPROVED BY:	PROPERTY MANAGER
	LICENSE NO. 16961 EXPIRATION DATE 06-14-2026						R.O.W NO.		POINT SHIT 57NW39	PROFILE SCALE:		DATE:	
			CONTRACT COMPLETION BOX						POINT SHIT 56NW39				
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			

RFM ENGINEERING, INC. 5025 RESEARCH PARK DRIVE SUITE 300 BALTIMORE, MD 21228 (410) 528-0200 F: (410) 382-0372	DGN BY: VMV	REVIEWED BY:	DATE REVIEWED:
AS-BUILT PER RECORD PRINT	DWN BY: VMV		
BY: SLD	CHKD BY: SLD		

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

SECOND FLOOR PLAN - ELECTRICAL NEW WORK

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

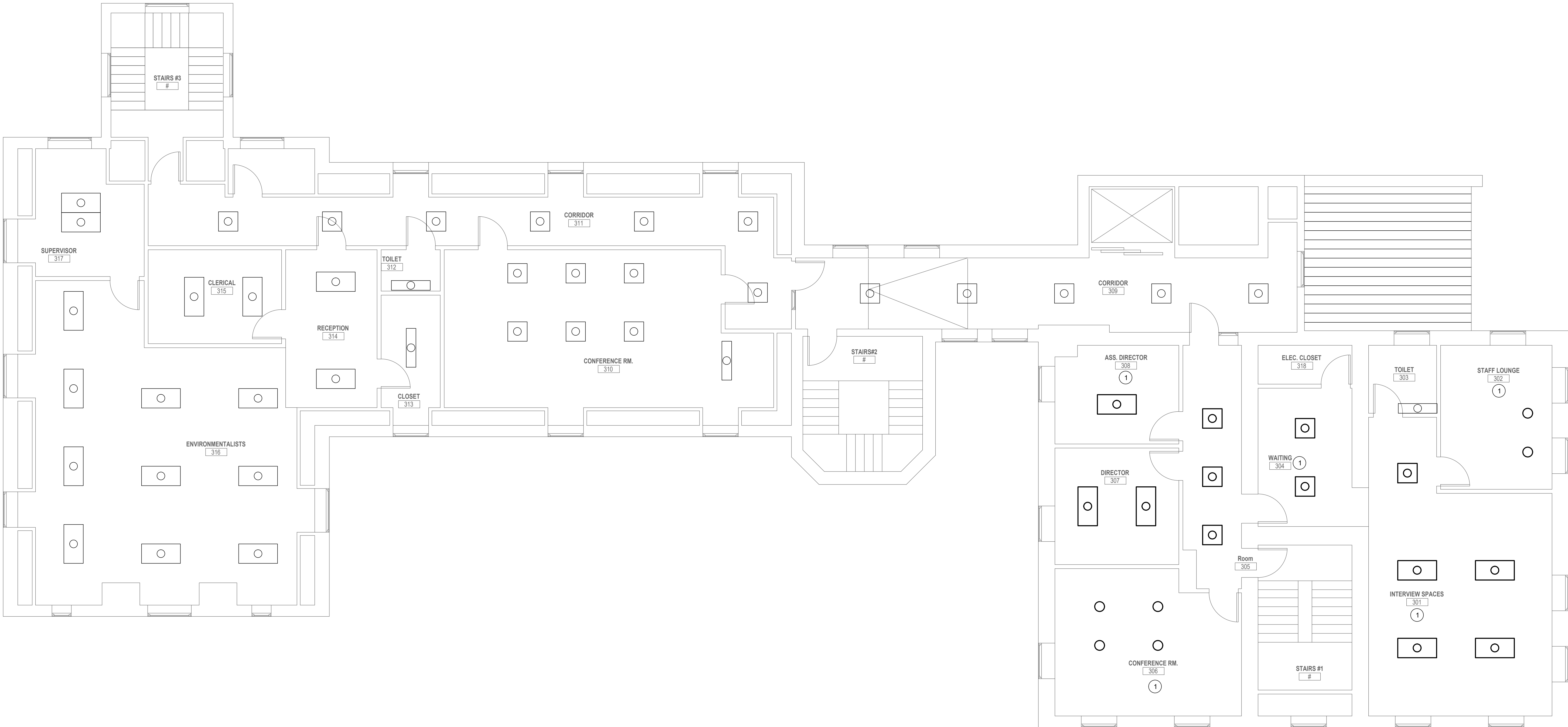
ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION	CONTRACT NUMBER
E-103	24096-P00
JOB ORDER NUMBER	
SHEET 56 OF 60	
DRAWING NUMBER	
2024-1282	
FILE NO.: 8	

DWG. FILENAME: ELECTRICAL - NEW WORK - SECOND FLOOR

DRAWING NOTES:

- 1 STORED LIGHTING FIXTURES ARE TO BE RE-INSTALLED IN ORIGINAL LOCATION. CONNECT TO EXISTING LIGHTING CIRCUIT SERVING AREA. RELAMP FIXTURES WITH LED TUBES RATED 4000K.



THIRD FLOOR PLAN - ELECTRICAL NEW WORK
3/16"=1'-0"

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16961 EXPIRATION DATE 06-14-2026							KEY SHIT TNY	POINT SHIT 57NW39	PLAN SCALE: 3/16"=1'-0"	APPROVED BY: _____ PROPERTY MANAGER		
								R.O.W. NO.	POINT SHIT 57NW39	PROFILE SCALE: _____	DATE: _____		
BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER					
AS-BUILT PER RECORD PRINT		REVIEWED BY:											
BY: _____ DATE: _____		CHKD BY: _____		DATE REVIEWED:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

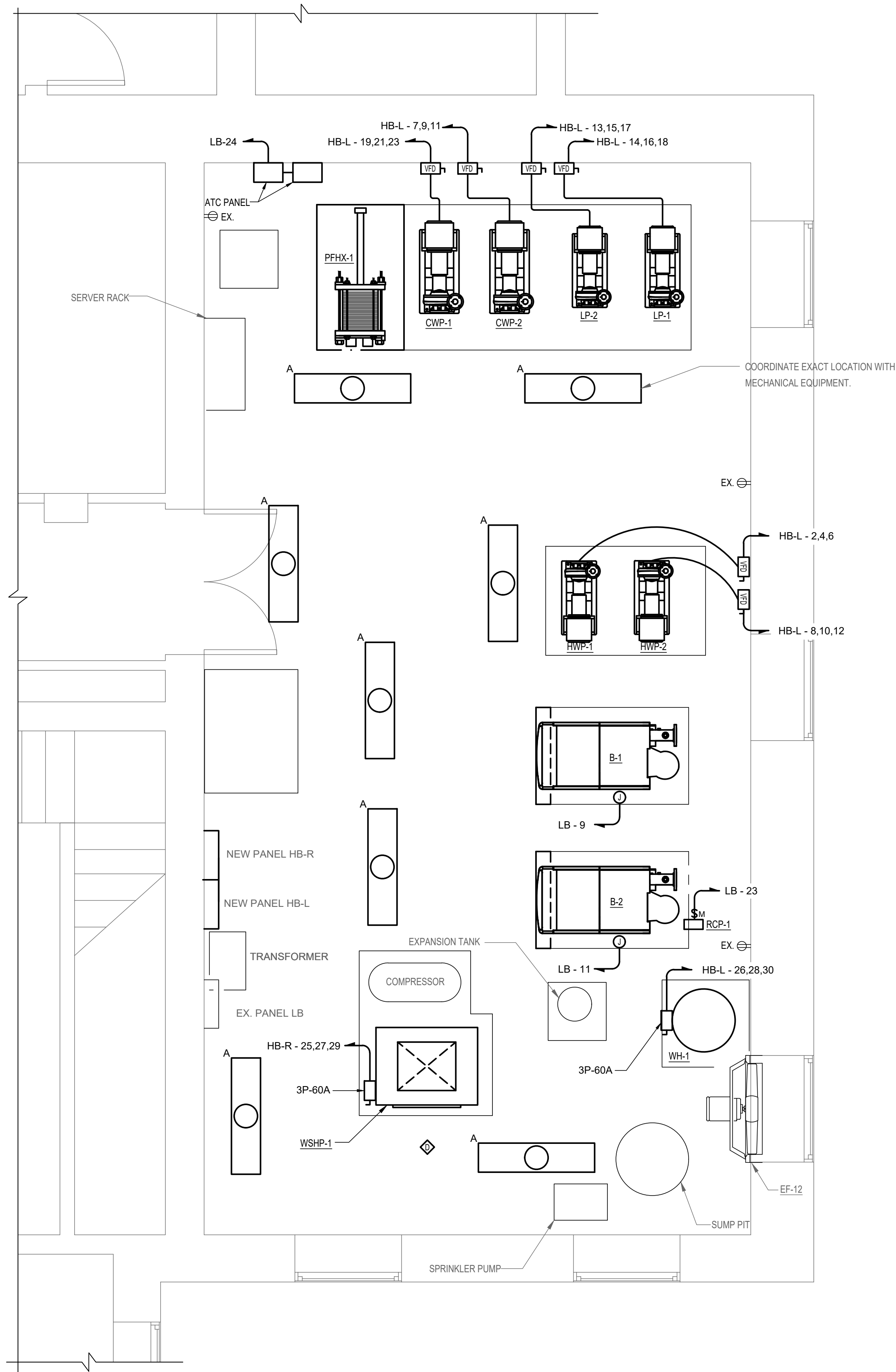
THIRD FLOOR PLAN - ELECTRICAL NEW WORK

SUBDIVISION: REISTERSTOWN 12035 Reisterstown Rd, Reisterstown, MD 21136



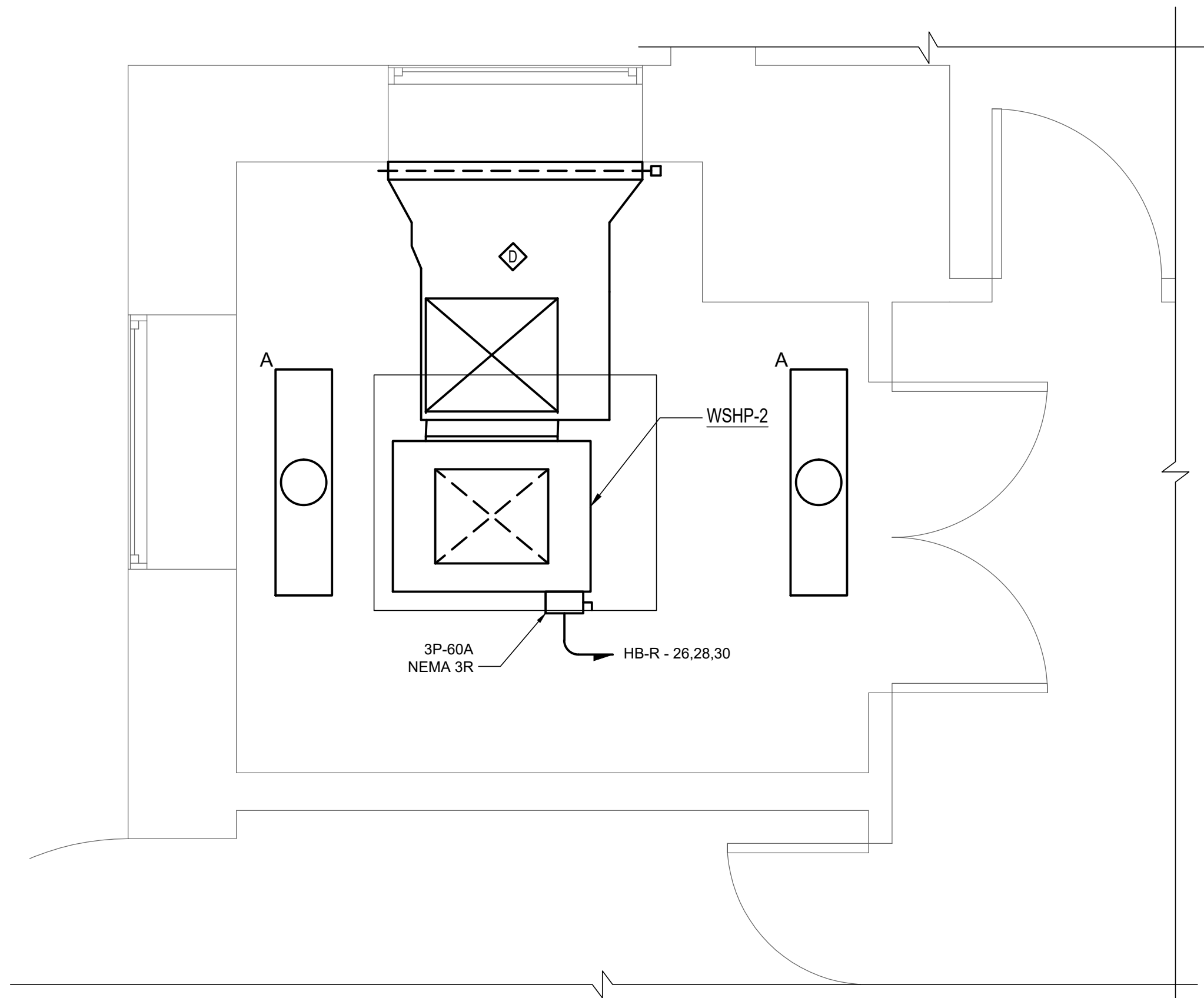
SHEET DESIGNATION	CONTRACT NUMBER
E-104	24096-P00
JOB ORDER NUMBER	
SHEET 57 OF 60	
DRAWING NUMBER	
2024-1283	
FILE NO.: 8	

DWG. FILENAME: ELECTRICAL - NEW WORK - THIRD FLOOR

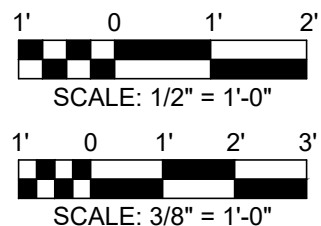


1 MECHANICAL ROOM 001 - ELECTRICAL NEW WORK
3/8"=1'-0"

- GENERAL NOTES:
- A. TYPE A FIXTURE- LITHONIA BLWP WRAPAROUND LED, ACRYLIC LENSE MODEL NUMBER BLWP4 40L ADP G210 LP840 OR EQUAL.
 - B. COORDINATE EXACT LOCATION OF NEW LIGHTS WITH INSTALLATION OF NEW MECHANICAL EQUIPMENT.



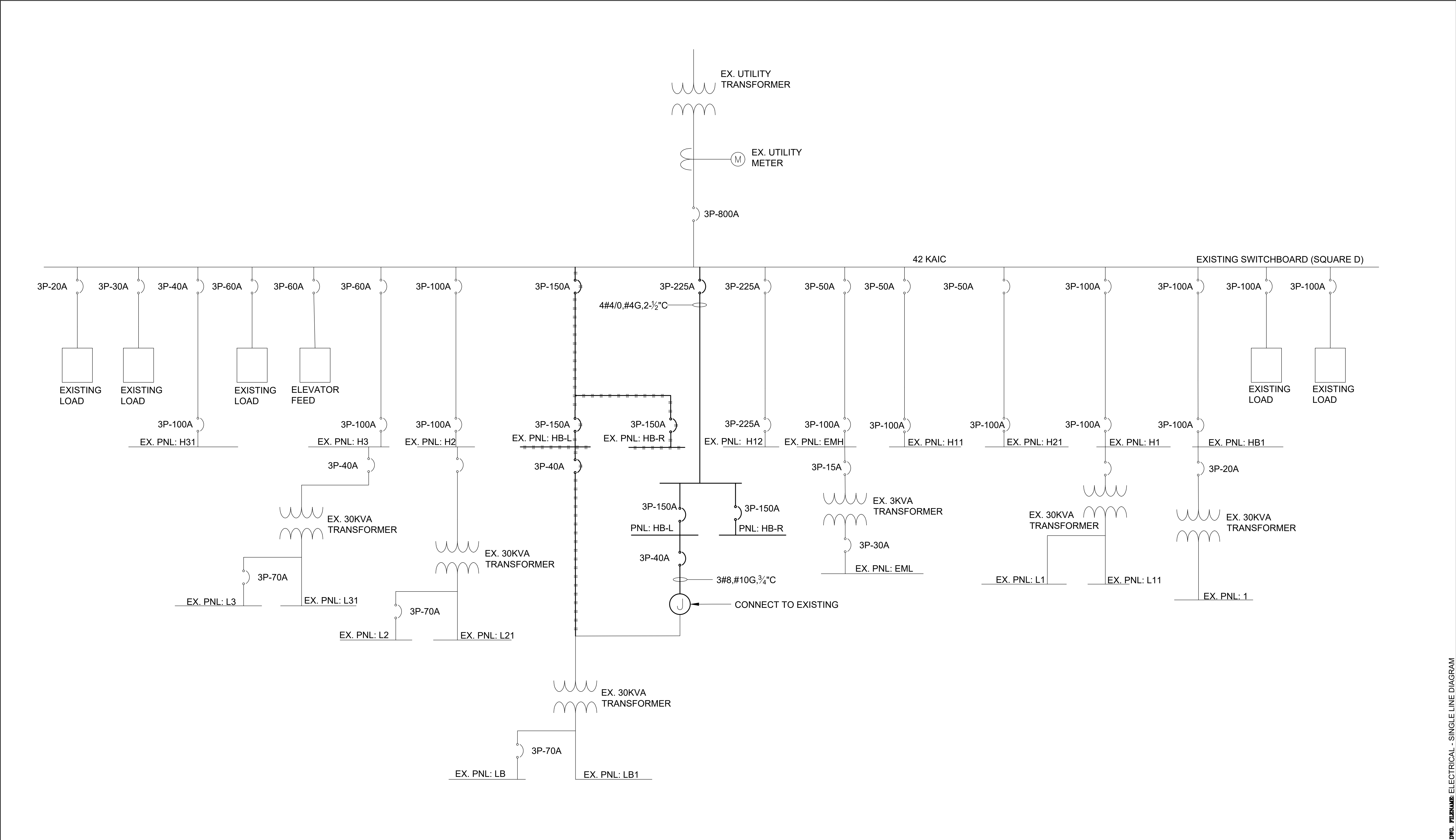
2 MECHANICAL ROOM 024 - NEW WORK
1/2"=1'-0"



	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	KEY SHEET TNY	POINT. SHIT 57W930	PLAN SCALE: AS SHOWN	APPROVED BY: _____	
	LICENSE NO. 16961 EXPIRATION DATE 06-14-2026		CONTRACT COMPLETION BOX						POINT. SHIT 57W930	PROFILE SCALE: _____	DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER		
	AS-BUILT PER RECORD PRINT		REVIEWED BY:									

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT				SHEET DESIGNATION		CONTRACT NUMBER	
HANNAH MORE HEALTH CENTER HVAC REPLACEMENT				E-401		24096-P00	
MECHANICAL ROOMS - ELECTRICAL NEW WORK				JOB ORDER NUMBER			
SUBDIVISION: REISTERSTOWN				SHEET 58 OF 60		DRAWING NUMBER	
12035 Reisterstown Rd, Reisterstown, MD 21136				2024-1284		FILE NO.: 8	
ELECTION DIST. NO.: 4 c 4							

DWG. FILENAME: ELECTRICAL - NEW WORK - MECHANICAL ROOMS



SEAL DATE : 07/31/2024	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE		PROPERTY MANAGEMENT	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.							KEY SHIT TNY	POINT SHIT 57WV39	PLAN SCALE:	NTS	APPROVED BY: _____	
	LICENSE NO. 16961 EXPIRATION DATE 06-14-2026		CONTRACT COMPLETION BOX					R.O.W NO.	POINT SHIT 57WV39	PROFILE SCALE:		DATE: _____	
	BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC		HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER			
AS-BUILT PER RECORD PRINT		REVIEWED BY:											
BY: _____		DATE REVIEWED:											
DATE: 07/31/2024		CHKD BY: RMH											

SHEET DESIGNATION		CONTRACT NUMBER	
E-501		24096-P00	
		JOB ORDER NUMBER	
		SHEET 59 OF 60	
		DRAWING NUMBER	
		2024-1285	
FILE NO.: 8		REV 05/24	

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

ELECTRICAL SINGLE LINE DIAGRAM

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

DWG. FILENAME: ELECTRICAL - SINGLE LINE DIAGRAM

PANEL NO.: EX. LB (SQUARE-D - TYPE NQ08)

USAGE: BRANCH

LOCATION: MECHANICAL 001

PHASES: 3

L-L VOLTS: 208V

L-G VOLTS: 120V

BUS AMPS: 100A

MAIN CB AMPS: 70A

AIC RATING: 10,000

PROJECT: HANNAH MOORE HVAC RENOVATION

CIRCUIT				LOAD	DESCRIPTION	NOTES	BREAKER				NOTES	DESCRIPTION	LOAD	CIRCUIT											
SETS	WIRE	NEUT.	GND.	COND.			AMPS.	POLE	AMP.	#			#	AMP.	POLE	AMPS.	SETS	WIRE	NEUT.	GND.	COND.				
					5.0	EXISTING LOAD		1	20	1	A	2	20	1					EXISTING	5.0	EXISTING				
					5.0	REC MEN 005 WOMEN 005,CORR 007		1	20	3	B	4	20	1					EXISTING	5.0	EXISTING				
					5.0	EXISTING LOAD		1	20	5	C	6	20	1					EXISTING	5.0	EXISTING				
					5.0	LTS ELEVATOR CAB LTS		1	20	7	A	8	20	1					EXISTING	5.0	EXISTING				
1	#10	#10	#10	3/4"	16.0	BOILER B-1	1	1	30	9	B	10	20	1					EXISTING	5.0	EXISTING				
1	#10	#10	#10	3/4"	16.0	BOILER B-2	1	1	30	11	C	12	20	1					EXISTING	5.0	EXISTING				
					5.0	DOMESTIC WATER HEATER		1	20	13	A	14	20	1					EXISTING	5.0	EXISTING				
					5.0	REC. SUMP PUMP		1	20	15	B	16	20	1					EXISTING	5.0	EXISTING				
					5.0	AIR COMPRESSOR SPRINKLER SYS		1	20	17	C	18	20	1					EXISTING	5.0	EXISTING				
					5.0	EX. FAN 12		1	20	19	A	20	20	1					EXISTING	5.0	EXISTING				
					5.0	A.T.C AIR DRYER "QUINCY"		1	20	21	B	22	20	1					EXISTING	5.0	EXISTING				
1	#12	#12	#12	3/4"	1.1	RCP-1	1	1	20	23	C	24	20	1	1				ATC PANELS	5.0	1	#12	#12	#12	3/4"
					0.0	SPARE		1	20	25	A	26							SPACE	0.0					
					0.0	SPACE		1		27	B	28		1					SPACE	0.0					
					0.0	SPACE		1		29	C	30		1					SPACE	0.0					
					0.0	SPACE		1		31	A	32		1					SPACE	0.0					
					0.0	SPACE		1		33	B	34		1					SPACE	0.0					
					0.0	SPACE		1		35	C	36		1					SPACE	0.0					
					0.0	SPACE		1		37	A	38		1					SPACE	0.0					
					0.0	SPACE		1		39	B	40		1					SPACE	0.0					
					0.0	SPACE		1		41	C	42		1					SPACE	0.0					

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	3.84	code	3.84
MOTORS	0.132	100%	0.132
LIGHTS (INT.)	0	125%	0
LIGHTS (EXT.)	0	125%	0
HVAC (HEAT)	0	100%	0
HVAC (COOL)	0	100%	0
VENTILATION	0	100%	0
KITCHEN	0	65%	0
EMERGENCY	0	100%	0
MISC.	0.6	100%	0.6
FUTURE	0	100%	0
OTHER	0	100%	0
EXISTING	12	125%	15
LARGEST MTR	0	25%	0
TOTAL KVA	17 KVA		20 KVA
TOTAL AMPS	46 AMPS		54 AMPS

PANEL NOTES:
1 PROVIDE CIRCUIT INDICATED

PANEL NO.: NEW HB-L (SQUARE-D - TYPE NF)

USAGE: BRANCH

LOCATION: MECHANICAL 001

PHASES: 3

L-L VOLTS: 480V

L-G VOLTS: 277V

BUS AMPS: 250A

MAIN CB AMPS: 150A

AIC RATING: 42,000

PROJECT: HANNAH MOORE HVAC RENOVATION

CIRCUIT				LOAD	DESCRIPTION	NOTES	BREAKER				NOTES	DESCRIPTION	LOAD	CIRCUIT											
SETS	WIRE	NEUT.	GND.	COND.			AMPS.	POLE	AMP.	#			#	AMP.	POLE	AMPS.	SETS	WIRE	NEUT.	GND.	COND.				
					0.0	SPACE		1		1	A	2	15	3					HWP-1	4.8	1	#12	-	#12	3/4"
					5.0	EX. PARKING LOT LIGHTS		1	1	20	3	B	4							4.8					
					5.0	EX. PARKING LOT LIGHTS		1	1	20	5	C	6							4.8					
1	#10	-	#10	3/4"	0.0	CWP-2		3	25	7	A	8	15	3					HWP-2	0.0	1	#12	-	#12	3/4"
					0.0					9	B	10								0.0					
					0.0					11	C	12								0.0					
1	#12	-	#12	3/4"	0.0	LP-2		3	20	13	A	14	20	3					LP-1	11.0	1	#12	-	#12	3/4"
					0.0					15	B	16								11.0					
					0.0					17	C	18								11.0					
1	#10	-	#10	3/4"	14.0	CWP-1		3	25	19	A	20	15	3					SPARE	0.0					
					14.0					21	B	22								0.0					
					14.0					23	C	24								0.0					
					30.0	EX. PANELS LB/LB1 XFMR		1	3	40	25	A	26	40	3				WH-1	28.9	1	#8	#8	#10	3/4"
					30.0					27	B	28								28.9					
					30.0					29	C	30								28.9					

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	0
MOTORS	24.78	100%	24.78
LIGHTS (INT.)	0	125%	0
LIGHTS (EXT.)	0	125%	0
HVAC (HEAT)	0	100%	0
HVAC (COOL)	0	100%	0
VENTILATION	0	100%	0
KITCHEN	0	65%	0
EMERGENCY	0	100%	0
MISC.	24	100%	24
FUTURE	0	100%	0
OTHER	0	100%	0
EXISTING	27.66	125%	34.575
LARGEST MTR	0	25%	0
TOTAL KVA	76 KVA		83 KVA
TOTAL AMPS	92 AMPS		100 AMPS

PANEL NOTES:
1 . RECONNECT EXISTING CIRCUIT

PANEL NO.: NEW HB-R (SQUARE-D - TYPE NF)

USAGE: BRANCH

LOCATION: MECHANICAL 001

PHASES: 3

L-L VOLTS: 480V

L-G VOLTS: 277V

BUS AMPS: 250A

MAIN CB AMPS: 150A

AIC RATING: 42,000

PROJECT: HANNAH MOORE HVAC RENOVATION

CIRCUIT				LOAD	DESCRIPTION	NOTES	BREAKER				NOTES	DESCRIPTION	LOAD	CIRCUIT											
SETS	WIRE	NEUT.	GND.	COND.			AMPS.	POLE	AMP.	#			#	AMP.	POLE	AMPS.	SETS	WIRE	NEUT.	GND.	COND.				
1	#12	#12	#12	3/4"	5.0	EXISTING LOAD		1	3	20	1	A	2	20	1	1			EX. EMERG LTG	5.0	1	#12	#12	#12	3/4"
					5.0							3	B	4	20	1	1		EX. LTS CORRIDOR 004 007	5.0	1	#12	#12	#12	3/4"
					5.0							5	C	6	20	1	1		EX. CONSOLE UNIT	5.0	1	#12	#12	#12	3/4"
1	#8	-	#10	3/4"	21.0	CT-1			3	40	7	A	8	20	3	1			EXISTING LOAD	5.0	1	#12	#12	#12	3/4"
					21.0							9	B	10						5.0					
					21.0							11	C	12						5.0					
1	#12	#12	#12	3/4"	5.0	EXISTING LOAD		1	3	20	13	A	14	20	3	1			EXISTING LOAD	5.0	1	#12	#12	#12	3/4"
					5.0							15	B	16						5.0					
					5.0							17	C	18						5.0					
1	#12	#12	#12	3/4"	5.0	EXISTING LOAD		1	3	20	19	A	20			1			SPACE	0.0					
					5.0							21	B	22			1		SPACE	0.0					
					5.0							23	C	24	20	1	1		EXISTING	5.0	1	#12	#12	#12	3/4"
1	#8	-	#10	3/4"	18.7	WSHP-1			3	40	25	A	26	40	3				WSHP-2	18.7	1	#8	-	#10	3/4"
					18.7							27	B	28						18.7					
					18.7							29	C	30						18.7					

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	0
MOTORS	48.579	100%	48.579
LIGHTS (INT.)	0	125%	0
LIGHTS (EXT.)	0	125%	0
HVAC (HEAT)	0	100%	0
HVAC (COOL)	0	100%	0
VENTILATION	0	100%	0
KITCHEN	0	65%	0
EMERGENCY	0	100%	0
MISC.	4.14	100%	4.14
FUTURE	0	100%	0
OTHER	0	100%	0
EXISTING	22.08	125%	27.6
LARGEST MTR	0	25%	0
TOTAL KVA	75 KVA		80 KVA
TOTAL AMPS	90 AMPS		97 AMPS

PANEL NOTES:
1 RECONNECT EXISTING CIRCUIT

SEAL

STATE OF MARYLAND

PROFESSIONAL ENGINEER

1896

DATE: 07/31/2024

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO. 16961 EXPIRATION DATE 06-14-2026

RFM ENGINEERING, INC.

5025 RESEARCH PARK DRIVE

SUITE 300

BALTIMORE, MD 21228

P. 410.526.0000 F. 410.302.0372

DGN BY: VMV

DWN BY: VMV

CHKD BY: SLD

AS-BUILT PER RECORD PRINT

DATE:

AS-BUILT / REVISION

BY

DATE

P.W.A. NO.

KEY SHEET

POSITION SH

DRAWING SCALE

PROPERTY MANAGEMENT

BUREAU OF ENGINEERING AND CONSTRUCTION

TRAFFIC

HIGHWAYS

STRUCTURES

STORM DRAINS

SEWER

WATER

FIELD ENGINEER

REVIEWED BY:

DATE REVIEWED:

BALTIMORE COUNTY OFFICE OF BUDGET AND FINANCE – PROPERTY MANAGEMENT

HANNAH MORE HEALTH CENTER HVAC REPLACEMENT

ELECTRICAL PANEL SCHEDULES

SUBDIVISION: REISTERSTOWN

12035 Reisterstown Rd, Reisterstown, MD 21136

ELECTION DIST. NO.: 4 c 4

SHEET DESIGNATION

E-601

CONTRACT NUMBER

24096-P00

JOB ORDER NUMBER

SHEET 60 OF 60

DRAWING NUMBER

2024-1286

FILE NO.: 8

DWG. FILENAME: ELECTRICAL PANEL SCHEDULES