

ADDENDUM NO. 1

TO: PLANS AND SPECIFICATIONS FOR THE STATE OF MISSOURI

Improvements to HVAC
Broadway State Office Building
Jefferson City, MO
PROJECT NO.: O2324-01

Bid Opening Date: 1:30 PM, August 1, 2024 (Unchanged)

Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:

SPECIFICATION CHANGES:

1. Section 235700 – Heat Exchangers for HVAC
 - a. Add paragraph 2.1-A.5 as follows:
“5. Thrush Co. Inc.”
2. Section 237313 – Modular Indoor Central Station Air Handling Units
 - a. Revise 2.2-E as follows:
“E. Control Panel shall be designed for installation in the AHU adjacent to the inlet side of the fan wall, with a NEMA 1 cabinet, with SCCR of 100 kAIC, and shall include an integral means of disconnect and hand/off/automatic control and 0-10 VDC speed control for when in manual operation. The fan array manufacturer shall provide wiring for controls and power from the control panel to each fan for field installation. BAS Inputs to fan shall include a start/stop signal (binary) and fan speed setting (analog, 0-10 VDC) to control static pressure from the BAS. The control panel shall transmit on/off status (binary) to the BAS, and transmit alarm (binary) to the BAS if one or more fans fails.”
3. Section 238216 – Air Coils
 - a. Add paragraph 2.1-A.9 as follows:
“9. Temptrol”

DRAWING CHANGES:

1. Sheet M102 – Second Floor - HVAC
 - a. Revise airflow balance tag at Southeast RA shaft.
 - b. Add keynote M84 as follows:
“PROVIDE AND INSTALL FIRE-RATED, 24"X36", LOCKABLE, STEEL ACCESS PANEL.”
 - c. See revised Sheet M102, attached.
2. Sheet M108 – Eighth Floor - HVAC Plan
 - a. Revise keynote M49 as follows:
“EXISTING 2.5" ROOF SLAB TO BE REMOVED FROM INSIDE FACE OF JOIST TO INSIDE FACE OF JOIST FOR OPENING. OPENING LENGTH ALONG JOIST SHALL NOT EXCEED 36". TRANSITION DUCT AND ROUTE DUCT UP THROUGH NEW CURB TO EF-1 ABOVE. CONTRACTOR SHALL COORDINATE WITH THE ROOFING SYSTEM MANUFACTURER TO ENSURE THAT THE WARRANTY ON THE EXISTING VERSICO ROOFING SYSTEM IS MAINTAINED.”

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- b. Add keynote M82 as follows:
“OFFSET EXISTING SUPPLY AIR DUCT IN THIS AREA AS NECESSARY TO ROUTE EXHAUST DUCT.”
 - c. Add keynote M83 as follows:
“CAP EXISTING BRANCH DUCT ABOVE CEILING.”
 - d. See revised sheet M108, attached.
3. Sheet M601 – Mechanical Schedules
 - a. Revise Shell and Tube Heat Exchanger Schedule
 - b. Revise Fan Array Schedule.
 - c. See revised Sheet M601, attached.
 4. Sheet M701 – Airflow Control Schematic Diagram
 - a. Revise airflow tags throughout.
 - b. See revised Sheet M701, attached.
 5. Sheet E201 – Enlarged Penthouse Electrical Plan
 - a. Revise panel names of SP9-1 AND SP9-1A to SP9-2 and SP9-2A respectively to match existing panel labels.
 - b. Revise circuits to pumps CWP-3 and HWP-1 from three phase to single phase.
 - c. Revise keynote E01 to reference panels SP9-2 and SP9-2A in lieu of SP9-1 and SP9-1A as noted above.
 - d. Revise keynote E02 as follows:
“EXISTING PANEL PDP-1 IS EATON MODEL PRL4F POW-R-LINE C.
REPLACE EXISTING 200A SWITCH WITH 125A SWITCH TO FEED RAF-1.
REPLACE EXISTING 200A SWITCH WITH 175A SWITCH TO POWER SAF-1.”
 - e. Revise keynote E03 to reference panel SP9-2A in lieu of SP9-1A as noted above.
 - f. Add panel schedule for panel SP9-2A.
 - g. See revised Sheet E201, attached.

GENERAL COMMENTS:

1. The Pre-Bid Meeting was held July 22nd, 2024, followed by a walk-through of the project site. The Pre-Bid Meeting sign-in sheet is attached.
2. If an additional site visit is necessary, please contact Shannon Thompson, Shannon.Thompson@oa.mo.gov who will coordinate with the on-site personnel.
3. Please contact April Howser, contract specialist, at April.Howser@oa.mo.gov for questions about bidding procedures, MBE/WBE/SDVE goals, good faith effort forms, and bid submittal requirements.
4. All bids shall be submitted on the provided bid forms without additional terms and conditions, modifications, or stipulations. Each space on the bid forms shall be properly filled. Failure to do so will result in rejection of the bid.
5. MBE/WBE/SDVE participation requirements can be found in DIVISION 00. The MBE/WBE/SDVE participation goals are 10%/10%/3%, respectively. All MBE, WBE, and SDVE contractors, subcontractors, and suppliers must be certified by the State of Missouri, Office of Equal Opportunity. No other certifications from other Missouri certifying agencies will be accepted. If a bidder is unable to meet a participation goal, a Good Faith Effort Determination Form must be completed. Failure to complete this process will result in rejection of the bid.

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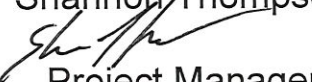
6. Changes to, or clarification of, the bid documents are only made as issued in the addenda.
7. All correspondence with respect to this project must include the State of Missouri project number as indicated above.
8. Current Planholders list available online at: <https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans> Prospective Bidders contact American Document Solutions, 1400 Forum Blvd Suite 7A, Columbia MO 65203, 573-446-7768 to order official plans and specifications.

ATTACHMENTS:

1. Pre-bid Sign in sheet
2. Sheet M102 - Revised 07/25/2024
3. Sheet M108 - Revised 07/25/2024
4. Sheet M601 - Revised 07/25/2024
5. Sheet M701 - Revised 07/25/2024
6. Sheet E201 - Revised 07/25/2024

END ADDENDUM NO. 1

**Pre-Bid Meeting Attendance Sheet
Improvements to HVAC
Broadway State Office Building
Project #: O2324-01
July 22nd, 2024 10:00 AM**

Name & Title	Company Name & Type of Contracting	MBE/WBE/SDVE Status	Phone	E-Mail Address of Attendee & E-Mail Address of Individual filling out Bid Documents
Shannon Thompson  Project Manager	State of Missouri OA/FMDC		573-526-3166 573-257-7137	Shannon.thompson@oa.mo.gov
Dustin Cooper Construction Administrator	State of Missouri OA/FMDC		573-526-0711	Dustin.cooper@oa.mo.gov
Jamie Abshier Engineer	FSC Inc		913-693-5987	j.abshier@fsc-inc.com
Glenn Smith ENGINEER	KLINGNOR & ASSOCIATES		573-355-5988	GSmith@KLINGNOR.COM
JON PINET FMDC	OA/FMDC		573-522-5641	JON.PINET@OA.MO.GOV
Rusty Allen ARSI Inc.	ARSI Inc.	SDVE	573-896-0222	rustyallen@arsi-mo.com

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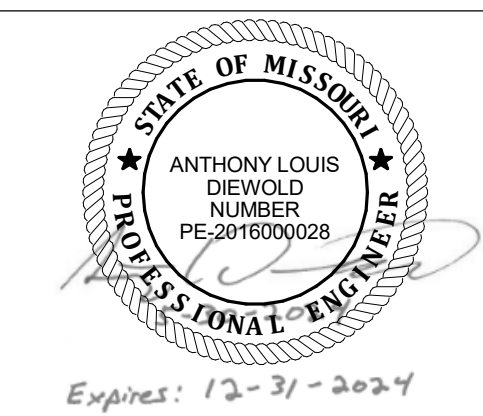
Name & Title	Company Name Type of Contracting	MBE/WBE/ SDVE Status	Phone	E-Mail Address of Attendee and E-Mail Address of Individual filling out Bid Documents
ARSI, Inc. Matt Roark	ARSI, Inc	SDVE	896-0222	<u>Mattroark@arsi-mo.com</u>
Adam Rush	Budrovich		573-301-9114	<u>ARUSH@BUDROVICH.COM</u>
Rick Clark	Kaiser Electric		556-6188	<u>rclark@kaisercentralmo.com</u>
Brian Jacob	FMDC		573-536-1383	<u>brian.jacob@oa.mo.gov</u>
Craig Linhardt	Meyer Electric		573-893-2335	<u>Craig@meyerelectric.net</u>
Kyle Boeckman	Butzer		573-619-2827	<u>Kyleb@hgbutzer.com</u>

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 Broadway State Office Building
 Project #: O2324-01
 July 22nd, 2024 10:00 AM

Name & Title	Company Name Type of Contracting	MBE/WBE/ SDVE Status	Phone	E-Mail Address of Attendee and E-Mail Address of Individual filling out Bid Documents
John Christian Project Manager	Schneider Electric		573-644-4774	Jchristian@secoje.com
Brad Armstrong Estimator	Butzer Mechanical	N/A	573-636-4115	brada@hgbutzer.com
Curtis Dittmer Estimator	Butzer Mechanical	N/A	573-636-4115	CurtisD@HGButzer.com
Ross Gilbert PM	IFS	—	573-366-8091	rgilbert@intfs.com
Tim Scott Pm	American Arborist Abatement dba Midwest Service Group	WBE	636-875-2106	tscott@msg-stl.com
MIKE STILLWELL PM	ALLOY GROUP ABATEMENT	—	314-327-1650	Mstillwell@alloygroup.com

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July 22nd, 2024 10:00 AM

Name & Title	Company Name Type of Contracting	MBE/WBE/ SDVE Status	Phone	E-Mail Address of Attendee and E-Mail Address of Individual filling out Bid Documents
Brad Berendzen	OAF/KMPC		751-7623	<u>Brad.Berendzen@OAF.mo.gov</u>



ANTHONY L. DIEWOLD - ENGINEER
MO # - 2016000028

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MISSOURI STATE CERTIFICATE OF AUTHORITY #000866

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

IMPROVEMENTS TO HVAC

BROADWAY STATE OFFICE
BUILDING

221 W. HIGH STREET
JEFFERSON CITY, MISSOURI

PROJECT # O2324-01
SITE # 1001
ASSET # 3101001041

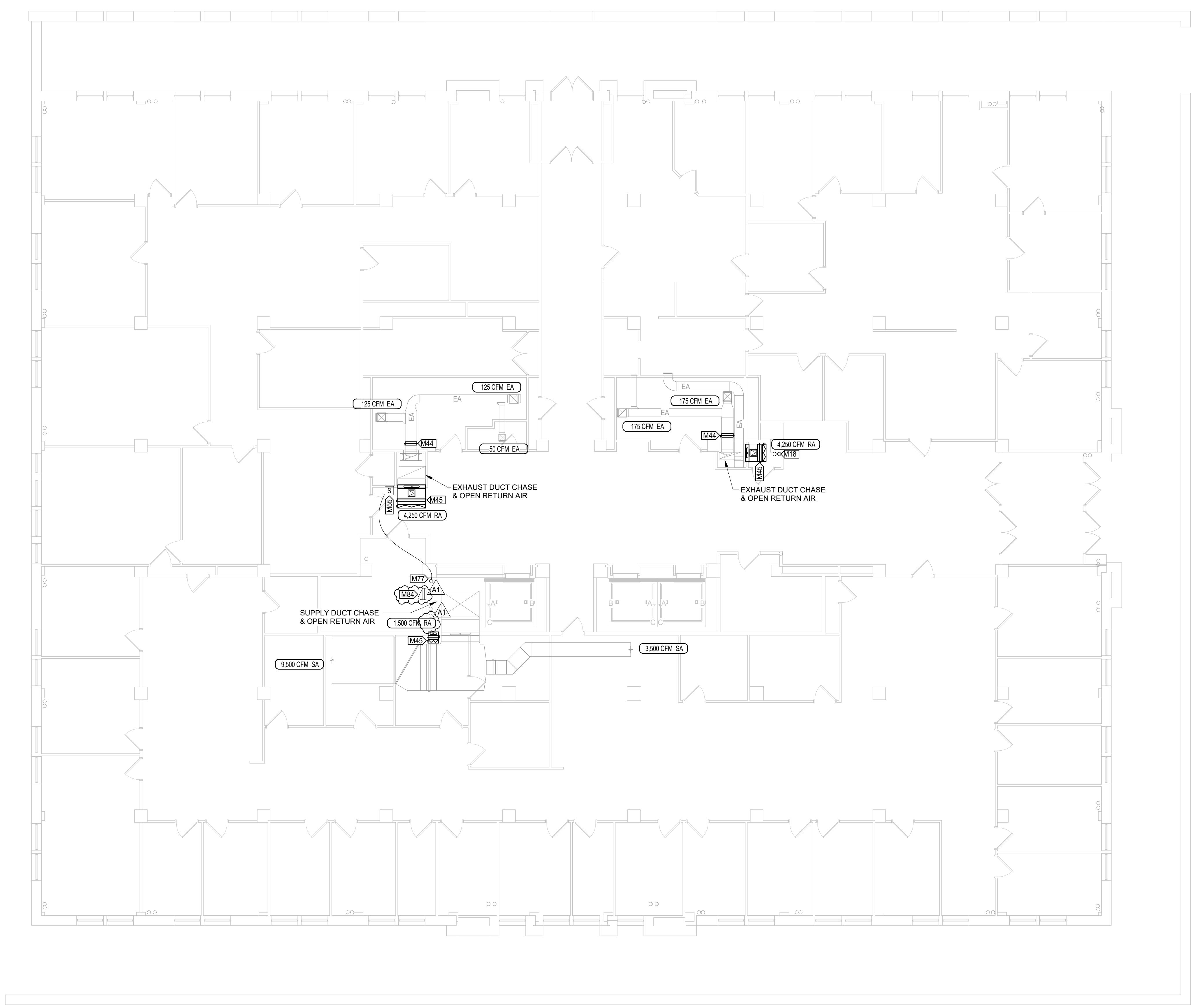
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DATE: 07/25/2024
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 05/30/2024

CAD DWG FILE:
DRAWING BY: ALD
CHECKED BY: GCS
DESIGNED BY: ALD

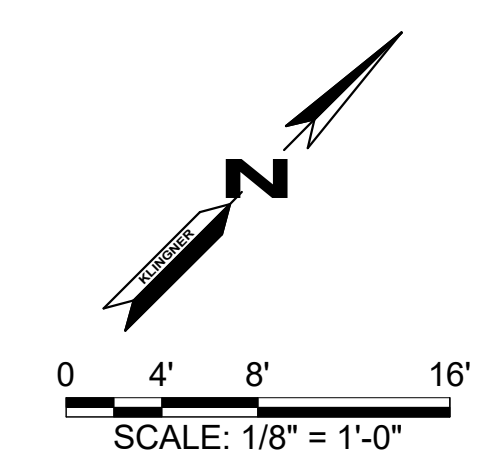
SHEET TITLE:
**SECOND FLOOR - HVAC
PLAN**

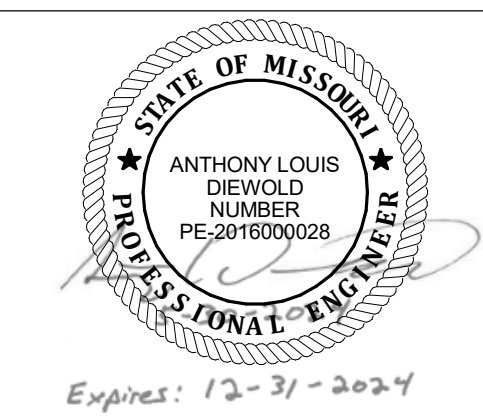
SHEET NUMBER:
M102
SHEET 6 of 23
MAY 30, 2024

VALUE	DESCRIPTION
M18	ROUTE 3" LPS AND 2" LPR UP ADJACENT TO BUILDING COLUMN.
M44	REPLACE EXISTING MANUAL BALANCING DAMPER. FIELD VERIFY DUCT SIZE PRIOR TO PURCHASING.
M45	REMOVE EXISTING FIRE DAMPER AND MANUAL BALANCE DAMPER AND PROVIDE 12"x12" ACCESS DOOR, FIRE DAMPER, MANUAL BALANCE DAMPER, AND AUTOMATIC CONTROL DAMPER.
M55	INSTALL FLOOR DIFFERENTIAL PRESSURE SENSOR IN THIS LOCATION AND ROUTE LOW-SIDE TUBE TO OUTSIDE STATIC PRESSURE REFERENCE. CONTRACTOR
M77	PROVIDE 2-1/2" TYPE L COPPER PIPE FOR OUTSIDE STATIC PRESSURE REFERENCE AND ROUTE UP AND DOWN IN CHASE
M84	PROVIDE AND INSTALL FIRE-RATED, 24"X36", LOCKABLE, STEEL ACCESS PANEL.



1 SECOND FLOOR - HVAC PLAN
1/8" = 1'-0"

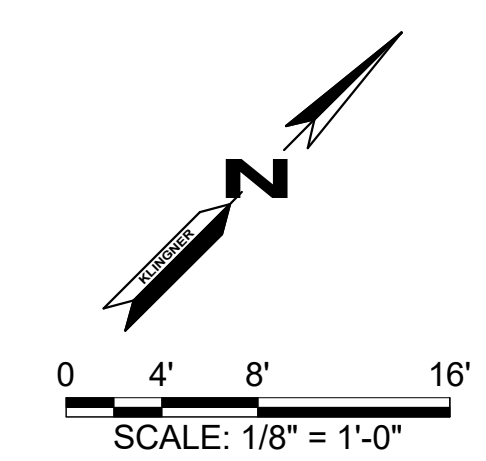
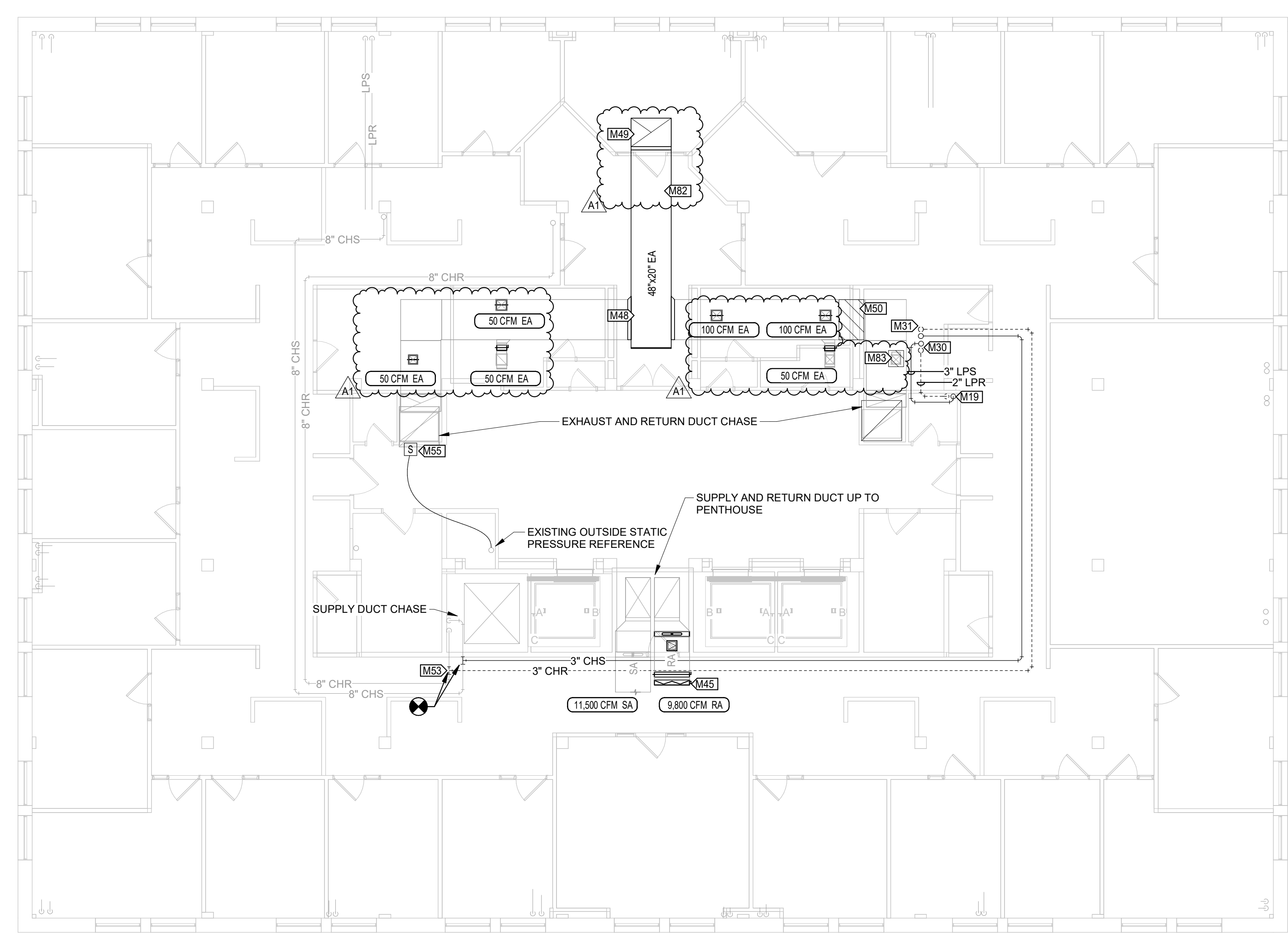




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VALUE	DESCRIPTION
M19	ROUTE 3" LPS AND 2" LPR DOWN ADJACENT TO BUILDING COLUMN.
M30	ROUTE 3" LPS & 2" LPR UP THROUGH PENTHOUSE FLOOR.
M31	ROUTE 3" CHS/CHR UP THROUGH FLOOR IN THIS LOCATION. COORDINATE WITH EQUIPMENT ABOVE.
M45	REMOVE EXISTING FIRE DAMPER AND MANUAL BALANCE DAMPER AND PROVIDE 12"x12" ACCESS DOOR, FIRE DAMPER, MANUAL BALANCE DAMPER, AND AUTOMATIC CONTROL DAMPER.
M48	INTERCEPT EXISTING EXHAUST AIR DUCT AND ROUTE TO NEW ROOF MOUNTED EXHAUST FAN.
M49	EXISTING 2.5" ROOF SLAB TO BE REMOVED FROM INSIDE FACE OF JOIST TO INSIDE FACE OF JOIST FOR OPENING. OPENING LENGTH ALONG JOIST SHALL NOT EXCEED 36". TRANSITION DUCT AND ROUTE DUCT UP THROUGH NEW CURB TO EF-1 ABOVE. CONTRACTOR SHALL COORDINATE WITH THE ROOFING SYSTEM MANUFACTURER TO ENSURE THAT THE WARRANTY ON THE EXISTING VERSICO ROOFING SYSTEM IS MAINTAINED.
M50	CAP EXISTING DUCT UP THROUGH FLOOR.
M53	CONNECT TO EXISTING 8" CHS/R IN THIS LOCATION.
M55	INSTALL FLOOR DIFFERENTIAL PRESSURE SENSOR IN THIS LOCATION AND ROUTE LOW SIDE TUBE TO OUTSIDE STATIC PRESSURE REFERENCE. CONTRACTOR
M82	OFFSET EXISTING SUPPLY AIR DUCT IN THIS AREA AS NECESSARY TO ROUTE EXHAUST DUCT.
M83	CAP EXISTING BRANCH DUCT ABOVE CEILING.



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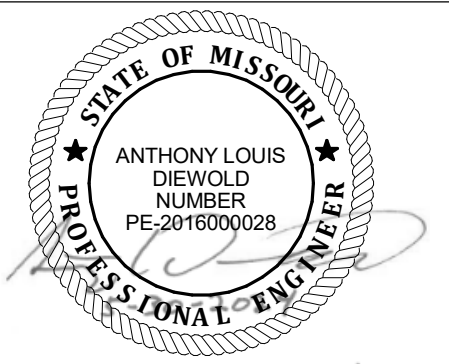
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ISSUE DATE: 05/30/2024

CAD DWG FILE: _____
DRAWING BY: ALD
CHECKED BY: GCS
DESIGNED BY: ALD

SHEET TITLE:
**EIGHTH FLOOR - HVAC
PLAN**

SHEET NUMBER:
M108
SHEET 12 of 23
MAY 30, 2024



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SITE # 1001
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CAD DWG FILE:
DRAWING BY: ALD
CHECKED BY: GCS
DESIGNED BY: ALD

SHEET TITLE:
**MECHANICAL
SCHEDULES**

SHEET NUMBER:

M601

SHEET 18 of 23
MAY 30, 2024

SHELL AND TUBE HEAT EXCHANGER SCHEDULE																	
TAG	DESCRIPTION	LENGTH	DIAMETER	STEAM			ANTIFREEZE			WATER				MAKE	MODEL	WEIGHT	REMARKS
				INLET PRESSURE	FLOWRATE	CAPACITY	TYPE	CONCENTRATION	EWT	LWT	P.D.	TUBES	FLOWRATE				
HX-1	SHELL AND TUBE SINGLE PASS	4'-6"	5"	8.0 ftH2O	612 lb/h	612,000 Btu/h	POLYPROPYLENE GLYCOL	35%	140 °F	180 °F	1.0 psig	12	30.0 GPM	BELL & GOSSETT	QSU-47-2	150 lb	1
1. PROVIDE FLOOR SUPPORT STRUCTURE.																	

EXHAUST FAN SCHEDULE												
TAG	DESCRIPTION	AIRFLOW	E.S.P.	VOLT	ELECTRICAL			BASIS OF DESIGN			REMARKS	
					FREQ	PHASE	MCA	MOP	MAKE	MODEL		WEIGHT
EF-1	BELT DRIVE UPBLAST CENTRIFUGAL ROOF EXHAUST FAN	4,500 CFM	3.00 in-wg	208 V	60 Hz	3	18 A	35 A	GREENHECK	CUBE-300-XP-50	275 lb	1
1. PROVIDE MINIMUM 14" ROOF CURB, ISOLATION DAMPER, VARIABLE FREQUENCY DRIVE, AND DISCONNECT SWITCH												

HYDRONIC COIL SCHEDULE																						
TAG	DESCRIPTION	LENGTH	WIDTH	DEPTH	ROWS	FINS/INCH	AIRFLOW	MAX VELOCITY	AIR P.D.	EAT				CAPACITY	FLUID		EWT	LWT	FLOWRATE	P.D.	WEIGHT	REMARKS
										DB	WB	DB	WB		TYPE	CONCENTRATION						
CC-2	HYDRONIC COOLING COIL	60 in	60 in	12 in	8	12	10,500 CFM	450 FPM	1.13 in-wg	95.0 °F	78.0 °F	53.5 °F	53.5 °F	925,200 Btu/h	WATER	100%	44 °F	64 °F	92.3 GPM	13.4 ftH2O	650 lb	1
HC-1	HYDRONIC HEATING COIL	60 in	60 in	12 in	1	10	10,500 CFM	450 FPM	0.08 in-wg	0.0 °F	0.0 °F	55.0 °F	38.0 °F	612,500 Btu/h	PROPYLENE GLYCOL	35%	180 °F	140 °F	30.0 GPM	5.0 ftH2O	150 lb	1
1. PROVIDE SUPPORT STRUCTURE FROM FLOOR.																						

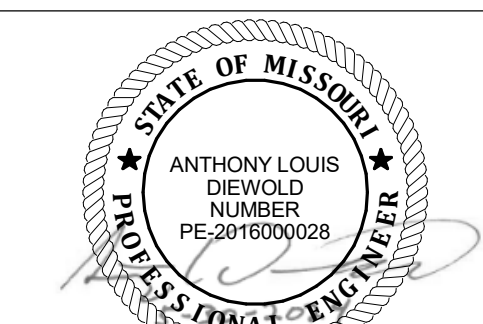
FAN ARRAY SCHEDULE																					
TAG	DESCRIPTION	MAX AIRFLOW	MIN AIRFLOW	MAX. S.P.	TYPE	FAN			MAX. CABINET DIMENSIONS			ELECTRICAL			BASIS OF DESIGN			REMARKS			
						QUANTITY	POWER	SPEED	WHEEL DIA.	LENGTH	HEIGHT	VOLT	FREQ	PHASE	MCA	MOP	MAKE		MODEL	WEIGHT	
RAF-1	RETURN AIR FAN ARRAY	90,000 CFM	20,000 CFM	3.50 in-wg	CENTRIFUGAL PLENUM	12	8 hp	2104	19.7 in	18" - 0"	6" - 8"	480 V	60 Hz	3	121 A	125 A	Q-PAC	1700523	1,300 lb	1, 3	
SAF-1	SUPPLY AIR FAN ARRAY	100,000 CFM	40,000 CFM	5.70 in-wg	CENTRIFUGAL PLENUM	16	9 hp	2192	19.7 in	15" - 7"	10" - 0"	480 V	60 Hz	3	160 A	175 A	Q-PAC	1700523	3,650 lb	1-2	
1. INSTALL FAN ARRAY BULKHEAD PER MANUFACTURER RECOMMENDATIONS. 2. FAN ARRAY SHALL BE CONTROLLED BASED ON BUILDING STATIC AIR PRESSURE. 3. FAN ARRAY SHALL BE CONTROLLED BASED ON MIXED AIR PLENUM STATIC AIR PRESSURE.																					

AIR FILTER SCHEDULE																				
TAG	FILTER SECTION				INDIVIDUAL PRE-FILTERS						INDIVIDUAL FINAL FILTERS									
	AIRFLOW	LENGTH	HEIGHT	VELOCITY	DESCRIPTION	EFFICIENCY	QUANTITY	SIZE	THICKNESS	MEDIA AREA	PRESSURE DROP CLEAN	PRESSURE DROP DIRTY	DESCRIPTION	EFFICIENCY	QUANTITY	SIZE	THICKNESS	FACE AREA	PRESSURE DROP CLEAN	PRESSURE DROP DIRTY
MAF-1	100,000 CFM	18' - 0"	12' - 0"	475 FPM	PLEATED DISPOSABLE	MERV 8	54	2x2	2' - 0"	12.1 SF	0.25 in-wg	0.75 in-wg	EXTENDED SURFACE HIGH EFFICIENCY	MERV 13	54	2x2	1' - 0"	39.2 SF	0.10 in-wg	0.52 in-wg

CIRCULATING PUMP SCHEDULE											
TAG	DESCRIPTION	FLOW	HEAD	ELECTRICAL			BASIS OF DESIGN				REMARKS
				VOLT	FREQ	POLES	MOP	MAKE	MODEL	WEIGHT	
CWP-3	CLOSE COUPLED INLINE CIRCULATOR PUMP	92.3 GPM	20.0 ftH2O	120 V	60 Hz	1	15 A	TACO	1935	150 lb	1-2
HWP-1	CLOSE COUPLED INLINE CIRCULATOR PUMP	30.0 GPM	25.0 ftH2O	120 V	60 Hz	1	20 A	TACO	1915	150 lb	1-2
1. PROVIDE VFD WITH INTEGRAL DISCONNECT. 2. SUPPORT PUMP FROM FLOOR AND NOT FROM PIPING.											

GLYCOL FEED SYSTEM SCHEDULE																
TAG	DESCRIPTION	SYSTEM			TANK			VOLT	FREQ	PHASE	MOP	MAKE	MODEL	WEIGHT	REMARKS	
		TYPE	FLUID	CONCENTRATION	LENGTH	WIDTH	HEIGHT									
GFS-1	PACKAGED GLYCOL FEED SYSTEM	SIMPLEX	POLYPROPYLENE GLYCOL	35	1' - 0"	1' - 0"	1' - 6"	6.0 gal	120 V	60 Hz	1	20 A	WESSELLS	G-6	75 lb	1
1. SYSTEM TO BE SET ON FLOOR BELOW HEAT EXCHANGER.																

EXPANSION TANK SCHEDULE										
TAG	DESCRIPTION	MAX. PRES.	MAX. TEMP.	PRE-CHARGE	TANK VOLUME	ACCEPTANCE VOLUME	BASIS OF DESIGN			REMARKS
							MAKE	MODEL	WEIGHT	
ETK-1	FLOOR MOUNTED BLADDER STYLE	125 psi	240 °F	15 psi	8.0 gal	5.0 gal	TACO	CX30-125	100 lb	1
1. INCLUDE SIGHT GLASS.										



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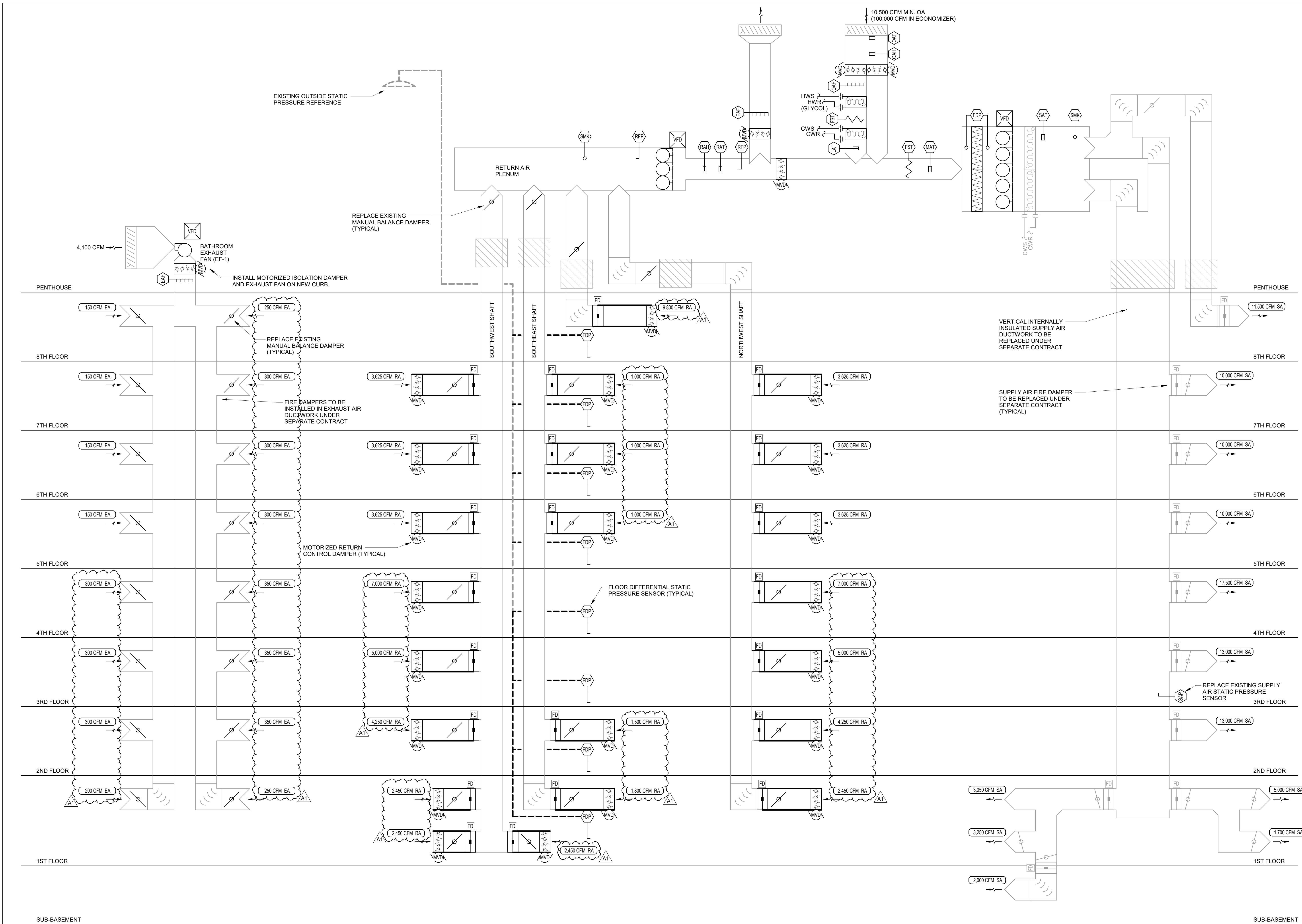
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DRAWING BY: ALD
CHECKED BY: GCS
DESIGNED BY: ALD

SHEET TITLE:
**AIRFLOW CONTROL
SCHEMATIC DIAGRAM**

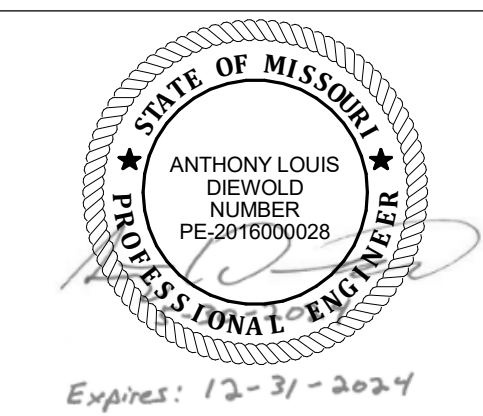
SHEET NUMBER:

M701

SHEET 19 of 23
MAY 30, 2024



1 AHU SYSTEM SCHEMATIC DIAGRAM - PROPOSED
NTS



ANTHONY L. DIEWOLD - ENGINEER
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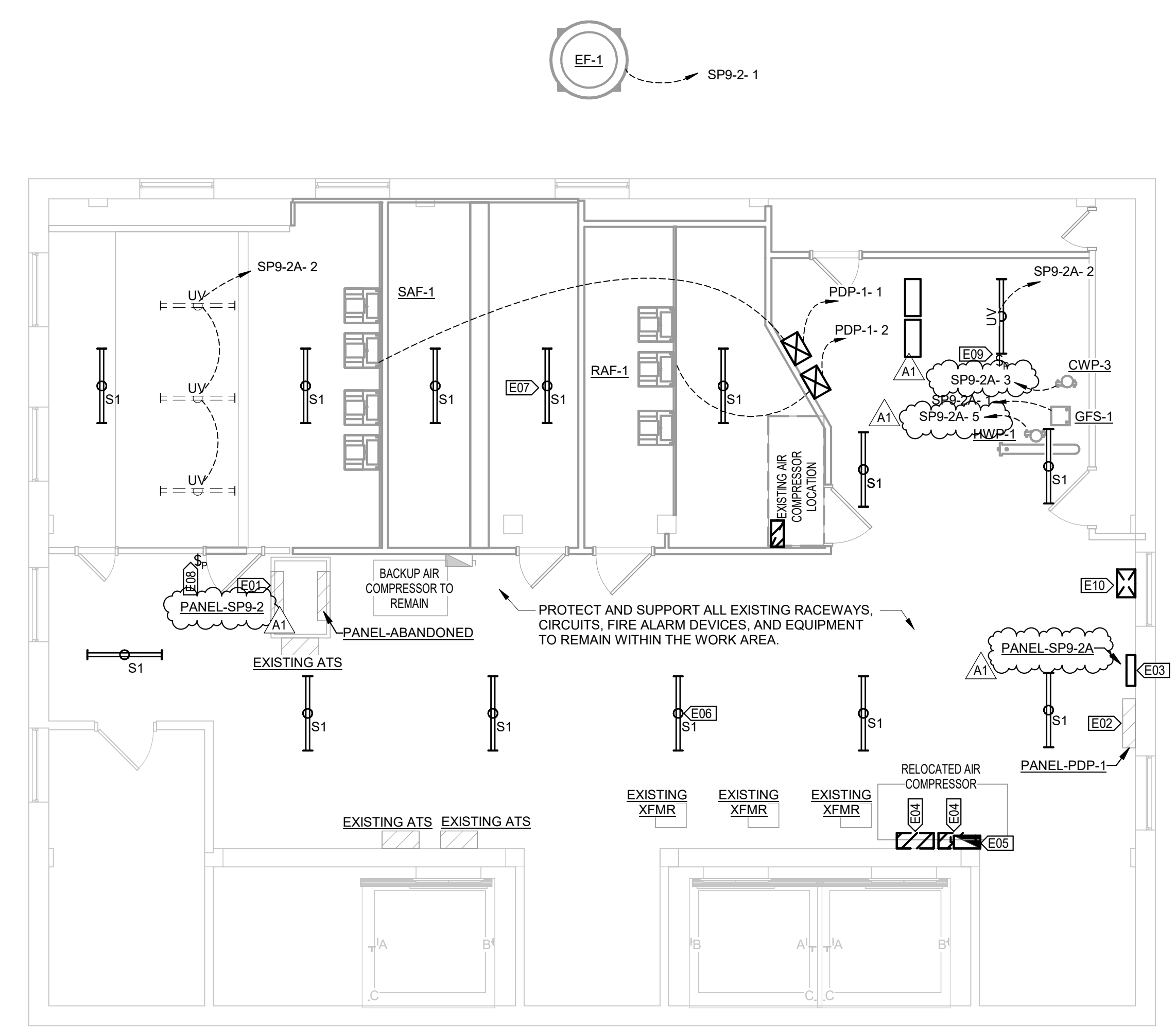
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REVISION: _____
DATE: _____
ISSUE DATE: 05/30/2024

CAD DWG FILE: _____
DRAWING BY: ALD
CHECKED BY: GCS
DESIGNED BY: ALD

SHEET TITLE:
**ENLARGED PENTHOUSE
ELECTRICAL PLAN**

SHEET NUMBER:
E201
SHEET 23 of 23
MAY 30, 2024



KEYNOTE LEGEND

VALUE	DESCRIPTION
E01	PROVIDE NEW FEEDER FROM PANEL SP9-2 TO NEW EXHAUST FAN. REPLACE EXISTING RESTROOM EXHAUST FAN CIRCUIT BREAKER WITH NEW 35A. PROVIDE NEW 60A BREAKER AND FEEDER TO NEW SUB-PANEL SP9-2A.
E02	EXISTING PANEL PDP-1 IS EATON MODEL PRL4F POW-R-LINE C. REPLACE EXISTING 200A SWITCH WITH 125A SWITCH TO FEED RAF-1. REPLACE EXISTING 200A SWITCH WITH 175A SWITCH TO POWER SAF-1.
E03	DEMOLISH EXISTING RETURN FAN VFD IN THIS LOCATION AND INSTALL NEW PANEL SP9-2A.
E04	DEMOLISH EXISTING SUPPLY FAN VFD IN THIS LOCATION.
E05	RELOCATE EXISTING AIR COMPRESSOR CIRCUIT FROM EXISTING AHU WALL TO THIS LOCATION.
E06	REUSE EXISTING PENTHOUSE LIGHTING CIRCUIT AND SWITCHES AND PROVIDE EIGHT (8) LED STRIP LIGHT FIXTURES MOUNTED AS HIGH AS POSSIBLE.
E07	REUSE EXISTING AIR HANDLING UNIT LIGHT FIXTURE CIRCUIT AND PROVIDE FIVE (5) LED STRIP LIGHT FIXTURES MOUNTED AS HIGH AS POSSIBLE WITHIN AIR HANDLING UNIT CABINET.
E08	PROVIDE DOOR POSITION SWITCH ON EXISTING DOOR. WHEN DOOR IS OPEN UV LIGHTING SHALL BE OFF.
E09	PROVIDE DOOR POSITION SWITCH ON COOLING COIL ACCESS DOOR INTO COOLING COIL SECTION. WHEN DOOR IS OPEN UV LIGHTING SHALL BE OFF.
E10	DEMOLISH EXISTING RETURN FAN VFD IN THIS LOCATION.

LIGHT FIXTURE SCHEDULE

TAG	DESCRIPTION	LAMP OUTPUT	COLOR TEMPERATURE	BASIS OF DESIGN	
				MANUFACTURER	MODEL
S1	4' LED STRIPLIGHT	3000 lm	4000 K	LITHONIA	ZL1N L48

BRANCH PANEL: SP9-2A

LOCATION: PENTHOUSE
SUPPLY FROM: SP9-2
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 120/208
PHASES: 3
WIRES: 4
ACCESSORIES:

A.I.C. RATING: 10,000
PANEL TYPE: MAIN LUG ONLY
MAINS RATING: 60 A

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A	B	C	POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1	RESTROOM EXHAUST FAN EF-1	20 A	1	900 VA	0 VA		1	20 A	UV LIGHTING	2
3	PRECOOLING PUMP CWP-3	25 A	1		1658 VA	0 VA	1	20 A	SPARE	4
5	PREHEATING PUMP HWP-1	20 A	1			1176 VA	0 VA	1	20 A	SPARE
7	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE	8
9	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE	10
11	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE
				PHASE LOAD:	900 VA	1,658 VA	1,176 VA	**TOTAL LOAD: 3,734 VA		
				PHASE AMPS:	8 A	14 A	10 A	**TOTAL AMPS: 10 A		

* FIELD VERIFY BREAKER SIZE WITH ACTUAL EQUIPMENT PROVIDED. COORDINATE WITH OTHER CONTRACTORS AS NECESSARY.
**TOTAL LOAD AND TOTAL AMPS DO NOT INCLUDE DEMAND FACTOR CALCULATIONS.

1 ENLARGED PENTHOUSE ELECTRICAL PLAN
3/16" = 1'-0"

