

GENERAL NOTES:

- SEE SHEET M001 FOR MECHANICAL LEGEND AND GENERAL NOTES.
- COORDINATE WITH OTHER DISCIPLINES PRIOR TO INSTALLATION OF MECHANICAL COMPONENTS.

SHEET KEYNOTES

- FURNISH AND INSTALL VAV TERMINAL UNIT. MAINTAIN ALL MANUFACTURER'S REQUIRED CLEARANCES. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- SUPPLY DUCTWORK DOWN FROM SECOND LEVEL. SEE SHEET MH406 FOR CONTINUATION.
- PROVIDE DUCTWORK UP TO EF-01. SEE SHEET MH406 FOR CONTINUATION.
- PROVIDE RETURN DUCTWORK UP TO SECOND LEVEL. SEE SHEET MH406 FOR CONTINUATION.
- PROVIDE DUCTWORK UP TO CRAC UNITS ABOVE. SEE SHEET MH406 FOR CONTINUATION.
- HVAC CONTROL PANEL FOR HVLS FANS & GAS-FIRED RADIANT HEATERS. CONTROL WIRING SHALL BE PROVIDED UNDER DIVISION 23 CONTRACT.

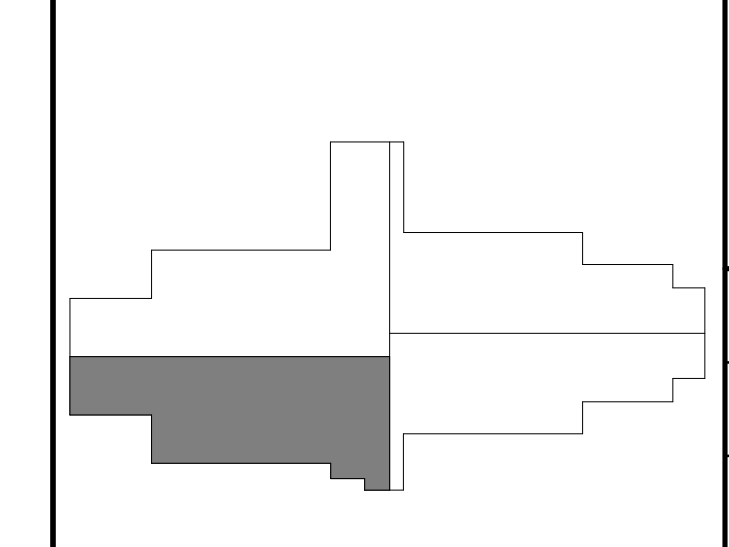


FIRST LEVEL - AREA B - HVAC PLAN
 KENTON COUNTY SCHOOL DISTRICT SUPPORT OPERATIONS CENTER
 11800 TAYLOR MILL ROAD, INDEPENDENCE, KY 41051

DESIGNED	JJS
DRAWN	JJS
REVIEWED	CVS
APPROVED	CVS

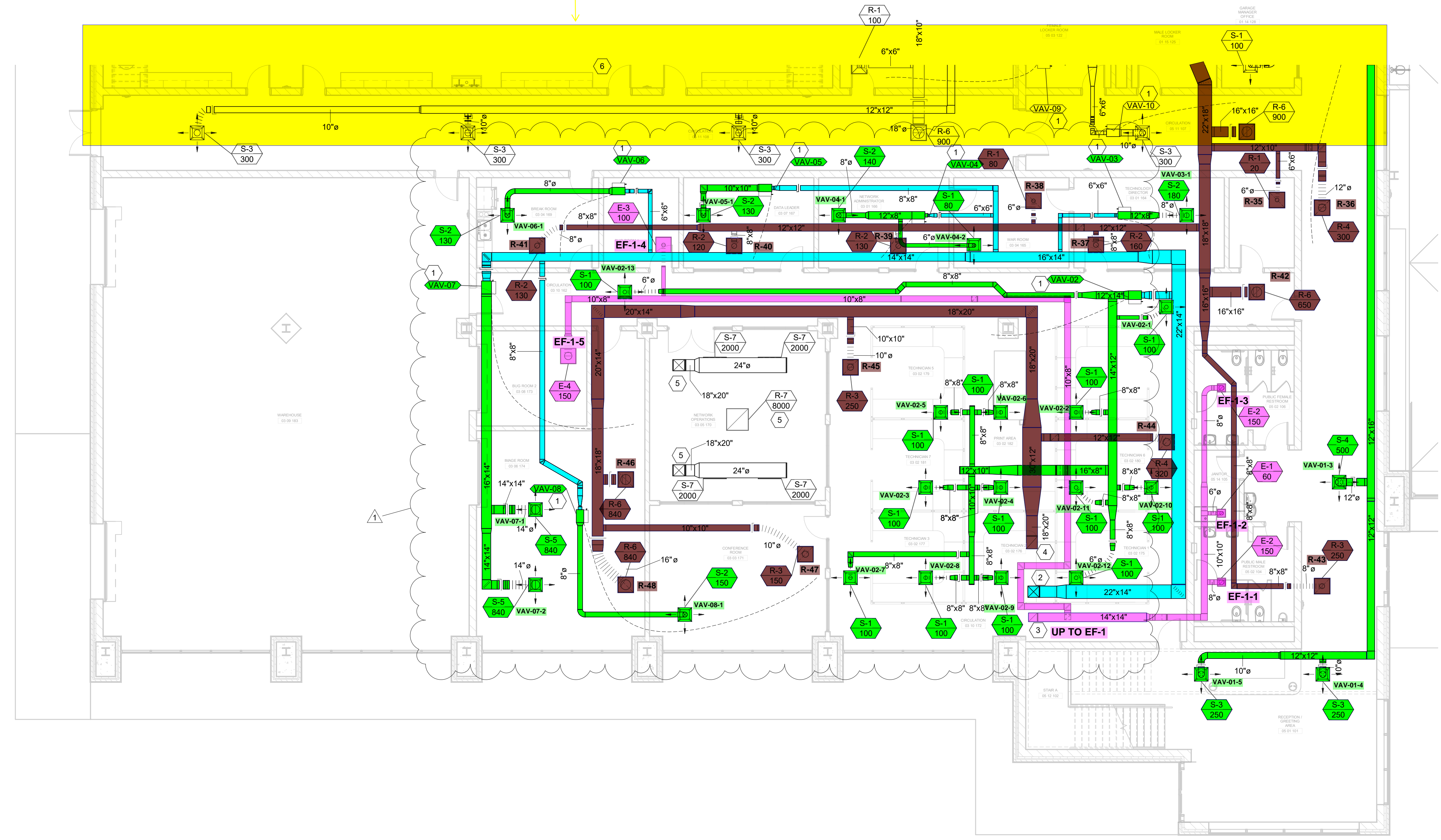
NO.	DATE	REVISION/DESCRIPTION

AREA KEY PLAN

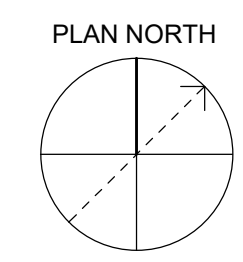


DATE	MARCH 30, 2023
SCALE	1/8" = 1'-0"
SHEET NO.	MH402 X1

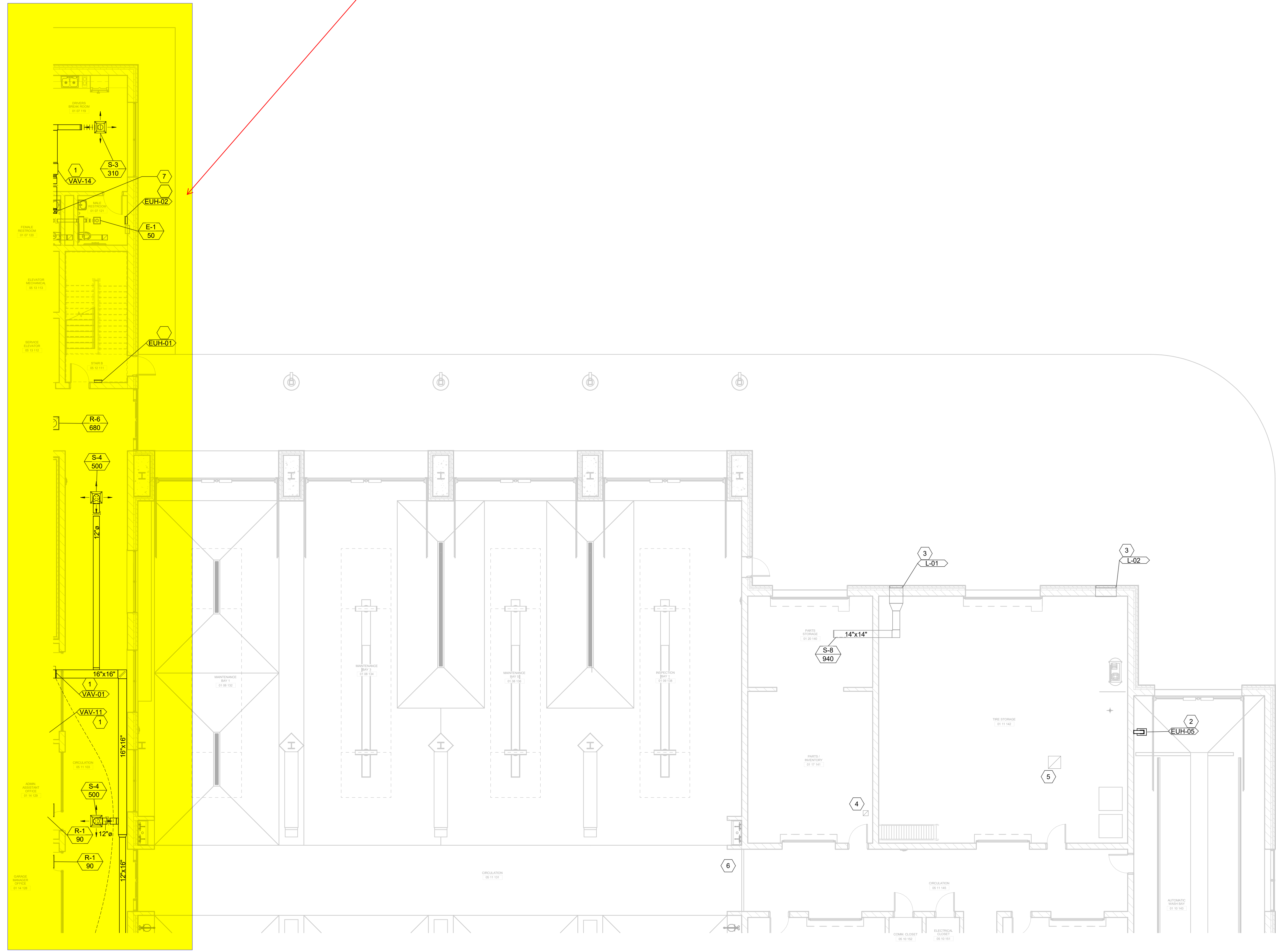
ON MH401



1 FIRST LEVEL - AREA B - HVAC PLAN
 SCALE: 1/8" = 1'-0"



ON MH401



GENERAL NOTES:

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GRW PROJECT NO. 05068-01
 CLIENT PROJECT NO. BG 23-173
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SHEET KEYNOTES

- FURNISH AND INSTALL VAV TERMINAL UNIT. MAINTAIN ALL MANUFACTURER'S REQUIRED CLEARANCES. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL CORROSION RESISTANT ELECTRIC UNIT HEATER. BASE OF UNIT SHALL BE 14" AFF. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL OPERABLE LOUVER. BASE OF LOUVER SHALL BE 13'-0" AFF. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- PROVIDE DUCTWORK UP TO EF-06. SEE SHEET MH407 FOR CONTINUATION.
- PROVIDE DUCTWORK UP TO EF-07. SEE SHEET MH407 FOR CONTINUATION.
- HVAC CONTROL PANEL FOR HVLS FANS & GAS-FIRED RADIANT HEATERS. CONTROL WIRING SHALL BE PROVIDED UNDER DIVISION 23 CONTRACT.
- SUPPLY DUCTWORK DOWN FROM SECOND LEVEL. SEE SHEET MH405 FOR CONTINUATION.

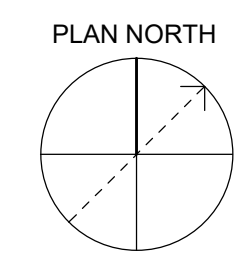
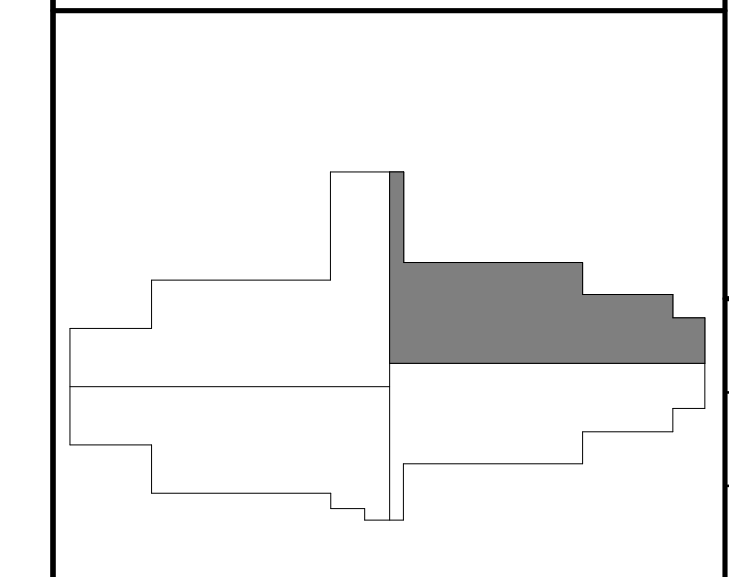
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FIRST LEVEL - AREA C - HVAC PLAN
 KENTON COUNTY SCHOOL DISTRICT SUPPORT OPERATIONS CENTER
 11800 TAYLOR MILL ROAD, INDEPENDENCE, KY 41051

DESIGNED	JJS
DRAWN	JJS
REVIEWED	CVS
APPROVED	CVS

REVISIONS	DATE	BY

AREA KEY PLAN



1 FIRST LEVEL - AREA C - HVAC PLAN
 SCALE: 1/8" = 1'-0"

DATE	MARCH 30, 2023
SCALE	1/8" = 1'-0"
SHEET NO.	MH403

GENERAL NOTES:

- SEE SHEET M001 FOR MECHANICAL LEGEND AND GENERAL NOTES.
- COORDINATE WITH OTHER DISCIPLINES PRIOR TO INSTALLATION OF MECHANICAL COMPONENTS.

GRW PROJECT NO. 0506-01

CLIENT PROJECT NO. BG 23-173

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SHEET KEYNOTES

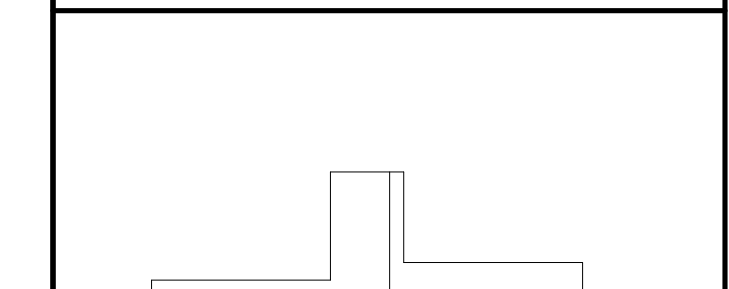
- FURNISH AND INSTALL VAV TERMINAL UNIT. MAINTAIN ALL MANUFACTURER'S REQUIRED CLEARANCES. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL OPERABLE LOUVER. BASE OF LOUVER SHALL APPROXIMATELY BE 2'-0" AFF. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL INDOOR WALL MOUNTED MINI SPLIT UNIT. BASE OF UNIT SHALL BE 7'-4" AFF. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL INDOOR COMPUTER ROOM AIR CONDITIONER UNIT. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL GAS FIRED UNIT HEATER. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL WALL-MOUNTED EXHAUST FAN. BASE OF FAN SHALL APPROXIMATELY BE 2'-0" AFF. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- RETURN DUCTWORK UP FROM FIRST LEVEL. SEE SHEET MH402 FOR CONTINUATION.
- EXHAUST DUCTWORK UP FROM FIRST LEVEL. SEE SHEET MH402 FOR CONTINUATION.
- SUPPLY DUCTWORK DOWN TO FIRST LEVEL. SEE SHEET MH402 FOR CONTINUATION.
- RETURN DUCTWORK UP FROM NETWORK OPERATIONS CENTER. SEE SHEET MH402 FOR CONTINUATION. PROVIDE AND INSTALL FIRE DAMPER IN DUCTWORK AT FLOOR PENETRATION. SEE MECHANICAL CONTROL SHEETS FOR MORE INFORMATION.
- PROVIDE AND INSTALL CONTROL DAMPERS FOR COMPUTER ROOM AIR CONDITIONER DUCTWORK. SEE MECHANICAL CONTROL SHEETS FOR MORE INFORMATION.
- SUPPLY DUCTWORK DOWN TO NETWORK OPERATIONS CENTER. SEE SHEET MH402 FOR CONTINUATION. PROVIDE AND INSTALL FIRE DAMPER IN DUCTWORK AT FLOOR PENETRATION. SEE MECHANICAL CONTROL SHEETS FOR MORE INFORMATION.
- FURNISH AND INSTALL HIGH VELOCITY, LOW SPEED FAN. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES FROM STRUCTURE AND LIGHTING. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.

SECOND LEVEL - AREA B - HVAC PLAN
 KENTON COUNTY SCHOOL DISTRICT SUPPORT OPERATIONS CENTER
 11800 TAYLOR MILL ROAD, INDEPENDENCE, KY 41051

DESIGNED:	JJS
DRAWN:	JJS
REVIEWED:	CVS
APPROVED:	CVS

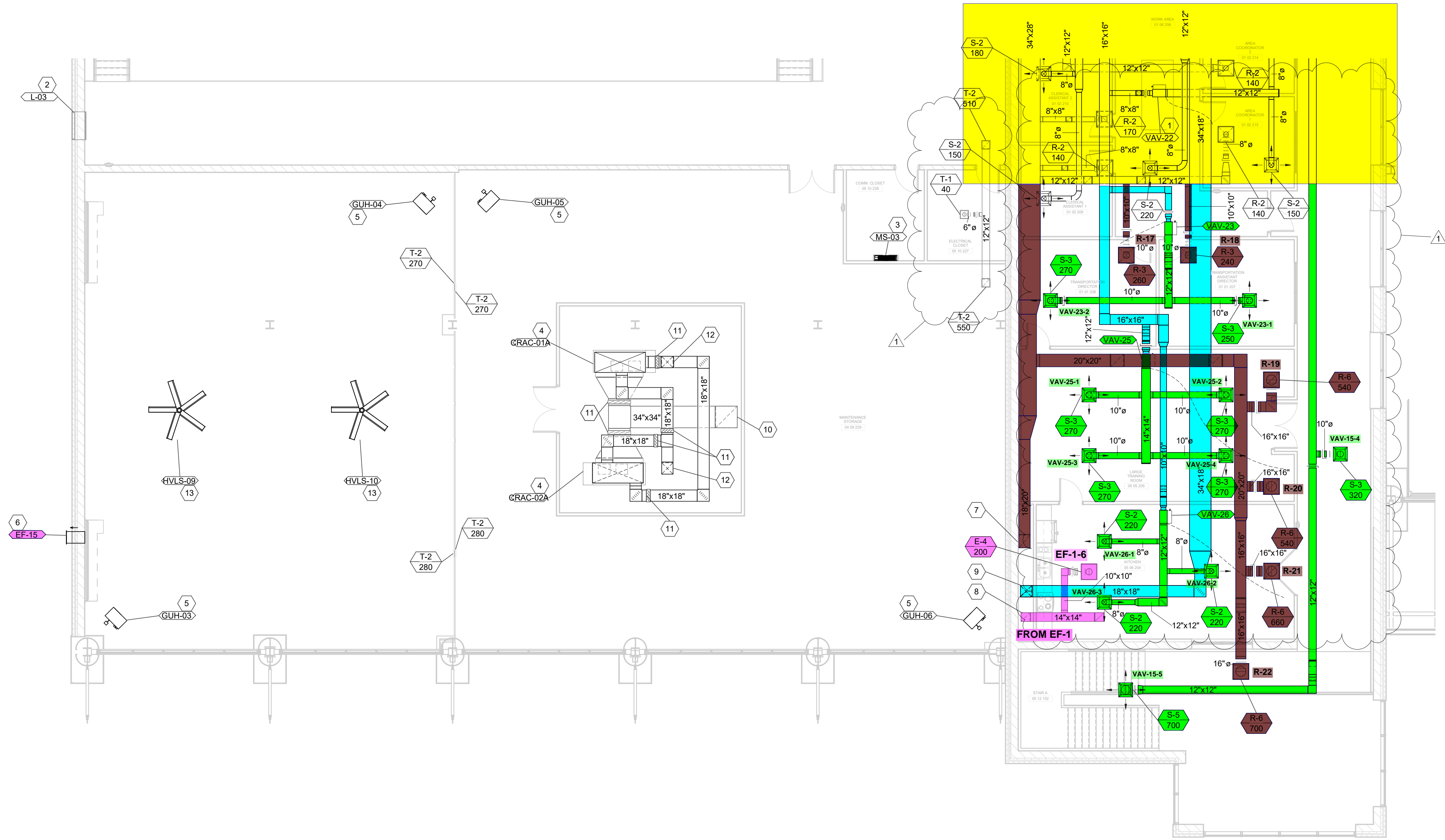
NO.	REVISIONS	DATE	BY

AREA KEY PLAN

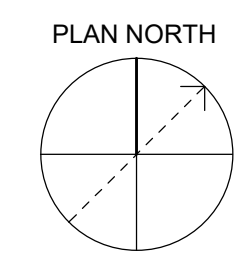


DATE:	MARCH 30, 2023
SCALE:	1/8" = 1'-0"
SHEET NO.:	MH406 X1

ON MH405



1 SECOND LEVEL - AREA B - HVAC PLAN
 SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- SEE SHEET M001 FOR MECHANICAL LEGEND AND GENERAL NOTES.
- COORDINATE WITH OTHER DISCIPLINES PRIOR TO INSTALLATION OF MECHANICAL COMPONENTS.

GRW PROJECT NO. 05066-01
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SHEET KEYNOTES

- FURNISH AND INSTALL GAS FIRED UNIT HEATER. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL WALL-MOUNTED EXHAUST FAN. BASE OF FAN SHALL APPROXIMATELY BE 10'-0" AFF. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.
- FURNISH AND INSTALL OPERABLE LOUVER. BASE OF LOUVER SHALL APPROXIMATELY BE 10'-0" AFF. SEE SCHEDULES AND DETAILS FOR MORE INFORMATION.

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WAREHOUSE ALTERNATE - MECHANICAL PLAN
 KENTON COUNTY SCHOOL DISTRICT SUPPORT OPERATIONS CENTER
 11800 TAYLOR MILL ROAD, INDEPENDENCE, KY 41051

DESIGNED:	JJS
DRAWN:	JJS
REVIEWED:	CVS
APPROVED:	CVS

NO.	REVISIONS	DATE	BY

DATE:	MARCH 30, 2023
SCALE:	1/8" = 1'-0"
SHEET NO.:	MK401

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	ESP (IN H2O)	SONES	DRIVE TYPE	RPM	V/PHHZ	HP	FLA	REMARKS
EF-16	GREENHECK	CUE-090-VG	200	0.13 in-wg	1.4	Direct	738	115/1/60	0.10	2 A	ALL

- REMARKS:
- PROVIDE WITH UNIT MOUNTED DISCONNECT.
 - PROVIDE WITH MOTORIZED DAMPER.
 - OPERATION OF EXHAUST FAN SHALL BE INTERLOCKED WITH THE OPERATION OF THE LIGHTING FOR THE WAREHOUSE.
 - CONNECT EXHAUST FAN TO DDC MONITORING SYSTEM. PROVIDE FAN STATUS PARAMETER TO SYSTEM.
- OTHER ACCEPTABLE MANUFACTURERS INCLUDE: RUSKIN, UNITED ENTERTECH. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

LOUVER SCHEDULE

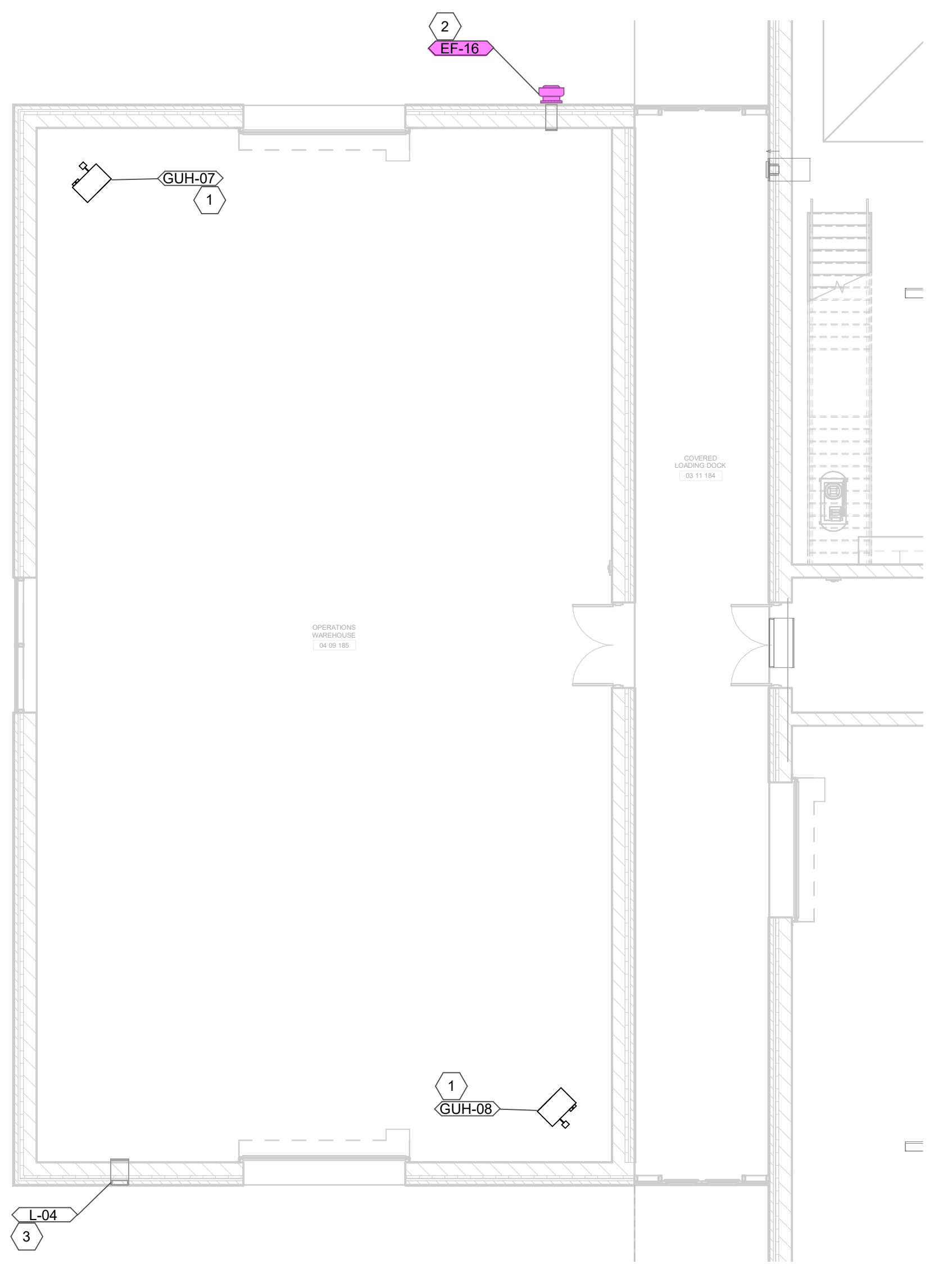
MARK	MANUFACTURER	MODEL	INTAKE/EXHAUST	WIDTH	HEIGHT	DEPTH	CFM	PRESSURE DROP (IN)	FREE AREA (SQ.FT.)	VELOCITY (FPM)	REMARKS
L-04	GREENHECK	ECD-401	Intake	1'-4"	1'-0"	0'-4"	200	0.038	0.4	473	ALL

- REMARKS:
- LOUVER COLOR SELECTED BY ARCHITECT.
 - COORDINATE ALL LOUVER LOCATIONS WITH ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
 - ALUMINUM CONSTRUCTION.
 - DRAINABLE BLADES.
 - PROVIDE INSECT SCREEN.
 - PROVIDE WITH FACTORY MOUNTED DAMPER ACTUATOR. CONTROLS CONTRACTOR SHALL PROVIDE REQUIRED POWER TO ACTUATOR.
 - INTERLOCK OPERATION OF DAMPER WITH EF-16.
- OTHER ACCEPTABLE MANUFACTURERS INCLUDE: CARNES, COOK. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

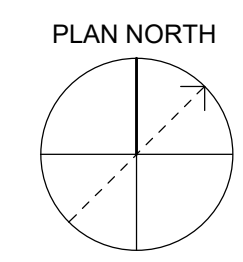
GAS FIRED UNIT HEATER

MARK	MANUFACTURER	MODEL	CFM	INPUT (MBH)	OUTPUT (MBH)	HP	AMPS	FLUE SIZE	V/PHHZ	MCA	MOCP	REMARKS
GUH-07	REZNOR	UBX	759	45	36.9	1/6	3.7	4	115/1/60	5.6	15	ALL
GUH-08	REZNOR	UBX	759	45	36.9	1/6	3.7	4	115/1/60	5.6	15	ALL

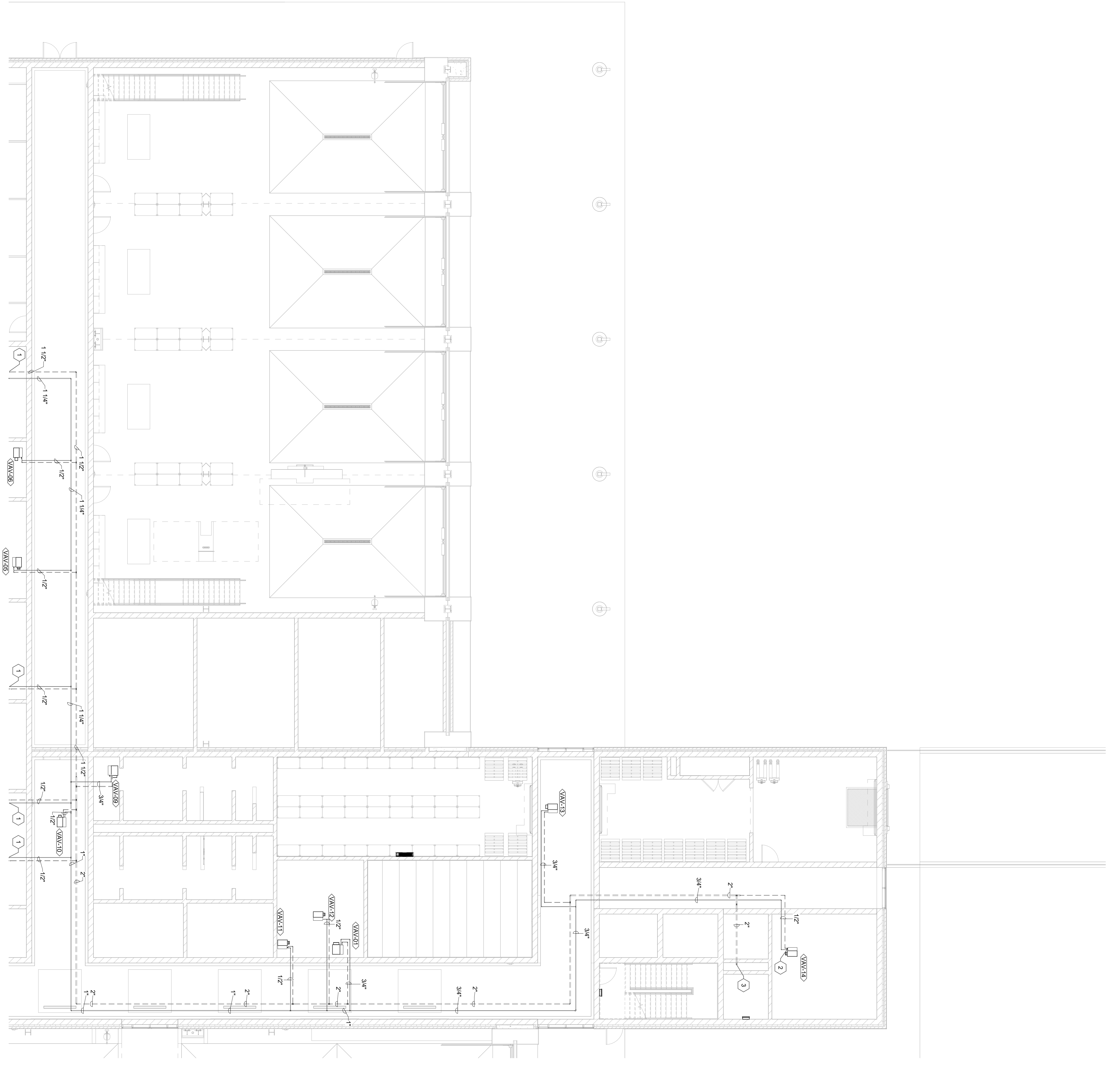
- REMARKS:
- HORIZONTAL GAS FIRED UNIT HEATER.
 - PROVIDE FLUE AS REQUIRED BY MANUFACTURER AND ROUTE PER PLANS.
 - PROVIDE WALL MOUNTED THERMOSTAT.
 - INSTALL AS HIGH AS POSSIBLE.
- OTHER ACCEPTABLE MANUFACTURERS INCLUDE: TRANE, MODINE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



1 FIRST LEVEL - WAREHOUSE ALTERNATE - MECHANICAL PLAN
 SCALE: 1/8" = 1'-0"



1 FIRST LEVEL - AREA A - MECHANICAL PIPING PLAN
SCALE: 1/8" = 1'-0"



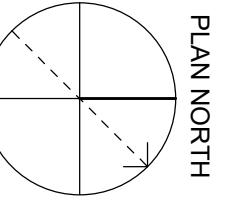
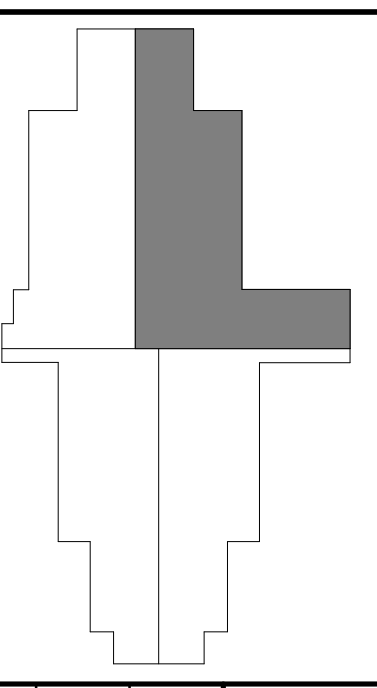
GENERAL NOTES:

- SEE SHEET MP401 FOR MECHANICAL PLAN.
- COORDINATE WITH OTHER DISCIPLINES FOR INSTALLATION OF MECHANICAL EQUIPMENT.

SHEET KEYNOTES

- SEE SHEET MP402 FOR CONTINUATION.
- CONNECT HOT WATER SUPPLY AND RETURN PIPING TO NEW VAN BOX. SEE DETAIL FOR HYDROLOGIC PIPING UP TO SECOND FLOOR.
- SEE SHEET MP403 FOR CONTINUATION.

AREA KEY PLAN



REVISIONS		DESIGNED:	STAFF
NO.	REVISION DESCRIPTION	DATE	BY

DATE:	MARCH 30, 2023
SCALE:	1/8" = 1'-0"
SHEET NO.:	MP401

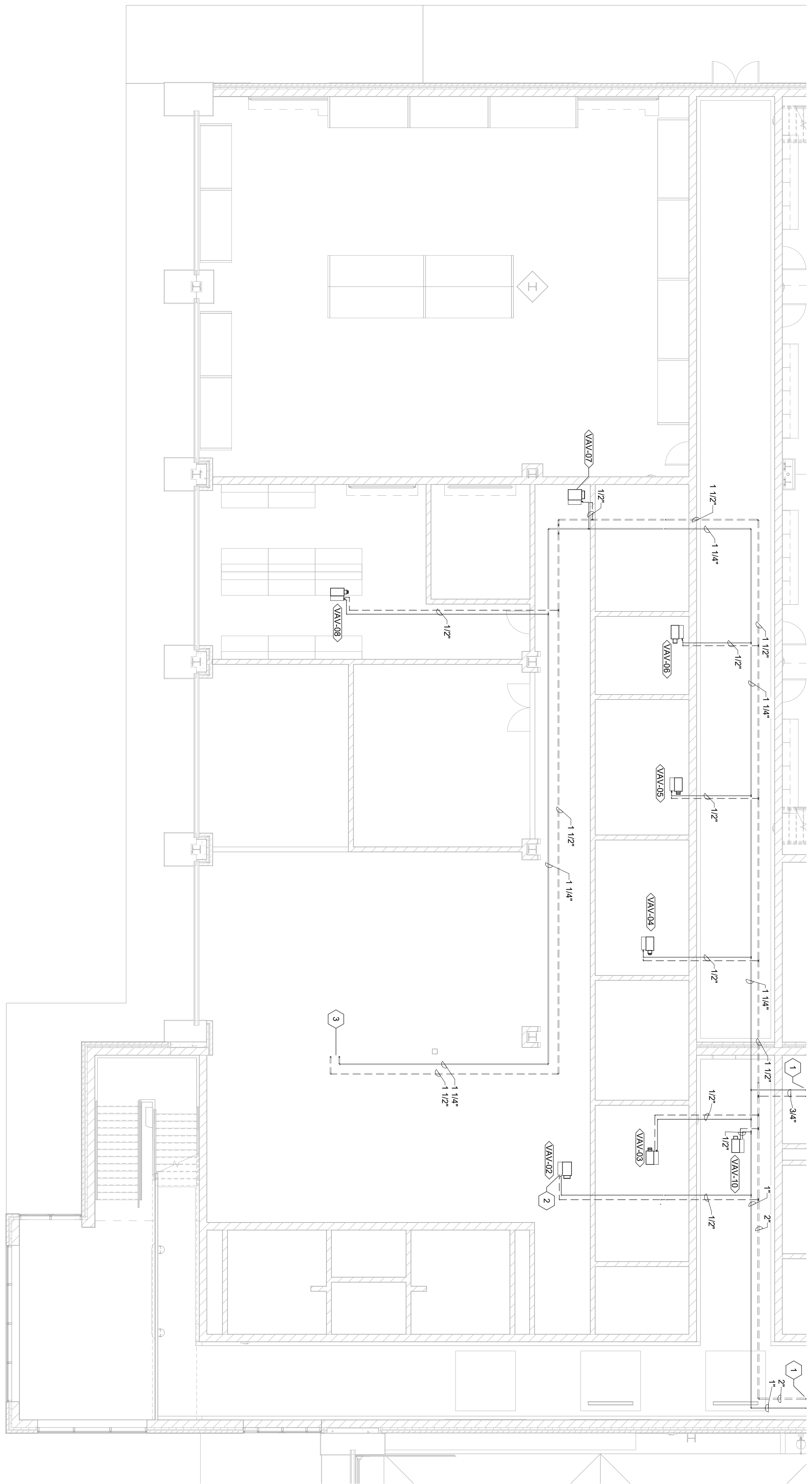
FIRST LEVEL - AREA A - MECHANICAL PIPING PLAN
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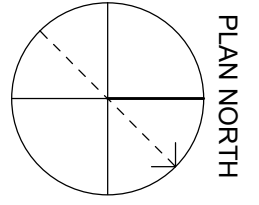
GRW PROJECT NO. 05056-01
 CLIENT PROJECT NO. BG 23-173

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CONSTRUCTION DOCUMENTS



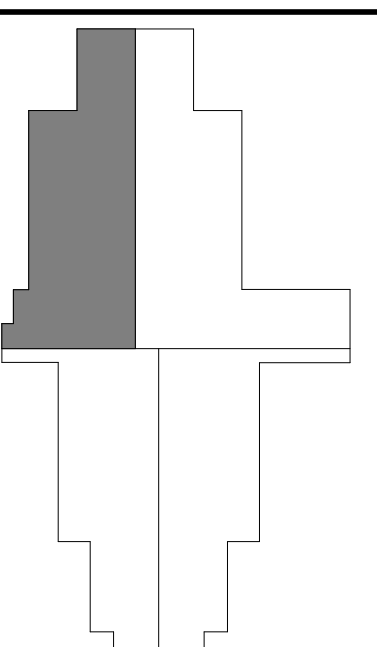
1 FIRST LEVEL - AREA B - MECHANICAL PIPING PLAN
SCALE: 1/8" = 1'-0"



GENERAL NOTES:
1. SEE SHEET MP401 FOR MECHANICAL PIPING TO MECH. ROOMS.
2. COORDINATE WITH OTHER DISCIPLINES FOR ANY INSTALLATION OF MECHANICAL EQUIPMENT.

SHEET KEYNOTES
1. SEE SHEET MP401 FOR CONTINUATION.
2. CONNECT HOT WATER SUPPLY AND RETURN PIPING TO MECH. ROOM VAV BOX. SEE DETAIL FOR HYDRAULIC PIPING UP TO SECOND FLOOR.
3. SEE SHEET MP402 FOR CONTINUATION.

AREA KEY PLAN



GRW PROJECT NO. 05056-01
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FIRST LEVEL - AREA B - MECHANICAL PIPING PLAN
KENTON COUNTY SCHOOL DISTRICT SUPPORT OPERATIONS CENTER
11800 TAYLOR MILL ROAD, INDEPENDENCE, KY 41051

DESIGNED:	STAFF
DRAWN:	STAFF
REVIEWED:	CVS
APPROVED:	CVS

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NO.	REVISION/DESCRIPTION	DATE	BY

DATE:	MARCH 30, 2023
SCALE:	1/8" = 1'-0"
SHEET NO.:	MP402

GENERAL NOTES:

- SEE SHEET M001 FOR MECHANICAL LEGENDS AND GENERAL NOTES.
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SHEET KEYNOTES

- SEE SHEET MP406 FOR CONTINUATION.
- CONNECT HOT WATER SUPPLY AND RETURN PIPING TO NEW VAV BOX. SEE DETAIL FOR CONNECTION INFORMATION. TYPICAL.
- SEE SCHEMATIC MECHANICAL ROOM PIPING DIAGRAM DETAIL FOR MORE INFORMATION.
- FURNISH AND INSTALL NEW GAS-FIRED BOILER. INSTALL PER MANUFACTURER'S RECOMMENDATION. PROVIDE WITH 6" HOUSEKEEPING PAD. SEE DETAILS AND SCHEDULES FOR MORE INFORMATION.
- FURNISH AND INSTALL NEW INLINE BOILER CIRCULATING PUMP. INSTALL PER MANUFACTURER'S RECOMMENDATION. SEE DETAILS AND SCHEDULES FOR MORE INFORMATION.
- BYPASS PIPING WITH CHECK VALVE.
- FURNISH AND INSTALL NEW BASE MOUNTED ZONE PUMP. INSTALL PER MANUFACTURER'S RECOMMENDATION. PROVIDE WITH 6" HOUSEKEEPING PAD. SEE DETAILS AND SCHEDULES FOR MORE INFORMATION.
- FURNISH AND INSTALL NEW AIR SEPARATOR. INSTALL PER MANUFACTURER'S RECOMMENDATION. MOUNT AS HIGH AS POSSIBLE. SEE DETAILS AND SCHEDULES FOR MORE INFORMATION.
- FURNISH AND INSTALL NEW EXPANSION TANK. INSTALL PER MANUFACTURER'S RECOMMENDATION. PROVIDE WITH 6" HOUSEKEEPING PAD. SEE DETAILS AND SCHEDULES FOR MORE INFORMATION.
- PIPING TO MAKE-UP WATER STATION. SEE DETAIL FOR MORE INFORMATION.
- HYDRONIC PIPING DOWN TO FIRST FLOOR. SEE SHEET MP401 FOR CONTINUATION.

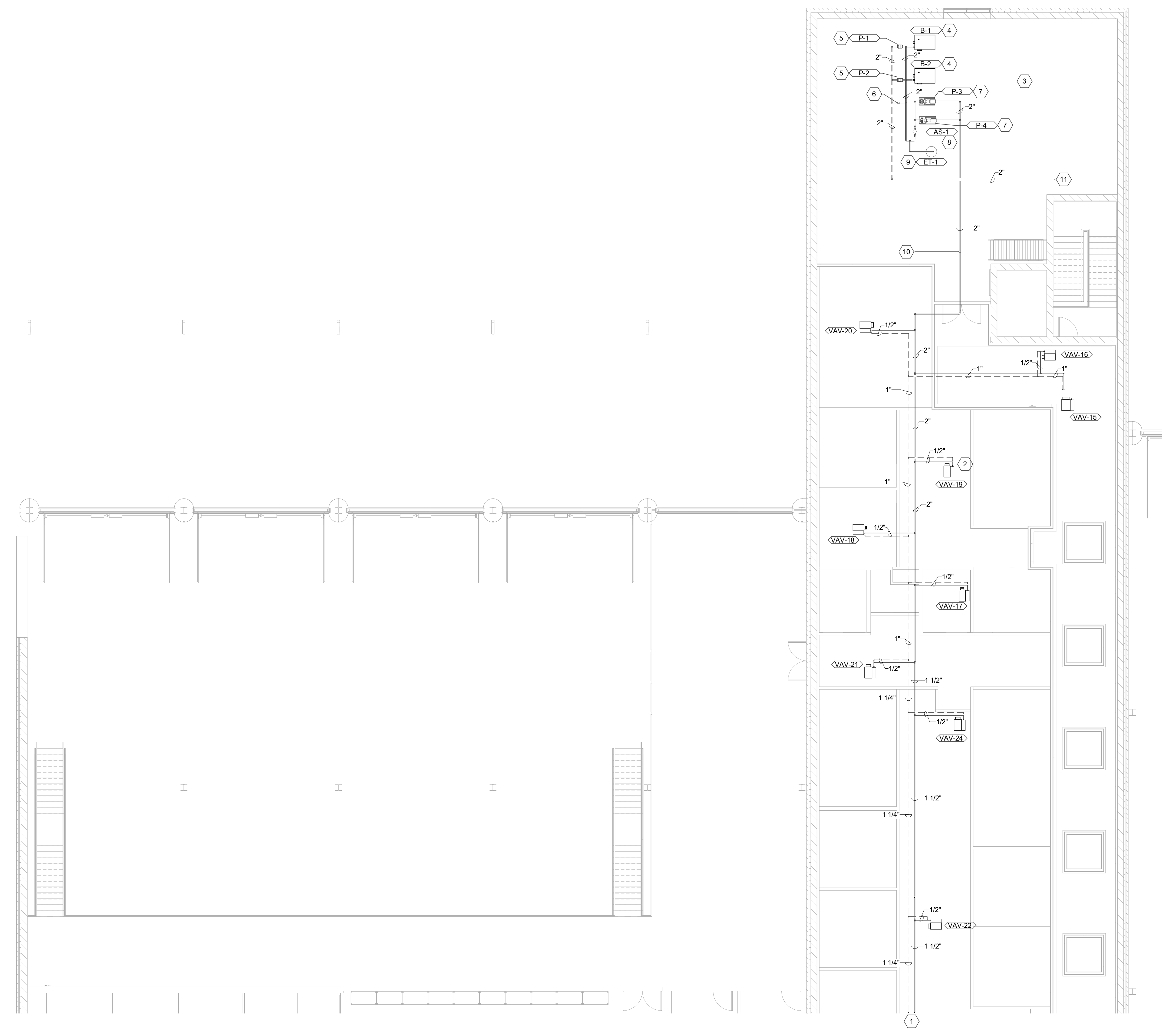
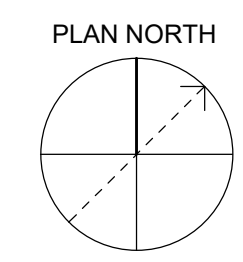
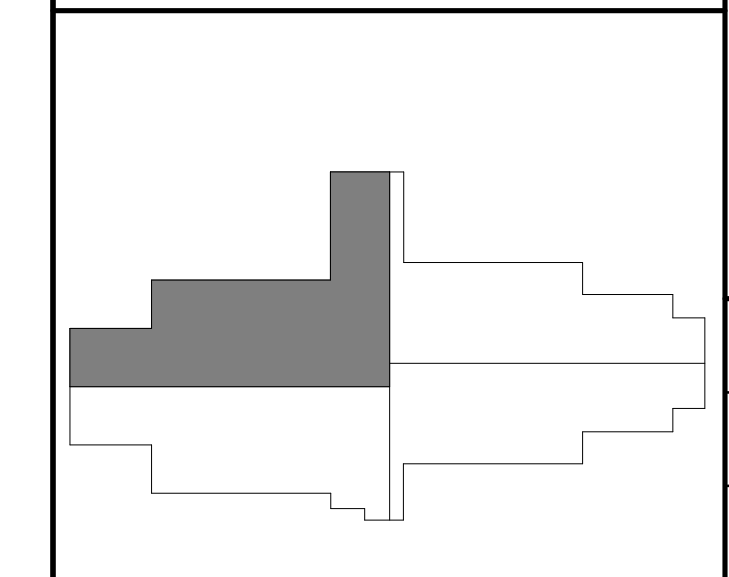
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SECOND LEVEL - AREA A - MECHANICAL PIPING PLAN
 KENTON COUNTY SCHOOL DISTRICT SUPPORT OPERATIONS CENTER
 11800 TAYLOR MILL ROAD, INDEPENDENCE, KY 41051

DESIGNED:	STAFF
DRAWN:	STAFF
REVIEWED:	CVS
APPROVED:	CVS

REVISIONS	REVISION DESCRIPTION	DATE	BY

AREA KEY PLAN



1 SECOND LEVEL - AREA A - MECHANICAL PIPING PLAN
 SCALE: 1/8" = 1'-0"

MP405

