ADDENDUM NO. 02

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

Update HVAC & Chiller, Troop D Crime Lab
Troop D Crime Lab
Springfield, Missouri
PROJECT NO.: R2517-01

Bid Opening Date: 1:30 PM, Thursday, February 5, 2026 (Unchanged)

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

SPECIFICATION CHANGES:

1. Section 099123 – Interior Painting

    a. ADD Section 099123 – Interior Painting

2. Section 230719 – HVAC Piping Insulation

    a. Add 3.02E as follows:

        E. Refrigerant Piping.
            a. Provide aluminum jacketing on all exterior refrigerant piping.
            b. Provide 1" EPDM insulation for all refrigerant piping.

    b. Add 3.02F as follows:

        F. Hydronic Specialties.
            a. Provide 1" EPDM insulation for all hydronic specialties. Provide opening around equipment label.

3. Section 233616– Variable Air Volume Units

    a. Add 2.01B.1.d as follows:

        d. MetalAire

4. Section 233700 – Air Outlets and Inlets

    a. Add 2.01E as follows:

        E. MetalAire

5. Section 236423 – Air Cooled Scroll Chiller

    a. Add 2.01G as follows:

        G. Daikin

6. Section 237313 – Custom Air Handlers

    a. Add 2.01B.1.g as follows:

        g. Daikin

    b. REMOVE and REPLACE 2.01B.9 as follows:

        9. Entire Unit to be insulated with a full 3" (R24) thick closed cell foam insulation. Foam shall be ecomate 0-, 0-, (Non VOC) UL 94HF1 rated. All insulation edges shall be encapsulated within the panel. All field penetrations must be completely sealed by installing contractor.

DRAWINGS CHANGES:

1. Sheet M-002

    a. Remove pressure monitoring system and associated differential pressure sensors.

2. Sheet M-102

    a. Provide new pressure monitoring system and associated differential pressure sensors.

3. Sheet M-401

    a. Revised Fan Powered VAV Terminal Units Schedule.
    b. Revised VAV Terminal Unit Schedule.
    c. Revised Air Handling Unit Schedule.

4. Sheet E-201

    a. Added detail 2/E201 – Elevation Detail per attached sheet E-201.

GENERAL COMMENTS:

1. NONE

ATTACHMENTS:

A. Section 099123 – Interior Painting (3 Pages)
B. Sheet M-002 (1 Page)
C. Sheet M-102 (1 Page)
D. Sheet M-401 (1 Page)
E. Sheet E-201 (1 Page)

END ADDENDUM 02

SECTION 099123

INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.

1. Mechanical and Electrical:

a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.

D. Do Not Paint or Finish the Following Items:

1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
2. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
3. Floors, unless specifically indicated.
4. Glass.
5. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

A. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

1.03 SUBMITTALS

A. Product Data: Provide complete list of products to be used, with the following information for each:

1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
2. MPI product number (e.g., MPI #47).
3. Cross-reference to specified paint system products to be used in project; include description of each system.

1.04 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

B. Paints:

1. Behr Paint Company:
2. Diamond Vogel Paints:
3. Sherwin-Williams Company:
4. Vista Paint Corporation:

2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.

1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
2. Supply each paint material in quantity required to complete entire project's work from a single production run.
3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

2.03 PRIMERS

A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.

1. Alkali Resistant Water Based Primer; MPI #3.

PART 3 EXECUTION

3.01 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

3.02 APPLICATION

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.03 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.04 PROTECTION

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

3.05 SCHEDULE - PAINT SYSTEMS

A. Mechanical terminal units as indicated on Fan Powered VAV Terminal Unit Schedule and VAV Terminal Unit Schedule.

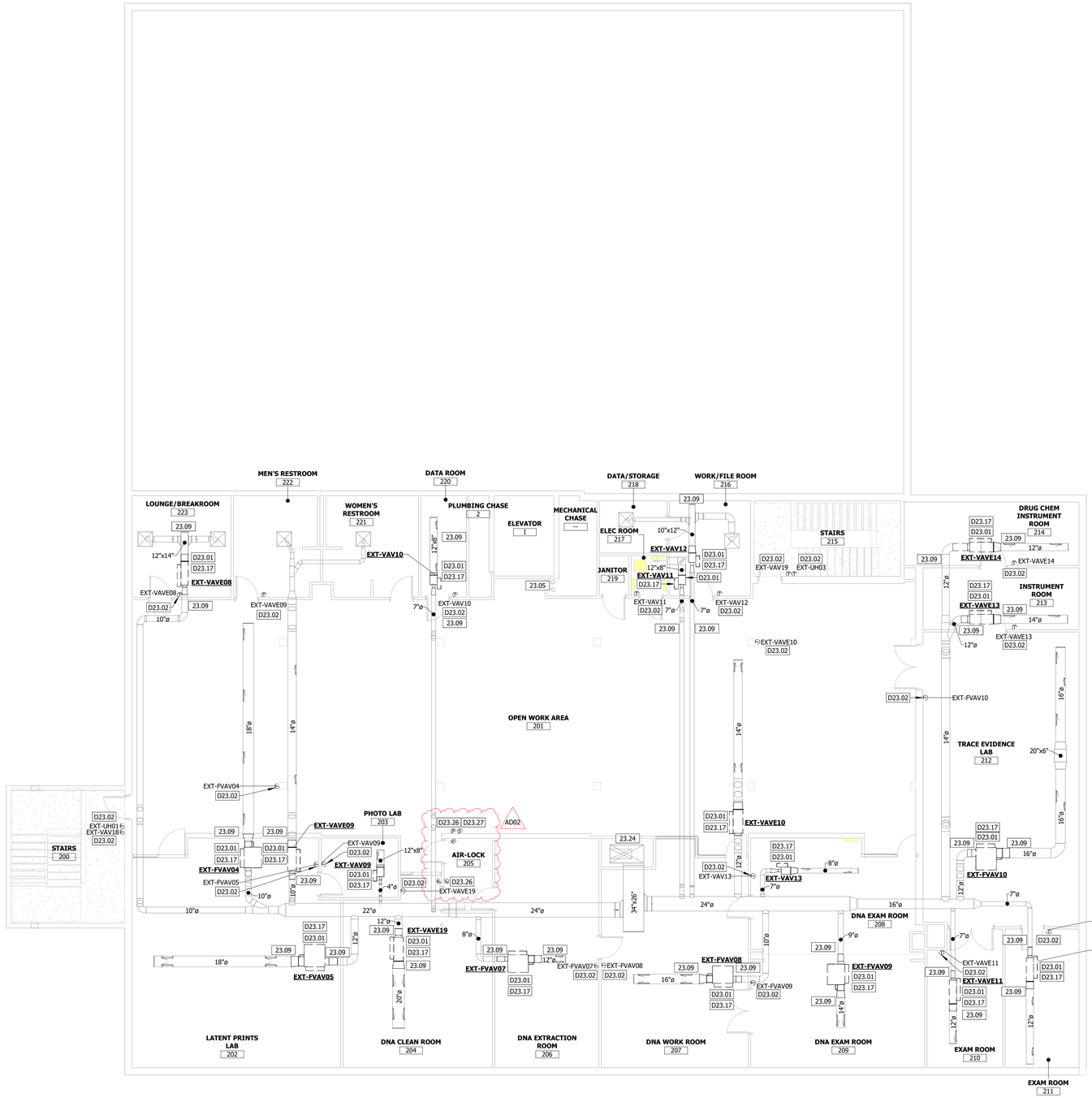
B. New ductwork and ductwork connections to terminal units.

C. Touch up paint ductwork for duct cleaning equipment. Coordinate with duct cleaning contractor.

END OF SECTION 099123

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
23.05	EXISTING CHILLED WATER PIPING UP TO THIRD FLOOR SHALL REMAIN.
23.09	EXISTING DUCTWORK SHALL REMAIN. SHOWN FOR SYSTEM CLARITY.
23.24	EXISTING 56"X30" SUPPLY DUCT UP AND 36"X16" SUPPLY DUCT DOWN SHALL REMAIN.
D23.01	REMOVE EXISTING TERMINAL UNIT AND ASSOCIATED DUCT CONNECTIONS. EXISTING AIR DISTRIBUTION SHALL REMAIN. REFER TO IMPROVEMENT PLANS FOR FURTHER INFORMATION.
D23.02	REMOVE EXISTING THERMOSTAT AND ASSOCIATED LOW VOLTAGE WIRE. EXISTING RACEWAY SHALL REMAIN.
D23.17	REMOVE EXISTING CONTROLLERS AND ASSOCIATED LOW VOLTAGE WIRING TO EXISTING MECHANICAL EQUIPMENT, SENSORS, AND ZONE SENSORS. EXISTING RACEWAY SHALL REMAIN FOR NEW EQUIPMENT CONNECTIONS INTO BUILDING AUTOMATION SYSTEM.
D23.26	REMOVE EXISTING DIFFERENTIAL PRESSURE SENSOR AND ASSOCIATED PLATING. EXISTING TUBING SHALL REMAIN. REFER TO IMPROVEMENT PLAN FOR FURTHER REQUIREMENTS.
D23.27	REMOVE EXISTING DIFFERENTIAL PRESSURE MONITORING SYSTEM AND ASSOCIATED REMOTE ANNUNCIATOR. PROVIDE STAINLESS STEEL FACEPLATE OVER REMOTE ANNUNCIATOR BOX.



1 DEMO MECHANICAL PLAN - LEVEL 2
1/8" = 1'-0"

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STATE OF MISSOURI
MIKE KEHOE, GOVERNOR

Engineer of Record
Jacob Adam Nelson PE
PE-2009018758

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10/06/2025

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DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF HIGHWAY PATROL

UPDATE HVAC & CHILLER, TROOP D CRIME LAB

425 East Phelps Street
Springfield, MO 65806

PROJECT # R2517-01
SITE # 6022
FACILITY # 8136022022

REVISION: ADDENDUM 02
DATE: 01/29/2026
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 10/06/2025

CAD DWG FILE: R2517-01
DRAWN BY: KP
CHECKED BY: JN
DESIGNED BY: JK

SHEET TITLE:

DEMO MECHANICAL PLAN - LEVEL 2

SHEET NUMBER:

M-002

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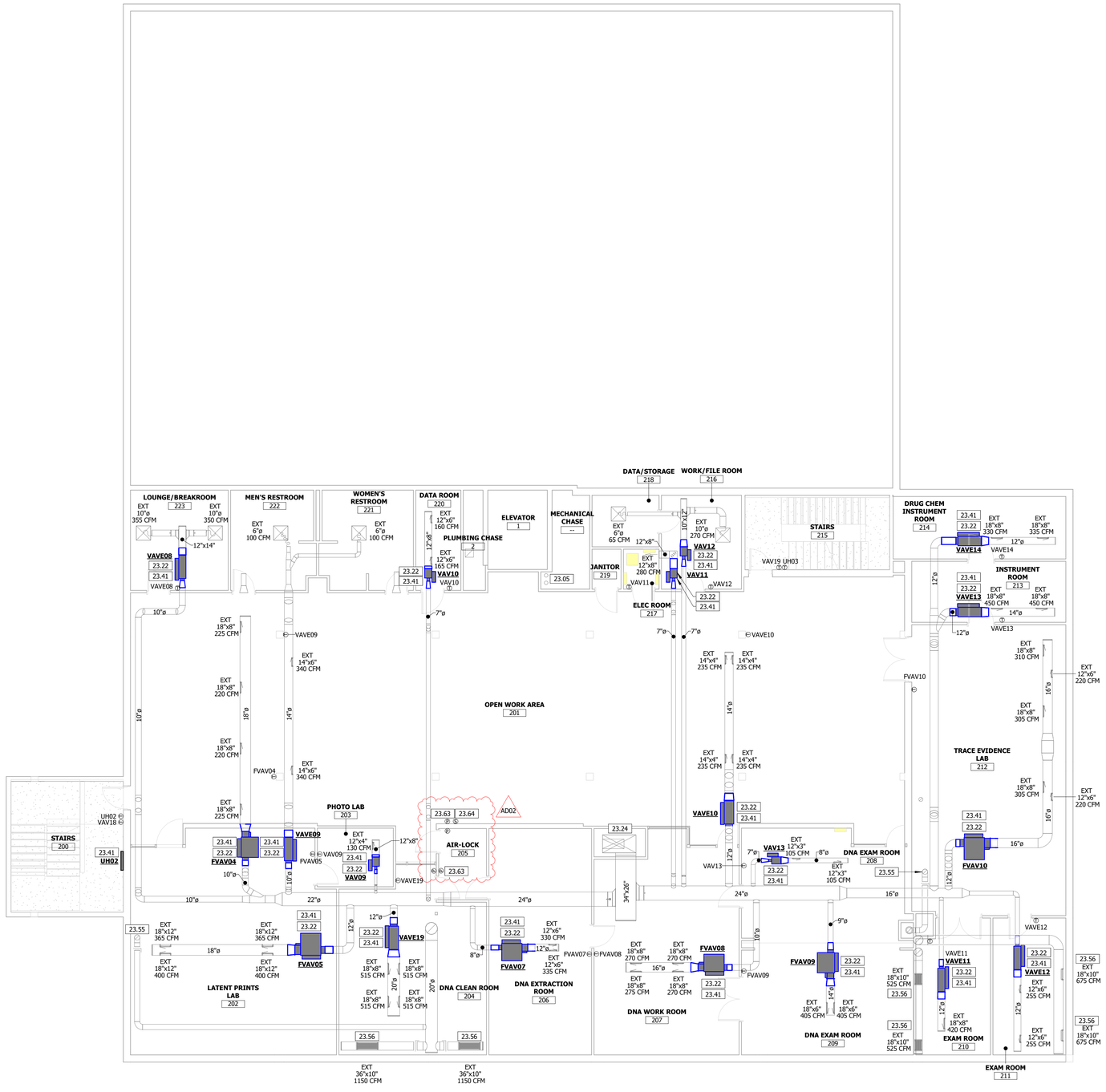
10/06/2025

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
23.05	EXISTING CHILLED WATER PIPING UP TO THIRD FLOOR SHALL REMAIN.
23.22	INSTALL NEW TERMINAL UNIT. RECONNECT TO EXISTING UPSTREAM AND DOWNSTREAM DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED FOR NEW INSTALLATION. REBALANCE EXISTING AIR DEVICE TO CFM SHOWN ON DRAWINGS.
23.24	EXISTING 56"X30" SUPPLY DUCT UP AND 36"X16" SUPPLY DUCT DOWN SHALL REMAIN.
23.41	FURNISH AND INSTALL NEW CONTROLLER AND LOW VOLTAGE WIRING FOR NEW TERMINAL UNIT.
23.55	REBALANCE EXISTING EXHAUST HOOD. FIELD VERIFY EXHAUST CFM REQUIREMENTS WITH LAB EQUIPMENT ON SITE.
23.56	REBALANCE EXISTING EXHAUST AIR TERMINAL TO CFM LISTED ON DRAWINGS.
23.63	FURNISH AND INSTALL NEW DIFFERENTIAL PRESSURE SENSOR AND ASSOCIATED PLATING.
23.64	FURNISH AND INSTALL NEW PRESSURE MONITOR.



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UPDATE HVAC & CHILLER, TROOP D CRIME LAB

425 East Phelps Street
Springfield, MO 65806

PROJECT # R2517-01
SITE # 6022
FACILITY # 8136022022

REVISION: ADDENDUM 02
DATE: 01/29/2026
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CAD DWG FILE: R2517-01
DRAWN BY: KP
CHECKED BY: JN
DESIGNED BY: JK

SHEET TITLE:

MECHANICAL PLAN - LEVEL 2

SHEET NUMBER:

M-102

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10/06/2025

AIR COOLED CHILLER SCHEDULE

NOTES:	
1.	SINGLE POINT POWER CONNECTION WITH DISCONNECTING MEANS. COORDINATE WITH ELECTRICAL CONTRACTOR.
2.	BACNET CONTROL MODULE FOR INTEGRATION WITH BAS SYSTEM. COORDINATE WITH BAS CONTRACTOR.
3.	(2) VARIABLE SPEED SCROLL COMPRESSORS FOR MODULATING CAPACITY WITH ADDITIONAL HEAD PRESSURE CONTROL.
4.	REFER TO SPECIFICATIONS FOR WARRANTY INFORMATION.
6.	PIPE EXTENSION KIT WITH FACTORY INSTALLED FLOW SWITCH.
7.	CONDENSER COIL HAIL GUARDS.
8.	UNIT SHALL BE SELECTED WITH 30% GLYCOL.

TYPE MARK	MANUFACTURER	MODEL NUMBER	TONNAGE	AMBIENT (F)	HYDRONIC				VOLTAGE	MCA	MOCP	EER	WEIGHT (LBS)	NOTES	EQUIVALENTS
					FLOW (GPM)	PRESSURE DROP (FT)	EWT (F)	LWT (F)							
CH01a	YORK	YLAA0070SJ46XFB	70	95	105.9	7.96	58.0	42.0	480/3	170	175	10.39	4597	1 THRU 8	SEE SPECS
CH01b	YORK	YLAA0070SJ46XFB	70	95	105.9	7.96	58.0	42.0	480/3	170	175	10.39	4597	1 THRU 8	SEE SPECS

UNIT HEATER SCHEDULE

NOTES:	
1.	TWO STAGE THERMOSTAT (FIELD COORDINATE LOCATION WITH OWNER).
2.	FACTORY INSTALLED ELECTRICAL SERVICE DISCONNECT SWITCH.
3.	PROVIDE CONTROLLER FOR INTEGRATION INTO BAS SYSTEM FOR MONITORING. COORDINATE WITH BAS CONTRACTOR.
4.	SURFACE MOUNTING FRAME.
5.	SUSPEND FROM STRUCTURE PER MQANUFACTURERS REQUIREMENTS.

TYPE MARK	MANUFACTURER	MODEL NUMBER	KW	FLA	MOCP	VOLTAGE	NOTES	EQUIVALENTS
UH01	QMARK	EFQ6008	6.0	28.8	40	208/1	1,2,3,4	BERKO
UH02	QMARK	EFQ60048	6.0	12.5	20	480/1	1,2,3,4	BERKO
UH03	QMARK	EFQ6008	6.0	28.8	40	208/1	1,2,3,4	BERKO
UH04	QMARK	MUH104	10.0	12.0	20	480/3	1,2,3,5	BERKO
UH05	QMARK	MUH104	10.0	12.0	20	480/3	1,2,3,5	BERKO

VRF - MINI-SPLIT SYSTEM SCHEDULE

NOTES:	
1.	PROVIDE REFRIGERANT LINE SET(S) SIZED PER MANUFACTURER'S RECOMMENDATIONS.
2.	PROVIDE ALL REFRIGERATION SYSTEM ACCESSORIES REQUIRED BY MANUFACTURER FOR GIVEN LINE SET ROUTING.
3.	PROVIDE BALL VALVES AT LIQUID AND SUCTION LINE FOR EACH BRANCH.
4.	PROVIDE ACCESSORIES FOR LOW AMBIENT OPERATION.
5.	PROVIDE EQUIPMENT SUPPORT SYSTEM BY BIG FOOT, QUICK-SLING, RECTORSEAL OR APPROVED EQUAL. EQUIPMENT SUPPORT SYSTEM SHALL BE SIZED PER MANUFACTURER'S REQUIREMENTS.

TYPE MARK	MANUFACTURER	MODEL NUMBER		AMBIENT TEMPERATURE		TOTAL MBH	HEATING MBH	VOLTAGE	MCA	MOCP	NOTES	EQUIVALENTS
		OUTDOOR UNIT	INDOOR UNIT	SUMMER DB/WB	WINTER DB/WB							
MS01	LG	KUSXB181A	KNUDB181A	95/74	0/0	18	20	208/1	16	25	1 THRU 5	SEE SPECS
MS02	LG	KUSXB181A	KNUDB181A	95/74	0/0	18	20	208/1	16	25	1 THRU 5	SEE SPECS
MS03	LG	KSUXA421A	KNSCB421A	95/74	0/0	42	48	208/1	32	40	1 THRU 5	SEE SPECS

MECHANICAL PUMP SCHEDULE

NOTES:	
1.	PROVIDE CONTACTOR/RELAY FOR PUMP CONTROL BY BUILDING AUTOMATION SYSTEM. COORDINATE WITH BAS CONTRACTOR.
2.	BEARINGS ARE TO BE LUBRICATED BY THE CIRCULATING FLUID.
3.	PROVIDE VARIABLE SPEED DRIVE FOR PUMP CONTROL. DRIVE PROVIDED AND INSTALLED BY BAS CONTRACTOR. COORDINATE LINE VOLTAGE CONNECTION WITH ELECTRICAL CONTRACTOR.
4.	SELECTION SHALL BE BASED ON 30% GLYCOL AND WATER MIXTURE.

TYPE MARK	MANUFACTURER	SERIES	INLET SIZE	DISCHARGE SIZE	GPM	PUMP HEAD (FT)	MOTOR HP (Watts)	RPM	CONSTRUCTION	FLUID TYPE	FLUID TEMPERATURE	VOLTAGE	NOTES	EQUIVALENTS
CWP01	BELL & GOSSET	1510-2BD	2.5"	2"	183	75	7.5	1800	SS	CHILLED WATER	40-60	480/3	1 THRU 4	ARMSTRONG
CWP02	BELL & GOSSET	1510-2BD	2.5"	2"	183	75	7.5	1800	SS	CHILLED WATER	40-60	480/3	1 THRU 4	ARMSTRONG

VAV TERMINAL UNIT SCHEDULE

NOTES:	
1.	PROVIDE SCRIM REINFORCED FOIL FACED LINER.
2.	PROVIDE AIR VALVE WITH AVERAGING SENSOR.
3.	PROVIDE WITH BOTTOM ACCESS PANELS.
4.	PROVIDE FULL UNIT DISCONNECT SWITCH.
5.	PROVIDE ELECTRIC HEAT WITH SCR CONTROL.
6.	PROVIDE HANGING BRACKETS WITH VIBRATION ISOLATION.
7.	PROVIDE DDC CONTROLS COMPATIBLE WITH BUILDING AUTOMATION SYSTEM.
AD02 8.	PAINT TERMINAL UNIT TO MATCH EXISTING DUCTWORK. PROTECT EQUIPMENT LABEL AND ALL INLETS AND OUTLETS ON THE EQUIPMENT WHILE PAINTING.

TYPE MARK	MANUFACTURER	MODEL	MAX DEPTH	AIRFLOW			ELECTRIC HEATER			INLET/OUTLET STATIC (WC)	MAX NC	CONTROL VOLTAGE	NOTES	EQUIVALENTS
				COOLING CFM	HEATING CFM	MIN CFM	CAPACITY (KW)	LAT (F)	VOLTAGE					
VAV01	KRUEGER	LMHS	10"	685	-	125	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV02	KRUEGER	LMHS	10"	140	-	40	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV03	KRUEGER	LMHS	10"	635	-	125	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV04	KRUEGER	LMHS	10"	310	-	65	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV05	KRUEGER	LMHS	10"	300	-	65	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV06	KRUEGER	LMHS	10"	85	-	40	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV07	KRUEGER	LMHS	10"	375	-	90	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
AD02 VAV08	KRUEGER	LMHS	10"	290	-	65	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
AD02 VAV09	KRUEGER	LMHS	10"	130	-	40	-	-	-	1.0"/0.5"	28	120/1	1 THRU 8	TITUS
VAV10	KRUEGER	LMHS	10"	325	-	65	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV11	KRUEGER	LMHS	10"	280	-	65	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
AD02 VAV12	KRUEGER	LMHS	10"	335	-	65	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
AD02 VAV13	KRUEGER	LMHS	10"	210	-	40	-	-	-	1.0"/0.5"	28	120/1	1 THRU 8	TITUS
VAV14	KRUEGER	LMHS	10"	410	-	90	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV15	KRUEGER	LMHS	10"	310	-	65	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV16	KRUEGER	LMHS	10"	185	-	40	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV17	KRUEGER	LMHS	10"	540	-	125	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV18	KRUEGER	LMHS	13"	945	-	200	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAV19	KRUEGER	LMHS	10"	520	-	125	-	-	-	1.0"/0.5"	28	120/1	1 THRU 7	TITUS
VAVE01	KRUEGER	LMHS	10"	305	85	85	3	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE02	KRUEGER	LMHS	10"	540	140	140	4	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE03	KRUEGER	LMHS	10"	330	85	85	4	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE04	KRUEGER	LMHS	10"	210	55	55	2.5	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE05	KRUEGER	LMHS	10"	270	85	85	3	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE06	KRUEGER	LMHS	10"	345	85	85	4	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE07	KRUEGER	LMHS	15"	1170	300	300	15	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE08	KRUEGER	LMHS	10"	705	215	215	10	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE09	KRUEGER	LMHS	15"	1140	300	300	11	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
VAVE10	KRUEGER	LMHS	15"	945	225	225	11	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
VAVE11	KRUEGER	LMHS	10"	420	125	125	6	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
VAVE12	KRUEGER	LMHS	15"	510	155	155	8	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
VAVE13	KRUEGER	LMHS	10"	900	225	225	11	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
VAVE14	KRUEGER	LMHS	10"	665	190	190	8.5	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
VAVE15	KRUEGER	LMHS	15"	550	165	165	8	95	480/3	1.0"/0.5"	28	277/1	1 THRU 7	TITUS
VAVE16	KRUEGER	LMHS	15"	2145	575	575	24	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
VAVE17	KRUEGER	LMHS	15"	1620	425	425	17	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
AD02 VAVE18	KRUEGER	LMHS	15"	1620	425	425	17	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS
VAVE19	KRUEGER	LMHS	15"	2060	2060	2060	24	95	480/3	1.0"/0.5"	28	277/1	1 THRU 8	TITUS

HYDRONIC SPECIALTIES SCHEDULE

TYPE MARK	DESCRIPTION	MANUFACTURER	MODEL NUMBER	ADDITIONAL INFORMATION	EQUIVALENTS
HS01	CHILLED WATER BUFFER TANK	AMERICAN WHEATLEY	AWCBT-300-4	250 GALLON CAPACITY, 125 PSI WORKING PRESSURE, 4" FLANGED CONNECTIONS, CENTER BAFFLE, 1" THICK ELASTOMERIC FOAM INSULATION, BELL & GOSSETT HIGH CAPACITY AIR VENT, WET WEIGHT SHALL NOT EXCEED 3,750 LBS	SEE SPECS
HS02	SHOT FEEDER	AMERICAN WHEATLEY	CFT-005-0	5 GALLON CAPACITY, FILTER FEEDER	SEE SPECS
HS03	EXPANSION TANK	BELL & GOSSET	D40V	PRE-CHARGED DIAPHRAM TYPE, VERTICAL ORIENTATION	SEE SPECS
HS04	AIR/DIRT SEPERATOR	BELL & GOSSET	CRS-4	AIR/DIRT SEPERATOR	SEE SPECS

AIR DEVICE SCHEDULE

NOTES:	
1.	GRILLE/DIFFUSER NECK SHALL BE SAME SIZE AS BRANCH DUCTWORK UNLESS NOTED OTHERWISE ON PLAN.
2.	GRILLE/DIFFUSER SHALL BE FIELD PAINTABLE.

TYPE MARK	SYTEM TYPE	MANUFACTURER	MODEL NUMBER	FRAME	FINISH	DAMPER	MAX NC RATING	EXTERNAL STATIC (WC)	NOTES	EQUIVALENTS
S01	SUPPLY	KRUEGER	SDMGDR	DUCT	PAINT	EXTRACTOR	30	0.1"	1,2	TITUS, PRICE

FAN POWERED VAV TERMINAL UNIT SCHEDULE

NOTES:	
1.	PROVIDE SCRIM REINFORCED FOIL FACED LINER.
2.	PROVIDE AIR VALVE WITH AVERAGING SENSOR.
3.	PROVIDE WITH BOTTOM ACCESS PANELS.
4.	PROVIDE FULL UNIT DISCONNECT SWITCH.
5.	PROVIDE ELECTRIC HEAT WITH SCR CONTROL.
6.	PROVIDE ECM FAN MOTOR.
7.	PROVIDE HANGING BRACKETS WITH VIBRATION ISOLATION.
AD02 8.	PROVIDE DDC CONTROLS COMPATIBLE WITH BUILDING AUTOMATION SYSTEM.
9.	PAINT TERMINAL UNIT TO MATCH EXISTING DUCTWORK. PROTECT EQUIPMENT LABEL AND ALL INLETS AND OUTLETS ON THE EQUIPMENT WHILE PAINTING.

TYPE MARK	MANUFACTURER	MODEL	UNIT SIZE	INLET SIZE	AIRFLOW		FAN			ELECTRIC HEATER			INLET/EXTERNA LSTATIC (WC)	MAX NC	CONTROL VOLTAGE	NOTES	EQUIVALENTS
					COOLING CFM	MIN. PRIMARY CFM	CONFIGURATION	HEATING CFM	VOLTAGE	CAPACITY (KW)	LAT (F)	VOLTAGE					
FVAV01	KRUEGER	KQFP	4	10"	1255	380	PARALLEL	620	277/1	10.5	90	480/3	1.0"/0.5"	30	277/1	1 THRU 8	TITUS
FVAV02	KRUEGER	KQFP	7	12"	1815	550	PARALLEL	900	277/1	14	90	480/3	1.0"/0.5"	30	277/1	1 THRU 8	TITUS
FVAV03	KRUEGER	KQFP	4	8"	755	230	PARALLEL	390	277/1	9	90	480/3	1.0"/0.5"	30	277/1	1 THRU 8	TITUS
AD02 FVAV04	KRUEGER	KQFP	4	8"	890	270	PARALLEL	445	277/1	10	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
AD02 FVAV05	KRUEGER	KQFP	7	12"	1530	460	PARALLEL	765	277/1	17	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV06	KRUEGER	KQFP	7	14"	2240	680	PARALLEL	1110	277/1	17	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV07	KRUEGER	KQFP	4	8"	665	200	PARALLEL	330	277/1	8	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV08	KRUEGER	KQFP	4	10"	1085	330	PARALLEL	540	277/1	10	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV09	KRUEGER	KQFP	4	8"	810	250	PARALLEL	400	277/1	9	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV10	KRUEGER	KQFP	4	10"	1360	410	PARALLEL	680	277/1	10	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV11	KRUEGER	KQFP	4	10"	950	285	PARALLEL	475	277/1	10	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV12	KRUEGER	KQFP	4	10"	1240	380	PARALLEL	610	277/1	10	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV13	KRUEGER	KQFP	4	10"	1240	380	PARALLEL	610	277/1	10	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV14	KRUEGER	KQFP	7	14"	2520	760	PARALLEL	1255	277/1	19	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV15	KRUEGER	KQFP	7	14"	2800	840	PARALLEL	1390	277/1	14	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV16	KRUEGER	KQFP	4	8"	825	250	PARALLEL	410	277/1	9	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV17	KRUEGER	KQFP	4	10"	1190	360	PARALLEL	590	277/1	10	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS
FVAV18	KRUEGER	KQFP	4	10"	1190	360	PARALLEL	590	277/1	10	90	480/3	1.0"/0.5"	30	277/1	1 THRU 9	TITUS

AIR HANDLING UNIT SCHEDULE

NOTES:	
AD02 1.	SUPPLY FAN WALL WITH (3) ROWS OF (3) SUPPLY FANS. FAN WALL SHALL BE EQUIPPED WITH (2) VFDS'S PROVIDED BY THE BAS CONTRACTOR AND INSTALLED IN FACTORY BY EQUIPMENT MANUFACTURER. (1) VFD SHALL BE 100% REDUNDANT AND AUTMATICALLY TRANSFER UPON FAULT.
AD02 2.	(2) EXHAUST FAN WALLS WITH (2) ROW OF (2) EXHAUST FAN. EXHAUST FANS SHALL BE EQUIPPED WITH (2) VFDS PROVIDED BY THE BAS CONTRACTOR AND INSTALLED IN FACTORY BY EQUIPMENT MANUFACTURER. (1) VFD SHALL BE 100% REDUNDANT AND AUTMATICALLY TRANSFER UPON FAULT.
3.	(2) CHILLED WATER COILS STACKED ON TOP OF EACH OTHER. COILS SHALL HAVE SEPERATE HYDRONIC CONNECTIONS. 3-WAY CONTROL VALVE FURNISHED BY BAS CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR.
4.	SOUND TRAP SECTION.
AD02 5.	MODULATING ELECTRIC PREHEAT COIL FOR PRIMARY OUTSIDE AIR PREHEAT.
AD02 6.	MODULATING STEAM GENERATOR FOR HUMIDIFCATION CONTROL. HUMIDIFIER SHALL BE EQUIVALENT TO NEPTRONIC SKE4-NM100M-480-3. GENERATOR SHALL BE FIELD INSTALLED IN THE AIR HANDLER STEAM CABINET SECTION. STEAM GRID SHALL BE INSTALLED BY EQUIPMENT MANUFACTURER.
7.	2" MERV 8 PRE FILTER SECTION WITH STANDARD FILTER SIZES. (5) 12"X24" AND (20) 24"X24" FILTERS.
8.	MINIMUM OUTSIDE AIR DAMPER TO CONTROL TO PRIMARY CFM. DAMPER ACTUATOR SHALL BE PROVIDED BY BAS CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR.
9.	0-100% ECONOMIZER DAMPER INTERLOCKED WITH RETURN AIR DAMPERS FOR ECONOMIZER CONTROL. PROVIDE (2) MOTORIZED EXHAUST AIR DAMPERS FOR BUILDING PRESSURE CONTROL. ACTUATORS PROVIDED BY BAS CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR.
10.	PROVIDE CONTROLS SECTION ON AIR HANDLER FOR BAS CONTROLLER AND FAN VFDS. COORDINATE WITH BAS CONTRACTOR. CONTROLLER PROVIDED AND INSTALLED BY BAS CONTRACTOR.
11.	ALL AIR HANDLER SECTIONS SHALL BE EQUIPPED WITH HINGED ACCESS DOORS.
12.	REFER TO SPECIFICATIONS FOR UNIT CONSTRUCTION, COMPONENT, AND WARRANTY REQUIREMENTS.

TYPE MARK	MANUFACTURER	SUPPLY FAN WALL					EXHAUST FAN WALL				PREHEAT COIL				COOLING COIL						HUMIDIFICATION				WEIGHT (LB)	NOTES	EQUIVALENTS
		SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	EXTERNAL STATIC (WC)	SUPPLY FAN HP	SUPPLY FAN VOLTAGE	EXHAUST CFM	RETURN/EXHAUST FAN ESP	RETURN/EXHAUST FAN HP	EXHAUST FAN VOLTAGE	AIRFLOW (CFM)	EAT/LAT (DB)	CAPACITY (KW)	PREHEAT COIL VOLTAGE	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	ENTERING AIR (DB/WB)	LEAVING AIR (DB/WB)	EWT/LWT (F)	FLOW	MAX COIL PRESSURE DROP (FT)	MANUFACTURER	AIRFLOW (CFM)	STEAM RATE (LB/HR)	HUMIDIFER (KW)	HUMIDIFIER VOLTAGE			
AHU01	TEMTROL	(1) 34000	(1) 8500	(1) 4.75"	(9) 7	(1) 480/3	(2) 17000	(2) 0.5"	(4) 3.5	(2) 480/3	8500	0/60	(1) 178.3	(1) 480/3	1078.7	1367.2	84.1/67.0	53.1/53.1	42/58	183.0	13.4	NEPTRONIC	34000	545.8	(1) 100	(2) 480/3	32167	1 THRU 12	SEE SPECS

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

Engineer of Record
Jacob Adam Nelson PE
PE-2009018758

STATE OF MISSOURI
JACOB
ADAM NELSON
NUMBER
PE-2009018758
PROFESSIONAL ENGINEER

10/06/2025
PROFESSIONAL SEAL

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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF HIGHWAY PATROL

UPDATE HVAC & CHILLER, TROOP D CRIME LAB

425 East Phelps Street
Springfield, MO 65806

PROJECT # R2517-01
SITE # 6022
FACILITY # 8136022022

REVISION: ADDENDUM 02
DATE: 01/29/2026
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 10/06/2025

CAD DWG FILE: R2517-01
DRAWN BY: KP
CHECKED BY: JN
DESIGNED BY: JK

SHEET TITLE:
MECHANICAL SCHEDULES

SHEET NUMBER:
M-401
19 of 27 SHEETS
10/06/2025

1/29/2026 11:34:05 AM

Distribution Panel: H4B

Location: ROOF
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 3R

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 18 KAIC
Mains Type: MLO
Mains Rating: 600 A
Model: I-Line

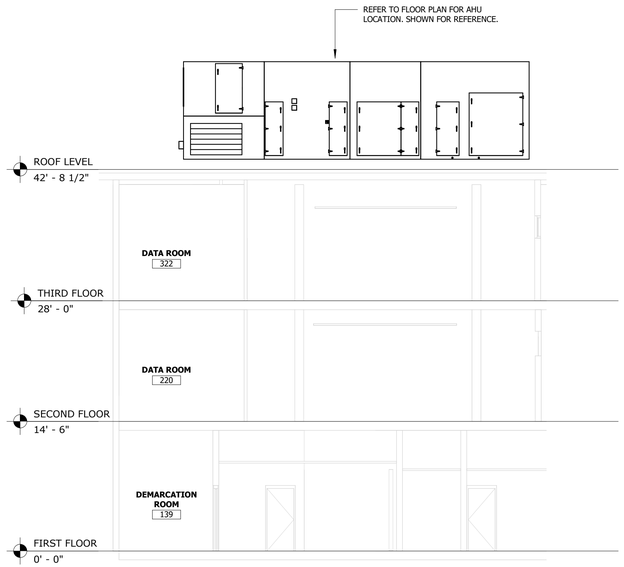
Panelboard Accessories:
1. EQUIPMENT GROUND BAR, 2. TIN PLATED COPPER BUS BARS, 3. PROVIDE 24" SPARE FUTURE CIRCUIT BREAKER SPACE, 4. SURGE PROTECTION DEVICE

CKT	CIRCUIT DESCRIPTION	TRIP	ACCESSORIES	POLES	A	B	C	NOTES
1	EXHAUST FANS	25 A		3	6007 VA	6007 VA	6007 VA	
2	PREHEAT COIL	300 A		3	62077 VA	62077 VA	62077 VA	
3	SUPPLY FANS	80 A		3	21020 VA	21020 VA	21020 VA	
4	STEAM GENERATOR	150 A		3	33333 VA	33333 VA	33333 VA	
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
				Total Load:	122437 VA	122437 VA	122437 VA	
				Total Amps:	442 A	442 A	442 A	

Legend:
1. HACR = HACR RATED, 2. HLO = HAND LOCK-OFF, 3. GFCI = GROUND FAULT CIRCUIT INTERRUPTER, 4. EXISITNG = EXISITNG TO REMAIN

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	367311 VA	100.00%	367311 VA		
				Total Conn. Load:	367311 VA
				Total Est. Demand:	367311 VA
				Total Conn.:	442 A
				Total Est. Demand:	442 A

Notes:



2 ELEVATION DETAIL
1/8" = 1'-0"
AD02

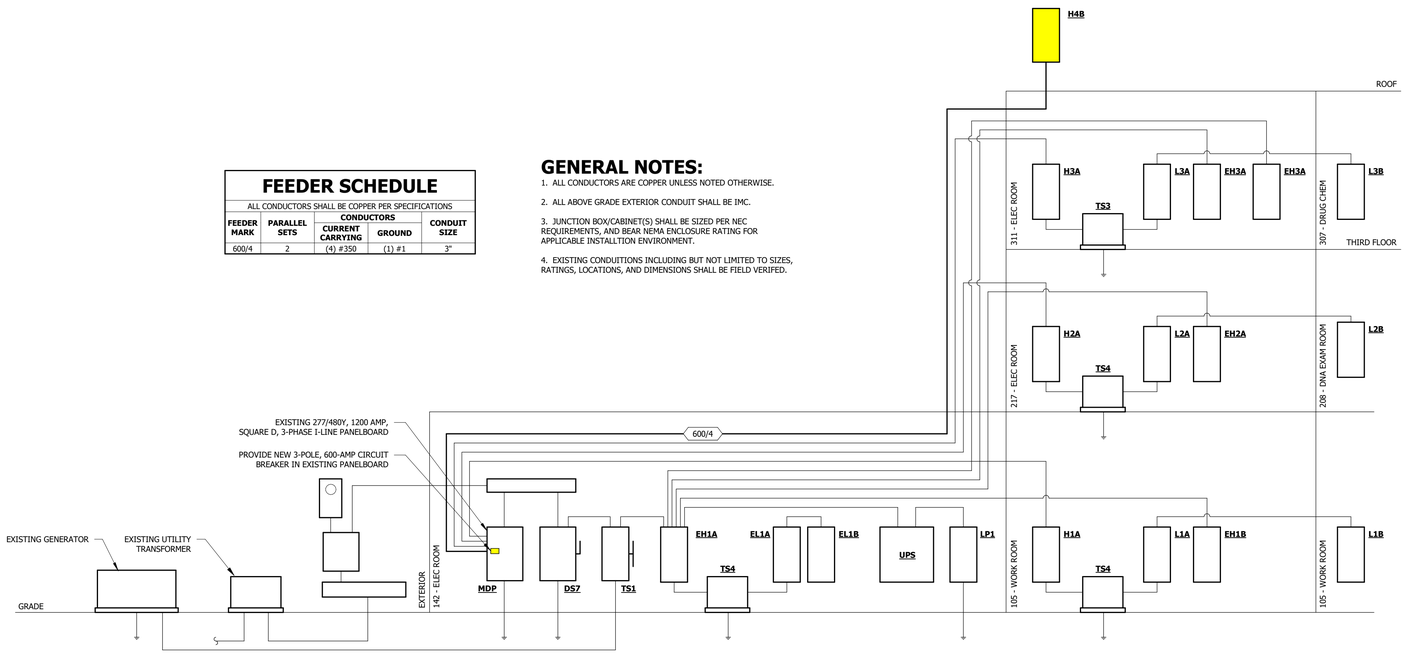
FEEDER SCHEDULE

ALL CONDUCTORS SHALL BE COPPER PER SPECIFICATIONS

FEEDER MARK	PARALLEL SETS	CONDUCTORS		CONDUIT SIZE
		CURRENT CARRYING	GROUND	
600/4	2	(4) #350	(1) #1	3"

GENERAL NOTES:

1. ALL CONDUCTORS ARE COPPER UNLESS NOTED OTHERWISE.
2. ALL ABOVE GRADE EXTERIOR CONDUIT SHALL BE IMC.
3. JUNCTION BOX/CABINET(S) SHALL BE SIZED PER NEC REQUIREMENTS, AND BEAR NEMA ENCLOSURE RATING FOR APPLICABLE INSTALLTION ENVIRONMENT.
4. EXISTING CONDUITIONS INCLUDING BUT NOT LIMITED TO SIZES, RATINGS, LOCATIONS, AND DIMENSIONS SHALL BE FIELD VERIFED.



1 ELECTRICAL RISER
NOT TO SCALE

STATE OF MISSOURI
MIKE KEHOE, GOVERNOR

Engineer of Record
Jacob Adam Nelson PE
PE-2009018758

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DRAWN BY: KP
CHECKED BY: JN
DESIGNED BY: JK

SHEET TITLE:
ELECTRICAL DETAILS AND SCHEDULES

SHEET NUMBER:
E-201
27 of 27 SHEETS
10/06/2025

1/29/2026 11:34:05 AM