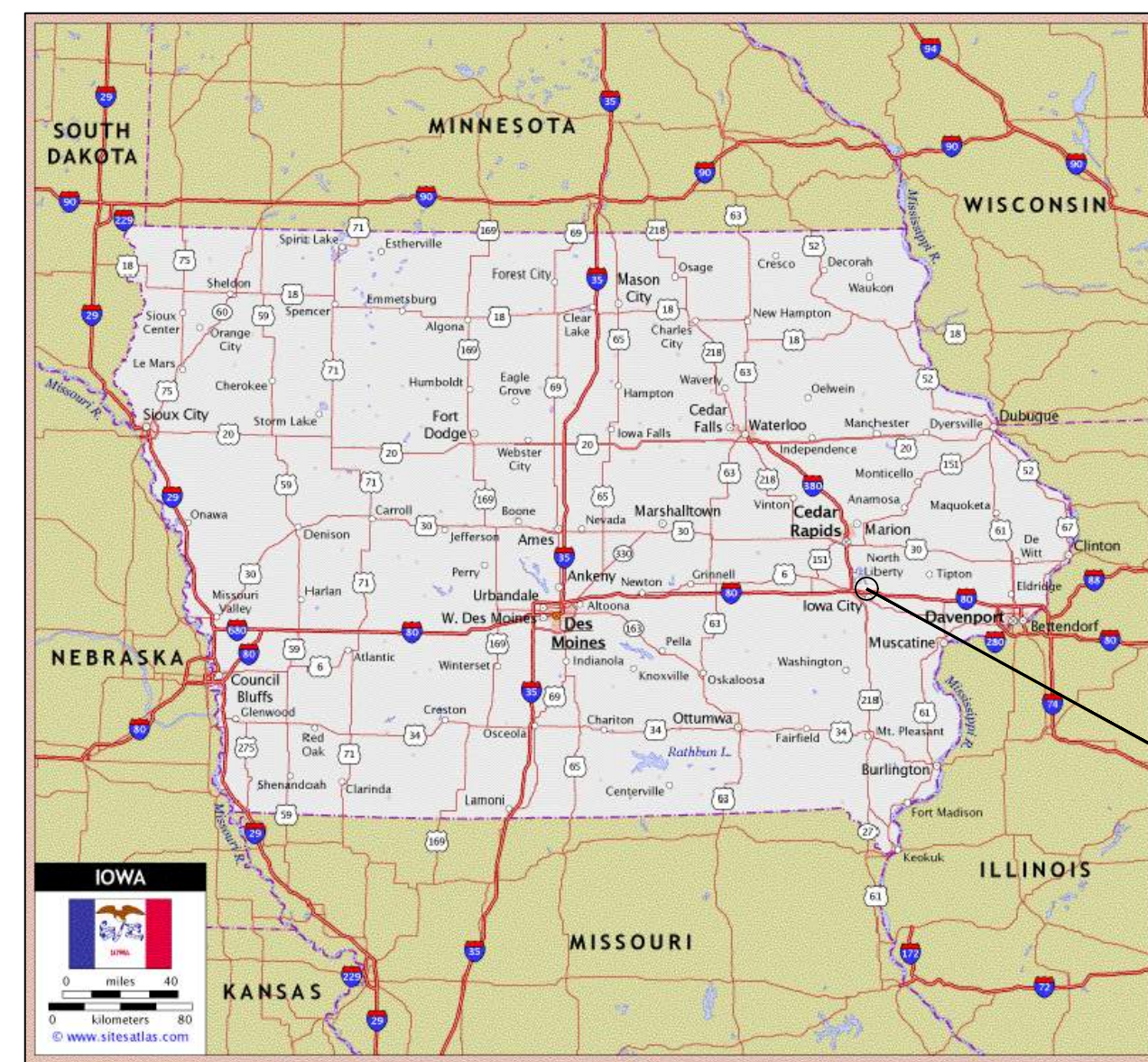


IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES (9377.00) DOC 6JD IC HOPE-STRATTON HVAC PHASE 1

2501 HOLIDAY ROAD,
CORALVILLE IA 52240



CORALVILLE, IOWA

PROJECT LOCATION MAP - CORALVILLE, IOWA
NO SCALE



HOPE - STRATTON CENTER

PROJECT LOCATION PLAN - DOC 6JD IC
NO SCALE

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E-2	ELECTRICAL PLAN
E-3	ELECTRICAL SCHEDULES, DETAILS, & RISERS

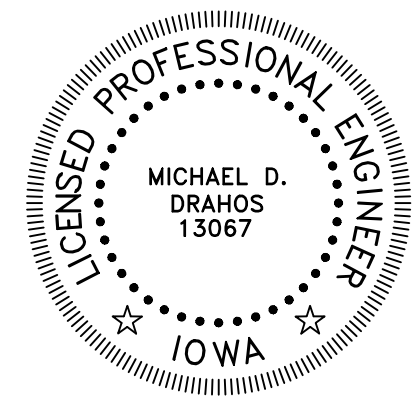
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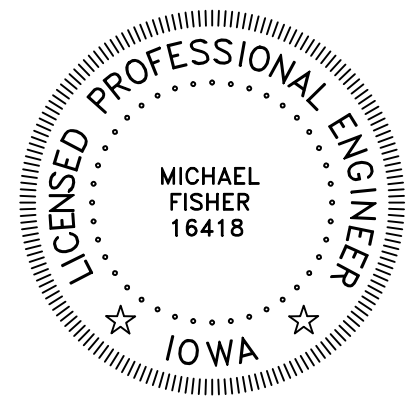
COVER SHEET
 IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES (9377.00)
 DOC 6JD IC HOPE-STRATTON HVAC PHASE 1
 2501 HOLIDAY ROAD CORALVILLE, IA 52240

PROJECT#:	BI24017
DESIGNED:	WPE
DRAWN:	WPE
APPROVED:	WPE
DATE:	09/09/24



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Michael D. Drahos 09-09-2024
 MICHAEL D. DRAHOS
 Iowa Registration Number: 13067
 My license renewal date is December 31, 2025
 Pages or sheets covered by this seal:
 G-1, M-1, M-2, M-3



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Michael Fisher 09-09-2024
 MICHAEL FISHER
 My license renewal date is December 31, 2025
 Pages or sheets covered by this seal:
 G-1, E-1, E-2, E-3

SHEET:
G-1
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MECHANICAL ABBREVIATIONS

THESE TERMS COMPRISE A STANDARD LIST. NOT ALL TERMS MAY APPEAR ON THIS PROJECT.

AC	alternating current	N/A	not applicable
ACU	air conditioning unit	NC	noise criteria
AFF	above finished floor	N C	normally closed
AHU	air handling unit	N I C	not in contract
AIR COND	air condition(-ing, -ed)	N O	normally open
ALT	altitude	N T S	not to scale
AMB	ambient	OA	outside air
ANSI	American National Standards Institute	OD	diameter, outside
APPROX	approximate	OZ	ounce
AVG	average	%	percent
BARO	barometer(-tric)	PD	pressure drop or difference
BARO PR	pressure, barometric	PH	phase (electrical)
BHP	brake horse power	PPM	parts per million
BP	boiling point	PRESS	pressure
BTU	British thermal unit	PRI	primary
°C	Celsius	PSF	pounds per square foot
CFM	cubic feet per minute	PSFA	psf absolute
CLG LOAD	cooling load	PSFG	psf gage
CMPR	compressor	PSI	pounds per square inch
COND	condens(-er, -ing, -ation)	PSIA	psi absolute
C to C	center to center	PSIG	psi gage
CU FT	cubic feet	QT	quart
CU IN	cubic inch	R12, R22	refrigerant (12, 22, etc.)
DEG or °	degree	R	thermal resistance
DENS	density	RA	return air
DIA	diameter	RAD	radiat(-e, -or)
DPT	dew-point temperature	RADN	radiation
ID	diameter, inside	RCVR	receiver
DBT	dry-bulb temperature	RECIRC	recirculat(-e, -or)
DIFF	difference or delta	RES	resist(-ance, -ivity, -or)
DIR RADN	direct radiation	REV	revolutions
EAT	entering air temperature	RH	relative humidity
EDR	equivalent direct radiation	RP	radiant panel
EFF	efficiency	RPM	revolutions per minute
EL	elevation	SA	supply air
ENT	entering	SAT	saturation
EVAP	evaporat(-e, -ing, -ed, -or)	SCFM	cfm, standard conditions
EWT	entering water temperature	SF	safety factor
EXP	expansion	SFT HP	shaft horsepower
°F	Fahrenheit	SG	specific gravity
FA	face area	SH	sensible heat
FP	freezing point	SHG	sensible heat gain
FPM	feet per minute	SHR	sensible heat ratio
FT	foot or feet	SL	sea level
F to F	face to face	SPEC	specification
FT LB	foot-pound	SP HT	specific heat
FVEL	face velocity	SP	pressure, static
GA	gage or gauge	SPLY	supply
GAL	gallons	SP VOL	specific volume
GPD	gallons per day	SQ	square
GPH	gallons per hour	STD	standard
GPM	gallons per minute	SUCT	suction
GR	grains	T	time
GTD	greatest temperature difference	TC	thermocouple
HD	head	TD	temperature difference
HG	heat gain	TE	temperature entering
HGT	height	TEMP	temperature
HP	horse power	THKNS	thick(-ness)
HPS	high pressure steam	TL	temperature leaving
HR	hour(s)	TONS	tons of refrigeration
HTHW	high temperature hot water	TOT HT	total heat
IHP	indicated horse power	T STAT	thermostat
IPS	International Pipe Size	VAC	vacuum
K	thermal conductivity	V	volt
kW	kilowatt	VA	volt ampere
KWH	kilowatt hour	VAP PR	pressure, vapor
LAT	leaving air temperature	VAP PRF	vapor proof
LBS	pounds	VAR	variable
LF	linear feet	VAV	variable air volume
LG	length	VEL	velocity
LH	latent heat	VENT	ventilation, vent
LHG	heat gain, latent	VERT	vertical
LIQ	liquid	VISC	viscosity
LPS	low pressure steam	VOL	volume
LSHVAC	load-sharing (hybrid) HVAC system	VP	pressure, dynamic (velocity)
LTHW	low-temp hot water	W	watt
LWT	leaving water temperature	WB	wet bulb
MAX	maximum	WBT	wet bulb temperature
MCF	thousand cubic feet	WH	watt-hour
MET	mean effective temperature	WT	weight
MFR	mass flow rate	YD	yard
MIN	minimum, minute	YR	year
MPS	medium pressure steam	Z	zone
MTD	mean temperature difference		
MTHW	medium temperature hot water		

VENTILATION SYMBOLS

THESE SYMBOLS COMPRISE A STANDARD LIST. NOT ALL SYMBOLS MAY APPEAR ON THIS PROJECT.

	SUPPLY DUCT (UP & DOWN)		MANUAL VOLUME DAMPER
	RETURN DUCT (UP & DOWN)		BRANCH DUCT INTO SIDE OF MAIN DUCT
	EXHAUST DUCT (UP & DOWN)		DUCT RISE OR DROP IN DIRECTION OF AIR FLOW
	STANDARD RADIUS ELBOW R EQUAL W (MINIMUM)		DUCT DIMENSION- WIDTH x DEPTH
	DUCT TURN WITH TURN VANES		DUCT INSULATION (SEE SPECIFICATION)
	FLEXIBLE DUCT CONNECTION		DUCT TURN AND AIR SPLIT TYPE TAKEOFF (NON-ADJUSTABLE)
	SPIRAL DUCTWORK		GRILLE, REGISTER & DIFFUSER DESIGNATION SUPPLY, RETURN, EXHAUST, & TRANSFER
	LOW PRESURE DUCTWORK MAX 2" W.G. PRESSURE		EQUIPMENT DESIGNATION
	MEDIUM PRESSURE DUCTWORK 2"-6" W.G. PRESSURE		FLEX DUCT (5' MAXIMUM)
	B - BACKDRAFT DAMPER		CONNECT TO EXISTING
	C - COMBINATION FIRE/SMOKE DAMPER		
	F - FIRE DAMPER		
	M - MOTORIZED DAMPER		
	S - SMOKE DAMPER		

GENERAL MECHANICAL NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH THE BUILDING CODES ADOPTED BY THE STATE OF IOWA.
- FIELD VERIFY EXISTING CONDITIONS AND DUCT SIZES WHERE NEW EQUIPMENT IS BEING INSTALLED.
- INSTALL ALL EQUIPMENT PER THE MANUFACTURER'S RECOMMENDATIONS.
- EVACUATE AND RECLAIM REFRIGERANT FROM EXISTING SYSTEMS PRIOR TO REMOVAL AND INSTALLATION OF NEW SYSTEMS.
- CAULK ALL EXTERIOR PIPE PENETRATIONS WATER-TIGHT.
- COORDINATE MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. COORDINATE THE LOW VOLTAGE DAMPER ACTUATOR WIRING WITH EXISTING AND NEW FURNACE/THERMOSTAT CONTROL WIRING.
- REMOVE AND REPLACE CEILING TILES AS NECESSARY TO CORRECT INSULATION DEFICIENCIES. CONTACT OWNER FOR ATTIC STOCK OF CEILING TILES TO REPLACE EXISTING STAINED TILES.
- COORDINATE NEW WORK WITH ALL OTHER TRADES.

ALTERNATE BIDS:

ALTERNATE #1:

INSTALL 1-1/2" THICK BLANKET INSULATION ON TOP OF CEILING DIFFUSERS AT 58 LOCATIONS IN AREAS WITH LAY-IN CEILINGS (DOES NOT INCLUDE DOUBLE RESIDENT ROOMS). PROVIDE 24" X 24" SQUARE PIECE OF INSULATION WITH ROUND CUTOUT FOR DIFFUSER DUCT CONNECTION. TAPE NEW INSULATION TO EXISTING INSULATED FLEX DUCT CONNECTION.

ALTERNATE #2:

REPLACE FURNACE F-2 WITH A NEW UNIT. REFER TO SCHEDULE ON PLANS FOR MORE INFORMATION. CONNECT TO EXISTING SUPPLY DUCT, RETURN DUCT, AND INTAKE/VENT PIPING.

ALTERNATE #3:

REPLACE FURNACE F-3 WITH A NEW UNIT. REFER TO SCHEDULE ON PLANS FOR MORE INFORMATION. CONNECT TO EXISTING SUPPLY DUCT, RETURN DUCT, AND INTAKE/VENT PIPING.

UNIT PRICING:

UNIT PRICING #1:

PROVIDE COST TO INSTALL ADDITIONAL INSULATION AT A SINGLE SUPPLY DIFFUSER LOCATION WHERE THE EXISTING EXTERIOR INSULATION ON THE FLEX DUCT CANNOT BE STRETCHED FOR PROPER CONNECTION TO DIFFUSER CONNECTION. INSULATION TO BE 1-1/2" THICK BLANKET INSULATION APPROXIMATELY 12" WIDE X 30" LONG TO WRAP AROUND 8-10" DUCT.

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MECHANICAL SYMBOLS, ABBREVIATIONS & GENERAL NOTES
 IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES (9377.00)
 DOC 6JD IC HOPE-STRATTON HVAC PHASE 1
 2501 HOLIDAY ROAD CORALVILLE, IA 52240

PROJECT#: BI24017

DESIGNED: WPE

DRAWN: WPE

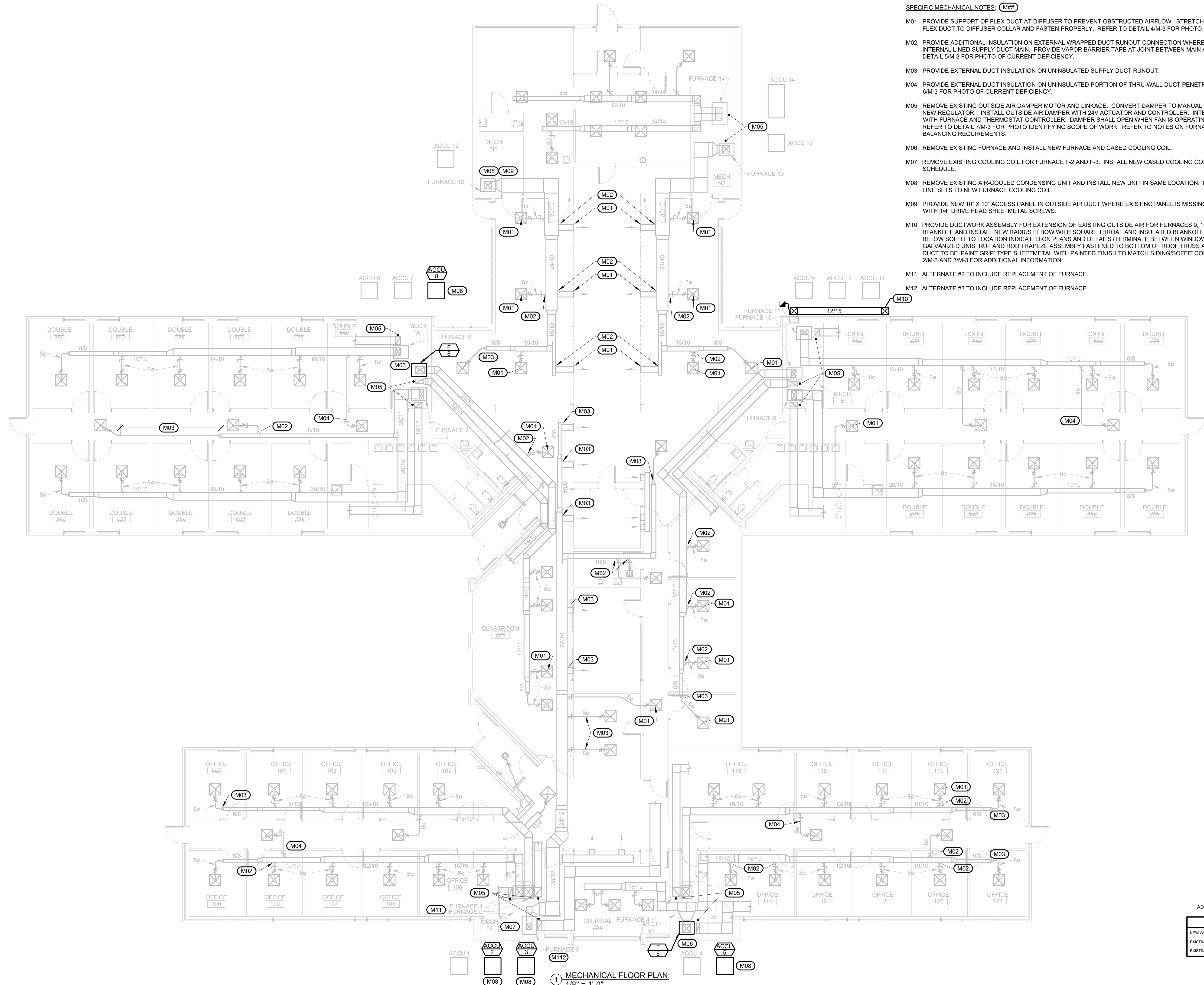
APPROVED: WPE

DATE: 09/09/24

SHEET:

M-1

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- SPECIFIC MECHANICAL NOTES: (M##)**
- M01. PROVIDE SUPPORT OF FLEX DUCT AT DIFFUSER TO PREVENT OBSTRUCTED AIRFLOW. STRETCH EXTERNAL INSULATION ON FLEX DUCT TO DIFFUSER COLLAR AND FASTEN PROPERLY. REFER TO DETAIL 4/M-3 FOR PHOTO OF CURRENT DEFICIENCY.
 - M02. PROVIDE ADDITIONAL INSULATION ON EXTERNAL WRAPPED DUCT RUNOUT CONNECTION WHERE IT CONNECTS TO THE INTERNAL LINED SUPPLY DUCT MAIN. PROVIDE VAPOR BARRIER TAPE AT JOINT BETWEEN MAIN AND RUNOUT. REFER TO DETAIL 5/M-3 FOR PHOTO OF CURRENT DEFICIENCY.
 - M03. PROVIDE EXTERNAL DUCT INSULATION ON UNINSULATED SUPPLY DUCT RUNOUT.
 - M04. PROVIDE EXTERNAL DUCT INSULATION ON UNINSULATED PORTION OF THRU-WALL DUCT PENETRATION. REFER TO DETAIL 6/M-3 FOR PHOTO OF CURRENT DEFICIENCY.
 - M05. REMOVE EXISTING OUTSIDE AIR DAMPER MOTOR AND LINKAGE. CONVERT DAMPER TO MANUAL VOLUME CONTROL WITH NEW REGULATOR. INSTALL OUTSIDE AIR DAMPER WITH 24V ACTUATOR AND CONTROLLER. INTERFACE OA CONTROLLER WITH FURNACE AND THERMOSTAT CONTROLLER. DAMPER SHALL OPEN WHEN FAN IS OPERATING IN OCCUPIED MODE. REFER TO DETAIL 7/M-3 FOR PHOTO IDENTIFYING SCOPE OF WORK. REFER TO NOTES ON FURNACE DETAIL 1/M-3 FOR OA BALANCING REQUIREMENTS.
 - M06. REMOVE EXISTING FURNACE AND INSTALL NEW FURNACE AND CASSED COOLING COIL.
 - M07. REMOVE EXISTING COOLING COIL FOR FURNACE F-2 AND F-3. INSTALL NEW CASSED COOLING COIL. REFER TO FURNACE SCHEDULE.
 - M08. REMOVE EXISTING AIR-COOLED CONDENSING UNIT AND INSTALL NEW UNIT IN SAME LOCATION. INSTALL NEW REFRIGERANT LINE SETS TO NEW FURNACE COOLING COIL.
 - M09. PROVIDE NEW 10" X 10" ACCESS PANEL IN OUTSIDE AIR DUCT WHERE EXISTING PANEL IS MISSING. PANEL TO BE FASTENED WITH 1/4" DRIVE HEAD SHEETMETAL SCREWS.
 - M10. PROVIDE DUCTWORK ASSEMBLY FOR EXTENSION OF EXISTING OUTSIDE AIR FOR FURNACES 9, 10, AND 11. REMOVE LOUVER BLANKOFF AND INSTALL NEW RADIUS ELBOW WITH SQUARE THROAT AND INSULATED BLANKOFF PANEL. ROUTE NEW DUCT BELOW SOFFIT TO LOCATION INDICATED ON PLANS AND DETAILS (TERMINATE BETWEEN WINDOWS). SUPPORT DUCT WITH GALVANIZED UNISTRUT AND ROD TRAPEZE ASSEMBLY FASTENED TO BOTTOM OF ROOF TRUSS ABOVE VENTED SOFFIT. ALL DUCT TO BE 'PAINT GRIP' TYPE SHEETMETAL WITH PAINTED FINISH TO MATCH SIDING/SOFFIT COLOR. REFER TO DETAILS 2/M-3 AND 3/M-3 FOR ADDITIONAL INFORMATION.
 - M11. ALTERNATE #2 TO INCLUDE REPLACEMENT OF FURNACE.
 - M12. ALTERNATE #3 TO INCLUDE REPLACEMENT OF FURNACE.

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MECHANICAL PLAN
 IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES (9377.00)
 DOC 6JDI IC HOPE-STRATTON HVAC PHASE 1
 2501 HOLIDAY ROAD CORALVILLE, IA 52240

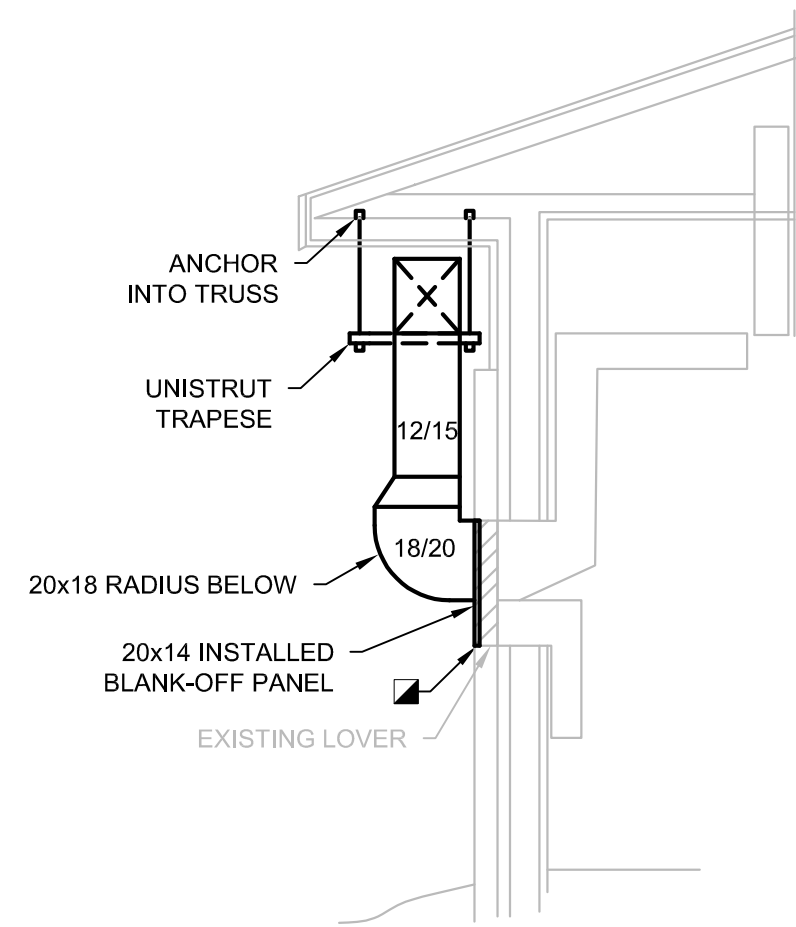
PROJECT#:	BI24017
DESIGNED:	MDD
DRAWN:	GLL
APPROVED:	MDD
DATE:	09/09/24

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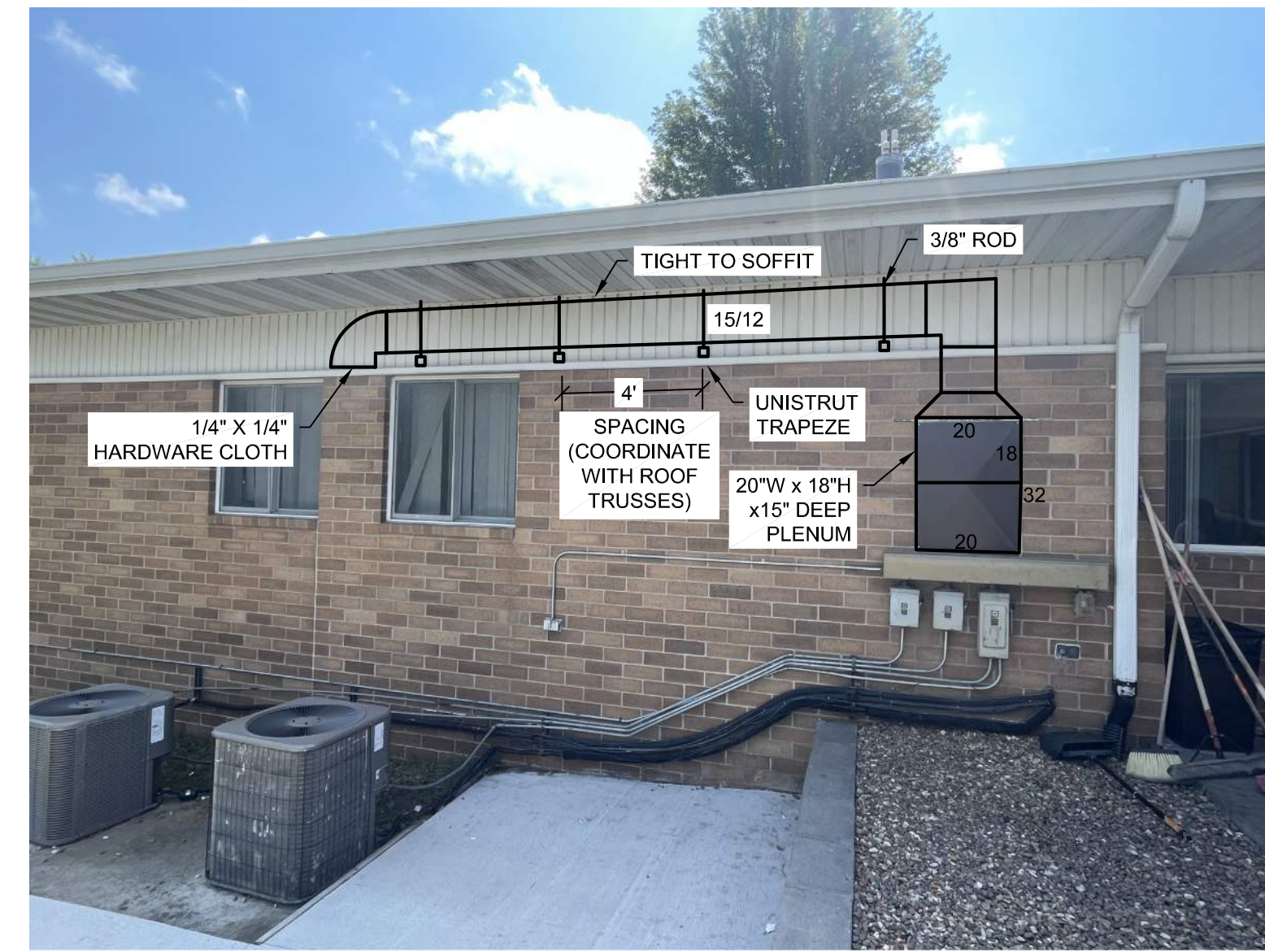
BAR IS ONE INCH ON OFFICIAL DRAWINGS
 IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY

KEY	
NEW WORK	—————
EXISTING TO REMAIN	—————
EXISTING TO BE REMOVED

1 MECHANICAL FLOOR PLAN
 1/8" = 1'-0"



3 VENTILATION DUCT SECTION
NO SCALE



2 VENTILATION DUCT
NO SCALE

AIR COOLED CONDENSING UNIT SCHEDULE

UNIT NO	MANUFACTURER'S DESIGNATION	SERVES	REQUIRED CAPACITY MBH	AMBIENT TEMP.	REF TYPE	SEER	ELECTRICAL				NOTES
							V	PH	MCA	MAX FUSE	
ACCU-2	NEW LENNOX ML18XC036	F-3	36.0	95	R-410A	18	208	1	20.2	35	1, 3-7
ACCU-3	NEW LENNOX ML18XC048	F-3	48.0	95	R-410A	18	208	1	26.2	45	1, 3-7
ACCU-5	NEW LENNOX EL23XC048	F-5	48.0	95	R-410A	22	208	1	23.6	40	2-7
ACCU-8	NEW LENNOX EL23XC048	F-8	48.0	95	R-410A	22	208	1	23.6	40	2-7

NOTES:
 1. TWO-STAGE COMPRESSOR, 50-100% CAPACITY RANGE.
 2. VARIABLE SPEED COMPRESSOR, 5 STAGES, 25-100% CAPACITY RANGE.
 3. OUTDOOR THERMOSTAT TO SHUT UNIT OFF AT TEMPERATURES BELOW 50 DEG. F.
 4. PROVIDE 5YR COMPRESSOR WARRANTY, PROVIDE HAIL GUARD.
 5. ALL CAPACITIES ARE BASED ON INDOOR AND OUTDOOR UNITS AT AIR STANDARD 210/240-94 CONDITIONS (80 F DB, 67 F WB EVAPORATOR EA).
 6. PROVIDE ALL UNITS WITH FILTER-DRYER, CRANKCASE HEATER, LOW PRESSURE SWITCH, TIME-DELAY, RELAY, AND CYCLE PROTECTOR.
 7. PROVIDE WITH INDOOR CASED COOLING COIL.

FURNACE SCHEDULE

UNIT NO	MANUFACTURER'S DESIGNATION	NOM. CFM	MIN CFM OA	E.S.P.	FUEL	MBH		AFUE	FAN HP	EVAPORATOR COIL		ELECTRICAL				CONFIGURATION	NOTES
						IN	OUT			NEW/EXIST	MBH	V	PH	MCA	MOCP		
F-2	EXISTING LENNOX ML195UH45XP68-56	800	100	1.0	NG	44	41	+95%	1/3	NEW	36	115	1	6.1	15	UPFLOW	3
F-3	EXISTING LENNOX ML193UH110XP60-04	1600	125	1.0	NG	110	105	+93%	1	NEW	48	115	1	6.8	15	UPFLOW	3
F-5	NEW LENNOX EL297UH090KV48C	1600	200	1.0	NG	88	85	+97%	3/4	NEW	48	115	1	10.1	15	UPFLOW	1-7
F-8	NEW LENNOX EL297UH090KV48C	1600	300	1.0	NG	88	85	+97%	3/4	NEW	48	115	1	10.1	15	UPFLOW	1-7
F-2 (ALT #2)	NEW LENNOX EL297UH045KV26C	800	100	1.0	NG	44	43	+97%	1/2	NEW	36	115	1	7.7	15	UPFLOW	1-7
F-3 (ALT #3)	NEW LENNOX EL297UH090KV48C	1600	125	1.0	NG	88	85	+97%	3/4	NEW	48	115	1	10.1	15	UPFLOW	1-7

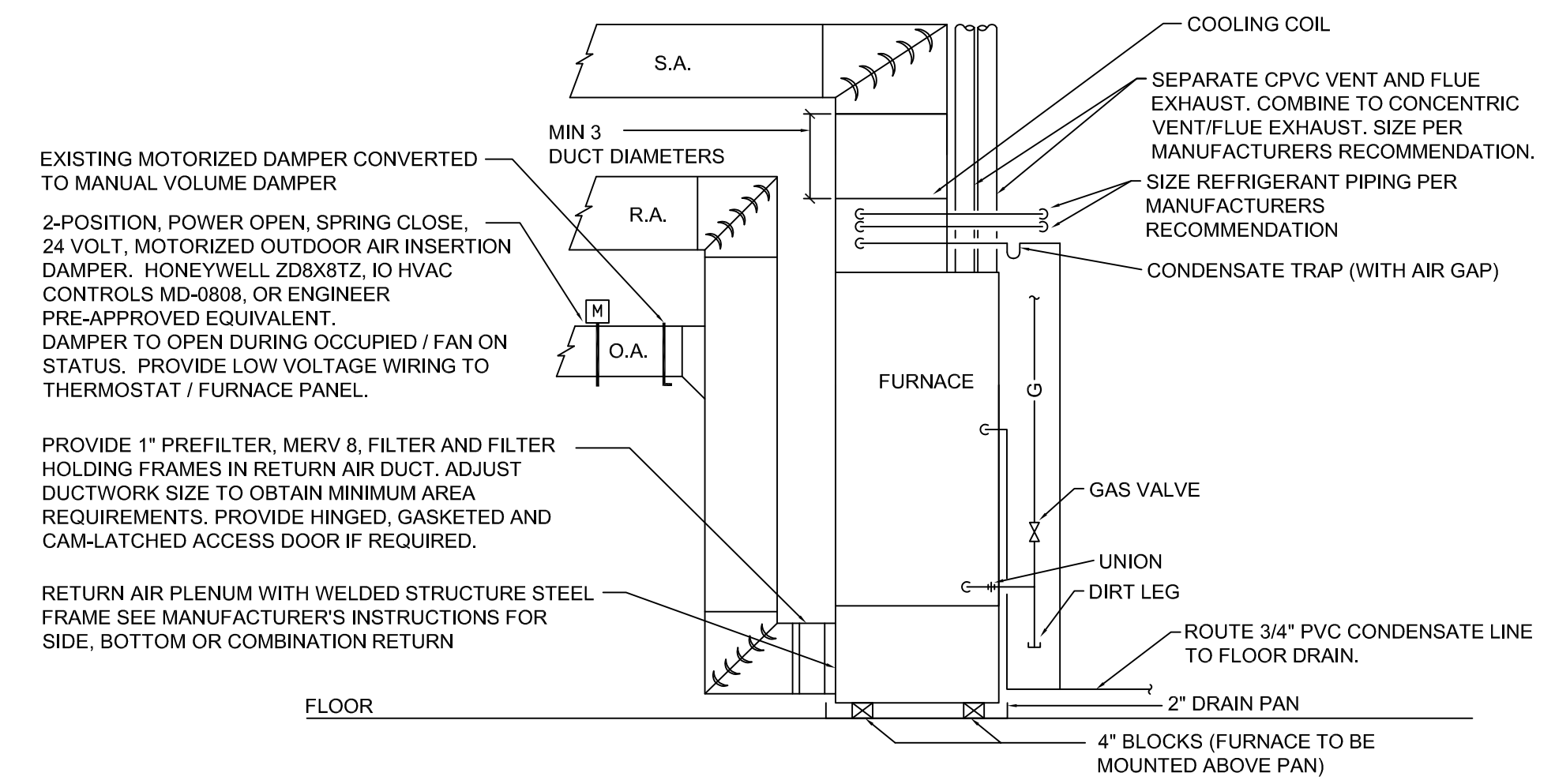
NOTES:
 1. PROVIDE MANUFACTURERS RECOMMENDED INTAKE AND VENT FOR DIRECT VENT (2-PIPE SINGLE EXIT) SIDE WALL PENETRATION.
 2. PIPE FURNACE CONDENSATE TO NEAREST FLOOR DRAIN.
 3. PROVIDE MATCHING CONDENSING UNIT, SEE CONDENSING UNIT SCHEDULE.
 4. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT.
 5. PROVIDE UNIT MOUNTED DISCONNECT.
 6. PROVIDE MERV 8 FILTER WITH 1" FRAME RETURN AIR DUCTWORK.
 7. ELECTRONICALLY CONTROLLED MOTOR FOR VARIABLE SUPPLY FAN OPERATION.



5 DUCT BRANCH RUN-OUT PHOTO
NO SCALE



4 DIFFUSER PHOTO
NO SCALE

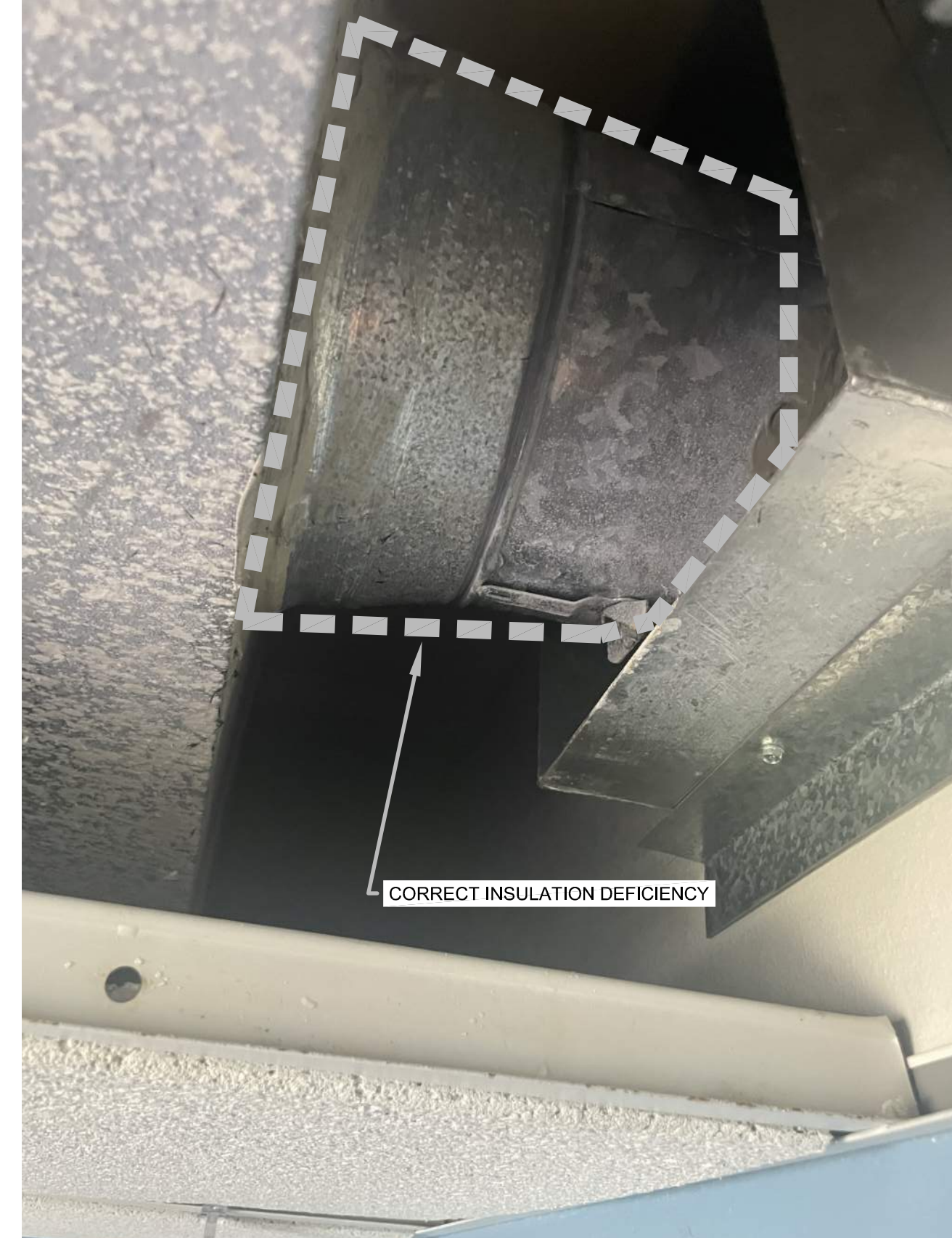


- FURNACE NOTES:**
- FURNACE F-1: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 100 CFM.
 - FURNACE F-2: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 100 CFM. INSTALL NEW CASED COOLING COIL.
 - FURNACE F-3: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 125 CFM. INSTALL NEW CASED COOLING COIL.
 - FURNACE F-4: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 150 CFM.
 - FURNACE F-5: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 200 CFM. INSTALL NEW FURNACE AND CASED COOLING COIL. REUSE EXISTING INTAKE AND EXHAUST VENTS.
 - FURNACE F-6: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 175 CFM.
 - FURNACE F-7: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 200 CFM.
 - FURNACE F-8: INSTALL 12"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER (VERIFY SIZE). INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 350 CFM. INSTALL NEW FURNACE AND CASED COOLING COIL. REUSE EXISTING INTAKE AND EXHAUST VENTS.
 - FURNACE F-9: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 100 CFM.
 - FURNACE F-10: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 200 CFM.
 - FURNACE F-11: INSTALL 8"X8" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER. INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 175 CFM.
 - FURNACE F-12: INSTALL 12"X12" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER (VERIFY SIZE). INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 700 CFM.
 - FURNACE F-13: INSTALL 12"X12" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER (VERIFY SIZE). INSTALL REGULATOR TO CONVERT EXISTING DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 700 CFM.
 - FURNACE F-14: INSTALL 24"X24" 24 VOLT MOTORIZED OUTSIDE AIR DAMPER (VERIFY SIZE). INSTALL REGULATOR TO CONVERT EXISTING MOTORIZED DAMPER TO A MANUAL VOLUME DAMPER. BALANCE OA TO 1500 CFM.

1 FURNACE DETAIL
NO SCALE



7 FURNACE OUTSIDE AIR PHOTO
NO SCALE



6 CORRIDOR WALL PENETRATION PHOTO
NO SCALE

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MECHANICAL SCHEDULES & DETAILS
 IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES (9377.00)
 DOC 6J DIC HOPE-STRATTON HVAC PHASE 1
 25011 HOLIDAY ROAD CORALVILLE, IA 52240

PROJECT#:	BI24017
DESIGNED:	WPE
DRAWN:	WPE
APPROVED:	WPE
DATE:	09/09/24

SHEET:
M-3
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ELECTRICAL ABBREVIATIONS

A STANDARD LIST, NOT ALL WORDS APPEAR IN THESE DRAWINGS.

SEE SPECIFICATION SECTION "EQUIPMENT WIRING" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

A or AMP	AMPERE	LA	LIGHTNING ARRESTOR
A/C	AIR CONDITIONING	LT	LIGHT
A/E or AE	ARCHITECT & ENGINEER	LTG	LIGHTING
AC	ABOVE COUNTER	LTS	LIGHTS
AC	ALTERNATING CURRENT	MC	MECHANICAL CONTRACTOR
ADA	AMERICANS WITH DISABILITIES ACT	MCB	MAIN CIRCUIT BREAKER
AFF	ABOVE FINISH FLOOR	MCC	MOTOR CONTROL CENTER
AFG	ABOVE FINISH GRADE	MCM	THOUSAND CIRCULAR MILS
AFI or AFCI	ARC FAULT CIRCUIT INTERRUPTER	MCP	MAIN DISTRIBUTION PANEL
AHJ	AUTHORITY HAVING JURISDICTION	MCH	MECHANICAL
AHU	AIR HANDLING UNIT	MS	MAIN FUSIBLE SWITCH
AI	AMPERES INTERRUPTING CURRENT	MH	METAL HALIDE
AL	ALUMINUM	MLO	MAIN LUG ONLY
ANN	ANNUNCIATOR	MSB	MAIN SWITCHBOARD
AS	AUTOMATIC SENSORS	MTD	MOUNTED
AWG	AMERICAN WIRE GAUGE	MTS	MOTOR THERMAL SWITCH
		MV	MERCURY VAPOR
		MW	MICROWAVE
bc	BELOW COUNTER	NA or NW	NOT APPLICABLE
BC	BELOW COUNTER	NC	NORMALLY CLOSED
BH	BASKETBALL HOOP OPER	NEC	NATIONAL ELECTRICAL CODE
BL	BLEACHER ELECTRIC OPERATOR	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BRD or BD	BOARD	NEU, NEUT or N	NEUTRAL
BUH	BLAST UNIT HEATER	NF	NON-FUSED
		NL	NIGHT LIGHT
		NO	NORMALLY OPEN
C or COND	CONDUIT	OFF, OF, or OFC	OFFICE
C/B or CB	CIRCUIT BREAKER	OH	OVERHEAD
CAT	CATEGORY	OHD	OVERHEAD DOOR
CCT or CKT	CIRCUIT	P	POLE
CM	CARBON MONOXIDE SENSOR	PA	PUBLIC ADDRESS
CO	CARBON MONOXIDE	PB	PUSH BUTTON
COMB	COMBINATION	PH	PHASE
CONF	CONFERENCE	PLBG	PLUMBING
CP	CEILING PROJECTOR	PML	PANEL
CTC	CABLE TERMINATION CABINET	PR or pf	PAIR
Cu or CU	COPPER	PRV	POWER ROOF VENTILATOR
CU	CONDENSING UNIT	PS	PULL SWITCH
CUH	CABINET UNIT HEATER	PS	PROTECTION SCREEN
DC	DIRECT CURRENT	PTZ	PAN TILT ZOOM
DC	DISTRIBUTION CABINET	PVC	POLYVINYL CHLORIDE
DISC	DISCONNECT	PWR	POWER
DISP	DISPOSAL	RCP	REFLECTED CEILING PLAN
DL	DOCK LEVELER	REC or RECEPT	RECEPTACLE
DN or DWN	DOWN	REF or REFRIG	REFRIGERATOR
DR	DOOR	RH	RADIANT HEAT
DW	DISHWASHER	RH	RANGE HOOD
DWG	DRAWING	RLY	RELAY
		RM	ROOM
		RMS	ROOT MEAN SQUARE
EC	ELECTRICAL CONTRACTOR	RMS	ROOT MEAN SQUARE
EC	ELECTRICAL CABINET	SCC	SHORT CIRCUIT CURRENT
EF	EXHAUST FAN	SD	SMOKE DETECTOR
EH	ELECTRICAL HEAT	SFR	SAFETY RECEPTACLE
ELEC	ELECTRIC OR ELECTRICAL	SFTY	SAFETY
EHD	ELECTRIC HAND DRYER	SHLD	SHIELD OR SHIELDED
EM or EMERG	EMERGENCY	SIG	SIGNAL
EMT	ELECTRICAL METALLIC TUBING	SMR	SURFACE MOUNT RACEWAY
ENT	ELECTRICAL NON-METALLIC TUBING	SN	SOLID NEUTRAL
EUN	ELECTRIC UNIT HEATER	SP	SUMP PUMP
EWG	ELECTRIC WATER COOLER	SPECS	SPECIFICATIONS
EX	EXISTING	SFRK	SPEAKER
EXP	EXPLOSION PROOF	SPR	SPLIT WIRE RECEPTACLE
		SW	SWITCH
F or FUS	FUSE OR FUSIBLE	SWBD	SWITCH BOARD
FA	FIRE ALARM	TC	TEMPERATURE CONTROL
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TC	TELEPHONE CABINET
FACP	FIRE ALARM CONTROL PANEL	TCC	TEMPERATURE CONTROL CONTRACTOR
FBO	FURNISHED BY OTHERS	TEL	TELEPHONE
FL, FLU or FLUOR	FLUORESCENT	TL	TWIST LOCK
FLA	FULL LOAD AMPERES	TR, TRANS or TRFMR	TRANSFORMER
FVNR	FULL VOLTAGE, NON-REVERSING	TTB	TELEPHONE TERMINATION BOARD
FVR	FULL VOLTAGE, REVERSING	TV	TELEVISION
		TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
GC	GENERAL CONTRACTOR	TYP	TYPICAL
GD	GARBAGE DISPOSAL	UG	UNDERGROUND
GEN	GENERATOR	UH	UNIT HEATER
GFI or GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UV	UNIT VENTILATOR
GRC	GALVANIZED RIGID CONDUIT	V	VOLT
GND or GRND	GROUND	VFD	VARIABLE FREQUENCY DRIVE
		W	WATT
H & AC	HEATING & AIR CONDITIONING	W	WATT
H & V	HEATING & VENTILATING	W/O	WITHOUT
HA	HANDICAP ACCESS DOOR	WP	WEATHERPROOF
HD	HAND DRYER	WTR or H2O	WATER
HID	HIGH INTENSITY DISCHARGE	WS	WINDOW SHADE
HP	HORSE POWER	XFMR	TRANSFORMER
HPS	HIGH PRESSURE SODIUM	Y	WYE CONNECTION
HTG	HEATING	Ø	PHASE
HTR	HEATER	Δ	DELTA
HVAC	HEATING, VENTILATION & AIR CONDITIONING		
HZ	HERTZ (CYCLES/SEC)		
IC	INTER interrupting CURRENT		
IGR	ISOLATED GROUND RECEPTACLE		
IMC	INTERMEDIATE METAL CONDUIT		
INC	INCANDESCENT		
ISO	ISOLATED OR ISOLATION		
J, JB or J-BOX	JUNCTION BOX		
KCMIL	THOUSAND CIRCULAR MILS		
KV	KILOVOLT		
KVA	KILOVOLT - AMPERE		
KVAR	KILOVOLT - AMPERE REACTIVE		
KW	KILOWATT		
KWH	KILOWATT - HOUR		

ELECTRICAL SYMBOLS

THESE SYMBOLS COMPRISE A STANDARD LIST; NOT ALL SYMBOLS MAY APPEAR ON THIS PROJECT. ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE ABOVE FINISHED FLOOR. MOUNTING HEIGHTS INDICATED ON ARCH. WALL ELEVATIONS OR AS NOTED SPECIFICALLY ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER MOUNTING HEIGHTS LISTED BELOW.

POWER

	PUSH BUTTON STATION (62" M.H.)		BLANK OUTLET		REMOTE HVAC SENSOR
	DOUBLE PUSH BUTTON STATION		JUNCTION BOX		RADIANT HEAT PANEL
	EMERGENCY SHUTDOWN PUSHBUTTON		PULL BOX		BASEBOARD OR COVE ELEC. HEAT
	ISOLATED GROUND RECEPTACLE (18" M.H.)		MOTOR		ELECTRIC UNIT HEATER
	DUPLEX CONVENIENCE RECEPTACLE (18" M.H.)		DISCONNECT SWITCH		ELECTRIC CABINET UNIT HEATER
	SINGLE RECEPTACLE (18" M.H.)		GENERATOR ANNUNCIATOR PANEL		MOTORIZED DAMPER
	DOUBLE DUPLEX CONVENIENCE RECEPTACLE (18" M.H.)		AUTOMATIC TRANSFER SWITCH		BUS DUCT
	SPLIT WIRED DUPLEX RECEPTACLE (18" M.H.)		VARIABLE FREQUENCY DRIVE		SURFACE MOUNT RACEWAY
	SAFETY CONVENIENCE RECEPTACLE		COMBINATION VARIABLE FREQUENCY DRIVE DISCONNECT		CEILING PADDLE FAN
	POWER RECEPTACLE		MAGNETIC STARTER		TYPE OF EQUIPMENT SEE SCHEDULES
	EMERGENCY DUPLEX RECEPTACLE		COMBINATION STARTER/DISCONNECT		EQUIPMENT NUMBER
	TWIST LOCK RECEPTACLE		MOTOR THERMAL SWITCH		ROOFTOP EQUIPMENT/CIRCUITING
	GFI DUPLEX CONVENIENCE RECEPTACLE		TRANSFORMER		EXISTING EQUIPMENT/CIRCUITING
	GFI DOUBLE DUPLEX CONVENIENCE RECEPTACLE		ELECTRIC METER		GROUND
	SPECIAL PURPOSE OUTLET OR CONNECTION		SWITCHBOARD/DISTRIBUTION PANEL SECTION		CONDUIT IN FLOOR OR UNDERGROUND
	CORD/PLUG		PANELBOARD OR LOAD CENTER		CONDUIT IN WALL OR CEILING SPACE. CROSS MARKS INDICATE TWO WIRES. ARROWS INDICATE HOME RUNS TO PANEL. NUMBERS INDICATE PANEL AND CIRCUIT IN PANEL.
	CORD REEL		CENTER (EXISTING TO REMAIN)		SWITCHLEG TRAVELER
	CEILING DUPLEX RECEPTACLE		CIRCUIT BREAKER		HOT
	FLUSH FLOOR DUPLEX RECEPTACLE		FUSE		NEUTRAL WIRE INDICATES SEPARATE GROUND WIRE TO BE INSTALLED IN RACEWAY
	FLUSH FLOOR DOUBLE DUPLEX RECEPTACLE		HUMIDISTAT		
	FLUSH FLOOR MULTI-SERVICE OUTLET (WITH DEVICES INDICATED)		THERMOSTAT		
	MULTI-SERVICE POLE (WITH DEVICES INDICATED)				

EQUIPMENT CONNECTION SCHEDULE

EQUIP NO.	EQUIPMENT DESCRIPTION	VOLTS/ PHASE	HP OR WATTS	FLA	MCA	OCBP SIZE	EQUIPMENT FEEDER	DISCONNECT AT EQUIP.	NOTES
ACCU-2	AIR COOLED CONDENSING UNIT	208/1			20.2	35A	4#8 CU, 1#10 CU GRND	60/3, 35AF, WP	NOTE 1
ACCU-3	AIR COOLED CONDENSING UNIT	208/1			26.2	45A	4#8 CU, 1#10 CU GRND	60/3, 45AF, WP	NOTE 1
ACCU-5	AIR COOLED CONDENSING UNIT	208/1			23.6	40A	4#8 CU, 1#10 CU GRND	60/3, 40AF, WP	NOTE 1
ACCU-8	AIR COOLED CONDENSING UNIT	208/1			23.6	40A	4#8 CU, 1#10 CU GRND	REUSE EXISTING WITH NEW 40AF FUSES	
F-2	EXISTING FURNACE	120/1			18.4	20A	2#12 CU, 1#12 CU GRND	REUSE EXISTING	
F-3	EXISTING FURNACE	120/1			18.4	20A	2#12 CU, 1#12 CU GRND	REUSE EXISTING	
F-5	FURNACE	120/1			12.8	20A	2#12 CU, 1#12 CU GRND	REUSE EXISTING	
F-8	FURNACE	120/1			12.8	20A	2#12 CU, 1#12 CU GRND	REUSE EXISTING	
F-2 (ALT #2)	NEW FURNACE	120/1			12.8	20A	2#12 CU, 1#12 CU GRND	REUSE EXISTING	
F-3 (ALT #3)	NEW FURNACE	120/1			12.8	20A	2#12 CU, 1#12 CU GRND	REUSE EXISTING	

NF = NON-FUSED SSY = BUSSMAN FUSED SWITCH OCPD = OVERCURRENT PROTECTIVE DEVICE 4X = NEMA 4X TY PE
FLA = FULL LOAD AMPS. MCA = MINIMUM CIRCUIT AMPS 1P SWITCH = 1 POLE TOGGLE SWITCH FE = FURNISHED WITH EQUIPMENT

GENERAL NOTES:

- VERIFY ALL BREAKERS, FEEDER, AND DISCONNECT SIZES WITH MECHANICAL EQUIPMENT.
- VERIFY EQUIPMENT CONNECTION AND LOCATION PRIOR TO INSTALLATION.

NOTES:

- INSTALL DISCONNECT SWITCH ON GALVANIZED STEEL UN-STRUT ADJACENT TO CONDENSING UNIT TO MAINTAIN WORKING CLEARANCE

PANEL E		VOLTS: 120/ 208		PHASE 3		WIRE 4		MAIN CAP. 150		AMPERES			
A/C RATING		GROUND BAR, TYPE WRITTEN PANEL DIRECTORY, NEMA 3R ENCLOSURE											
MOUNTING SURFACE		FEEDER SIZE				SEE RISER				MAIN CONNECTION 100A 35KAIC MCB			
CCT NO	ITEM FED	LOAD WATTS	WIRE SIZE	CIRCUIT BREAKER AMPS	NEUTRAL POLES	FRAME	CIRCUIT BREAKER AMPS	WIRE SIZE	LOAD WATTS	ITEM FED	CCT NO		
1		3,135	6			A			10	1,719			
3	AIR COOLED CONDENSING UNIT ACCU-7	3,135	6	45	3	100A	B	100A	3	25	10		
5		3,135	6			C			10	1,719			
7	AIR COOLED CONDENSING UNIT ACCU-8	2,455	8	40	2	100A	A						
9		2,455	8			B							
11	SPACE					C							
13	SPACE					A							
15	SPACE					B							
17	SPACE					C							

PANEL F		VOLTS: 120/ 208		PHASE 3		WIRE 4		MAIN CAP. 150		AMPERES			
A/C RATING		GROUND BAR, TYPE WRITTEN PANEL DIRECTORY, NEMA 3R ENCLOSURE											
MOUNTING SURFACE		FEEDER SIZE				SEE RISER				MAIN CONNECTION 100A 35KAIC MCB			
CCT NO	ITEM FED	LOAD WATTS	WIRE SIZE	CIRCUIT BREAKER AMPS	NEUTRAL POLES	FRAME	CIRCUIT BREAKER AMPS	WIRE SIZE	LOAD WATTS	ITEM FED	CCT NO		
1	AIR COOLED CONDENSING UNIT ACCU-1	1,555	10	25	2	100A	B	100A	2	35	8		
3		1,555	10			A			8	2,049			
5	AIR COOLED CONDENSING UNIT ACCU-2	2,101	8	35	2	100A	C	100A	2	40	8		
7		2,101	8			A			8	2,455			
9	AIR COOLED CONDENSING UNIT ACCU-3	2,725	8	45	2	100A	B						
11		2,725	8			C							
13	SPACE					A							
15	SPACE					B							
17	SPACE					C							

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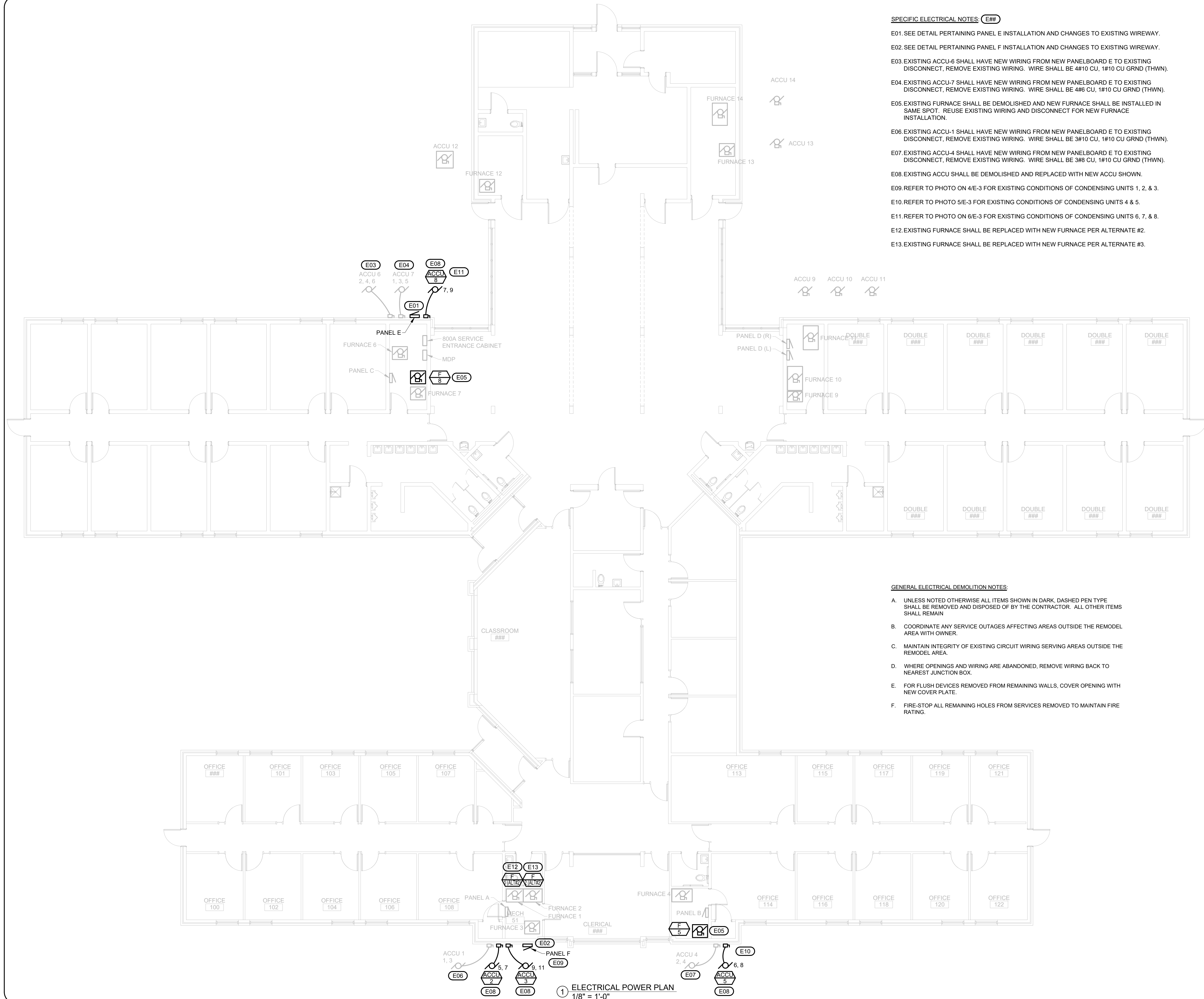
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ELECTRICAL SYMBOLS, ABBREVIATIONS & SCHEDULES
IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES (9377.00)
DOC 6JD IC HOPE-STRATTON HVAC PHASE 1
2501 HOLIDAY ROAD CORALVILLE, IA 52240

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SPECIFIC ELECTRICAL NOTES: E##

- E01. SEE DETAIL PERTAINING PANEL E INSTALLATION AND CHANGES TO EXISTING WIREWAY.
- E02. SEE DETAIL PERTAINING PANEL F INSTALLATION AND CHANGES TO EXISTING WIREWAY.
- E03. EXISTING ACCU-6 SHALL HAVE NEW WIRING FROM NEW PANELBOARD E TO EXISTING DISCONNECT, REMOVE EXISTING WIRING. WIRE SHALL BE 4#10 CU, 1#10 CU GRND (THWN).
- E04. EXISTING ACCU-7 SHALL HAVE NEW WIRING FROM NEW PANELBOARD E TO EXISTING DISCONNECT, REMOVE EXISTING WIRING. WIRE SHALL BE 4#6 CU, 1#10 CU GRND (THWN).
- E05. EXISTING FURNACE SHALL BE DEMOLISHED AND NEW FURNACE SHALL BE INSTALLED IN SAME SPOT. REUSE EXISTING WIRING AND DISCONNECT FOR NEW FURNACE INSTALLATION.
- E06. EXISTING ACCU-1 SHALL HAVE NEW WIRING FROM NEW PANELBOARD E TO EXISTING DISCONNECT, REMOVE EXISTING WIRING. WIRE SHALL BE 3#10 CU, 1#10 CU GRND (THWN).
- E07. EXISTING ACCU-4 SHALL HAVE NEW WIRING FROM NEW PANELBOARD E TO EXISTING DISCONNECT, REMOVE EXISTING WIRING. WIRE SHALL BE 3#8 CU, 1#10 CU GRND (THWN).
- E08. EXISTING ACCU SHALL BE DEMOLISHED AND REPLACED WITH NEW ACCU SHOWN.
- E09. REFER TO PHOTO ON 4/E-3 FOR EXISTING CONDITIONS OF CONDENSING UNITS 1, 2, & 3.
- E10. REFER TO PHOTO ON 5/E-3 FOR EXISTING CONDITIONS OF CONDENSING UNITS 4 & 5.
- E11. REFER TO PHOTO ON 6/E-3 FOR EXISTING CONDITIONS OF CONDENSING UNITS 6, 7, & 8.
- E12. EXISTING FURNACE SHALL BE REPLACED WITH NEW FURNACE PER ALTERNATE #2.
- E13. EXISTING FURNACE SHALL BE REPLACED WITH NEW FURNACE PER ALTERNATE #3.

GENERAL ELECTRICAL NOTES:

- A. NEW TYPED OUT PANEL DIRECTORIES TO REFLECT CHANGES MADE IN NEW WORK.
- B. WHERE APPLICABLE, MAINTAIN INTEGRITY OF EXISTING CIRCUIT WIRING FOR NEW WORK.
- C. CUT AND PATCH WALLS AND FLOORS AS REQUIRED FOR INSTALLATION OF NEW SYSTEMS.
 - 1. ALL OPENINGS IN CONCRETE OR MASONRY CONSTRUCTION SHALL BE CORE DRILLED OR SAW CUT. COORDINATE WITH EXISTING STRUCTURE AND WITH GENERAL CONTRACTOR AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY AND MINIMIZE SIZE OF OPENINGS.
 - 2. SEAL AROUND ALL CONDUIT PENETRATIONS WITH NON-SHRINK GROUT OR SIMILAR MATERIAL. WHERE PENETRATIONS ARE IN FIRE RATED CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL FIRE STOP TO MATCH THE FIRE RATING.
 - 3. WHEN PATCHING OPENINGS IN AREAS WHICH ARE NOT TO RECEIVE NEW FINISHES, ELECTRICAL CONTRACTOR PATCHING SHALL MATCH ADJACENT FINISH.
- D. COORDINATE LOCATIONS AND SIZES OF OPENINGS IN NEW STRUCTURE. WHEN ADDITIONAL CUTTING AND PATCHING IS REQUIRED DUE TO ELECTRICAL CONTRACTOR'S FAILURE TO COORDINATE THIS WORK, IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ADDITIONAL CUTTING AND PATCHING. SEAL AND/OR FIRE STOP ALL PENETRATIONS AS REQUIRED.
- E. FOR ALL WORK REQUIRED ABOVE EXISTING CEILINGS TO REMAIN, CONTRACTOR IS RESPONSIBLE FOR REMOVAL/REINSTALLATION OF CEILING TILE TO ACCOMPLISH THE WORK. FOR OCCUPIED AREAS, CEILING TILE SHALL BE REPLACED FOLLOWING EACH SHIFT.
- F. COORDINATE SCHEDULING FOR ALL WORK. IN GENERAL, THE EXISTING SYSTEMS ARE INTENDED TO BE PHASED OUT AS THE NEW SYSTEMS ARE INSTALLED. HOWEVER, CONTRACTOR SHALL REVIEW PHASING PLANS AND IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS AS REQUIRED TO MINIMIZE SYSTEMS DOWNTIME.
- G. COMMUNICATION, 120/208 VOLT, CRITICAL WIRING, AND LIFE SAFETY WIRING TO BE IN SEPARATE RACEWAYS PER NEC.
- H. NEATLY LABEL CIRCUIT NUMBER WITH DIGITALLY PRINTED CLEAR LABELS ON ALL RECEPTACLES AND EQUIPMENT TERMINATION POINTS.
- I. BELOW IS A LIST OF SOME COMMON REQUIREMENTS OUTLINED IN THE SPECIFICATION. REFER TO THE SPECIFICATION FOR MORE DETAILED INFORMATION FOR THESE AND ALL OTHER ITEMS.
 - 1. CONDUIT PENETRATIONS THROUGH FIRE/SMOKE RATED WALLS/FLOORS SHALL BE FIRESTOPPED.
 - 2. EMT FITTINGS SHALL BE SET SCREW TYPE. MINIMUM CONDUIT SIZE SHALL BE 3/4" FOR HOMERUNS.
 - 3. BOXES FLUSH IN COMMON WALL SHALL NOT BE BACK-TO-BACK OR THROUGH-WALL TYPE.
 - 4. RECEPTACLES AND SWITCHES SHALL BE SPECIFICATION GRADE.
 - 5. CONDUITS, JUNCTION BOXES, WIRING, AND EQUIPMENT SHALL BE LABELED PER NEC.
 - 6. PROVIDE A GREEN GROUND CONDUCTOR THROUGHOUT ALL NEW ELECTRICAL WORK.
 - 7. PROVIDE A SEPARATE NEUTRALS FOR EACH ELECTRICAL PHASE.
 - 8. MC CABLE MAY BE USED FOR LIGHT FIXTURE WHIPS AND WHERE CONCEALED WITHIN WALLS.

GENERAL ELECTRICAL DEMOLITION NOTES:

- A. UNLESS NOTED OTHERWISE ALL ITEMS SHOWN IN DARK, DASHED PEN TYPE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL OTHER ITEMS SHALL REMAIN.
- B. COORDINATE ANY SERVICE OUTAGES AFFECTING AREAS OUTSIDE THE REMODEL AREA WITH OWNER.
- C. MAINTAIN INTEGRITY OF EXISTING CIRCUIT WIRING SERVING AREAS OUTSIDE THE REMODEL AREA.
- D. WHERE OPENINGS AND WIRING ARE ABANDONED, REMOVE WIRING BACK TO NEAREST JUNCTION BOX.
- E. FOR FLUSH DEVICES REMOVED FROM REMAINING WALLS, COVER OPENING WITH NEW COVER PLATE.
- F. FIRE-STOP ALL REMAINING HOLES FROM SERVICES REMOVED TO MAINTAIN FIRE RATING.

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ELECTRICAL PLAN
 IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES (9377.00)
 DOC 6J DIC HOPE-STRATTON HVAC PHASE 1
 2501 HOLIDAY ROAD CORALVILLE, IA 52240

PROJECT#: BI24017

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 DATE: 09/09/24

SHEET:

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KEY	
NEW WORK	—
EXISTING TO REMAIN	---
EXISTING TO BE REMOVED	-----

RECEPTACLE/OUTLET KEY	
#	= PANEL CIRCUIT NUMBER
##	= HEIGHT TO CENTER OF RECEPTACLE OR OTHER OUTLET ABOVE FINISHED FLOOR (18" IF NOT SHOWN)
⊕	= RECEPTACLE OR OTHER OUTLET MOUNTED 8" ABOVE COUNTER OR 4" ABOVE BACKSPASH

1 ELECTRICAL POWER PLAN
 1/8" = 1'-0"



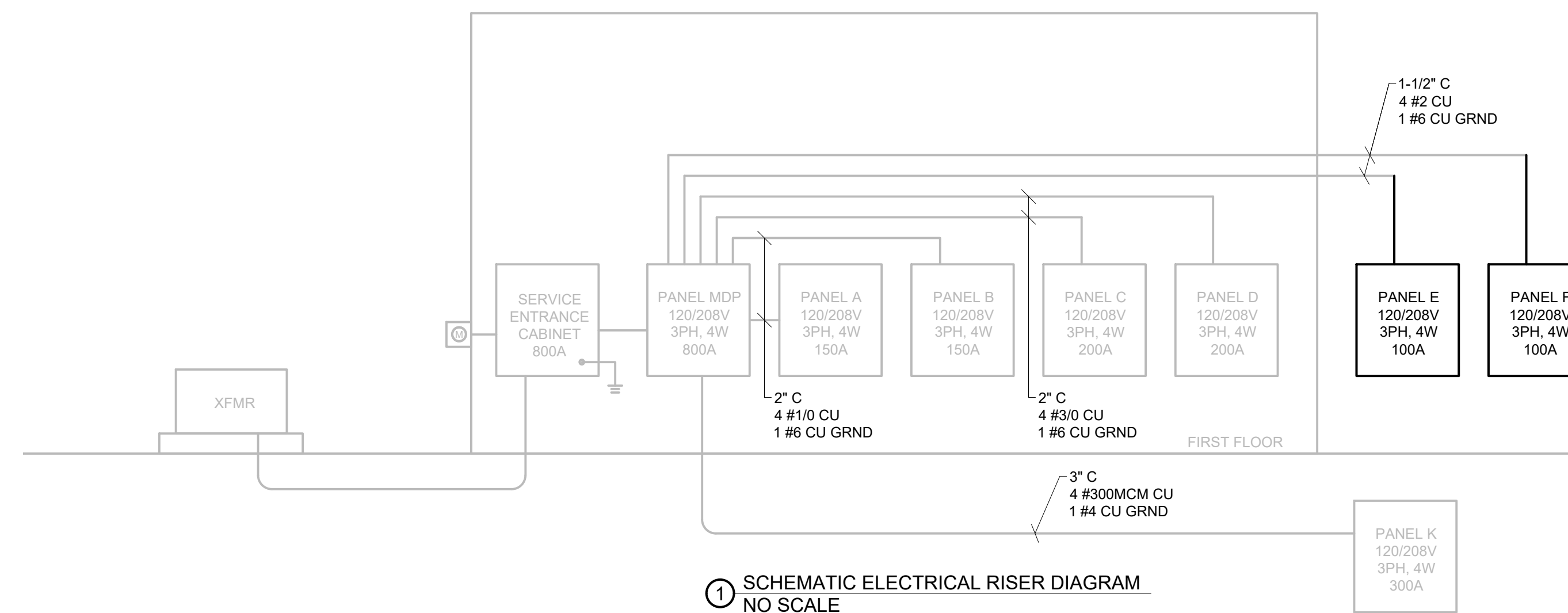
④ ELECTRICAL ACCU 1-3
NO SCALE



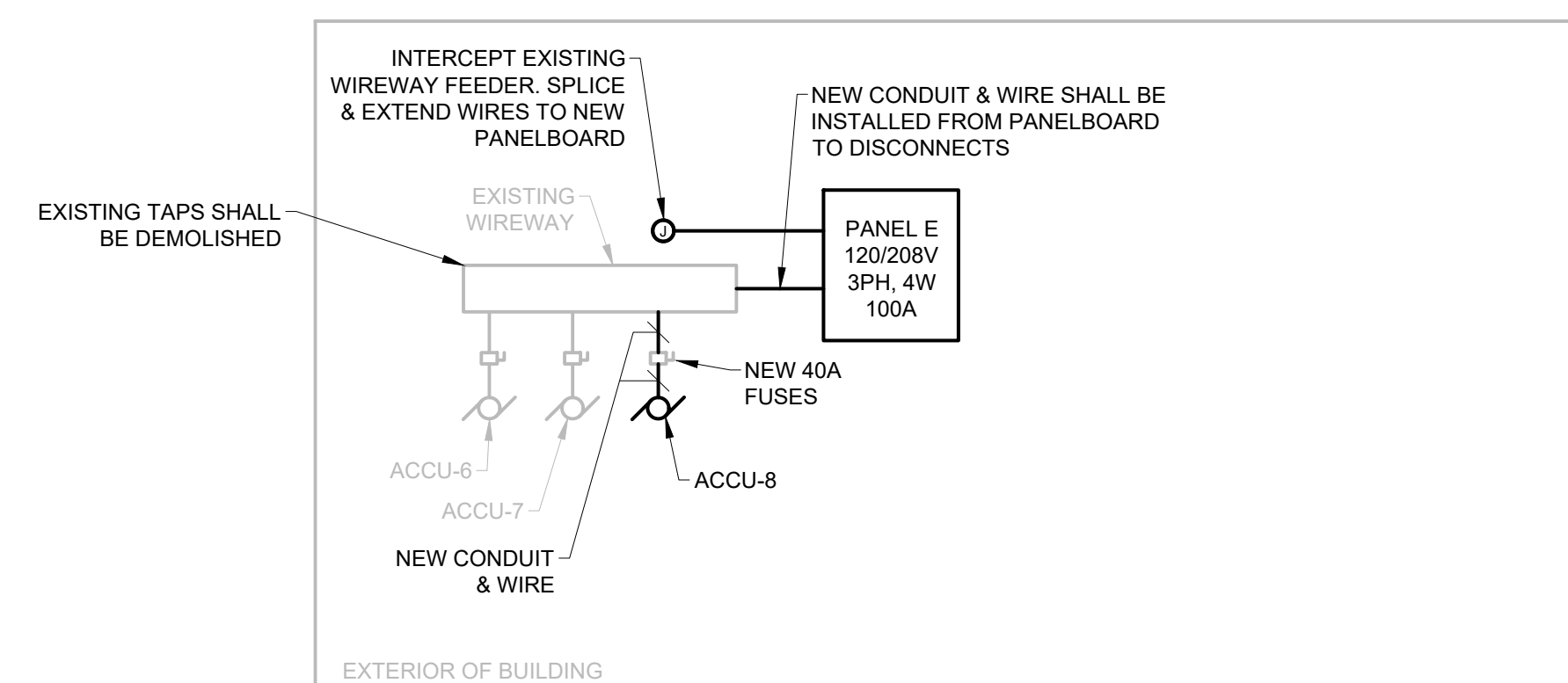
⑤ ELECTRICAL ACCU 4 & 5
NO SCALE



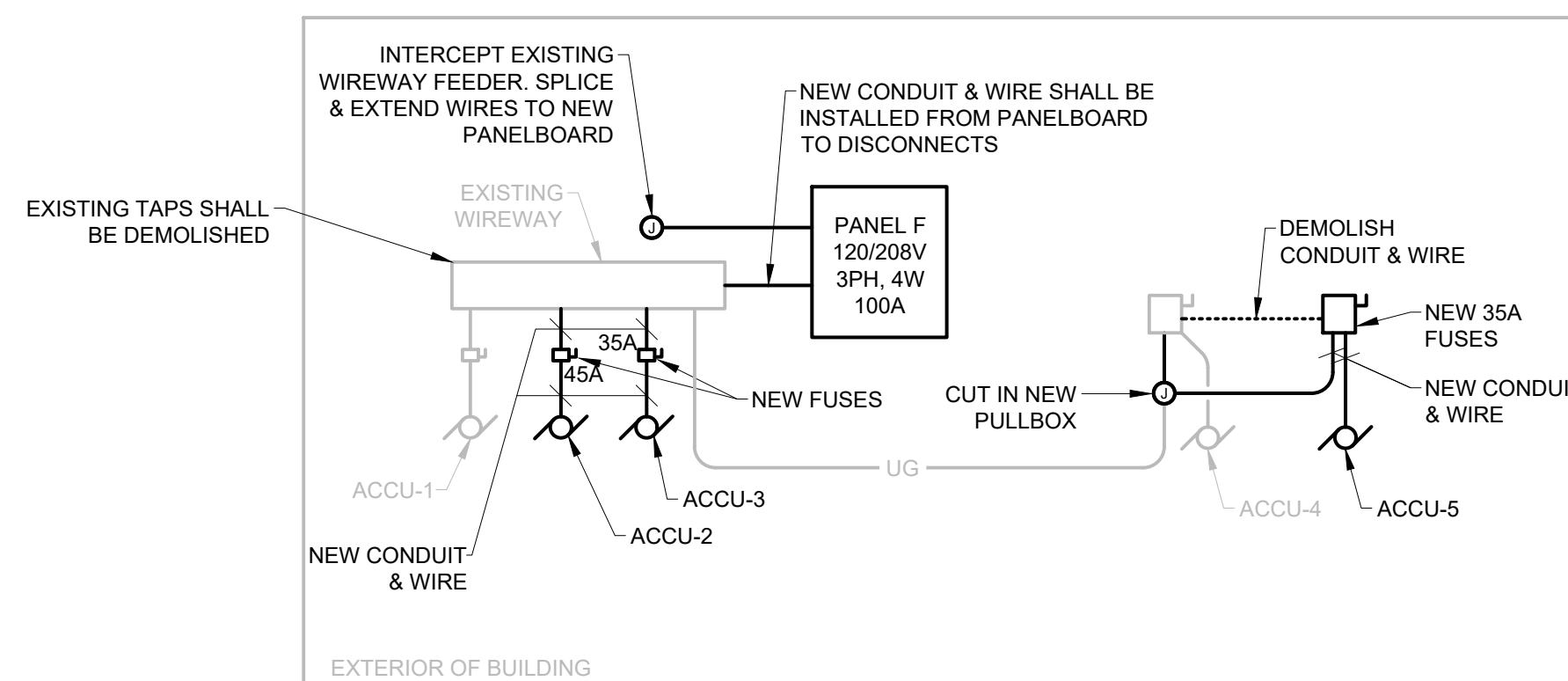
⑥ ELECTRICAL ACCU 6-8
NO SCALE



① SCHEMATIC ELECTRICAL RISER DIAGRAM
NO SCALE



② WIREWAY DETAIL 1
NO SCALE



③ WIREWAY DETAIL 2
NO SCALE

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- D. WHERE OPENINGS AND WIRING ARE ABANDONED, REMOVE WIRING BACK TO NEAREST JUNCTION BOX.
- E. FOR FLUSH DEVICES REMOVED FROM REMAINING WALLS, COVER OPENING WITH NEW COVER PLATE.
- F. FIRE-STOP ALL REMAINING HOLES FROM SERVICES REMOVED TO MAINTAIN FIRE RATING.

GENERAL ELECTRICAL NOTES:

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 2. SEAL AROUND ALL CONDUIT PENETRATIONS WITH NON-SHRINK GROUT OR SIMILAR MATERIAL. WHERE PENETRATIONS ARE IN FIRE RATED CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL FIRE STOP TO MATCH THE FIRE RATING.
 3. WHEN PATCHING OPENINGS IN AREAS WHICH ARE NOT TO RECEIVE NEW FINISHES, ELECTRICAL CONTRACTOR PATCHING SHALL MATCH ADJACENT FINISH.
- D. COORDINATE LOCATIONS AND SIZES OF OPENINGS IN NEW STRUCTURE. WHEN ADDITIONAL CUTTING AND PATCHING IS REQUIRED DUE TO ELECTRICAL CONTRACTOR'S FAILURE TO COORDINATE THIS WORK, IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ADDITIONAL CUTTING AND PATCHING. SEAL AND/OR FIRE STOP ALL PENETRATIONS AS REQUIRED.
- E. FOR ALL WORK REQUIRED ABOVE EXISTING CEILINGS TO REMAIN, CONTRACTOR IS RESPONSIBLE FOR REMOVAL/REINSTALLATION OF CEILING TILE TO ACCOMPLISH THE WORK. FOR OCCUPIED AREAS, CEILING TILE SHALL BE REPLACED FOLLOWING EACH SHIFT.
- F. COORDINATE SCHEDULING FOR ALL WORK. IN GENERAL, THE EXISTING SYSTEMS ARE INTENDED TO BE PHASED OUT AS THE NEW SYSTEMS ARE INSTALLED. HOWEVER, CONTRACTOR SHALL REVIEW PHASING PLANS AND IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS AS REQUIRED TO MINIMIZE SYSTEMS DOWNTIME.
- G. COMMUNICATION, 120/208 VOLT, CRITICAL WIRING, AND LIFE SAFETY WIRING TO BE IN SEPARATE RACEWAYS PER NEC.
- H. NEATLY LABEL CIRCUIT NUMBER WITH DIGITALLY PRINTED CLEAR LABELS ON ALL RECEPTACLES AND EQUIPMENT TERMINATION POINTS.
- I. BELOW IS A LIST OF SOME COMMON REQUIREMENTS OUTLINED IN THE SPECIFICATION. REFER TO THE SPECIFICATION FOR MORE DETAILED INFORMATION FOR THESE AND ALL OTHER ITEMS.
 1. CONDUIT PENETRATIONS THROUGH FIRE/SMOKE RATED WALLS/FLOORS SHALL BE FIRESTOPPED.
 2. EMT FITTINGS SHALL BE SET SCREW TYPE. MINIMUM CONDUIT SIZE SHALL BE 3/4" FOR HOMERUNS.
 3. BOXES FLUSH IN COMMON WALL SHALL NOT BE BACK-TO-BACK OR THROUGH-WALL TYPE.
 4. RECEPTACLES AND SWITCHES SHALL BE SPECIFICATION GRADE.
 5. CONDUITS, JUNCTION BOXES, WIRING, AND EQUIPMENT SHALL BE LABELED PER NEC.
 6. PROVIDE A GREEN GROUND CONDUCTOR THROUGHOUT ALL NEW ELECTRICAL WORK.
 7. PROVIDE A SEPARATE NEUTRALS FOR EACH ELECTRICAL PHASE.
 8. MC CABLE MAY BE USED FOR LIGHT FIXTURE WHIPS AND WHERE CONCEALED WITHIN WALLS.

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REVISIONS		
#	DESCRIPTION	DATE
1		
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PROJECT#:	BI24017
DESIGNED:	CHH
DRAWN:	GLL
APPROVED:	TAW
DATE:	09/09/24