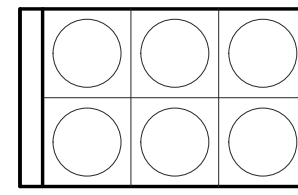


HVAC ABBREVIATIONS

ABV	ABOVE
AD	DUCT ACCESS DOOR
BDD	BACK-DRAFT-DAMPER
CD	CEILING DIFFUSER
CFM	CUBIC FEET/MINUTE
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
COMP	COMPRESSOR
DMPR	DAMPER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
EVAP	EVAPORATOR
FD	FILTERED RETURN AIR GRILLE
FRAG	FIRE DAMPER, PER ASSEMBLY RATING
FOB	FLAT ON BOTTOM DUCT TRANSITION
FOT	FLAT ON TOP DUCT TRANSITION
GC	GENERAL CONTRACTOR
PC	PLUMBING CONTRACTOR
PDD	PERFORATED FACE DIRECTIONAL DIFFUSER
RAD	RETURN-AIR DUCT
RAG	RETURN AIR GRILLE
RAR	RETURN AIR REGISTER
RCD	ROUND CEILING DIFFUSER
RDR	ROUND DUCT REGISTER
RH	RADIANT HEATER
RTS	ROUND TO SQUARE DUCT TRANSITION
RTU	ROOFTOP HVAC UNIT
T'STAT	THERMOSTAT

HVAC PLAN SYMBOLS



AIR COOLED CHILLER



CHILLED WATER PIPING

NOTE: THIS PROJECT MAY NOT USE EVERY SYMBOL OR DEVICE APPEARING ON THIS LEGEND.

2024 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Mechanical design
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: 18° F
summer dry bulb: 91.5° F

Interior design conditions
winter dry bulb: 68° F
summer dry bulb: 75° F
relative humidity: 50%

Building heating load: EXISTING
Building cooling load: EXISTING

Mechanical Spacing Conditioning System
Unitary
description of unit: SEE SCHEDULE(S)
heating efficiency: SEE SCHEDULE(S)
cooling efficiency: SEE SCHEDULE(S)
size category of unit: SEE SCHEDULE(S)

Boiler
Size category. If oversized, state reason: _____

Chiller
Size category. If oversized, state reason: _____

List equipment efficiencies: SEE SCHEDULE(S)

CHILLED LIQUID PIPING

HAND STOP VALVES ARE RECOMMENDED FOR USE IN ALL LINES TO FACILITATE SERVICING.

DRAIN CONNECTIONS SHOULD BE PROVIDED AT ALL LOW POINTS TO PERMIT COMPLETE DRAINAGE OF THE COOLER AND SYSTEM PIPING.

THE COOLER MUST BE PROTECTED BY A STRAINER, PREFERABLY OF 40 MESH, FITTED AS CLOSE AS POSSIBLE TO THE LIQUID INLET CONNECTION, AND PROVIDED WITH A MEANS OF LOCAL ISOLATION.

THE COOLER MUST NOT BE EXPOSED TO FLUSHING VELOCITIES OR DEBRIS RELEASED DURING FLUSHING. IT IS RECOMMENDED THAT A SUITABLY SIZED BYPASS AND VALVE ARRANGEMENT IS INSTALLED TO ALLOW FLUSHING OF THE PIPING SYSTEM. THE BYPASS CAN BE USED DURING MAINTENANCE TO ISOLATE THE HEAT EXCHANGER OR OTHER UNITS.

PRESSURE GAUGE CONNECTIONS ARE RECOMMENDED FOR INSTALLATION IN THE INLET AND OUTLET WATER LINES. GAUGES ARE NOT FURNISHED WITH THE UNIT AND ARE TO BE FURNISHED BY OTHER SUPPLIERS.

THE CHILLED LIQUID LINES THAT ARE EXPOSED TO OUTDOOR AMBIENTS SHOULD BE WRAPPED WITH A SUPPLEMENTAL HEATER CABLE AND COVERED WITH INSULATION.

A FLOW SWITCH IS AVAILABLE AS AN ACCESSORY ON ALL UNITS. THE FLOW SWITCH (OR ITS EQUIVALENT) MUST BE INSTALLED IN THE LEAVING WATER PIPING OF THE COOLER.

MECHANICAL SPECIFICATIONS

THE WORK INCLUDES PROVIDING MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING HVAC SYSTEM. ALL MATERIALS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AND FREE FROM DEFECTS. ANY ITEM NOT SPECIFICALLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS, BUT THAT IS NORMALLY REQUIRED TO CONFORM TO THE INTENT, ARE TO BE CONSIDERED A PART OF THE CONTRACT. THE WORK MAY ALSO INCLUDE ROUGH-IN AND FINAL CONNECTIONS TO EQUIPMENT PROVIDED BY OTHERS. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND/OR ORDINANCES AND IS SUBJECT TO INSPECTION.

PROVIDE EQUIPMENT INDICATED ON THE DRAWINGS, AND AS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM. INSTALL ALL HVAC EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

ALL HVAC WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST ADOPTED EDITIONS OF THE NORTH CAROLINA BUILDING CODES. INCLUDE PERMITS AND INSPECTION FEES IN CONTRACT.

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE LOCATION, TYPE, DEVICES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. PROVIDE ALL EQUIPMENT, DEVICES, ACCESSORIES, DUCTWORK, OFFSETS, TRANSITIONS, MATERIALS, ETC. NECESSARY TO FACILITATE THE SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT FURNISHED BY OTHERS.

DEFINITIONS: FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION. INSTALL MEANS TO PLACE IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.

WARRANTY: GUARANTEE ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE BY OWNER AS STATED IN WRITING, EXCEPT REFRIGERATION COMPRESSORS WHICH SHALL HAVE A FIVE YEAR EXTENDED GUARANTEE. REPAIR AND/OR REPLACE, WITHOUT ANY COST TO THE OWNER, ANY DEFECTIVE PART OR PARTS OF THE WORK WITHIN THE GUARANTEE PERIOD FROM THE TIME THE SYSTEM IS PUT INTO OPERATION AS DETERMINED BY THE DATE OF FINAL CERTIFICATE OF PAYMENT WITH EXCEPTIONS AS NOTED.

PROVIDE OPERATION MANUALS, MAINTENANCE MANUALS AND SCHEMATICS FOR ALL MECHANICAL EQUIPMENT INSTALLED.

MAINTAIN A SOLELY DEDICATED DRAWING SET FOR RECORD DRAWING PURPOSES. RECORD CHANGES AS THEY OCCUR ON THIS SET, CLEARLY AND PROFESSIONALLY. PROVIDE AS BUILT DRAWINGS TO OWNER UPON COMPLETION OF WORK.

CONTRACTOR SHALL ACQUIRE A FULL UNDERSTANDING OF PHASING REQUIREMENTS FOR THIS PROJECT PRIOR TO BID. COORDINATE ALL PHASING REQUIREMENTS WITH G.C. AND OWNER.

AIR-COOLED CHILLER SCHEDULE

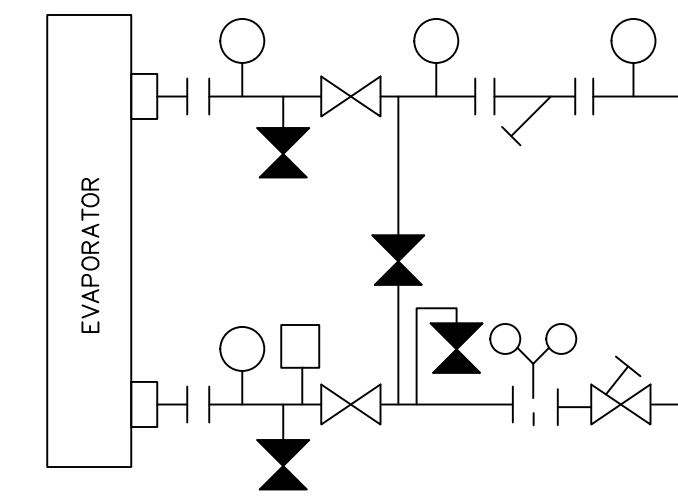
MARK	MANUFACTURER & MODEL NO.	NET CAPACITY (TONS)	OPERATING CAPACITY (TONS)	REF	PERFORMANCE DATA		EVAPORATOR DATA				COMPRESSOR DATA				CONDENSER DATA				VSD SINGLE PUMP		ELECTRICAL DATA UNIT (SINGLE POINT)			CONTROL CIRCUIT		HEATER CIRCUIT		OPERATING WEIGHT(LBS)			
					EER	NPLV.I.P	FLOW (GPM)	EWI (°F)	LWT (°F)	MAX.WPD (FT.WG)	FOULING FACTOR	FLUID	QTY.	RLA	LRA	STARTER	DESIGN	LOW	FAN QTY.	FAN FLA	REQ. ESP (FT.WG)	AVAILABLE ESP (FT.WG)	HP	VOLTAGE	MCA	MOCB	VOLTAGE		KW	VOLTAGE	KW
ACC-1	YORK YLAA0120SJ46XFB	125	118.2	R-454B	10.48	17.89	300.8	58	48	29.1	0.0001	WATER	4	53.1	316	ALS	95	55	6	4.0	20.0	49.1	7.5	460/60/3	263	300	120V	0.5	NA	NA	6535
ACC-2	YORK YLAA0120SJ46XFB	125	118.2	R-454B	10.48	17.89	300.8	58	48	29.1	0.0001	WATER	4	53.1	316	ALS	95	55	6	4.0	20.0	49.1	7.5	460/60/3	263	300	120V	0.5	NA	NA	6535

PROVIDE SCHEDULED EQUIPMENT OR EQUAL BY:

1. TRANE
2. CARRIER
3. MCOUAY

INTERFACE NEW CHILLERS WITH EXISTING AUTOMATED CONTROLS.

HYDRO-KIT (NOT DEPICTED) - FACTORY INSTALLED HYDRO-KIT SUITABLE FOR WATER GLYCOL SYSTEMS WITH UP TO 35% GLYCOL AT LEAVING TEMPERATURES DOWN TO 20°F. THE HYDRO-KIT OPTION IS AVAILABLE IN A SINGLE OR DUAL CONFIGURATION (DUAL AS STANDBY DUTY ONLY), WITH TOTALLY ENCLOSED PERMANENTLY LUBRICATED PUMP MOTORS. THE HYDRO-KIT OPTION COMES STANDARD WITH A BALANCING VALVE, DISCHARGE CHECK VALVE, DISCHARGE SHUTOFF VALVE, THERMAL DISPERSION FLOW SWITCH, PRESSURE PORTS, INLET WYE-STRAINER, BLEED AND DRAIN VALVES AND FROST PROTECTION. SERVICE SHUT OFF VALVES, ADDITIONAL PRESSURE PORTS AND EXPANSION TANKS ARE OPTIONAL WITHIN THE HYDRO-KIT OPTION.



- ISOLATING VALVE - NORMALLY OPEN
- ISOLATING VALVE - NORMALLY CLOSED
- FLOW REGULATING VALVE
- FLOW MEASUREMENT DEVICE
- STRAINER
- PRESSURE TAPPING
- FLOW SWITCH
- FLANGED CONNECTION

TYPICAL EVAPORATOR PIPING CONNECTIONS

NO SCALE

SCOPE OF WORK

REMOVAL AND REPLACEMENT OF (1) 125 TON CHILLER. EXISTING CHILLER #2 TO BE REPLACED WITH NEW PACKAGED CHILLER ACC-2.

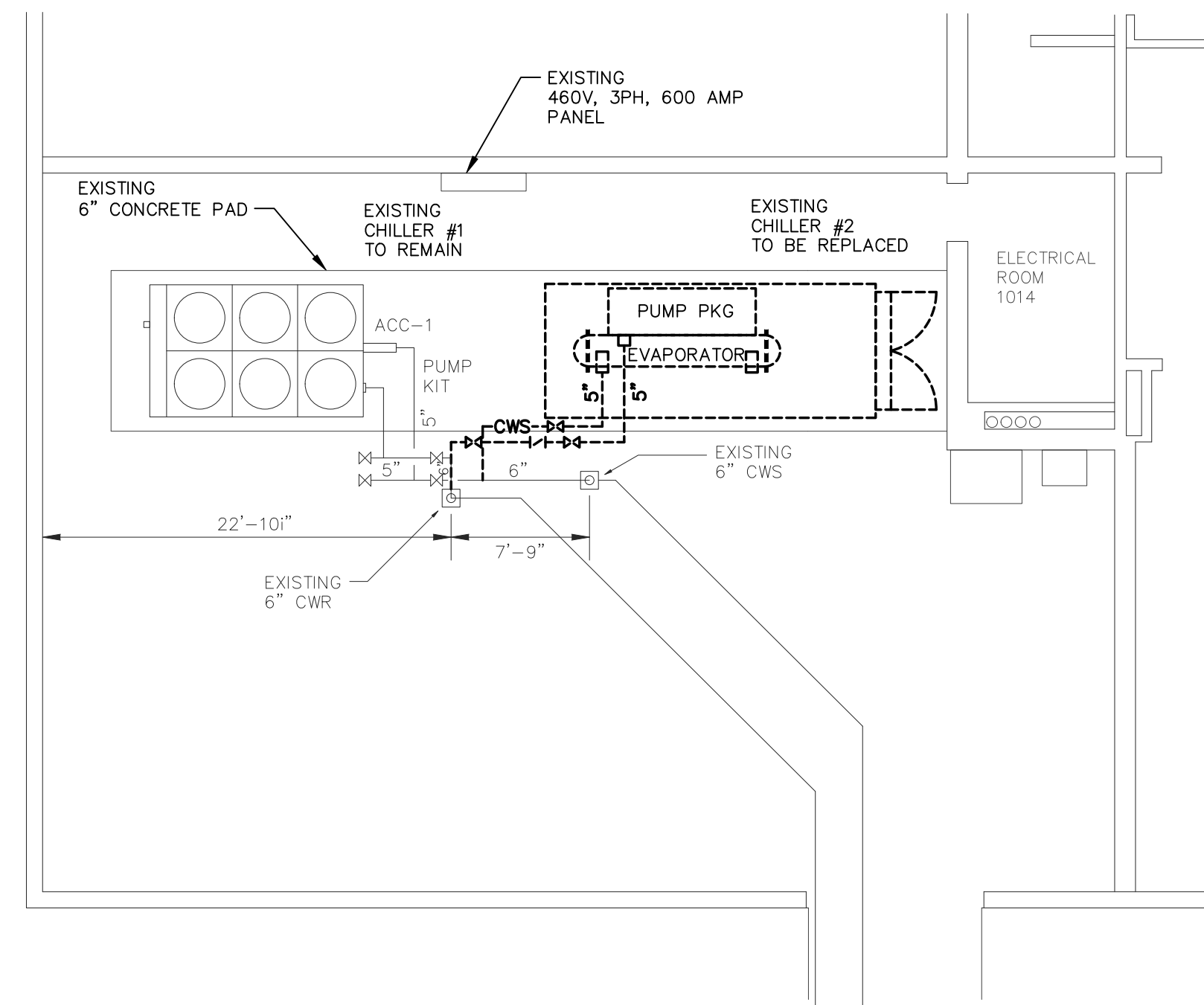
CHILLER REPLACEMENT SHALL INCLUDE REPLACING ALL ASSOCIATED ISOLATING VALVES (N.O. & N.C.), FLOW REGULATING VALVE, FLOW MEASURING DEVICE, PRESSURE TAPPING, FLOW SWITCH, AND FLANGED CONNECTIONS (IF SHOWING FITTING OR WEAR). VERIFY EXISTING COMPONENT QUANTITIES AND CHARACTERISTICS IN FIELD.

CONTRACTOR IS RESPONSIBLE FOR RE-INSULATING ALL EXPOSED PIPING FROM VALVE REPLACEMENT OR ANY OTHER DEVICE REPLACEMENT BACK TO ORIGINAL CONDITION.

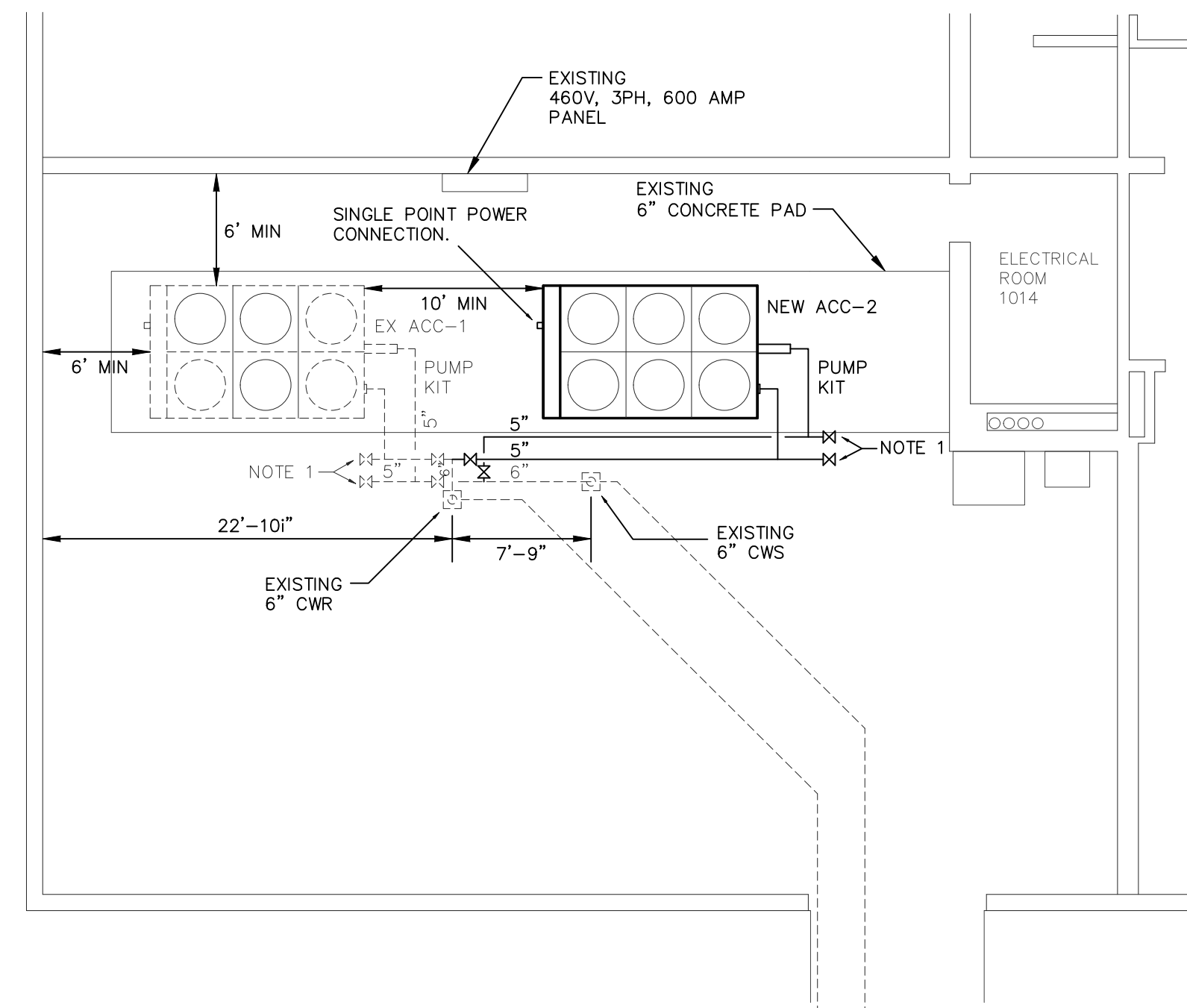
PROVIDE TEE AND ISOLATION VALVE FOR CONNECTION OF BACK-UP CHILLER. PROVIDE ADDITIONAL CHILLER ISOLATION VALVES IF NOT PROVIDED WITH PUMP PACKAGE.

NOTE 1

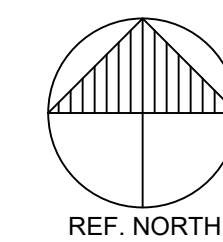
NOTE: DISPOSITION OF EXISTING CHILLER SHALL BE COORDINATED WITH OWNER PRIOR TO BEGINNING WORK. CONTRACTOR SHALL HAND OVER TO OWNER ANY EQUIPMENT COMPONENTS, RE-CLAIMED R-410 REFRIGERANT OR ACCESSORIES REQUESTED.



DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

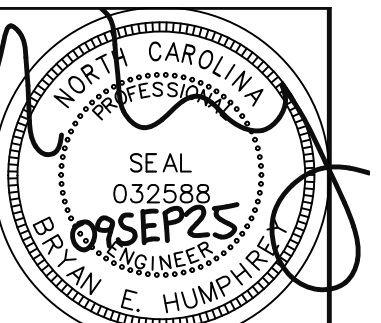


RENOVATION PLAN
SCALE: 1/8" = 1'-0"



MECHANICAL PLANS

SCALE: 1/8" = 1'-0"



REVISIONS

NO.	DATE	DESCRIPTION

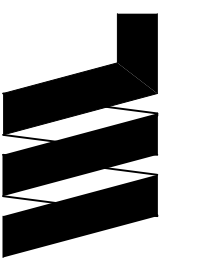
THESE CHANGES AND THE SIGNATURE OF THE ENGINEER HAVE BEEN MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENGINEERING COUNCIL OF NORTH CAROLINA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE ORIGINAL DRAWINGS.

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Phone 336.379.0663
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FIRM LICENSE: C-2272

CHILLER #2 REPLACEMENT FOR:
LEE COUNTY
COURTHOUSE AND JAIL

JOB NO. 2490-2
ORIGINAL ISSUE DATE 09SEP25
DRAWN BY BEH
CHECKED BY BEH
SHEET NO.

M-1