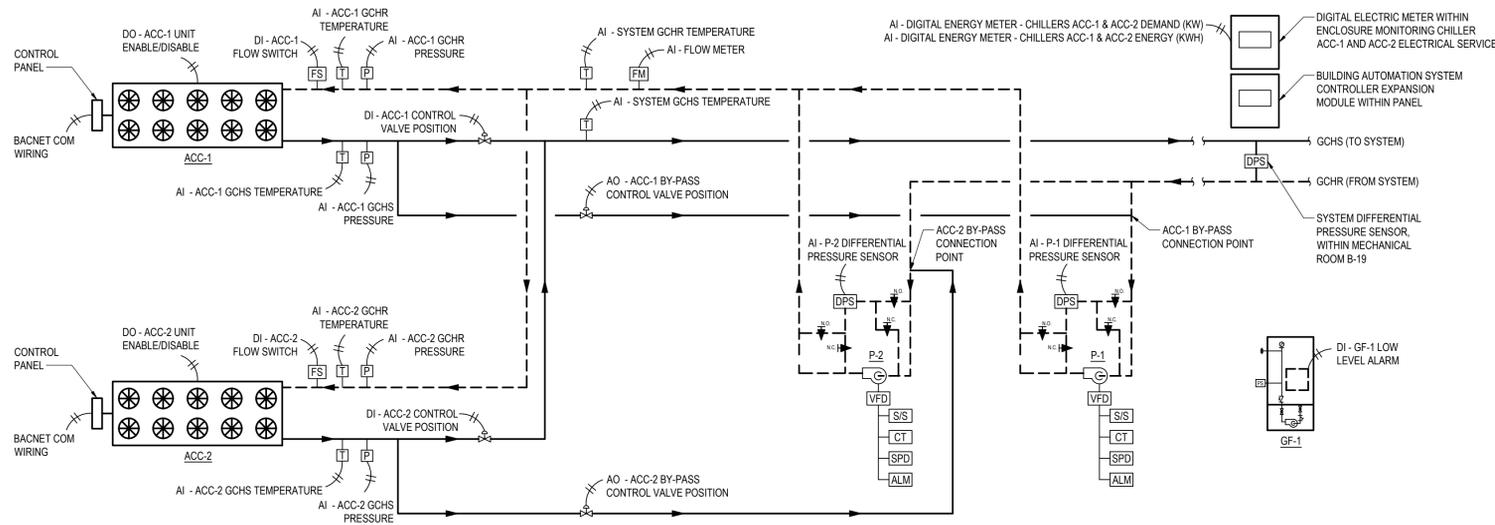


FILE: R:\PROJECTS\143 - OCS ORANBURG\CHILLER REPLACEMENT\CAD\843 - M-802.DWG
 USER: CHRISTOPHER STROM
 PLOTTED: 12/14/2023 11:33:59 AM
 SAVED: 12/14/2023 11:33:59 AM



CHILLER PLANT POINTS LIST						
ITEM	DESCRIPTION	INPUT		OUTPUT		ACTIONS / NOTES
		DIGITAL	ANALOG	DIGITAL	ANALOG	
1	SYSTEM CHILLED WATER SUPPLY TEMPERATURE SETPOINT				X	ADJUSTABLE BY OPERATOR
2	SYSTEM CHILLED WATER SUPPLY TEMPERATURE		X			TEMPERATURE SENSOR
3	SYSTEM CHILLED WATER RETURN TEMPERATURE		X			TEMPERATURE SENSOR
4	SYSTEM CHILLED WATER FLOW METER		X			FLOW METER
5	SYSTEM DIFFERENTIAL PRESSURE SETPOINT				X	ADJUSTABLE BY OPERATOR
6	SYSTEM DIFFERENTIAL PRESSURE		X			DIFFERENTIAL PRESSURE SENSOR
7	DIGITAL ENERGY METER - CHILLERS ACC-1 & ACC-2 DEMAND (KW)		X			DIGITAL ENERGY METER
8	DIGITAL ENERGY METER - CHILLERS ACC-1 & ACC-2 ENERGY (KWH)		X			DIGITAL ENERGY METER
ACC-1						
9	ACC-1 UNIT ENABLE/DISABLE				X	HARDWIRE CONNECTION
10	ACC-1 FLOW SWITCH	X				FLOW SWITCH BY CHILLER MFR
11	ACC-1 CHILLED WATER SUPPLY TEMPERATURE		X			TEMPERATURE SENSOR
12	ACC-1 CHILLED WATER RETURN TEMPERATURE		X			TEMPERATURE SENSOR
13	ACC-1 CHILLED WATER SUPPLY PRESSURE		X			PRESSURE SENSOR
14	ACC-1 CHILLED WATER RETURN PRESSURE		X			PRESSURE SENSOR
15	ACC-1 CONTROL VALVE COMMAND OPEN/CLOSE				X	COMMAND VALVE OPEN/CLOSE
16	ACC-1 CONTROL VALVE POSITION	X				MONITOR VALVE OPEN/CLOSE
17	ACC-1 CALL FOR PUMP ENABLE	X				CHILLER PUMP ENABLE REQUEST
18	ACC-1 GENERAL ALARM	X				ALARM
ACC-2						
19	ACC-2 UNIT ENABLE/DISABLE				X	HARDWIRE CONNECTION
20	ACC-2 FLOW SWITCH	X				FLOW SWITCH BY CHILLER MFR
21	ACC-2 CHILLED WATER SUPPLY TEMPERATURE		X			TEMPERATURE SENSOR
22	ACC-2 CHILLED WATER RETURN TEMPERATURE		X			TEMPERATURE SENSOR
23	ACC-2 CHILLED WATER SUPPLY PRESSURE		X			PRESSURE SENSOR
24	ACC-2 CHILLED WATER RETURN PRESSURE		X			PRESSURE SENSOR
25	ACC-2 CONTROL VALVE COMMAND OPEN/CLOSE				X	COMMAND VALVE OPEN/CLOSE
26	ACC-2 CONTROL VALVE POSITION	X				MONITOR VALVE OPEN/CLOSE
27	ACC-2 CALL FOR PUMP ENABLE	X				CHILLER PUMP ENABLE REQUEST
28	ACC-2 GENERAL ALARM	X				ALARM
P-1						
29	P-1 ENABLE/DISABLE				X	START/STOP
30	P-1 STATUS	X				CURRENT SENSOR
31	P-1 SPEED				X	CONSTANT FLOW
32	P-1 ALARM	X				GENERAL ALARM
33	P-1 DIFFERENTIAL PRESSURE		X			DIFFERENTIAL PRESSURE SENSOR
P-2						
34	P-2 ENABLE/DISABLE				X	START/STOP
35	P-2 STATUS	X				CURRENT SENSOR
36	P-2 SPEED				X	CONSTANT FLOW
37	P-2 ALARM	X				GENERAL ALARM
38	P-2 DIFFERENTIAL PRESSURE		X			DIFFERENTIAL PRESSURE SENSOR
GF-1						
39	GLYCOL FEED SYSTEM LOW LEVEL ALARM	X				LOW LEVEL ALARM

1 CHILLER PLANT CONTROLS DIAGRAM
 SCALE: NOT TO SCALE

CONTROLS NOTES

- SECURE AND PAY FOR THE SERVICES OF HONEYWELL INTERNATIONAL INC. FOR THE FOLLOWING CONTROLS WORK:
 - CONTROL PANEL WIRE TERMINATIONS AT EXISTING CONTROL PANELS AS REQUIRED FOR SYSTEM DEVICES.
 - EXISTING BMS PROGRAM CHANGES INCLUDING GRAPHICS UPDATES TO SUPPORT THE SEQUENCES OF OPERATIONS.
 - COMMISSIONING OF CONTROLS PROVIDED IN THIS PROJECT.
 - TRAINING OF CONTROLS PROVIDED IN THIS PROJECT.
- HONEYWELL INTERNATIONAL INC. CONTACT:
 - VICTOR AYOOA, (718) 374-1862, VICTOR.AYOOA@HONEYWELL.COM

CHILLER PLANT SEQUENCE OF OPERATIONS

- SYSTEM GENERAL DESCRIPTION:**
 - THE BUILDING AUTOMATION SYSTEM (BAS) SHALL MONITOR AND CONTROL THE SYSTEM'S CHILLERS(S), PUMP(S), AND CONTROL VALVES AS INDICATED IN THE CHILLED WATER FLOW DIAGRAM, POINTS LIST, AND SEQUENCE OF OPERATIONS LISTED BELOW. THE BAS SHALL PROVIDE COMPLETE CHILLER PLANT CONTROL, INCLUDING DETERMINING WHEN TO OPERATE IN SINGLE CHILLER OPERATION AND TWO CHILLER OPERATION BASED ON PEAK CHILLER PLANT EFFICIENCY AND OVERALL SYSTEM LOAD. BAS CHILLER PLANT OPERATION SHALL INCLUDE BAS CONTROL OF CONTROL VALVES AND PUMPS ASSOCIATED WITH THE TWO CHILLERS TO PROVIDE A COMPLETE CHILLER PLANT OPERATION AND CONTROL THROUGH THE BAS.
 - THE CHILLER PLANT SYSTEM CONSISTS OF TWO PACKAGED AIR COOLED CHILLERS (ACC-1 & ACC-2) AND ASSOCIATED PRIMARY PUMPS (P-1 & P-2). THE CHILLER SYSTEM HAS A PIPING CONFIGURATION ARRANGED AS A VARIABLE PRIMARY PUMPING SYSTEM SUPPLYING CHILLED WATER TO THE FACILITY.
 - THE CHILLERS AND PUMPS SHALL OPERATE IN LEAD/LAG OPERATION INDICATED BELOW. CHILLER ACC-1 AND PUMP P-1 SHALL OPERATE TOGETHER AND CHILLER ACC-2 AND PUMP P-2 SHALL OPERATE TOGETHER.
 - THE CHILLER PLANT CONTROLS SHALL INCLUDE CHILLED WATER RESET CONTROLS. AT PART LOAD CONDITIONS, THE BAS SHALL RESET UP THE CHILLED WATER SUPPLY TEMPERATURE. THE CHILLED WATER SUPPLY TEMPERATURE RESET SHALL HAVE A MAXIMUM RESET OF 4°F (ADJUSTABLE). THE CHILLED WATER RESET SHALL BE LOCKED OUT WHEN OUTSIDE AIR DEW POINT IS ABOVE 55°F (ADJUSTABLE).
 - CHILLERS ACC-1 AND ACC-2 FLOW SWITCHES SHALL BE FURNISHED WITH THE RESPECTIVE CHILLERS. FLOW SWITCHES SHALL BE HARD WIRED DIRECTLY TO THE CHILLERS. THE BAS SHALL DISPLAY FLOW SWITCH STATUS VIA BACnet INTERFACE WITH THE CHILLERS.
 - THE BAS SHALL MONITOR AND DISPLAY THE PRIMARY CHILLED WATER FLOW ON THE OPERATOR WORKSTATION AS MEASURED BY THE SYSTEM FLOW METERS.
 - THE BAS SHALL DISPLAY EACH COMPRESSORS RUN TIME HOURS, NUMBER OF CYCLES AND REFRIGERANT PRESSURE FOR EACH OF THE CHILLERS (ACC-1 & ACC-2) VIA BACnet INTERFACE WITH THE CHILLERS.
 - THE BAS SHALL DISPLAY EACH PUMPS (P-1 & P-2) RUN TIME HOURS AND NUMBER OF CYCLES.
 - IN ADDITION TO THE POINTS LISTED ON THE DRAWINGS, REVIEW WITH THE DIRECTOR'S REPRESENTATIVE THE BACnet POINTS AVAILABLE ON EACH CHILLER THROUGH ITS BACnet INTERFACE. INCLUDE ALL PROGRAMMING TO ADDRESS AND DISPLAY THESE ADDITIONAL BACnet POINTS REQUESTED BY THE FACILITY ON THE OPERATOR WORKSTATION.
 - CHILLER PLANT SYSTEM ENABLE/DISABLE:**
 - THE CHILLER PLANT SHALL BE ENABLED/DISABLED BY THE CHILLER PLANT CONTROLLER AS REQUESTED BY THE BAS OPERATOR INTERFACE PANEL OR THE BAS TIME OF DAY SCHEDULE (ADJUSTABLE). THE BAS WILL START, STOP, AND MODULATE THE CHILLERS AND CHILLED WATER PUMPS BASED UPON SYSTEM LOAD.
 - THE CHILLER PLANT SHALL BE DISABLED WHEN THE OUTDOOR AIR TEMPERATURE IS LESS THAN 55 DEGREES F (ADJUSTABLE).
 - CHILLER STAGING:**
 - CHILLERS WILL OPERATE IN A LEAD/LAG SEQUENCE THROUGH THE CHILLER PLANT CONTROLLER AND THE BAS, SO THAT THE LAST CHILLER ENERGIZED IS THE FIRST TO BE DE-ENERGIZED. DURING PART LOAD CONDITIONS WHERE THE BUILDING LOAD IS LESS THAN OR EQUAL TO THE CAPACITY OF A SINGLE CHILLER, THE CHILLER PLANT CONTROLLER AND BAS SHALL ANALYZE PLANT EFFICIENCY AND DETERMINE IF THE SYSTEM SHOULD OPERATE ONE CHILLER OR TWO CHILLERS BASED ON MAINTAINING OVERALL PEAK CHILLER PLANT EFFICIENCY. THE BAS SHALL INITIATE THE START OF THE SECOND CHILLER WHENEVER THE CHILLED WATER LOAD, AS DETERMINED BY THE SYSTEM SUPPLY WATER TEMPERATURE, IS NOT MET FOR 20 MINUTES (ADJ.). THE SYSTEM SHALL INITIATE THE SHUT DOWN OF THE SECOND CHILLER WHENEVER EXCESS CHILLED WATER CAPACITY EXISTS, AS DETERMINED BY PERCENT RUN LOAD AMPS, FOR 20 MINUTES (ADJ.).
 - THE CHILLER SEQUENCE ORDER WILL BE ROTATED ON A SCHEDULE. CHILLER ROTATIONS WILL BE PROGRAMMED TO OCCUR AT ONE OF THE FOLLOWING OPERATOR-DEFINED INTERVALS:
 - NEVER: CHILLERS WILL ALWAYS HAVE THE SAME SEQUENCE NUMBER.
 - DAY OF WEEK: CHILLERS WILL ROTATE ON A USER-SPECIFIED DAY AND TIME ONCE PER WEEK.
 - FIXED NUMBER OF DAYS: CHILLERS WILL ROTATE AFTER THE NUMBER OF DAYS SPECIFIED HAS ELAPSED.
 - RUN HOURS: CHILLERS ROTATE TO ATTEMPT TO EVEN OUT THE AMOUNT OF TIME EACH CHILLER RUNS. WHEN ANY CHILLER REACHES THE USER-DEFINED RUN HOURS SETPOINT (WHICH IS MEASURED ONLY FROM THE LAST ROTATION), THE SYSTEM CONTROLLER CAN RE-SEQUENCE THE CHILLERS, IF NECESSARY, TO PUT THE CHILLER WITH THE LEAST TOTAL RUN HOURS INTO A HIGHER-USE POSITION IN THE SEQUENCE.
 - ROTATIONAL INPUT: CHILLERS WILL ROTATE WHEN THE SPECIFIED REFERENCE COMMANDS THEM TO ROTATE.
 - FROM THE BAS OPERATOR INTERFACE, AN OPERATOR SHALL BE ABLE TO MANUALLY CHANGE THE LEAD/LAG SEQUENCE OR REQUEST ANY CHILLER TO BE UNAVAILABLE WHICH WOULD REMOVE IT FROM THE ROTATION SEQUENCE.
 - LEAD CHILLER ENABLE:** WHEN THE CHILLER PLANT IS ENABLED, UPON A CALL FOR COOLING FROM THE SYSTEM THE BAS SHALL:
 - OPEN THE LEAD CHILLER CONTROL VALVE TO THE FULL OPEN POSITION.
 - CLOSE THE LEAD CHILLER BY-PASS CONTROL VALVE.
 - CLOSE THE LAG CHILLER CONTROL VALVE AND BY-PASS CONTROL VALVE.
 - ENERGIZE THE LEAD CHILLED WATER PUMP (THE LAG CHILLED WATER PUMP SHALL REMAIN DE-ENERGIZED).
 - WHEN FLOW STATUS FOR THE PUMP IS PROVEN VIA THE LEAD CHILLER FLOW SWITCH AND THE SYSTEM FLOW METER, THE SYSTEM SHALL REPORT RUNNING STATUS TO THE BAS.
 - ENERGIZE THE LEAD CHILLER (THE LAG CHILLER SHALL REMAIN DE-ENERGIZED).
 - LAG CHILLER ENABLE:** WHEN THE CHILLER PLANT IS ENABLED AND THE LAG CHILLER IS ENABLED:
 - OPEN THE LAG CHILLER CONTROL VALVE TO THE FULL OPEN POSITION.
 - CLOSE THE LAG CHILLER BY-PASS CONTROL VALVE.
 - ENERGIZE THE LAG CHILLED WATER PUMP.
 - WHEN FLOW STATUS FOR THE PUMP IS PROVEN VIA THE LAG CHILLER FLOW SWITCH AND THE SYSTEM FLOW METER, THE SYSTEM SHALL REPORT RUNNING STATUS TO THE BAS.
 - ENERGIZE THE LAG CHILLER.
 - CHILLER PLANT DE-ENERGIZE:** THE CHILLER PLANT SHALL BE DE-ENERGIZED WHEN THERE IS NOT AN ACTIVE CALL FOR COOLING FROM THE SYSTEM:
 - THE CHILLER PLANT SHALL BE DE-ENERGIZED IN THE OPPOSITE ORDER THAT IT WAS ENERGIZED IN THE STEPS ABOVE.
 - ACTIVE CHILLED WATER PUMPS BEING DE-ENERGIZED SHALL CONTINUE TO RUN FOR 5 MINUTES (ADJUSTABLE) AFTER ITS ASSOCIATED CHILLER HAS BEEN DE-ENERGIZED.
- CHILLER PLANT OPERATION:**
 - SINGLE (LEAD) CHILLER AND PUMP OPERATION:** WHEN THE CHILLER PLANT IS ENABLED, THE COOLING LOAD IS LESS THAN THE CAPACITY OF ONE CHILLER AND THE PLANT EFFICIENCY HAS BEEN ANALYZED TO DETERMINE THAT THE SYSTEM SHOULD OPERATE ONE CHILLER BASED ON MAINTAINING OVERALL PEAK CHILLER PLANT EFFICIENCY, THE SYSTEM SHALL OPERATE AS FOLLOWS:
 - THE LEAD CHILLER SHALL MODULATE ITS COMPRESSORS (CAPACITY) TO HOLD A SUPPLY CHILLED WATER SETPOINT OF 45 DEGREES F (ADJUSTABLE).
 - THE LEAD CHILLED WATER PUMP SHALL MODULATE FLOW TO SATISFY THE SYSTEM PRESSURE DIFFERENTIAL SETPOINT AT THE SYSTEM DIFFERENTIAL PRESSURE SENSOR (PRESSURE DETERMINED DURING SYSTEM BALANCING - INITIALLY SET AT 15 PSIG) (ADJUSTABLE).
 - THE BAS SHALL MONITOR THE SYSTEM FLOW METER AND SHALL NOT ALLOW THE LEAD CHILLED WATER PUMP TO MODULATE FLOW BELOW THE LEAD CHILLER'S MINIMUM ALLOWABLE FLOW PLUS 20% (MINIMUM SINGLE CHILLER OPERATION FLOW SETPOINT) 205 GPM (ADJUSTABLE - THIS SHALL BE SET AT 120% OF THE APPROVED CHILLER'S MINIMUM ALLOWABLE FLOW AS INDICATED IN THE APPROVED MANUFACTURER'S PUBLISHED LITERATURE).
 - WHEN THE LEAD CHILLED WATER PUMP FLOW IS AT THE MINIMUM SINGLE CHILLER FLOW SETPOINT, THE LEAD CHILLER'S BY-PASS CONTROL VALVE SHALL MODULATE OPEN TO SATISFY THE SYSTEM DIFFERENTIAL PRESSURE SETPOINT. MODULATION OF THE BY-PASS CONTROL VALVE SHALL ALLOW FOR FURTHER MODULATION OF THE CHILLED WATER SYSTEM FLOW WHILE MAINTAINING MINIMUM SINGLE CHILLER FLOW SETPOINT THROUGH THE LEAD CHILLER.
 - IF CHILLED WATER SYSTEM FLOW DROPS BELOW THE APPROVED CHILLERS MINIMUM ALLOWABLE FLOW PLUS 10%, 190 GPM (ADJUSTABLE), AN ALARM SHALL BE GENERATED AND THE LEAD CHILLED WATER PUMP SHALL BE MODULATED TO PROVIDE DESIGN CHILLED WATER FLOW.
 - DOUBLE (LEAD & LAG) CHILLER AND PUMP OPERATION:** WHEN THE CHILLER PLANT IS ENABLED, THE COOLING LOAD IS GREATER THAN THE CAPACITY OF ONE CHILLER OR THE PLANT EFFICIENCY HAS BEEN ANALYZED TO DETERMINE THAT THE SYSTEM SHOULD OPERATE TWO CHILLERS BASED ON MAINTAINING OVERALL PEAK CHILLER PLANT EFFICIENCY, THE SYSTEM SHALL OPERATE AS FOLLOWS:
 - THE LEAD AND LAG CHILLERS SHALL MODULATE THEIR COMPRESSORS (CAPACITY) EQUALLY TO HOLD A SUPPLY CHILLED WATER SETPOINT OF 45 DEGREES F (ADJUSTABLE).
 - THE LEAD AND LAG CHILLED WATER PUMPS SHALL MODULATE FLOW TO SATISFY THE SYSTEM PRESSURE DIFFERENTIAL SETPOINT AT THE SYSTEM DIFFERENTIAL PRESSURE SENSOR (PRESSURE DETERMINED DURING SYSTEM BALANCING - INITIALLY SET AT 15 PSIG) (ADJUSTABLE).
 - THE BAS SHALL MONITOR THE SYSTEM FLOW METER AND SHALL NOT ALLOW THE LEAD AND LAG CHILLED WATER PUMPS TO MODULATE SYSTEM FLOW BELOW THE LEAD AND LAG CHILLERS MINIMUM ALLOWABLE FLOW PLUS 20% ADDED TOGETHER (MINIMUM DOUBLE CHILLER OPERATION FLOW SETPOINT) 410 GPM (ADJUSTABLE - THIS SHALL BE SET AT 240% OF THE APPROVED CHILLERS MINIMUM ALLOWABLE FLOW AS INDICATED IN THE APPROVED MANUFACTURER'S PUBLISHED LITERATURE).
 - WHEN THE LEAD AND LAG CHILLED WATER PUMPS FLOW IS AT THE MINIMUM DOUBLE CHILLER FLOW SETPOINT, THE LEAD AND LAG CHILLER'S BY-PASS CONTROL VALVES SHALL MODULATE OPEN EQUALLY TO SATISFY THE SYSTEM DIFFERENTIAL PRESSURE SETPOINT. MODULATION OF THE BY-PASS CONTROL VALVES SHALL ALLOW FOR FURTHER MODULATION OF THE CHILLED WATER SYSTEM FLOW WHILE MAINTAINING MINIMUM DOUBLE CHILLER FLOW SETPOINT THROUGH THE LEAD AND LAG CHILLERS.
 - IF CHILLED WATER SYSTEM FLOW DROPS BELOW THE DOUBLE THE APPROVED CHILLERS MINIMUM ALLOWABLE FLOW PLUS 10%, 380 GPM (ADJUSTABLE), AN ALARM SHALL BE GENERATED AND THE LEAD AND LAG CHILLED WATER PUMPS SHALL BE MODULATED TO PROVIDE DESIGN CHILLED WATER FLOW.
- CHILLER ISOLATION VALVES:**
 - THE CHILLER ISOLATION VALVES SHALL PREVENT THE FLOW OF FLUID THROUGH NON-OPERATING CHILLERS. WHEN THE BAS INITIATES A CHILLER ENABLE SIGNAL, THE CHILLER ISOLATION VALVE WILL BE CONTROLLED TO 100% OPEN. CHILLER ISOLATION VALVE SHALL BE A SLOW-ACTUATING VALVE WITH A STROKE TIME OF (60-120) SECONDS (ADJ.). WHEN THE VALVE IS CONFIRMED TO BE 100% OPEN THE SYSTEM SHALL START THE RESPECTIVE CHILLED WATER PRIMARY PUMP. IF THE CHILLERS ISOLATION VALVE IS NOT CONFIRMED OPEN AFTER (VALVE STROKE TIME PLUS 60 SEC) 180 SECONDS (ADJ.), THE BAS SHALL ANNUNCIATE A CHILLER ISOLATION VALVE FAILURE ALARM TO THE BAS OPERATOR INTERFACE.
- CHILLED WATER PUMP COMMANDS:**
 - WHEN A CHILLED PUMP IS ENABLED, THE BAS SHALL START THE PUMP THROUGH A CONTACT CLOSURE OF THE PUMPS VARIABLE FREQUENCY DRIVE ENABLE CONTACTS. THE BAS SHALL DETECT CHILLED WATER PUMP RUN STATUS BY A CURRENT SWITCH.
 - PRIMARY CHILLED WATER PUMP FAILURE: IF THE LEAD PUMP START/STOP RELAY IS ENABLED AND THE PUMPS RUNNING STATUS IS OFF FOR MORE THAN 30 SECONDS (ADJ.), THE SYSTEM SHALL ANNUNCIATE A CHILLED WATER PUMP FAILURE ALARM TO THE BAS AND START THE LAG CHILLER AND PUMP. ONCE THE PROBLEM HAS BEEN CORRECTED, THE OPERATOR SHALL BE ABLE TO CLEAR THE ALARM FAILURE FROM THE BAS OPERATOR INTERFACE OR BY MANUALLY OVERRIDING THE PUMP ON. THIS SHALL RE-ENABLE THE LEAD/LAG SEQUENCE.
- GLYCOL FEED SYSTEM:**
 - THE GLYCOL FEED SYSTEM OPERATES UNDER ITS LOCAL CONTROLS. IT SHALL HAVE AN INTEGRAL PRESSURE SWITCH WITH ADJUSTABLE CUT-IN/CUT-OUT PRESSURE RANGE. WHEN THE SYSTEM PRESSURE DROPS BELOW THE CUT-IN SETPOINT, THE GLYCOL FEED PUMP SHALL ENERGIZE. WHEN THE SYSTEM RISES ABOVE THE CUT-OUT SETPOINT, THE GLYCOL FEED PUMP SHALL DE-ENERGIZE.
 - WHEN THE INTEGRAL TANK LOW LEVEL FLOAT SWITCH ACTIVATES DUE TO GLYCOL LOW LEVEL, AN ALARM SHALL BE GENERATED.

NEW YORK STATE OF OPPORTUNITY | **Office of Mental Health**

CONSULTANT: **Friedman Fisher Associates, P.C.**

CERTIFICATE OF AUTHORIZATION #: 017869

WARNING:
 THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

REGISTRATION EXPIRES: 10/31/24

CONTRACT: HVAC

TITLE: REPLACE BUILDING CHILLERS, BUILDING 144

LOCATION: COOK CHILL PRODUCTION CENTER, 145 OLD ORANBURG ROAD, ORANBURG, NY

CLIENT: OFFICE OF MENTAL HEALTH

12/6/2023 | BID DOCUMENTS

PROJECT NUMBER: 47430 - H

DESIGNED BY: CHS

DRAWN BY: CHS

FIELD CHECK:

APPROVED:

SHEET TITLE: CONTROLS DIAGRAM

DRAWING NUMBER: M-802

SHEET 14 OF 18