DDC POINTS LIST								
DESCRIPTION	DEVICE	INPUTS ANALOG		OUTPUTS ANALOG		ALARMS	DICITAL	REMARKS
		ANALOG	DIGITAL	ANALOG	DIGITAL	ANALOG	DIGITAL	[NOTE 1]
CHILLED WATER SYSTEM CHILLED WATER PUMPS - P-4, P-5, P-6, P-7(FUTURE)								
PUMP START/STOP PUMP STATUS	CR CS	X			X	X		
PUMP VFD SPEED CONTROL	AUX			X				
PUMP VFD SPEED %	AUX			X		X		
CHILLED WATER LOOP CHILLED WATER FLOW	FM	X				X		MAGNETIC FLOW METER
CHILLED WATER RETURN TEMPERATURE	TS	X				X		WATER TEST METER
CHILLED WATER SUPPLY TEMPERATURE SYSTEM PRESSURE — 5TH FLOOR	TS DPS	X				X		
CHILLED WATER SYSTEM BYPASS — FLOW CONTROL VALVE	FCV			X				
CHILLER CONTROL - EACH CHILLER CH-1, CH-2, CH-3, CH-4(FUTURE)								NOTE 2
CWS TEMPERATURE CWR TEMPERATURE	TS TS	X						
CWR FLOW CONTROL VALVE CHILLER DIFFERENTIAL PRESSURE SENSOR	ICV DPS	X		X		X		GLOBE
CHILLER FLOW SWITCH CHILLER ENABLE/DISABLE	FS SS				Х			FIELD INSTALL AND WIRE NOTE 3
CHILLER STATUS	AUX		X		^			
CHILLER ALARM CHILLER KW	AUX	X	X			X	X	NOTE 3 NOTE 6
CHILLER STARTER FAULT EVAPORATOR WATER PRESSURE (PSIA)	AUX AUX	X	X			X	Х	NOTE 6
CONDENSER WATER PRESSURE (PSIA)	AUX	X				X		
REMOTE CWS TEMPERATURE SETPOINT ADJUSTMENT EACH COMPRESSOR RUN TIME (HOURS)	AUX AUX	X		X				
CHILLER DEMAIND LIMIT	AUX			X				
CONDENSER WATER SYSTEM								
PUMP CONTROL - EACH PUMP P-8, P-9, P-10, P-11(FUTURE) PUMP START/STOP	CR				X			
PUMP STATUS PUMP VFD SPEED CONTROL	CS AUX	X		X		Χ		
PUMP VFD SPEED %	AUX			X		Χ		
CONDENSER WATER LOOP								
MAKE-UP WATER FLOW (GALLONS) CS TEMPERATURE BEFORE CHILLERS	PI TS	X	X			X		PULSE METER, NOTE 7
CS TEMPERATURE AFTER BYPASS	TS	X				X		
CR TEMPERATURE WARM-UP BYPASS CONTROL VALVE	TS FCV	X		X		X		GLOBE VALVE
CHILLER CONTROL— EACH CHILLER CH-1, CH-2, CH-3, CH-4(FUTURE)								
CS TEMPERATURE	TS	X				X		
CR TEMPERATURE CS ISOLATION VALVE	TS FCV	X		X		X		
CHILLER FLOW SWITCH	FS							FIELD INSTALL AND WIRE
COOLING TOWER CONTROL — EACH CELL CT—1, CT—2, CT—3, CT—4(FUT.)	SS				X			
FAN VFDSTART/STOP FAN VFD STATUS	CT		X		^		Χ	
FAN VFD SPEED CONTROL FAN VFD SPEED %	AUX			X	:	Χ		
CS CONTROL VALVE CONTROL & POSITION CR CONTROL VALVE CONTROL & POSITION	ICV				X			2-POSTION BUTTERFLY VALVE 2-POSTION BUTTERFLY VALVE
CR CONTROL VALVE CONTROL & POSITION	ICV				Χ			2-POSTION BUTTERFLY VALVE
EQUALIZATION BRANCH CONTROL VALVE & POSITION BASIN LOW LEVEL ALARM	ICV LS		X		X		X	2-POSTION BUTTERFLY VALVE
BASIN HIGH LEVEL ALARM BASIN WATER TEMPERATURE	LS TS	X	Х			X	Χ	
VIBRATION SWITCH ALARM	AUX		X				Χ	
WATER MAKE-UP SYSTEM BASIN HEATER								WIRE LEVEL CONTROL AND VALVE WIRE T'STAT AND CONTROL
PULSED POWER WATER TREATMENT SYSTEM ENABLE/DISABLE PULSED POWER WATER TREATMENT SYSTEM STATUS	CR CS		X		Χ		Х	
SAND FILTER SYSTEM - CTFS-1, CTFS-2			· · · · · · · · · · · · · · · · · · ·					
ENABLE/DISABLE	CR				Χ			
PUMP STATUS ALARM STATUS	CS A		X				X	
FILTER STATUS DRAIN FLOW (GALLONS)	DPH PI		X				X	PULSE METER
	1 1		^					, OLOC WILLIAM
PROCESS CHILLED WATER SYSTEM PROCESS CHILLER: PCH-1 (GLYCOL SYSTEM)								
PCWS TEMPERATURE PCWR TEMPERATURE	TS TS	X						
PCWS FLOW	FS		X				X	NO FLOW
CHILLER ENABLE/DISABLE CHILLER STATUS	CT AUX		X		X		Χ	
PROCESS CHILLED WATER SYSTEM GLYCOL FEED ALARM STATUS	AUX		X				Χ	
PROCESS CHILLED WATER PUMPS: P-16 AND P-17								
PUMP START/STOP PUMP STATUS	CR CS	X			Χ	X		
PUMP VFD SPEED CONTROL	AUX			X				
PUMP VFD STATUS CWR CONTROL VALVE	AUX ICV			Х	Χ	X		TWO POSITION BUTTERFLY VALVE
HEAT EXCHANGER PHX-1								
GLYCOL PCWS TEMPERATURE GLYCOL PCWR TEMPERATURE	TS TS	X						
GLYCOL FEWIX TEMPERATORIE GLYCOL SIDE CONTROL VALVE	FCV		:	Х				

DESCRIPTION	DEVICE			OUTPUTS		ALARMS		REMARKS
GLYCOL SIDE PRESSURE-INLET	PS	ANALO	G DIGITAL X	ANALOG	DIGITAL	ANALOG X	DIGITAL	[NOTE 1]
GLYCOL SIDE PRESSURE—OUTLET	PS	-	X			X		
MEDICAL EQUIPMENT SIDE OF HEAT EXCHANGER								
NON-GLYCOL PCWS TEMPERATURE	TS	X						
NON-GLYCOL PCWR TEMPERATURE	TS	X						
NON-GLYCOL SIDE CONTROL VALVE NON-GLYCOL SIDE PRESSURE-INLET	FCV PS		X	X		X		·.
NON-GLYCOL SIDE PRESSURE-OUTLET	PS		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			X		
NON-GLYCOL PCWS VALVE	ICV			X		Х		VALVE IS CLOSED
CITY WATER BACK -UP SUPPLY VALVE	ICV			X		X		VALVE IS OPEN
CITY WATER BACK—UP DRAIN VALVE	ICV			X		X		VALVE IS OPEN
PROCESS CHILLED WATER PUMPS - P-18, P-19								
PUMP START/STOP	CR				X .			
PUMP STATUS	CS	X				Х		
PUMP VFD SPEED CONTROL	AUX			X				
PUMP VFD STATUS	AUX			X		Х		
DOMESTIC WATER HEATING SYSTEM								
WATER HEATER: DWH-1, DWH-2, DWH-3(FUT.), DWH-4(FUT.)								
ENABLE/DISABLE	CR				X			
STATUS	AUX		X				Χ	
ALARM STATUS	AUX		X				Χ	
CONTROL VALVE	FCV	<u></u>		X				NOTE 5
HOT WATER SUPPLY TEMPERATURE	TS	X				Х		
PIPING SYSTEM								
HOT WATER SUPPLY TEMPERATURE	TS	X				X		
HOT WATER CIRC TEMPERATURE	TS	X						
COLD WATER SUPPLY TEMPERATURE	TS	X				X		
CIRC PUMP: P-14, P-15(FUTURE)								
ENABLE/DISABLE	CR				Х		V	
PUMP STATUS	CS		X				X	
DOMESTIC WATER PRESSURE BOOSTER SYSTEM: bwp-1								
ENABLE/DISABLE	CR				X			
PUMP STATUS	CS		X				Χ	
SYSTEM PRESSURE-INLET	PS		X			Χ		
SYSTEM PRESSURE-OUTLET	PS		X			Χ		
WATER METER	FM		X					MAGNETIC FLOW METER
HEAT RECOVERY WATER SYSTEM								
PUMP CONTROL: P-12 AND P-13								
PUMP START/STOP	CR				X			
PUMP STATUS	CS	X				Χ		
PUMP VFD SPEED CONTROL	AUX			Χ				
PUMP VFD STATUS	AUX			Χ		X		
IEAT DECOMEDY WATER LOOP								
HEAT RECOVERY WATER FLOW (CALLONS)								
MAKE-UP WATER FLOW (GALLONS) MAIN SUPPLY TEMPERATURE	PI TS	X	X			X		
MAIN RETURN TEMPERATURE	TS	X				X		
CONTROL VALVE	FCV			Χ				
HEAT RECOVERY GLYCOL FEED ALARM STATUS	AUX		X				Χ	
STEAM SYSTEM								
HIGH PRESSURE STEAM FLOW —UPSTREAM OF PRV STATION	FM	X						INSERTION TURBINE METER
PRV ASSEMBIY PRESSURE-INLET	PS		X			X		
	PS PS		X			X		
PRV ASSEMBIY PRESSURE-INLET								·
PRV ASSEMBIY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL								HEATING/SUMMER
PRV ASSEMBIY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL							X	HEATING/SUMMER
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT	PS		X				X	HEATING/SUMMER
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3	PS		X				X	HEATING/SUMMER
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE	PS AUX CR		X		X		X	HEATING/SUMMER
PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL DFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL	PS AUX CR AUX		X	X	X	X	X	HEATING/SUMMER
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P-1, P-2, P-3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%)	PS AUX CR AUX AUX	X	X	X	X	X	X	HEATING/SUMMER
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT OUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL	PS AUX CR AUX	X	X		X	X	X	HEATING/SUMMER USED FOR PUMP CONTROL
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT OUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR	PS AUX CR AUX AUX CS	 	X		X	X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR	PS AUX CR AUX AUX CS DPS	 	X	X	X	X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL DEFT—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE	PS AUX CR AUX AUX CS DPS TCV	 	X	X	X	X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT OUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE 2/3 STEAM CONTROL VALVE	PS AUX CR AUX AUX CS DPS TCV TCV	X	X	X	X	X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE	PS AUX CR AUX AUX CS DPS TCV TCV TS	X	X	X X X X	X	X X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE OUTLET WATER TEMPERATURE	PS AUX CR AUX AUX CS DPS TCV TCV TS TS	X	X	X	X	X X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE	PS AUX CR AUX AUX CS DPS TCV TCV TS	X	X	X X X X	X	X X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P-1, P-2, P-3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE 2/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE OUTLET WATER TEMPERATURE PRESSURE—INLET	PS AUX CR AUX AUX CS DPS TCV TCV TS TS PS	X	X	X X X X	X	X X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P-1, P-2, P-3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE 2/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE OUTLET WATER TEMPERATURE PRESSURE—INLET	PS AUX CR AUX AUX CS DPS TCV TCV TS TS PS	X	X	X X X X	X	X X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL DEFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE 2/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE OUTLET WATER TEMPERATURE PRESSURE—INLET PRESSURE—OUTLET PIPING SYSTEM MAIN SUPPLY WATER TEMPERATURE	AUX CR AUX AUX CS DPS TCV TCV TCV TS TS PS PS PS TS	X	X	X X X X	X	X X X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL DEFT—SEASON MODE STATUS OPERATOR WORKSTATION INPUT DUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE OUTLET WATER TEMPERATURE PRESSURE—INLET PRESSURE—OUTLET	AUX CR AUX AUX CS DPS TCV TCV TS TS PS PS PS	X	X	X X X X	X	X X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL OFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT OUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE 2/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE OUTLET WATER TEMPERATURE PRESSURE—INLET PRESSURE—OUTLET OUTLINING SYSTEM MAIN SUPPLY WATER TEMPERATURE MAIN RETURN WATER TEMPERATURE	AUX CR AUX AUX CS DPS TCV TCV TCV TS TS PS PS PS TS	X	X	X X X X	X	X X X X X	X	
PRV ASSEMBLY PRESSURE—INLET PRV ASSEMBLY PRESSURE—OUTLET HEATING WATER SYSTEM CONTROL DEFF—SEASON MODE STATUS OPERATOR WORKSTATION INPUT PUMPS — P—1, P—2, P—3 PUMP VFD ENABLE/DISABLE PUMP VFD SPEED CONTROL PUMP VFD SPEED (%) PUMP VFD STATUS SYSTEM PRESSURE — LOCATED AT 5TH FLOOR CONVERTORS — EACH HE—1 AND HE—2 1/3 STEAM CONTROL VALVE 2/3 STEAM CONTROL VALVE INLET WATER TEMPERATURE OUTLET WATER TEMPERATURE PRESSURE—INLET PRESSURE—OUTLET PIPING SYSTEM MAIN SUPPLY WATER TEMPERATURE	AUX CR AUX AUX CS DPS TCV TCV TCV TS TS PS PS PS TS	X	X	X X X X	X	X X X X X	X	

1. PROVIDE ANY ADDITIONAL POINTS TO EXECUTE THE SEQUENCE OF OPERATIONS.

2. PROVIDE COMPATIBLE GATEWAY WITH CHILLER MANUFACTURER.

3. PROVIDE HARD-WIRED INTERFACE (INDEPENDENT OF GATEWAY).

4. PROVIDE VALVE POSITION INDICATION (% OF FLOW). 5. ELECTRONIC CONTROL VALVE SUPPLIED WITH WATER HEATER.

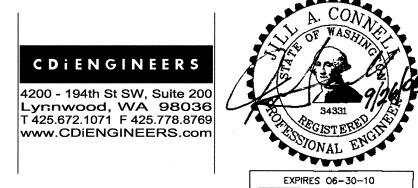
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6. INCLUDE POINT ONLY IF AVAILABLE BY SOFTWARE FROM CHILLER CONTROL PANEL.

7. MONITOR THE ACCUMULATING METER PROVIDED FOR CONDENSER WATER MAKE-UP SYSTEM.

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