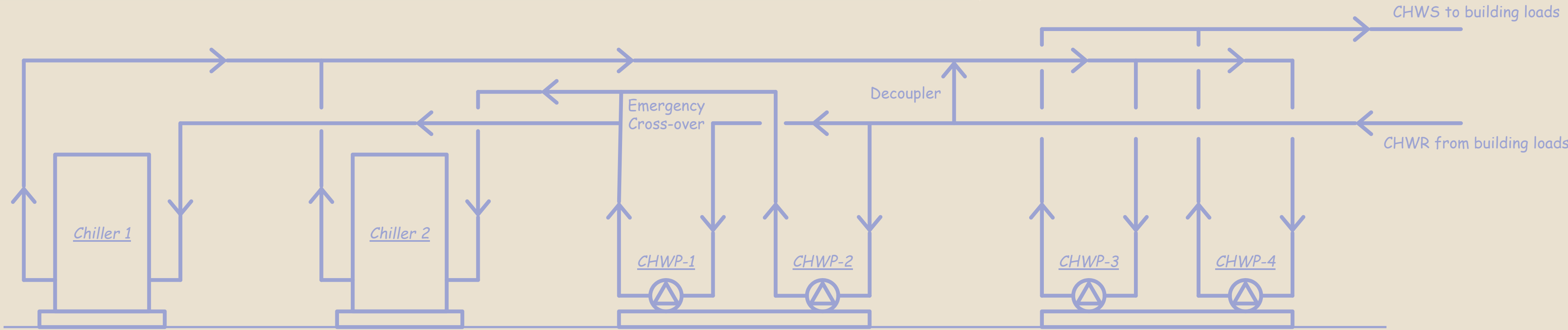


Chilled Water System Point List									
Point Name	AI	AO	DI	DO	Virtual	Network	Sensor Type	Comment	
Evaporator pump start-stop				X			Relay	Typical of 2	
Evaporator pump proof-of-operation			X				Current-switch	Typical of 2, Note 5	
Distribution pump start-stop				X			Relay	Typical of 2	
Distribution pump proof-of-operation			X				Current-switch	Typical of 2, Note 5	
Distribution pump speed command		X					Moneyhell Standard	Typical of 2	
Distribution pump speed feedback						X	Network Point	Typical of 2, Notes 1, 5	
Distribution pump VFD fault						X	Network Point	Typical of 2, Notes 1, 5	
Distribution pump kW						X	Network Point	Typical of 2, Notes 1, 5	
Distribution pump amps						X	Network Point	Typical of 2, Notes 1, 5	
Distribution pump acceleration time						X	Network Point	Typical of 2, Notes 1, 5	
Distribution pump deceleration time						X	Network Point	Typical of 2, Notes 1, 5	
Chilled water distribution system plant header differential pressure	X						Moneyhell Standard	Note 2	
Chilled water differential pressure - 1st floor south mechanical room	X						Moneyhell Standard	Notes 2, 3, 5	
Chilled water differential pressure - 1st floor north mechanical room	X						Moneyhell Standard	Notes 2, 3, 5	
Chilled water differential pressure - elevator machine room	X						Moneyhell Standard	Notes 2, 3, 5	
Chilled water flow	X						Differential pressure	Note 2, 4, 5	
Chilled water system supply temperature	X						Moneyhell Standard	Note 5	
Chilled water system return temperature	X						Moneyhell Standard	Note 5	
Chilled water system return temperature - 1st floor south mechanical room	X						Platinum RTD with xmtr.		
Chilled water system return temperature - 1st floor north mechanical room	X						Platinum RTD with xmtr.		
Chilled water system return temperature - elevator machine room	X						Platinum RTD with xmtr.		
Chilled water bypass temperature	X						Platinum RTD with xmtr.		
Chiller entering chilled water temperature	X						Moneyhell Standard	Typical of 2, Note 5	
Chiller leaving chilled water temperature	X						Moneyhell Standard	Typical of 2, Note 5	
Chiller enable				X			Relay	Typical of 2	
Chiller supply temperature set point command		X					Moneyhell Standard	Typical of 2	
Chiller demand limit		X					Moneyhell Standard	Typical of 2, Note 5	
Chiller status						X	Network Point	Typical of 2, Note 5	
Chiller amps						X	Network Point	Typical of 2, Note 5	
Chiller kW						X	Network Point	Typical of 2, Note 5	
Chiller VFD speed						X	Network Point	Typical of 2, Note 5	
Chiller inlet vane position						X	Network Point	Typical of 2, Note 5	
Chiller evaporator temperature						X	Network Point	Typical of 2, Note 5	
Chiller evaporator pressure						X	Network Point	Typical of 2, Note 5	
Chiller oil pressure						X	Network Point	Typical of 2, Note 5	
Chiller crankcase heater status						X	Network Point	Typical of 2, Note 5	
Chiller purge condenser status						X	Network Point	Typical of 2, Note 5	
Chiller hours						X	Network Point	Typical of 2, Note 5	
Chiller starts						X	Network Point	Typical of 2, Note 5	
Chiller purge condenser hours						X	Network Point	Typical of 2, Note 5	
Chiller hot gas bypass valve position						X	Network Point	Typical of 2, Note 5	
Chiller fault						X	Network Point	Typical of 2, Note 5	
Chiller VFD fault						X	Network Point	Typical of 2, Note 5	
Chiller flow rate						X	Network Point	Typical of 2, Note 5	
Chiller tons						X	Network Point	Typical of 2, Note 5	
Chiller hours of operation					X		N/A	Typical of 2, Note 5	
Evaporator pump hours of operation					X		N/A	Typical of 2, Note 5	
Distribution pump hours of operation					X		N/A	Typical of 2, Note 5	
Note 1 - Furnish and install a network card compatible with the Moneyhell system network protocol and map the indicated points across the interface.									
Note 2 - With five valve manifold									
Note 3 - Wire to the closest Moneyhell controller and use the network to transmit the data to the central plant controller.									
Note 4 - Coordinate with Division 15 to match flow transmitter span and requirements.									
Note 5 - Modified or deleted, VE Study									

CHILLER PLANT SEQUENCE OF OPERATION

- The chiller plant shall run 24/7 to ensure guest satisfaction. The operating team shall have the ability to over-ride the operating schedule as needed.
- The chilled water plant shall maintain a constant supply water temperature of 42°F under all operating conditions. The operating team shall have the ability to over-ride this set point as needed.
- The control system shall stage the chillers and distribution pumps as required to ensure maximum efficiency under all operating conditoin's. The operating team shall have the ability to over-ride any piece of equipment's operating parameters as needed.
- Safety interlocks shall be provided as required by the manufacturer. At a minimum, for the chillers, the interlocks shall include a chilled water flow switch and an auxilliary from the associated evaporator pump starter.
- All motor starters shall be provided with motor overloads and meet the requirements of the National Electric Code and shall be provided with Hand-Off-Auto switches. Automated control of the motor by the control system shall occur with the switch in the "Auto" position. The "Hand" position shall allow the operator to over-ride the control system. Regardless of the position of the selector switch, all safety devices shall function.
- All safety interlocks shall be hard wired. Software based safeties shall not be accepted.
- Provide trending and trend archiving capabilities only. Trends to be set up as required by the operating team subsequent to construcion.
- Provide high alarm high warning alarm, low warning alarm and low alarm capabilities only. Alarms to be set up as required by the operating team subsequent to construction.



Chilled Water Piping Schematic

No Scale

- NOTES:
- See piping details on M-04 for pump and chiller trim and specialties.
 - See point list for sensor and control interface requirements
 - See sequence of operation for staging requirements and interlocks

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8-9-2006 - As Built	

Point Lists,
Sequences