

BUILDING MANAGEMENT SYSTEM - POINTS LIST

KINGSFORD HOTEL BACOLOD

SYSTEM DESCRIPTION	TYPE	POINTS LIST DESCRIPTION	FIELD DEVICE	C/O	PHYS				HLI	DESCRIPTION OF OPERATIONS	BMS CONTROL DIAGRAM
					AI	DI	AO	DO			
MECHANICAL											
ROOF DECK LEVEL (GUEST ROOM LEVELS)											
VENT Dedicated Outdoor Air System (DOAS) Ventilation System: Roofdeck - RD1/RD2 Servicing Guestrooms	MONITOR	Temperature Monitoring (Outside - Supply Air)	Temperature Sensor	BMS Contractor						MONITOR & RECORD 1. Run status of the Fan (ON/ OFF) - Supply & Exhaust 2. Hand/ Off/ Auto Status of the Fan - Supply & Exhaust 3. Run status of the Recovery Wheel Motor (ON/ OFF) 4. Fan Variable Speed Drive Speed 5. Outdoor Supply Air Motorized Damper Status 6. CHW/ Cooling Coil Valve Status 7. Outdoor Supply Temperature & Flow Rate & Humidity Level 8. Indoor Mixed Air Temperature 9. Indoor Mixed Air Relative Humidity 10. Indoor Supply Air Temperature 11. Indoor Exhaust Air Temperature 12. Whenever the Fan is tripped 13. Outdoor Supply Temperature & Flow drops/ exceeds defined limits 14. Indoor Mixed Air Temperature drops/ exceeds defined limits 15. Indoor Supply Air Temperature drops/ exceeds defined limits 16. Indoor Exhaust Air Temperature drops/ exceeds defined limits GENERATE ALARM 1. Whenever the Fan is tripped 2. Outdoor Supply Temperature & Flow drops/ exceeds defined limits 3. Indoor Mixed Air Temperature drops/ exceeds defined limits 4. Indoor Supply Air Temperature drops/ exceeds defined limits 5. Indoor Exhaust Air Temperature drops/ exceeds defined limits 6. Indoor Mixed Air Relative Humidity drops/ exceeds defined limits GENERATE REPORT 1. Accumulated runtime of the DOAS (daily, weekly, monthly) 2. DOAS status report and DOAS trend log TURN ON/ OFF/ MODULATE 1. Supply Fan Motor Speed - According to pre-determined Temp. & Relative Humidity 2. Exhaust Fan Motor Speed - According to pre-determined Temp. & Relative Humidity 3. Outdoor Supply Air Motorized Damper - According to pre-determined Temp. & Relative Humidity 4. CHWS/ Cooling Coil Valve - per Supply Air Temperature Sensor & Relative Humidity	
	MONITOR	Flow Monitoring (Outside - Supply Air)	Flow Sensor	BMS Contractor							
	MONITOR	Humidity Monitoring (Outdoor - Supply Air)	Humidity Sensor	BMS Contractor							
	MONITOR	Outdoor Supply Air Motorized Damper Status	Damper Controller	ME Contractor							
	CONTROL	Outdoor Supply Air Motorized Damper Control (On/ Off/ Modulating)	Damper Controller	ME Contractor							
	MONITOR	Recovery Wheel Motor Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Recovery Wheel Motor Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Supply Fan Motor Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Supply Fan Motor Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Supply Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Supply Fan Variable Speed Monitoring	VFD	Equipment Supplier							
	CONTROL	Supply Fan Control (On/ Off/ Modulating)	VFD	Equipment Supplier							
	MONITOR	Temperature Monitoring (Indoor - Mixed Air)	Temperature Sensor	Equipment Supplier							
	MONITOR	Humidity Monitoring (Indoor - Mixed Air)	Humidity Sensor	Equipment Supplier							
	MONITOR	CHWS/ Cooling Coil Valve Status	Electric Valve Actuator	ME Contractor							
	CONTROL	CHWS Valve Control (On/ Off/ Modulating)	Electric Valve Actuator	ME Contractor							
	MONITOR	Temperature Monitoring (Indoor - Supply Air)	Temperature Sensor	BMS Contractor							
	MONITOR	Humidity Monitoring (Indoor - Exhaust Air)	Humidity Sensor	BMS Contractor							
	MONITOR	Temperature Monitoring (Indoor - Exhaust Air)	Temperature Sensor	BMS Contractor							
	MONITOR	Exhaust Fan Motor Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Exhaust Fan Motor Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Exhaust Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Exhaust Fan Variable Speed Monitoring	VFD	Equipment Supplier							
	CONTROL	Exhaust Fan Control (On/ Off/ Modulating)	VFD	Equipment Supplier							
	VENT Precooled Fresh Air (PAHU) System: Roofdeck	MONITOR	Temperature Monitoring (Outside - Supply Air)	Temperature Sensor	BMS Contractor						MONITOR & RECORD 1. Run status of the Fan (ON/ OFF) 2. Hand/ Off/ Auto Status of the Fan 3. Fan Variable Speed Drive Speed 4. Outdoor Supply Air Motorized Damper Status 5. CHW/ Cooling Coil Valve Status 6. Outdoor Supply Temperature & Flow 7. Indoor Supply Air Temperature. 8. Whenever the Fan is tripped 9. Outdoor Supply Temperature & Flow drops/ exceeds defined limits 10. Indoor Supply Air Temperature drops/ exceeds defined limits GENERATE ALARM 1. Whenever the Fan is tripped 2. Outdoor Supply Temperature & Flow drops/ exceeds defined limits 3. Indoor Supply Air Temperature drops/ exceeds defined limits GENERATE REPORT 1. Accumulated runtime of the Fan Motor (daily, weekly, monthly) 2. Fan Motor status report and Fan Motor trend log TURN ON/ OFF/ MODULATE 1. Fan Motor Speed - According to pre-determined Temperature and Relative Humidity 2. Outdoor Supply Air Motorized Damper 3. CHWS/ Cooling Coil Valve - per Supply Air Temperature Sensor and Relative Humidity
MONITOR		Flow Monitoring (Outside - Supply Air)	Flow Sensor	BMS Contractor							
MONITOR		Outdoor Supply Air Motorized Damper Status	Damper Controller	Equipment Supplier							
CONTROL		Outdoor Supply Air Motorized Damper Control (On/ Off/ Modulating) (A)	Damper Controller	Equipment Supplier							
CONTROL		CHWS/ Cooling Coil Valve Control (On/ Off/ Modulating) (A)	Electric Valve Actuator	ME Contractor							
MONITOR		Fan Motor Status	Auxiliary Contact	Equipment Supplier							
MONITOR		Fan Motor Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier							
MONITOR		Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
MONITOR		Variable Speed Monitoring	VFD	Equipment Supplier							
CONTROL		Fan Control (On/ Off/ Modulating)	VFD	Equipment Supplier							
MONITOR		Temperature Monitoring (Indoor - Supply Air)	Temperature Sensor	BMS Contractor							

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KINGSFORD HOTEL BACOLOD

SYSTEM DESCRIPTION	TYPE	POINTS LIST DESCRIPTION	FIELD DEVICE	C/O	PHYS				HLI	DESCRIPTION OF OPERATIONS	BMS CONTROL DIAGRAM
					AI	DI	AO	DO			
MECHANICAL											
VENT Exhaust Air System (EAS): At Roof deck - General Exhaust	MONITOR	Fan Motor Status	Auxiliary Contact	Equipment Supplier						MONITOR & RECORD 1. Run status of the Fan (ON/ OFF) 2. Hand/ Off Auto/ Manual Status of the Fan 3. Whenever the Fan is tripped GENERATE ALARM 1. Whenever the Fan is tripped GENERATE REPORT 1. Accumulated runtime of the equipment (daily, weekly, monthly)	
	MONITOR	Fan Motor Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
COMMON/ PUBLIC AREAS (GF Public Areas, Amenity Levels, Restaurants)											
VENT Dedicated Outdoor Air System (DOAS) Ventilation System: 2nd Level	MONITOR	Temperature Monitoring (Outside - Supply Air)	Temperature Sensor	BMS Contractor						MONITOR & RECORD 1. Run status of the Fan (ON/ OFF) - Supply & Exhaust 2. Hand/ Off/ Auto Status of the Fan - Supply & Exhaust 3. Run status of the Recovery Wheel Motor (ON/ OFF) 4. Fan Variable Speed Drive Speed 5. Outdoor Supply Air Motorized Damper Status 6. CHW/ Cooling Coil Valve Status 7. Outdoor Supply Temperature & Flow Rate & Humidity Level 8. Indoor Mixed Air Temperature 9. Indoor Mixed Air Relative Humidity 10. Indoor Supply Air Temperature 11. Indoor Exhaust Air Temperature 12. Whenever the Fan is tripped 13. Outdoor Supply Temperature & Flow drops/ exceeds defined limits 14. Indoor Mixed Air Temperature drops/ exceeds defined limits 15. Indoor Supply Air Temperature drops/ exceeds defined limits 16. Indoor Exhaust Air Temperature drops/ exceeds defined limits GENERATE ALARM 1. Whenever the Fan is tripped 2. Outdoor Supply Temperature & Flow drops/ exceeds defined limits 3. Indoor Mixed Air Temperature drops/ exceeds defined limits 4. Indoor Supply Air Temperature drops/ exceeds defined limits 5. Indoor Exhaust Air Temperature drops/ exceeds defined limits 6. Indoor Mixed Air Relative Humidity drops/ exceeds defined limits GENERATE REPORT 1. Accumulated runtime of the DOAS (daily, weekly, monthly) 2. DOAS status report and DOAS trend log TURN ON/ OFF/ MODULATE 1. Supply Fan Motor Speed - According to pre-determined Temp. & Relative Humidity 2. Exhaust Fan Motor Speed - According to pre-determined Temp. & Relative Humidity 3. Outdoor Supply Air Motorized Damper - According to pre-determined Temp. & Relative Humidity 4. CHWS/ Cooling Coil Valve - per Supply Air Temperature Sensor & Relative Humidity	
	MONITOR	Flow Monitoring (Outside - Supply Air)	Flow Sensor	BMS Contractor							
	MONITOR	Humidity Monitoring (Outdoor - Supply Air)	Humidity Sensor	BMS Contractor							
	MONITOR	Outdoor Supply Air Motorized Damper Status	Damper Controller	ME Contractor							
	CONTROL	Outdoor Supply Air Motorized Damper Control (On/ Off/ Modulating)	Damper Controller	ME Contractor							
	MONITOR	Recovery Wheel Motor Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Recovery Wheel Motor Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Supply Fan Motor Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Supply Fan Motor Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Supply Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Supply Fan Variable Speed Monitoring	VFD	Equipment Supplier							
	CONTROL	Supply Fan Control (On/ Off/ Modulating)	VFD	Equipment Supplier							
	MONITOR	Temperature Monitoring (Indoor - Mixed Air)	Temperature Sensor	Equipment Supplier							
	MONITOR	Humidity Monitoring (Indoor - Mixed Air)	Humidity Sensor	Equipment Supplier							
	MONITOR	CHWS/ Cooling Coil Valve Status	Electric Valve Actuator	ME Contractor							
	CONTROL	CHWS Valve Control (On/ Off/ Modulating)	Electric Valve Actuator	ME Contractor							
	MONITOR	Temperature Monitoring (Indoor - Supply Air)	Temperature Sensor	BMS Contractor							
	MONITOR	Humidity Monitoring (Indoor - Exhaust Air)	Humidity Sensor	BMS Contractor							
	MONITOR	Temperature Monitoring (Indoor - Exhaust Air)	Temperature Sensor	BMS Contractor							
	MONITOR	Exhaust Fan Motor Status	Auxiliary Contact	Equipment Supplier							
MONITOR	Exhaust Fan Motor Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier								
MONITOR	Exhaust Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier								
MONITOR	Exhaust Fan Variable Speed Monitoring	VFD	Equipment Supplier								
CONTROL	Exhaust Fan Control (On/ Off/ Modulating)	VFD	Equipment Supplier								
VENT Exhaust Air System (EAS): At GF Main Lobby - Toilet Exhaust; General Exhaust; At 2nd Floor - Toilet Exhaust; General Exhaust; At 3rd Floor Amenity Area (No Guestroom) - Toilet Exhaust; General Exhaust; At Basement - Toilet Exhaust; General Exhaust	MONITOR	Fan Motor Status	Auxiliary Contact	Equipment Supplier						MONITOR & RECORD 1. Run status of the Fan (ON/ OFF) 2. Auto/ Manual Status of the Fan 3. Whenever the Fan is tripped GENERATE ALARM 1. Whenever the Fan is tripped GENERATE REPORT 1. Accumulated runtime of the equipment (daily, weekly, monthly) 2. Fan Motor status report, and Fan Motor trend log	
	MONITOR	Fan Motor Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							

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KINGSFORD HOTEL BACOLOD

SYSTEM DESCRIPTION	TYPE	POINTS LIST DESCRIPTION	FIELD DEVICE	C/O	PHYS				HLI	DESCRIPTION OF OPERATIONS	BMS CONTROL DIAGRAM
					AI	DI	AO	DO			
MECHANICAL											
AC AHU - AC System: At 2nd Level	MONITOR	Indoor Return Air Motorized Damper Status	Damper Controller	ME Contractor						<p>MONITOR & RECORD</p> <ol style="list-style-type: none"> Run status of the Fan Motor (ON/ OFF) Whenever the Fan Motor is tripped Indoor Return Air Temperature Return Air CO2 Level Measurement Mixed Air Temperature Indoor Supply Air Temperature Variable Speed Drive Speed Return Air Motorized Damper Status Outdoor Supply Air Motorized Damper Status Outdoor Supply Temperature & Flow drops/ exceeds defined limits <p>GENERATE ALARM</p> <ol style="list-style-type: none"> Whenever the Fan is tripped Outdoor Supply Temperature & Flow drops/ exceeds defined limits Indoor Supply Air Temperature drops/ exceeds defined limits <p>GENERATE REPORT</p> <ol style="list-style-type: none"> Accumulated runtime of the Fan Motor (daily, weekly, monthly) Fan Motor status report and Fan Motor trend log <p>TURN ON/ OFF/ MODULATE (VFD)</p> <ol style="list-style-type: none"> Fan Motor Speed - According to pre-determined Temperature and Relative Humidity Outdoor Supply Air Motorized Damper <p>MODULATE</p> <ol style="list-style-type: none"> CHW/ Cooling Coil Valve - per Supply Air Temperature Sensor and Relative Humidity 	
	CONTROL	Indoor Return Air Motorized Damper Control (On/ Off/ Modulating) (A)	Damper Controller	ME Contractor							
	MONITOR	Indoor Return Air CO2 Level	CO2 Sensor	BMS Contractor							
	MONITOR	Temperature Monitoring (Indoor - Return Air)	Temperature Sensor	BMS Contractor							
	CONTROL	CHWS Valve Control (On/ Off/ Modulating) (A)	Electric Valve Actuator	ME Contractor							
	MONITOR	Fan Motor Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Variable Speed Monitoring	VFD	Equipment Supplier							
	CONTROL	Fan Control (On/ Off/ Modulating)	VFD	Equipment Supplier							
	MONITOR	Temperature Monitoring (Indoor - Supply Air)	Temperature Sensor	BMS Contractor							
	MONITOR	Temperature Monitoring (Indoor - Mixed Air)	Temperature Sensor	BMS Contractor							
	MONITOR	Outdoor Supply Air Motorized Damper Status	Damper Controller	Equipment Supplier							
	CONTROL	Outdoor Supply Air Motorized Damper Control (On/ Off/ Modulating) (A)	Damper Controller	Equipment Supplier							
MONITOR	Temperature Monitoring (Outside - Supply Air)	Temperature Sensor	BMS Contractor								
BACK OF THE HOUSE (COMMON AREAS AND ROOMS)											
VENT Precooled Fresh Air (PAHU) System: At 2nd Level At Basement	MONITOR	Temperature Monitoring (Outside - Supply Air)	Temperature Sensor	BMS Contractor						<p>MONITOR & RECORD</p> <ol style="list-style-type: none"> Run status of the Fan (ON/ OFF) Hand/ Off/ Auto Status of the Fan Fan Variable Speed Drive Speed Outdoor Supply Air Motorized Damper Status CHW/ Cooling Coil Valve Status Outdoor Supply Temperature & Flow Indoor Supply Air Temperature Whenever the Fan is tripped Outdoor Supply Temperature & Flow drops/ exceeds defined limits Indoor Supply Air Temperature drops/ exceeds defined limits <p>GENERATE ALARM</p> <ol style="list-style-type: none"> Whenever the Fan is tripped Outdoor Supply Temperature & Flow drops/ exceeds defined limits Indoor Supply Air Temperature drops/ exceeds defined limits <p>GENERATE REPORT</p> <ol style="list-style-type: none"> Accumulated runtime of the Fan Motor (daily, weekly, monthly) Fan Motor status report and Fan Motor trend log <p>TURN ON/ OFF/ MODULATE</p> <ol style="list-style-type: none"> Fan Motor Speed - According to pre-determined Temperature and Relative Humidity Outdoor Supply Air Motorized Damper CHWS/ Cooling Coil Valve - per Supply Air Temperature Sensor and Relative Humidity 	
	MONITOR	Flow Monitoring (Outside - Supply Air)	Flow Sensor	BMS Contractor							
	MONITOR	Outdoor Supply Air Motorized Damper Status	Damper Controller	Equipment Supplier							
	CONTROL	Outdoor Supply Air Motorized Damper Control (On/ Off/ Modulating) (A)	Damper Controller	Equipment Supplier							
	CONTROL	CHWS/ Cooling Coil Valve Control (On/ Off/ Modulating) (A)	Electric Valve Actuator	ME Contractor							
	MONITOR	Fan Motor Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Fan Motor Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Variable Speed Monitoring	VFD	Equipment Supplier							
	CONTROL	Fan Control (On/ Off/ Modulating)	VFD	Equipment Supplier							
MONITOR	Temperature Monitoring (Indoor - Supply Air)	Temperature Sensor	BMS Contractor								
	MONITOR	Indoor Return Air Motorized Damper Status	Damper Controller	ME Contractor					<p>MONITOR & RECORD</p> <ol style="list-style-type: none"> Run status of the Fan Motor (ON/ OFF) Whenever the Fan Motor is tripped Indoor Return Air Temperature Return Air CO2 Level Measurement Mixed Air Temperature Indoor Supply Air Temperature Variable Speed Drive Speed 		
	CONTROL	Indoor Return Air Motorized Damper Control (On/ Off/ Modulating) (A)	Damper Controller	ME Contractor							
	MONITOR	Indoor Return Air CO2 Level	CO2 Sensor	BMS Contractor							
	MONITOR	Temperature Monitoring (Indoor - Return Air)	Temperature Sensor	BMS Contractor							
	CONTROL	CHWS Valve Control (On/ Off/ Modulating) (A)	Electric Valve Actuator	ME Contractor							

BUILDING MANAGEMENT SYSTEM - POINTS LIST

KINGSFORD HOTEL BACOLOD

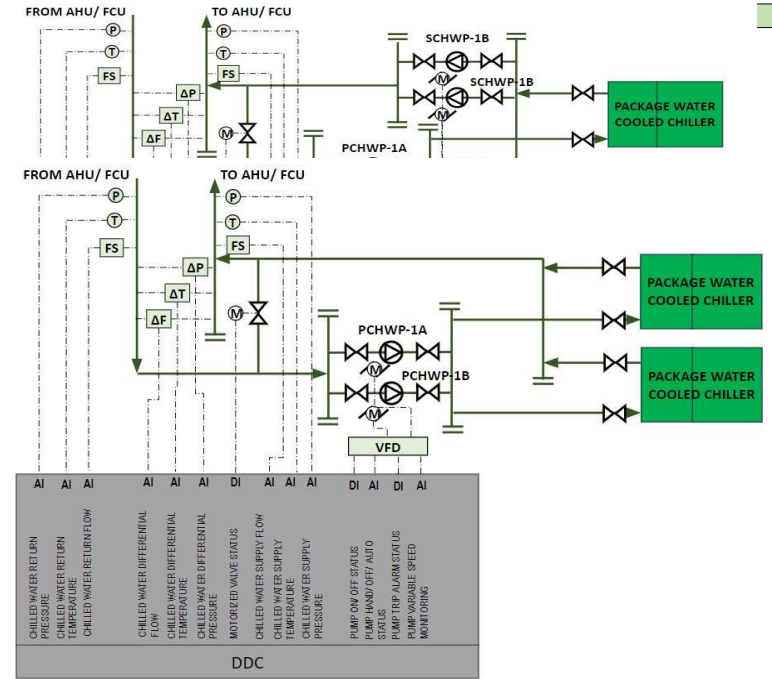
SYSTEM DESCRIPTION	TYPE	POINTS LIST DESCRIPTION	FIELD DEVICE	C/O	PHYS				HLI	DESCRIPTION OF OPERATIONS	BMS CONTROL DIAGRAM
					AI	DI	AO	DO			
MECHANICAL											
AC AHU - AC System: At 2nd Level At GF	MONITOR	Fan Motor Status	Auxiliary Contact	Equipment Supplier						<p>8. Return Air Motorized Damper Status 9. Outdoor Supply Air Motorized Damper Status 10. Outdoor Supply Temperature & Flow drops/ exceeds defined limits</p> <p>GENERATE ALARM 1. Whenever the Fan is tripped 2. Outdoor Supply Temperature & Flow drops/ exceeds defined limits 3. Indoor Supply Air Temperature drops/ exceeds defined limits</p> <p>GENERATE REPORT 1. Accumulated runtime of the Fan Motor (daily, weekly, monthly) 2. Fan Motor status report and Fan Motor trend log</p> <p>TURN ON/ OFF/ MODULATE (VFD) 1. Fan Motor Speed - According to pre-determined Temperature and Relative Humidity 2. Outdoor Supply Air Motorized Damper</p> <p>MODULATE 1. CHW/ Cooling Coil Valve - per Supply Air Temperature Sensor and Relative Humidity</p>	
	MONITOR	Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier							
	MONITOR	Variable Speed Monitoring	VFD	Equipment Supplier							
	CONTROL	Fan Control (On/ Off/ Modulating)	VFD	Equipment Supplier							
	MONITOR	Temperature Monitoring (Indoor - Supply Air)	Temperature Sensor	BMS Contractor							
	MONITOR	Temperature Monitoring (Indoor - Mixed Air)	Temperature Sensor	BMS Contractor							
	MONITOR	Outdoor Supply Air Motorized Damper Status	Damper Controller	Equipment Supplier							
	CONTROL	Outdoor Supply Air Motorized Damper Control (On/ Off/ Modulating) (A)	Damper Controller	Equipment Supplier							
	MONITOR	Temperature Monitoring (Outside - Supply Air)	Temperature Sensor	BMS Contractor							
	CHILLER ROOM/ AREA										
AC Chillers At 2nd Level	MONITOR	Entering Chilled Water Temperature	Temperature Sensor	BMS Contractor						<p>MONITOR & RECORD 1. Run status of the Chiller Compressor Pump (ON/ OFF) 2. Hand/ Off/ Auto Status of the Chiller Compressor 3. Motor Current Status 4. Motor Consumption - Kw-Hr/Btu Monitoring 5. Winding Temperature Level 6. Chiller - Oil Pump Status (ON/ OFF) 7. Chiller - Oil Sump Pressure Level 8. Chiller - Oil Sump Temperature Level 9. Isolation Motorized Valve Status CHW Return & Supply 10. Isolation Motorized Valve Status COW Return & Supply 11. Entering Chilled Water Temperature Level 12. Leaving Chilled Water Temperature Level 13. Evaporator Approach Delta Temperature Level 14. Evaporate Approach Delta Pressure Level 15. Evaporator Refrigerant Pressure Level 16. Evaporator Refrigerant Temperature Level 17. Condenser Refrigerant Pressure Level 18. Condenser Refrigerant Temperature Level 19. Condenser Approach Delta Temperature Level 20. Condenser Approach Delta Pressure Level 21. Entering Condenser Water Temperature 22. Leaving Condenser Water Temperature 23. Whenever the Chiller Compressor Pump is tripped 24. Whenever the Chiller Oil Pump is tripped 25. Entering Chilled Water Temperature Level drops/ exceeds Defined Limits 26. Leaving Chilled Water Temperature Level drops/ exceeds Defined Limits 27. Evaporator Approach Delta Temperature Level drops/ exceeds Defined Limits 28. Evaporate Approach Delta Pressure Level drops/ exceeds Defined Limits 29. Evaporator Refrigerant Pressure Level drops/ exceeds Defined Limits 30. Evaporator Refrigerant Temperature Level drops/ exceeds Defined Limits 31. Condenser Refrigerant Pressure Level drops/ exceeds Defined Limits 32. Condenser Refrigerant Temperature Level drops/ exceeds Defined Limits 33. Condenser Approach Delta Temperature Level drops/ exceeds Defined Limits 34. Condenser Approach Delta Pressure Level drops/ exceeds Defined Limits 35. Entering Condenser Water Temperature drops/ exceeds Defined Limits 36. Leaving Condenser Water Temperature drops/ exceeds Defined Limits</p> <p>GENERATE ALARM 1. Whenever the Chiller Compressor Pump is tripped 2. Whenever the Chiller Oil Pump is tripped 3. Entering Chilled Water Temperature Level drops/ exceeds Defined Limits 4. Leaving Chilled Water Temperature Level drops/ exceeds Defined Limits 5. Evaporator Approach Delta Temperature Level drops/ exceeds Defined Limits 6. Evaporate Approach Delta Pressure Level drops/ exceeds Defined Limits 7. Evaporator Refrigerant Pressure Level drops/ exceeds Defined Limits</p>	
	MONITOR	Leaving Chilled Water Temperature	Temperature Sensor	BMS Contractor							
	MONITOR	Isolation Motorized Valve Status CHW Return & Supply	Electric Valve Actuator	ME Contractor							
	MONITOR	Evaporator Approach Delta Temperature	-	Equipment Supplier							
	MONITOR	Evaporate Approach Delta Pressure	-	Equipment Supplier							
	MONITOR	Evaporator Refrigerant Pressure	-	Equipment Supplier							
	MONITOR	Evaporator Refrigerant Temperature	-	Equipment Supplier							
	MONITOR	Oil Sump Pressure	-	Equipment Supplier							
	MONITOR	Oil Sump Temperature	-	Equipment Supplier							
	MONITOR	Oil Pump Status (ON/ OFF)	-	Equipment Supplier							
	MONITOR	Oil Pump Trip Status	-	Equipment Supplier							
	MONITOR	Chiller Compressor Pump On/ Off Status	-	Equipment Supplier							
	MONITOR	Chiller Compressor Hand/ Off/ Auto Status	-	Equipment Supplier							
	MONITOR	Chiller Compressor Trip Alarm Status	-	Equipment Supplier							
	MONITOR	Motor Load Current	-	Equipment Supplier							
	MONITOR	Motor Consumption - KW / BTU Meter	-	Equipment Supplier							
	MONITOR	Winding Temperature	-	Equipment Supplier							
	MONITOR	Condenser Refrigerant Pressure	-	Equipment Supplier							
	MONITOR	Condenser Refrigerant Temperature	-	Equipment Supplier							
	MONITOR	Condenser Approach Delta Temperature	-	Equipment Supplier							
	MONITOR	Condenser Approach Delta Pressure	-	Equipment Supplier							
	MONITOR	Isolation Motorized Valve Status COW Return & Supply	Electric Valve Actuator	ME Contractor							
	MONITOR	Entering Condenser Water Temperature	Temperature Sensor	BMS Contractor							
	MONITOR	Leaving Condenser Water Temperature	Temperature Sensor	BMS Contractor							
	MONITOR	Chilled Water Return Flow Metering	Flow Sensor	BMS Contractor							
	MONITOR	Chilled Water Supply Flow Metering	Flow Sensor	BMS Contractor							
	MONITOR	Condenser Water Supply Flow Metering	Flow Sensor	BMS Contractor							

HIGH LEVEL INTERFACE (RS 485)

BUILDING MANAGEMENT SYSTEM - POINTS LIST

KINGSFORD HOTEL BACOLOD

SYSTEM DESCRIPTION	TYPE	POINTS LIST DESCRIPTION	FIELD DEVICE	C/O	PHYS				HLI	DESCRIPTION OF OPERATIONS	BMS CONTROL DIAGRAM
					AI	DI	AO	DO			
MECHANICAL											
										7. Evaporator Refrigerant Pressure Level drops/ exceeds Defined Limits 8. Evaporator Refrigerant Temperature Level drops/ exceeds Defined Limits 9. Condenser Refrigerant Pressure Level drops/ exceeds Defined Limits 10. Condenser Refrigerant Temperature Level drops/ exceeds Defined Limits 11. Condenser Approach Delta Temperature Level drops/ exceeds Defined Limits 12. Condenser Approach Delta Pressure Level drops/ exceeds Defined Limits 13. Entering Condenser Water Temperature drops/ exceeds Defined Limits 14. Leaving Condenser Water Temperature drops/ exceeds Defined Limits GENERATE REPORT 1. Accumulated runtime of the chiller (daily, weekly, monthly) 2. Chiller status report and Chiller trend log (status report shall include kWh and TR reading)	
CHILLED WATER LOOP (PRIMARY CHILLED WATER SYSTEM)											
AC	Primary Chilled Water Circulating Pumps At 2nd Level	MONITOR	Chilled Water Supply Pressure	Pressure Sensor	Equipment Supplier					MONITOR & RECORD 1. Run status of the Primary Chilled Water Pump (ON/ OFF) 2. Variable Frequency Drive speed 3. Chilled Water Supply Pressure Level 4. Whenever the Secondary Chilled Water Pump is tripped 5. Chilled Water Supply Pressure Level drops/ exceeds defined limits GENERATE ALARM 1. Whenever the Secondary Chilled Water Pump is tripped 2. Chilled Water Supply Pressure Level drops/ exceeds defined limits GENERATE REPORT 1. Accumulated runtime of the pump (daily, weekly, monthly) 2. Pump report, and pump trend log	
		MONITOR	On/ Off Status	Auxiliary Contact	Equipment Supplier						
		MONITOR	Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier						
		MONITOR	Variable Speed Monitoring	VFD	Equipment Supplier						
		MONITOR	Trip Alarm	Auxiliary Contact	Equipment Supplier						
AC	CHW Supply Main Header At 2nd Level	MONITOR	Temperature Monitoring	Temperature Sensor	BMS Contractor				MONITOR & RECORD 1. CHW Supply Main Header Pressure Level 2. CHW Supply Main Header Temperature Level 3. CHW Supply Main Header Pressure Level drops/ exceeds defined limits 4. CHW Supply Main Header Temperature Level drops/ exceeds defined limits GENERATE ALARM 1. CHW Supply Main Header Pressure Level drops/ exceeds defined limits 2. CHW Supply Main Header Temperature Level drops/ exceeds defined limits		
		MONITOR	Pressure Monitoring	Pressure Sensor	BMS Contractor						
AC	CHW Return Main Header At 2nd Level	MONITOR	Temperature Monitoring	Temperature Sensor	BMS Contractor				MONITOR & RECORD 1. CHW Return Main Header Pressure Level 2. CHW Return Main Header Temperature Level 3. CHW Return Main Header Pressure Level drops/ exceeds defined limits 4. CHW Return Main Header Temperature Level drops/ exceeds defined limits GENERATE ALARM 1. CHW Return Main Header Pressure Level drops/ exceeds defined limits 2. CHW Return Main Header Temperature Level drops/ exceeds defined limits		
		MONITOR	Pressure Monitoring	Pressure Sensor	BMS Contractor						
AC	CHW Main Header (Supply & Return) At 2nd Level	MONITOR	Differential Pressure	Diff. Pressure Sensor	BMS Contractor				MONITOR & RECORD 1. Differential Pressure Level 2. Differential Pressure Level drops/ exceeds defined limits 3. Isolation Motorized Valve Status CHW By-Pass GENERATE ALARM 1. Differential Pressure Level drops/ exceeds defined limits		
		MONITOR	Differential Temperature	Diff. Pressure Sensor	BMS Contractor						
		MONITOR	Isolation Motorized Valve Status CHW Return & Supply	Electric Valve Actuator	BMS Contractor						
CONDENSER WATER LOOP											



BUILDING MANAGEMENT SYSTEM - POINTS LIST

KINGSFORD HOTEL BACOLOD

SYSTEM DESCRIPTION	TYPE	POINTS LIST DESCRIPTION	FIELD DEVICE	C/O	PHYS				HLI	DESCRIPTION OF OPERATIONS	BMS CONTROL DIAGRAM			
					AI	DI	AO	DO						
MECHANICAL														
AC	Condenser Water Circulating Pumps At 2nd Level	MONITOR	On/ Off Status	Auxiliary Contact	Equipment Supplier									
		MONITOR	Hand/ Off/ Auto Status	Auxiliary Contact	Equipment Supplier					<input checked="" type="checkbox"/>				
		MONITOR	Trip Alarm	Auxiliary Contact	Equipment Supplier							<input checked="" type="checkbox"/>		
										<p>MONITOR & RECORD</p> <ol style="list-style-type: none"> Run status of the Condenser Water Pump (ON/ OFF) Hand/ Off/ Auto Status of Condenser Water Pump Whenever the Pump is tripped <p>GENERATE ALARM</p> <ol style="list-style-type: none"> Whenever the Pump is tripped <p>GENERATE REPORT</p> <ol style="list-style-type: none"> Accumulated runtime of the pump (daily, weekly, monthly) Pump report, and pump trend log 				
COOLING TOWER AREA														
AC	Cooling Towers At Roofdeck	MONITOR	Fan Motor Status	Auxiliary Contact	Equipment Supplier									
		MONITOR	Fan Trip Alarm Status	Auxiliary Contact	Equipment Supplier									
		MONITOR	Level Alarm Low (CT Basin)	Level Sensor / Electrode	BMS Contractor									
		MONITOR	Level Alarm High (CT Basin)	Level Sensor / Electrode	BMS Contractor									
		MONITOR	Outside Air Temperature Monitoring (B)	Temperature Sensor	BMS Contractor									
		MONITOR	Outside Air Humidity Monitoring (B)	Humidity Sensor	BMS Contractor									
		MONITOR	Water Temp Monitoring (Condenser Return Header)	Temperature Sensor	BMS Contractor									
		MONITOR	Water Temp Monitoring (Condenser Supply Header)	Temperature Sensor	BMS Contractor									
		MONITOR	Isolation Motorized Valve Status COW Return & Supply	Electric Valve Actuator	ME Contractor									
		MONITOR	Blowdown Corrosion/Scale Monitoring	pH Sensor / Conductivity Sensor	ME Contractor									
		CONTROL	Motorized Blowdown Valve Control	Electric Valve Actuator	BMS Contractor									
													<p>MONITOR & RECORD</p> <ol style="list-style-type: none"> Run status of the Cooling Tower Fans (ON/ OFF) Main Condenser Water Supply Temperature Level Main Condenser Water Return Temperature Level Outside Air Temperature Level Outside Air Humidity Level Whenever the Cooling Tower Fan is tripped Cooling Tower Basin - High/Low Level is tripped Main Condenser Water Supply Temperature Level drops/ exceeds defined limits Main Condenser Water Return Temperature Level drops/ exceeds defined limits Outside Air Temperature Level drops/ exceeds defined limits Outside Air Humidity Level drops/ exceeds defined limits Isolation Motorized Valve Status COW Return & Supply Blowdown water pH Level Level Motorized Blowdown Valve Status <p>GENERATE ALARM</p> <ol style="list-style-type: none"> Whenever the Cooling Tower Fan is tripped Cooling Tower Basin - High/Low Level is tripped Main Condenser Water Supply Temperature Level drops/ exceeds defined limits Main Condenser Water Return Temperature Level drops/ exceeds defined limits Outside Air Temperature Level drops/ exceeds defined limits Outside Air Humidity Level drops/ exceeds defined limits Blowdown water pH Level exceeds defined limits <p>GENERATE REPORT</p> <ol style="list-style-type: none"> Accumulated runtime of the Cooling Tower Fans (daily, weekly, monthly) Cooling Tower Fan status report and Cooling Tower Fan trend log 	
		BOILER ROOM/AREA												
				MONITOR	Supply Steam Pressure	Pressure Sensor	BMS Contractor							
MONITOR	Low Water Level			Level Sensor	Equipment Supplier									
MONITOR	High Water Level			Level Sensor	Equipment Supplier									
MONITOR	Burner Power			-	Equipment Supplier						<input checked="" type="checkbox"/>			
MONITOR	Small Fire Control Signal			-	Equipment Supplier						<input checked="" type="checkbox"/>			
MONITOR	Big Fire Control Signal			-	Equipment Supplier						<input checked="" type="checkbox"/>			
MONITOR	Waterfeed Pump Status			-	Equipment Supplier						<input checked="" type="checkbox"/>			
MONITOR	Burner Status			-	Equipment Supplier						<input checked="" type="checkbox"/>			
MONITOR	Burner Fire Running Status			-	Equipment Supplier						<input checked="" type="checkbox"/>			
MONITOR	Blower Motor Status			-	Equipment Supplier						<input checked="" type="checkbox"/>			
										<p>MONITOR & RECORD</p> <ol style="list-style-type: none"> Run Status of Oil Pump Manual/Auto Status of the Boiler Burner Firing Rate Run Status of Boiler Blower Run Status of Feedwater pump Small Fire Control Signal Big Fire Control Signal 				

BUILDING MANAGEMENT SYSTEM - POINTS LIST

KINGSFORD HOTEL BACOLOD

SYSTEM DESCRIPTION	TYPE	POINTS LIST DESCRIPTION	FIELD DEVICE	C/O	PHYS				HLI	DESCRIPTION OF OPERATIONS	BMS CONTROL DIAGRAM
					AI	DI	AO	DO			
MECHANICAL											
VENT Boilers At Lower Ground Level	MONITOR	Fuel Oil Pump Status	-	Equipment Supplier					<input checked="" type="checkbox"/>	7. Motorized Valve Status Blowdown Water 8. Fluegas Temperature 9. Fluegas Oxygen Level 10. Supply Steam Temperature 11. Supply Steam Pressure 12. Boiler Water Level 13. Fluegas Temperature Level exceeds Defined Limits 14. Fluegas Oxygen Level Temperature Level drops/ exceeds Defined Limits 15. Supply Steam Pressure Level drops/ exceeds Defined Limits GENERATE ALARM 1. Whenever the Oil Pump is tripped 2. Whenever the Blower is tripped 3. Boiler Water Level drops/ exceeds Defined Limits 4. Whenever the Burner is tripped 6. Fluegas Temperature Level exceeds Defined Limits 7. Fluegas Oxygen Level Temperature Level drops/ exceeds Defined Limits 8. Supply Steam Pressure Level drops/ exceeds Defined Limits GENERATE REPORT 1. Accumulated runtime of the boiler (daily, weekly, monthly) 2. Boiler status report and Boiler trend log	
	MONITOR	Motorized Valve Status Blowdown Water	Electric Valve Actuator	BMS Contractor							
	CONTROL	Motorized Valve Control Blowdown Water	Electric Valve Actuator	BMS Contractor							
	MONITOR	Feedwater Supply Temperature	Temperature Sensor	BMS Contractor							
	MONITOR	Fluegas Temperature	Temperature Sensor	BMS Contractor							
	MONITOR	Fluegas Oxygen Level	Oxygen Sensor	BMS Contractor							