### **CONTROLS POINTS LIST**

#### 1. GENERAL

- .1 A point is a specific software address which is resident in the SCU and which is identified with a particular field sensor, instrument or sensor.
- .2 The point schedule contains a general list and description of the points to be connected. The Contractor shall examine the point schedule and ensure that all points required to make the described control sequences work are provided, whether included in the point schedule or not.
- .3 The relationships between the points, systems and building are described in the control sequences, Section 23 09 93 Sequence of Operations for HVAC Controls.
- .4 Consult with the Contract Administrator during the Shop Drawing stage to finalise the physical terminal address of each point within the SCU.
- .5 The provided points list is not meant to be an exhaustive complete list of all points in the mechanical system. The Contractor is responsible for providing all required points for a fully functioning system.

### 2. CONTROLS POINTS LIST

.1 The following is the minimum required points list for the new equipment/systems.

	Controls Points List For New Equipment					
#	Description	Type	Units	System		
1	B-1 Enable/disable	DO		High Temp. Heating Loop		
2	B-1 five stage modulating signal	AO		High Temp. Heating Loop		
3	B-1 status	DI		High Temp. Heating Loop		
4	B-1 general alarm from boiler control panel	DI		High Temp. Heating Loop		
5	B-1 flow switch	DI		High Temp. Heating Loop		
6	B-1 DHW Priority	DO		High Temp. Heating Loop		
7	P-5 Enable/disable	DO		High Temp. Heating Loop		
8	P-5 Status	DI		High Temp. Heating Loop		
9	P-5 Fault	DI		High Temp. Heating Loop		
10	B-1 HWS Temperature	Al	°C	High Temp. Heating Loop		
11	Control Valve MCV-B-1 Modulation	AO		High Temp. Heating Loop		
12	Control Valve MCV-B-1 Status	Al		High Temp. Heating Loop		
13	Control Valve MCV-IWH Open/close	DO		High Temp. Heating Loop		
14	Control Valve MCV-IWH Status	DI		High Temp. Heating Loop		
15	Control Valve MCV-HX-1 Open/close	DO		High Temp. Heating Loop		
16	Control Valve MCV-HX-1 Status	DI		High Temp. Heating Loop		
17	B-2 Enable/disable	DO		Low Temp. Heating Loop		
18	B-2 five stage modulating signal	AO		Low Temp. Heating Loop		
19	B-2 status	DI		Low Temp. Heating Loop		
20	B-2 general alarm from boiler control panel	DI	-	Low Temp. Heating Loop		
21	B-2 flow switch	DI		Low Temp. Heating Loop		
22	P-6 Enable/disable	DO		Low Temp. Heating Loop		

## **CONTROLS POINTS LIST**

	Controls Points List For New Equipment					
#	Description	Туре	Units	System		
23	P-6 Status	DI		Low Temp. Heating Loop		
24	P-6 Fault	DI		Low Temp. Heating Loop		
25	B-2 HWS Temperature	Al	°C	Low Temp. Heating Loop		
26	Control Valve MCV-B-2 Modulation	AO		Low Temp. Heating Loop		
27	Control Valve MCV-B-2 Status	Al		Low Temp. Heating Loop		
28	Boiler disconnect switch alarm	DI		Boiler Heating Loop		
29	P-14 VFD Enable/disable	DO		Existing Building Loop		
30	P-14 VFD Alarm	DI		Existing Building Loop		
31	P-14 VFD Speed	Al		Existing Building Loop		
32	P-14 VFD Speed Control	AO		Existing Building Loop		
33	P-14 HWR Temperature	Al	°C	Existing Building Loop		
34	Control Valve MCV-P-14 Summer/Winter	DO		Existing Building Loop		
35	Control Valve MCV-P-14 Status	DI		Existing Building Loop		

# 3. PRODUCTS

.1 Not Applicable.

# 4. EXECUTION

.1 Refer to Section 23 09 33 for input/output designations.

## **END OF SECTION**