

# Zone Checksums

By MATENO

## LOBBY BUSINESS CENTER

COOLING COIL PEAK					CLG SPACE PEAK			HEATING COIL PEAK			TEMPERATURES			
Peaked at Time:		Mo/Hr: 8 / 14			Mo/Hr: 8 / 14		Mo/Hr: Heating Design			Cooling			Heating	
Outside Air:		OADB/WB/HR: 106 / 89 / 190			OADB: 106		OADB: 46			SADB			73.8	
Space Sens.	Plenum Sens.	Net Total	Percent Of Total	Space Sensible	Percent Of Total	Space Peak Space Sens	Coil Peak Tot Sens	Percent Of Total	Space Sens	Coil Peak Tot Sens	Percent Of Total	Plenum	Return	Ret/OA
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	(%)	Btu/h	Btu/h	(%)	83.4	83.4	83.4
<b>Envelope Loads</b>														
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	83.4	65.8	65.8
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	83.4	65.8	65.8
Roof Cond	0	5,183	5,183	33	0	0	0	0	0	-1,284	54	0.0	0.0	0.0
Glass Solar	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Glass Cond	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Wall Cond	2,827	984	3,810	24	2,827	38	-924	53	-924	-1,255	53	0.0	0.0	0.0
Partition	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Exposed Floor	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Infiltration	2,812	0	2,812	18	808	11	-570	24	-570	-570	24	0.0	0.0	0.0
<i>Sub Total ==&gt;</i>	<i>5,639</i>	<i>6,167</i>	<i>11,806</i>	<i>76</i>	<i>3,634</i>	<i>49</i>	<i>-1,495</i>	<i>132</i>	<i>-1,495</i>	<i>-3,110</i>	<i>132</i>			
<b>Internal Loads</b>														
Lights	410	102	512	3	410	6	0	0	0	0	0			
People	2,000	0	2,000	13	1,000	14	0	0	0	0	0			
Misc	1,500	0	1,500	10	1,500	20	0	0	0	0	0			
<i>Sub Total ==&gt;</i>	<i>3,910</i>	<i>102</i>	<i>4,012</i>	<i>26</i>	<i>2,910</i>	<i>40</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>			
<b>Ceiling Load</b>														
Ventilation Load	809	-809	0	0	809	11	-212	0	-212	0	0			
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	0	0			
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	0	0			
Exhaust Heat	0	-218	-218	-1	0	0	57	-2	57	-2	-2			
Sup. Fan Heat	0	0	0	0	0	0	0	0	0	0	0			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	0	0			
Reheat at Design	0	0	0	0	0	0	694	-29	694	-29	-29			
<i>Grand Total ==&gt;</i>	<i>10,357</i>	<i>5,243</i>	<i>15,600</i>	<i>100.00</i>	<i>7,353</i>	<i>100.00</i>	<i>-1,707</i>	<i>-2,358</i>	<i>-1,707</i>	<i>-2,358</i>	<i>100.00</i>			

AIRFLOWS		
	Cooling	Heating
Vent	0	0
Infil	24	24
Supply	272	272
MinStop/Rh	0	0
Return	296	296
Exhaust	24	24
Rm Exh	0	0
Auxil	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	0.0	0.0
cfm/ft2	0.90	0.90
cfm/ton	209.53	
ft2/ton	233.68	
Btu/hr-ft2	51.35	-7.76
No. People	4	

COOLING COIL SELECTION										
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			F	F	gr/lb	F	F	gr/lb
Main Clg	1.3	15.6	12.6	272	83.4	65.2	66.8	50.1	44.5	35.9
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>1.3</b>	<b>15.6</b>								

AREAS			
	Gross Total	Glass	
		ft2	(%)
Floor	304		
Part	0		
ExFlr	0		
Roof	304	0	0
Wall	134	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent F	Lvg F
Main Htg	-2.4	272	65.8	73.8
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
<b>Total</b>	<b>-2.4</b>			

# Zone Checksums

By MATENO

## LOBBY FLOW AREA

COOLING COIL PEAK					CLG SPACE PEAK			HEATING COIL PEAK			TEMPERATURES				
Peaked at Time:		Mo/Hr: 8 / 14			Mo/Hr: 8 / 14		Mo/Hr: Heating Design			Cooling			Heating		
Outside Air:		OADB/WB/HR: 106 / 89 / 190			OADB: 106		OADB: 46			SADB			71.4		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak Space Sens	Coil Peak Tot Sens	Percent Of Total (%)	SADB	Plenum	Return	Ret/OA	Fn MtrTD	Fn BldTD	Fn Frict
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h								
<b>Envelope Loads</b>															
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roof Cond	0	93,610	93,610	32	0	0	-23,190	37	0	0	0	0	0	0	0
Glass Solar	106,774	0	106,774	36	106,774	57	0	0	0	0	0	0	0	0	0
Glass Cond	40,548	0	40,548	14	40,548	22	-28,503	46	0	0	0	0	0	0	0
Wall Cond	12,857	4,324	17,181	6	12,857	7	-5,199	11	0	0	0	0	0	0	0
Partition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exposed Floor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Infiltration	36,533	0	36,533	12	10,495	6	0	0	0	0	0	0	0	0	0
<b>Sub Total ==&gt;</b>	<b>196,712</b>	<b>97,934</b>	<b>294,646</b>	<b>99</b>	<b>170,673</b>	<b>91</b>	<b>-33,703</b>	<b>95</b>							
<b>Internal Loads</b>															
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
People	5,000	0	5,000	2	2,500	1	0	0	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub Total ==&gt;</b>	<b>5,000</b>	<b>0</b>	<b>5,000</b>	<b>2</b>	<b>2,500</b>	<b>1</b>	<b>0</b>	<b>0</b>							
<b>Ceiling Load</b>															
Ceiling Load	14,603	-14,603	0	0	14,603	8	-3,834	0	0	0	0	0	0	0	0
Ventilation Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ov/Undr Sizing	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Exhaust Heat	0	-2,829	-2,829	-1	0	0	0	0	0	0	0	0	0	0	0
Sup. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reheat at Design	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Grand Total ==&gt;</b>	<b>216,316</b>	<b>80,501</b>	<b>296,817</b>	<b>100.00</b>	<b>187,778</b>	<b>100.00</b>	<b>-37,536</b>	<b>-62,172</b>	<b>100.00</b>						

AIRFLOWS		
	Cooling	Heating
Vent	0	0
Infil	311	0
Supply	10,301	10,301
MinStop/Rh	0	0
Return	10,612	10,301
Exhaust	311	0
Rm Exh	0	0
Auxil	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	0.0	0.0
cfm/ft2	1.88	1.88
cfm/ton	416.47	
ft2/ton	221.80	
Btu/hr-ft2	54.10	-11.33
No. People	10	

COOLING COIL SELECTION										
	Total Capacity		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			F	F	gr/lb	F	F	gr/lb
Main Clg	24.7	296.8	268.3	10,301	83.4	65.2	66.8	58.2	55.8	64.6
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>24.7</b>	<b>296.8</b>								

AREAS			
	Gross Total	Glass	
		ft2	(%)
Floor	5,486		
Part	0		
ExFlr	0		
Roof	5,486	0	0
Wall	5,082	2,541	50

HEATING COIL SELECTION				
	Capacity MBh	Coil Airflow cfm	Ent Lvg	
			F	F
Main Htg	-62.2	10,301	65.8	71.4
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
<b>Total</b>	<b>-62.2</b>			

# Zone Checksums

By MATENO

## LOBBY TOILETS

COOLING COIL PEAK					CLG SPACE PEAK			HEATING COIL PEAK				TEMPERATURES		
Peaked at Time:		Mo/Hr: 7 / 14			Mo/Hr: 7 / 14				Mo/Hr: Heating Design					
Outside Air:		OADB/WB/HR: 109 / 90 / 188			OADB: 109				OADB: 46					
Space Sens.	Plenum Sens.	Net Total	Percent Of Total	Space Sensible	Percent Of Total	Space Peak	Coil Peak	Percent	Space Sens	Tot Sens	Of Total	SADB	Cooling	Heating
+ Lat.	+ Lat	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	(%)	Btu/h	Btu/h	(%)	Plenum		
Btu/h	Btu/h											Return		
												Ret/OA		
												Fn MtrTD		
												Fn BldTD		
												Fn Frict		
<b>Envelope Loads</b>														
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roof Cond	0	12,510	12,510	51	0	0	0	0	0	-2,922	86	0	0	0
Glass Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glass Cond	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wall Cond	1,942	658	2,600	11	1,942	24	0	0	-720	-978	29	0	0	0
Partition	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exposed Floor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Infiltration	5,996	0	5,996	25	2,019	24	0	0	-1,298	-1,298	38	0	0	0
<i>Sub Total ==&gt;</i>	7,938	13,168	21,106	87	3,961	48	0	0	-2,018	-5,197	152	0	0	0
<b>Internal Loads</b>														
Lights	1,365	341	1,707	7	1,365	17	0	0	0	0	0	0	0	0
People	2,000	0	2,000	8	1,000	12	0	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sub Total ==&gt;</i>	3,365	341	3,707	15	2,365	29	0	0	0	0	0	0	0	0
<b>Ceiling Load</b>														
Ventilation Load	1,928	-1,928	0	0	1,928	23	0	0	-483	0	0	0	0	0
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exhaust Heat	0	-519	-519	-2	0	0	0	0	0	130	-4	0	0	0
Sup. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reheat at Design	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Grand Total ==&gt;</i>	13,232	11,062	24,293	100.00	8,254	100.00	0	0	-2,501	-3,411	100.00	0	0	0

AIRFLOWS		
	Cooling	Heating
Vent	0	0
Infil	54	54
Supply	381	381
MinStop/Rh	0	0
Return	435	435
Exhaust	54	54
Rm Exh	0	0
Auxil	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	0.0	0.0
cfm/ft2	0.55	0.55
cfm/ton	188.01	
ft2/ton	341.42	
Btu/hr-ft2	35.15	-4.94
No. People	4	

COOLING COIL SELECTION										
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			MBh	cfm	F	F	gr/lb	F
Main Clg	2.0	24.3	19.3	381	83.8	68.0	80.5	55.0	46.1	33.3
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	2.0	24.3								

AREAS			
	Gross Total	Glass	
		ft2	(%)
Floor	691		
Part	0		
ExFlr	0		
Roof	691	0	0
Wall	352	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent	Lvg
Main Htg	-3.4	381	65.8	74.1
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
<b>Total</b>	-3.4			

# Zone Checksums

By MATENO

## LOBY COFFEE SHOP

COOLING COIL PEAK					CLG SPACE PEAK			HEATING COIL PEAK				TEMPERATURES			
Peaked at Time:		Mo/Hr: 8 / 14			Mo/Hr: 8 / 14		Mo/Hr: Heating Design				Cooling			Heating	
Outside Air:		OADB/WB/HR: 106 / 89 / 190			OADB: 106		OADB: 46				SADB	60.7	72.2		
Space Sens.	Plenum Sens.	Net Total	Percent Of Total	Space Sensible	Percent Of Total	Space Peak	Coil Peak	Percent	Space Sens	Tot Sens	Of Total	Plenum	Return	Ret/OA	
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	(%)	Btu/h	Btu/h	(%)	Fn MtrTD	Fn BldTD	Fn Frict	
<b>Envelope Loads</b>															
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Roof Cond	0	9,127	9,127	34	0	0	0	0	0	-2,261	36	0	0	0	
Glass Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Glass Cond	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Wall Cond	11,584	4,032	15,616	58	11,584	82	0	0	-3,788	-5,144	81	0	0	0	
Partition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exposed Floor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Infiltration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Sub Total ==&gt;</b>	<b>11,584</b>	<b>13,159</b>	<b>24,743</b>	<b>92</b>	<b>11,584</b>	<b>82</b>	<b>0</b>	<b>0</b>	<b>-3,788</b>	<b>-7,405</b>	<b>117</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
<b>Internal Loads</b>															
Lights	120	30	150	1	120	1	0	0	0	0	0	0	0	0	
People	2,000	0	2,000	7	1,000	7	0	0	0	0	0	0	0	0	
Misc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Sub Total ==&gt;</b>	<b>2,120</b>	<b>30</b>	<b>2,150</b>	<b>8</b>	<b>1,120</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Ceiling Load</b>															
Ventilation Load	1,424	-1,424	0	0	1,424	10	0	0	-374	0	0	0	0	0	
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exhaust Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sup. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Reheat at Design	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Grand Total ==&gt;</b>	<b>15,128</b>	<b>11,765</b>	<b>26,893</b>	<b>100.00</b>	<b>14,128</b>	<b>100.00</b>	<b>-4,162</b>	<b>-6,337</b>	<b>100.00</b>	<b>-4,162</b>	<b>-6,337</b>	<b>100.00</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

AIRFLOWS		
	Cooling	Heating
Vent	0	0
Infil	0	0
Supply	909	909
MinStop/Rh	0	0
Return	909	909
Exhaust	0	0
Rm Exh	0	0
Auxil	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	0.0	0.0
cfm/ft2	1.70	1.70
cfm/ton	405.71	
ft2/ton	238.68	
Btu/hr-ft2	50.28	-11.85
No. People	4	

COOLING COIL SELECTION										
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			F	F	gr/lb	F	F	gr/lb
Main Clg	2.2	26.9	25.9	909	83.4	65.2	66.8	60.7	55.6	59.6
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>2.2</b>	<b>26.9</b>								

AREAS			
	Gross Total	Glass	
		ft2	(%)
Floor	535		
Part	0		
ExFlr	0		
Roof	535	0	0
Wall	550	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent	
			MBh	Lvg
	MBh	cfm	F	F
Main Htg	-6.3	909	65.8	72.2
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
<b>Total</b>	<b>-6.3</b>			