RICE LIBRARY PRE-DESIGN ENERGY MODELING REPORT

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RIPCORD ENGINEERING

OBJECTIVE

The objective of this exercise was to use architectural schematic drawings and proposed site conditions to perform preliminary energy modeling for the future Rice Library in Kittery, Maine, with the intention of optimizing the building envelope composition for cost, energy, performance, construction methods, and to identify viable HVAC system options.

METHOD

Preliminary drawings provided by Lassel Architects (LA) were used to build an energy model using Trane Trace 700 Version 6.3.1.

Weather data used was Typical Meteorological Year 3 (TMY3) for Pease AFB/Portsmouth, NH. Summer design dry bulb temperature was 90°F, wet bulb temperature was 76°F. Winter design temperature was 2°F.

Total occupancy for the building was calculated based on the following density rates:

- Book Stacks: 100 ft^2 per person
- Card File: 50 ft^2 per person
- Conference Room: 20 ft^2 per person
- Indoor Play Area: ft^2 per person
- Maker Space: 33 ft^2 per person
- Multi-Purpose Assembly: 12 ft^2 per person
- Offices: 143 ft^2 per person
- Reading Area: 50 ft^2 per person
- All other spaces: 0 people

The occupancy schedule as a percentage of maximum occupancy was programmed as:

- Sundays & Mondays: 0%
- Tuesdays & Fridays: 10 AM – 2 PM 50%; 2 PM – 5 PM 75%
- Wednesdays & Thursdays: 12 PM – 2 PM 50%; 2 PM – 8 PM 75%
- Saturdays: 10 AM – 2 PM 100%

Outside air requirements were based on ASHRAE 90.1 ventilation standards by space use.

Outside air infiltration was modeled as 0 ACH to reflect negligible infiltration rates with a well-sealed envelope (approximately 1 ACH_{50} or less).

The energy model was run assuming a multiple-zone variable air volume central air handler with an enthalpy recovery wheel and economizer mode. Air handler outside air pre-heat would be provided by a hot water coil, assuming natural gas providing the hot water. Air handler cooling would be provided by packaged Direct Expansion (DX) cooling. The interior building zones would be served by variable air volume boxes with electric reheat.

The Domestic Hot Water (DHW) was calculated at an average rate of 0.1 gallons per hour per occupant, varying with scheduled occupancy load. Domestic Hot Water was calculated as being provided by natural gas heating.

Electrical utility costs were based on a simplified CMP Medium General Service rate schedule for commercial users with more than 20 kW but less than 400 kW of demand. The rate structure was modeled as $37.22 per month customer charge, $11.72/kW demand charge, and $0.002857/kWh consumption charge.

Gas utility costs were based on a simplified Unitil G50/T50 Low Annual Use-Low Peak Period rate schedule. The rate structure was modeled as a $56.22 per month customer charge plus $0.83 per therm combined energy and distribution charge.

PHASE 1

Phase 1 of energy modeling was used to compare different envelope options. In Phase 1, the roof and slab compositions were held constant while three wall assemblies were modeled each with two window assemblies. After the results of the Phase 1 energy modeling had been reviewed, Lassel Architects selected a single envelope assembly to be evaluated in Phase 2.

- Slab: 4" rigid insulation (R-16)
- Wall 1: 2 x 6 with mineral wool insulation + 2" rigid exterior insulation under face brick (R-35)
- Wall 2: 2 x 8 with mineral wool insulation + 2" rigid exterior insulation under face brick (R-42)
- Wall 3: 2 x 8 with mineral wool insulation + insulated exterior sheathing under face brick (R-30)
- Window 1: Double-pane, coated (R-2)
- Window 2: Triple-pane, Coated (R-4.5)
- Roof: 12" Structural Insulated Panel (SIP) (R-42)

PHASE 2

Phase 2 of the energy modeling was used to provide data for HVAC equipment selection and to predict yearly utility costs.

- Slab: 4" rigid insulation (R-16)
- Wall 4: 2 x 6 with dense-pack cellulose insulation + 2" exterior rigid under face brick (R-32)
- Window 3: Triple Pane, tinted 6mm glass with Low-E film, 13mm spacing, air-filled
- Roof: Vented roof with 15 inches of blown-in cellulose insulation (R-55)

RESULTS

PHASE 1

The design occupancy load was calculated to be 391 people. The total outside air required at full occupancy was 4,314 CFM.

The cooling loads, heating loads, and estimated yearly utility costs (including lighting, plug loads, and domestic hot water) for each iteration are shown below in Table 1.

Table 1 – Phase 1 Energy Model Results

Wall Type	Window Type	Cooling Load (Tons)	Heating Load (MBH)	Yearly Utility Costs
Wall 1	Window 1	38.4	159	$9,247
Wall 2	Window 1	37.7	156	$9,140
Wall 3	Window 1	38.2	159	$9,253
Wall 1	Window 2	32.7	120	$8,071
Wall 2	Window 2	32.5	118	$8,046
Wall 3	Window 2	32.5	119	$8,108

PHASE 2

The Phase 2 cooling and heating loads, and yearly utility costs are shown in Table 2 below. The breakdown of the cooling loads are shown in Table 3 below. Detailed Phase 2 energy model results are in Appendix 1.

Table 2 – Phase 2 Energy Model Results

Wall Type	Window Type	Cooling Load (Tons)	Heating Load (MBH)	Yearly Utility Costs
Wall 4	Window 3	32.4	150	$8,048

Table 3 – Phase 2 Cooling Load Breakdown

Total Cooling Load	Envelope Load	Lighting Load	People Load	Ventilation Load
32.4 Tons	16%	26%	32%	26%

The Phase 2 energy model results showed System Loading (based on average monthly temperatures and occupancy rates instead of design day) showed that the cooling system only operated 96 hours per year, and only 31 hours per year were more than 24 Tons, with no hours above 30 Tons.

ANALYSIS

PHASE 1

The dominant factor in Phase 1 was the type of window. While yearly utility costs differed by no more than $1,200, the capacity of the required cooling equipment decreased by almost 20% from Double Pane to Triple Pane windows. The difference in utility costs between the wall compositions was negligible – less than $200 per year.

PHASE 2

The cooling load was dominated by people, and ventilation loads – accounting for more than 58% with envelope loads accounting for only 16%.

The predicted system loading leaves open the possibility of under-sizing the cooling capacity to 30 Tons or even down to 24 Tons, significantly reducing equipment size and cost. The trade-offs would be that if full occupancy ever occurred on a design summer day, full cooling would not be possible - only "comfort" cooling.

HVAC SYSTEM OPTIONS

OPTION 1 – MULTI-ZONE VARIABLE AIR VOLUME SYSTEM WITH ENERGY RECOVERY

Option 1 is a single packaged air handler located on the central portion of the roof with an integrated energy recovery enthalpy wheel, hot water coil pre-heat, and DX cooling. Condensing units would be integrated into the air handler. A single curb would serve the air handler and its energy recovery system. Basis of design: Trane Performance Climate Changer with Renewaire Energy Recovery Ventilator (ERV) and combination curb or Greenheck ERCH.

The air handler would be a Variable Air Volume (VAV) system with Variable Frequency Drives (VFDs) on all fan motors, economizer mode, and demand controlled ventilation. Approximately 8 different zones in the Library would be served by VAV boxes with electric reheat coils.

A central duct system would be run through the attic space, penetrating the ceiling to connect to the zone VAV boxes. Downstream of the VAV boxes, ductwork could be exposed or above the ceiling, depending on ceiling space and aesthetic requirements.

Pros

- Single piece of roof-top equipment with integrated condensing units, well located in the central roof would not be very visible from the exterior.
- Refrigerant is maintained exterior to the building, not triggering any ASHRAE 15 limitations.
- All heating and cooling is provided from above, with no equipment along the walls or floors.
- No condensate drainage required in the building.

Cons

- Less space temperature control in some offices and the Study Rooms/Conference Room.

OPTION 2 – CENTRAL ENERGY RECOVERY VENTILATOR WITH ZONE AIR HANDLERS

Option 2 is a central ERV located on the central portion of the roof providing ventilation air to multiple blower coil air handlers throughout the building. The blower coil air handlers would condition the ventilation air and provide additional heating and cooling required by each zone. Basis of design: Renewaire HE6XRT and Trane Blower Coil Air Handlers.

The ERV would be a Variable Air Volume (VAV) system with VFDs and demand controlled ventilation.

The ventilation air would be ducted to multiple blower coil air handlers located in the attic spaces throughout the building, serving approximately 8 different building zones. Each blower coil air handler will have DX cooling provided by an individual condensing unit, also located on the central portion of the roof and connected by refrigerant lines. Blower coil air handler re-heat would be provided by an electric coil. Downstream of the air handlers, ductwork could be exposed or above the ceiling, depending on ceiling space and aesthetic requirements.

Pros

- ERV well located in the central roof would not be very visible from the exterior.
- Refrigerant is maintained in the attic, not triggering any ASHRAE 15 limitations.
- All heating and cooling is provided from above, with no equipment along the walls or floors.

Cons

- Each air handler requires a condensing unit, so there would be multiple condensing units on the central portion of the roof.
- Multiple sets of refrigerant lines running throughout the attic.
- Blower coil air handler maintenance access would be from the attic.
- Condensate must be drained away from the blower coil air handlers.
- Less space temperature control in some offices and the Study Rooms/Conference Room.

OPTION 3 – CENTRAL ENERGY RECOVERY VENTILATOR WITH VRF SYSTEM

Option 3 is a central ERV located on the central portion of the roof providing ventilation air to the building, with space conditioning provided by a variable refrigerant flow (VRF) system (also known as "heat pump mini-splits"). Basis of design Mitsubishi PremiSys ERV with Mitsubishi VRF heat pumps.

The ERV would be a VAV system with VFDs and demand controlled ventilation. The VRF system would vary depending on space use. The Multi-Purpose Assembly and the Indoor Play Area would each have their own system that could provide low-ambient cooling. The Central Stack and Children's Collection would be served by a shared multi-zone cold weather heat pump system, with a combination of multi-position air handlers, wall-mounted air handlers, and ceiling cassettes. The Director's Office, Bookkeeper's Office, Study Rooms, and Conference Room would share a multi-zone cold weather heat pump system with low-ambient cooling capability. The south-east office group (Server Room, Genealogy, Reference & Circulation, Offices and Break Room) would share a multi-zone cold weather heat pump system with low-ambient cooling capability.

The ventilation air would be ducted in the attic spaces to distribute air throughout the building. The VRF system condensers would also be located on the central portion of the roof (to the greatest extent possible depending on refrigerant line length restrictions), with refrigerant lines run to the individual air handlers. Ductwork downstream of air handlers could be exposed or above the ceiling, depending on ceiling space and aesthetic requirements

Pros

- ERV well located in the central roof would not be very visible from the exterior.
- Total space temperature control in each room.

Cons

- Multiple condensing units on the central portion of the roof.
- System design would have to consider ASHRAE 15 refrigerant volume limitations.
- Multiple sets of refrigerant lines running throughout the building.
- Condensate must be drained away from all indoor units.
- Most expensive system.

RECOMMENDATIONS

All of the occupancy numbers in this study were based on people per square foot estimates. Ripcord Engineering (RE) recommends studying projected occupancy of the new library to ensure that HVAC systems are not over- or under-sized based on actual expected occupancy numbers.

RE recommends updating the energy model based on actual proposed window performance data by pre-selecting one or more window manufacturers to evaluate. RE also recommends evaluating different window performance by building face – for example adjusting solar heat gain (SHG) or R-value to optimize building performance and cost.

RE recommends evaluating a separate HVAC system for the Multi-Purpose Assembly room during Schematic Design. Some considerations would be the effect of winter cooling in the Multi-Purpose Assembly room on re-heat requirements for other zones, cost of an additional system, and the benefits of separate control of a system that may be used frequently outside of Library business hours.

RE recommends considering installing a cooling plant smaller than the design cooling capacity, due to the unlikely concurrence of maximum occupancy with the highest outside air temperature, humidity, and solar gain. The Design Engineer will need to coordinate with the Authority Having Jurisdiction (AHJ) prior to submitting plans for permitting.

RE recommends a building envelope of:

- 4" of rigid insulation under the whole slab
- R-30+ wall with exterior insulation
- Vented roof with 15+" of blown cellulose insulation
- Triple-pane, low-e, low SHG, insulated spacer windows
- ≤ 1 ACH_{50} airtightness

RE recommends installing a central multi-zone VAV system with energy recovery. The Server Room may require its own computer room unit.

APPENDIX 1: DETAILED PHASE 2 ENERGY MODEL RESULTS

RICE LIBRARY ENERGY MODELING

Location	**KITTERY, ME**
Building owner	**TOWN OF KITTERY**
Program user	**SONIA BARRANTES**
Company	**RIPCORD ENGINEERING**
Comments	

By	**RIPCORD ENGINEERING**
Dataset name	**\\psf\Home\Documents\TRACE 700 Projects\16001\16001 16-03-09.trc**

Calculation time	**01:20 PM on 03/10/2016**
TRACE® 700 version	**6.3.1**

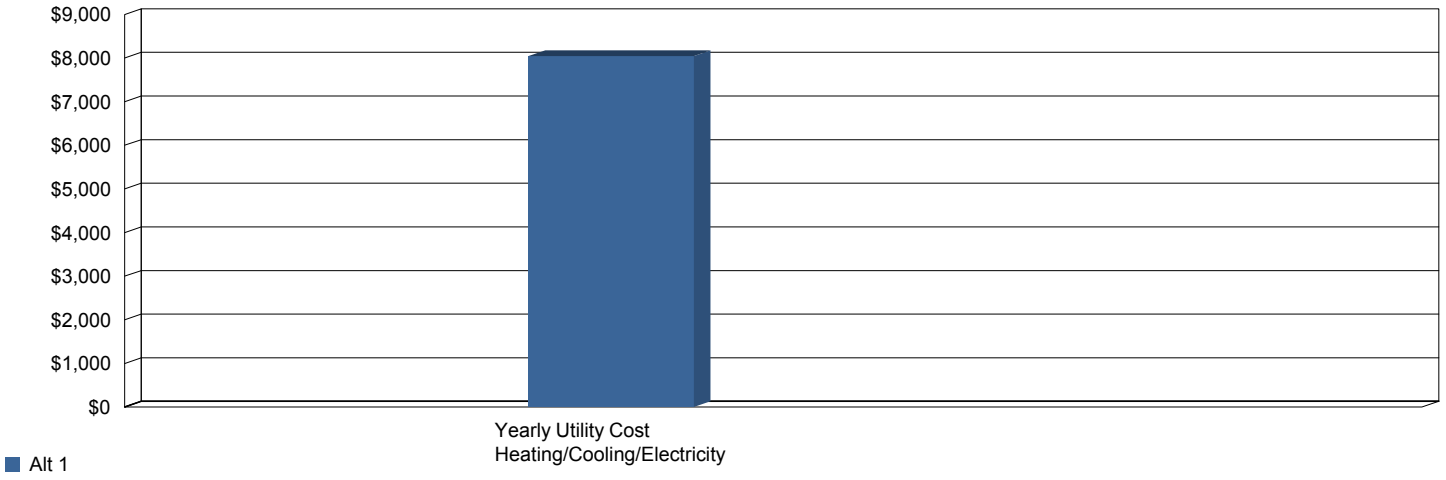
Location	**Portsmouth, NH**	
Latitude	**43.1**	**deg**
Longitude	**70.8**	**deg**
Time Zone	**5**	
Elevation	**0**	**ft**
Barometric pressure	**30.1**	**in. Hg**
Air density	**0.0765**	**lb/cu ft**
Air specific heat	**0.2444**	**Btu/lb·°F**
Density-specific heat product	**1.1223**	**Btu/h·cfm·°F**
Latent heat factor	**4,940.3**	**Btu·min/h·cu ft**
Enthalpy factor	**4.5914**	**lb·min/hr·cu ft**
Summer design dry bulb	**90.0**	**°F**
Summer design wet bulb	**76.0**	**°F**
Winter design dry bulb	**2.0**	**°F**
Summer clearness number	**1.000**	
Winter clearness number	**1.000**	
Summer ground reflectance	**.200**	
Winter ground reflectance	**.200**	
Carbon Dioxide Level	**400**	**ppm**
Design simulation period	**January - December**	
Cooling load methodology	**TETD-TA1**	
Heating load methodology	**UATD**	

Economic Summary

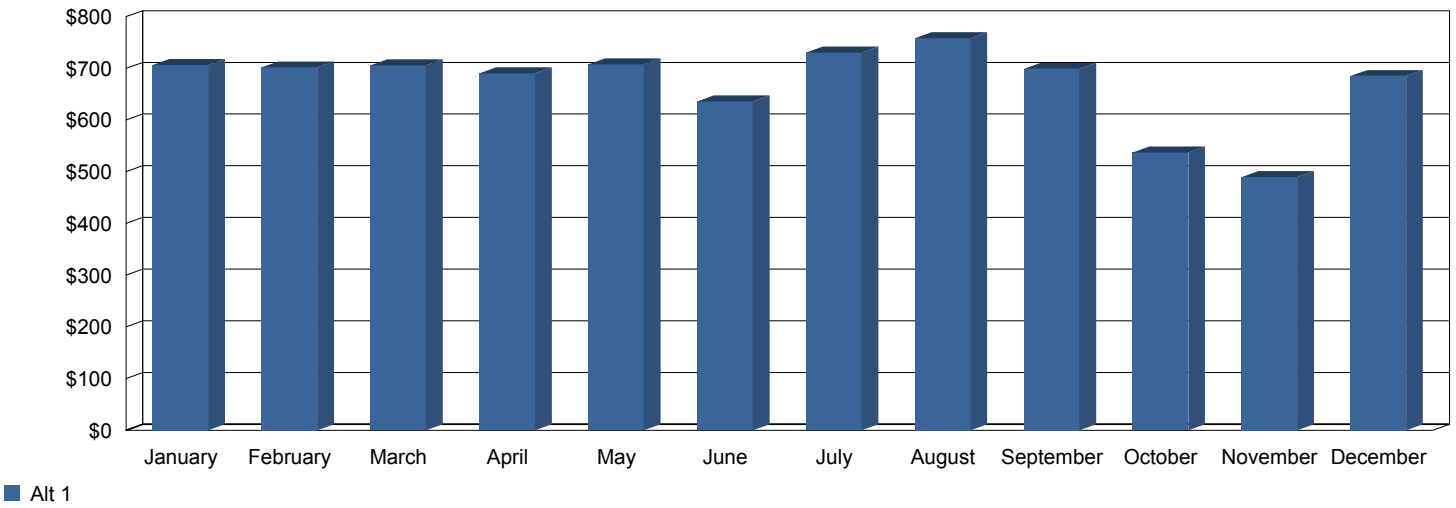
Project Information

Location	KITTERY, ME	Study Life:	20 years
Project Name	RICE LIBRARY ENERGY MODELING	Cost of Capital:	10 %
User	SONIA BARRANTES	Alternative 1:	16001 2x6 Dense Wall R-55 Roof 3Pane
Company	RIPCORD ENGINEERING		
Comments			

Annual Utility Costs



Monthly Utility Costs



MONTHLY UTILITY COSTS

By RIPCORD ENGINEERING

Utility	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
	------- Monthly Utility Costs -------												
Alternative 1													
Electric													
On-Pk Cons. ($)	5	5	4	4	3	3	4	3	4	3	3	5	47
On-Pk Demand ($)	641	634	641	625	644	573	665	695	634	474	426	619	7,273
Total ($):	646	639	646	630	648	576	669	698	638	477	430	624	7,320
Gas													
On-Pk Cons. ($)	61	63	60	61	60	60	61	60	61	60	60	61	728
Monthly Total ($):	706	702	706	691	708	636	730	758	699	537	490	685	8,048

Building Area = 19,924 ft²

Utility Cost Per Area = .40 $/ft²

MONTHLY ENERGY CONSUMPTION

By RIPCORD ENGINEERING

------- Monthly Energy Consumption -------

Utility	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Alternative: 1	**16001 2x6 Dense Wall R-55 Roof 3Pane**												
Electric													
On-Pk Cons. (kWh)	1,635	1,739	1,531	1,532	1,106	1,078	1,502	1,195	1,233	1,112	1,157	1,723	16,542
On-Pk Demand (kW)	52	51	52	50	52	46	54	56	51	37	33	50	56
Gas													
On-Pk Cons. (therms)	6	8	5	6	5	5	6	5	6	5	5	6	64
On-Pk Demand (therms/hr)	0	1	0	0	0	0	0	0	0	0	0	0	1

Energy Consumption

Building	3,156	Btu/(ft2-year)
Source	8,841	Btu/(ft2-year)
Floor Area	19,924	ft2

Environmental Impact Analysis

CO2	No Data Available
SO2	No Data Available
NOX	No Data Available

System Checksums

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Server Room — **Computer Room Unit**

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 13
Outside Air: OADB/WB/HR: 88 / 76 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	16	16	1
Glass Solar	631	0	631	36
Glass/Door Cond	37	0	37	2
Wall Cond	76	51	127	7
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	744	67	811	46
Internal Loads				
Lights	381	95	477	27
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	381	95	477	27
Ceiling Load	71	-71	0	0
Ventilation Load	0	0	497	28
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-15	-15	-1
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	1,197	76	1,770	100.00

CLG SPACE PEAK

Mo/Hr: Sum of
OADB: Peaks

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	631	53
Glass/Door Cond	37	3
Wall Cond	76	6
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	744	62
Internal Loads		
Lights	381	32
People	0	0
Misc	0	0
Sub Total ==>	381	32
Ceiling Load	71	6
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	1,197	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-172	7.67
Glass Solar	0	0	0.00
Glass/Door Cond	-355	-355	15.79
Wall Cond	-385	-658	29.24
Partition/Door	0	0	0.00
Floor	-417	-417	18.52
Adjacent Floor	0	0	0
Infiltration	0	0	0.00
Sub Total ==>	-1,157	-1,602	71.22
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-195	0	0.00
Ventilation Load	0	-673	29.93
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		41	-1.84
OA Preheat Diff.		0	.000
RA Preheat Diff.		0	.000
Additional Reheat		-16	.693
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-1,351	-2,249	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	92.6
Ra Plenum	76.5	65.8
Return	76.5	65.8
Ret/OA	78.4	55.3
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	53	53
Terminal	53	53
Main Fan	53	53
Sec Fan	0	0
Nom Vent	9	9
AHU Vent	9	9
Infil	0	0
MinStop/Rh	53	53
Return	53	53
Exhaust	9	9
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	16.5	16.5
cfm/ft²	0.36	0.36
cfm/ton	361.55	
ft²/ton	996.85	
Btu/hr·ft²	12.04	-15.30
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.2	1.8	1.4	53	78.4	64.3	67.1	55.0	53.2	57.3
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
Total	0.2	1.8								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	147		
Part	0		
Int Door	0		
ExFlr	25		
Roof	147	0	0
Wall	343	24	7
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-2.3	53	55.0	92.6
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Reheat	-1.2	53	55.0	75.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-2.3			

System Checksums

By RIPCORD ENGINEERING

System - 008 **Variable Volume Reheat (30% Min Flow Default)**

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	20,310	20,310	5
Glass Solar	37,891	0	37,891	10
Glass/Door Cond	2,324	0	2,324	1
Wall Cond	1,763	1,620	3,383	1
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	41,977	21,930	63,908	16
Internal Loads				
Lights	80,724	20,181	100,904	26
People	123,173	0	123,173	32
Misc	4,483	0	4,483	1
Sub Total ==>	208,380	20,181	228,561	59
Ceiling Load	15,193	-15,193	0	0
Ventilation Load	0	0	101,307	26
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	600		600	0
Exhaust Heat		-11,571	-11,571	-3
Sup. Fan Heat			5,962	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	266,150	15,347	388,767	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 18
OADB: 86

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	43,527	19
Glass/Door Cond	7,324	3
Wall Cond	2,077	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	52,928	23
Internal Loads		
Lights	80,724	35
People	76,022	33
Misc	4,483	2
Sub Total ==>	161,229	71
Ceiling Load	13,843	6
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	500	0
Grand Total ==>	228,500	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-24,187	23.82
Glass Solar	0	0	0.00
Glass/Door Cond	-41,265	-41,265	40.63
Wall Cond	-8,761	-18,278	18.00
Partition/Door	0	0	0.00
Floor	-13,498	-13,498	13.29
Adjacent Floor	0	0	0
Infiltration	0	0	0.00
Sub Total ==>	-63,524	-97,228	95.74
Internal Loads			
Lights	0	95,075	-93.62
People	0	74,769	-73.63
Misc	0	3,259	-3.21
Sub Total ==>	0	173,104	-170.46
Ceiling Load	-20,677	0	0.00
Ventilation Load	0	-68,635	67.59
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		5,024	-4.95
OA Preheat Diff.		-15,825	15.583
RA Preheat Diff.		-97,992	96.493
Additional Reheat		0	.000
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-84,201	-101,553	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	92.6
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.5	51.5
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	10,498	3,321
Terminal	10,498	3,321
Main Fan	10,498	3,321
Sec Fan	0	0
Nom Vent	4,305	122
AHU Vent	4,305	122
Infil	0	0
MinStop/Rh	3,321	3,321
Return	10,323	3,269
Exhaust	4,130	3,027
Rm Exh	175	53
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	41.0	92.7
cfm/ft²	0.53	0.17
cfm/ton	324.04	
ft²/ton	610.46	
Btu/hr·ft²	19.66	-4.78
No. People	318	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F	Enter DB/WB/HR °F	Enter DB/WB/HR gr/lb	Leave DB/WB/HR °F	Leave DB/WB/HR °F	Leave DB/WB/HR gr/lb
Main Clg	32.4	388.8	241.8	10,061	76.5	66.0	78.6	55.1	53.5	58.2
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
Total	32.4	388.8								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	19,777		
Part	0		
Int Door	0		
ExFlr	794		
Roof	19,777	0	0
Wall	11,522	2,789	24
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-68.7	3,321	55.1	73.5
Aux Htg	0.0	0	0.0	0.0
Preheat	-25.8	4,305	49.7	55.1
Reheat	-55.6	3,321	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-94.5			

Room Checksums

By RIPCORD ENGINEERING

BATHROOM - CHILD

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 20
Outside Air: OADB/WB/HR: 81 / 73 / 111

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	89	89	40
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	58	34	93	42
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	58	123	181	82
Internal Loads				
Lights	0	0	0	0
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	0	0	0	0
Ceiling Load	71	-71	0	0
Ventilation Load	0	0	100	45
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	34		34	15
Exhaust Heat		-98	-98	-44
Sup. Fan Heat			4	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	163	-47	221	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 23
OADB: 75

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	67	12
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	67	12
Internal Loads		
Lights	0	0
People	0	0
Misc	0	0
Sub Total ==>	0	0
Ceiling Load	77	14
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	400	73
Grand Total ==>	544	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-110	5.49
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	-178	-294	14.66
Partition/Door	0	0	0.00
Floor	-170	-170	8.48
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-348	-574	28.63
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-94	0	0.00
Ventilation Load	0	-572	28.55
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		-1,042	51.995
RA Preheat Diff.		0	.000
Additional Reheat		0	.000
System Plenum Heat		184	-9.17
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-442	-2,005	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	122.5
Ra Plenum	77.5	68.5
Return	77.5	68.5
Ret/OA	78.4	2.0
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	25	8
Terminal	25	8
Main Fan	25	8
Sec Fan	0	0
Nom Vent	25	8
AHU Vent	25	8
Infil	0	0
MinStop/Rh	8	8
Return	0	0
Exhaust	0	0
Rm Exh	25	8
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	100.0	100.0
cfm/ft²	0.28	0.08
cfm/ton	1,355.50	
ft²/ton	4,879.80	
Btu/hr·ft²	2.46	-22.27
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.0	0.2	0.2	8	78.4	66.5	78.1	55.1	55.1	64.3
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
Total	0.0	0.2								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	90		
Part	0		
Int Door	0		
ExFlr	10		
Roof	90	0	0
Wall	140	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.5	8	55.1	116.3
Aux Htg	0.0	0	0.0	0.0
Preheat	-1.5	25	2.0	55.1
Reheat	-0.1	8	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-2.0			

Room Checksums

By RIPCORD ENGINEERING

BATHROOM - MENS

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	122	122	21
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	94	56	151	26
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	94	178	272	47
Internal Loads				
Lights	0	0	0	0
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	0	0	0	0
Ceiling Load	101	-101	0	0
Ventilation Load	0	0	353	61
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	131		131	23
Exhaust Heat		-190	-190	-33
Sup. Fan Heat			9	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	326	-113	575	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 23
OADB: 75

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	125	11
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	125	11
Internal Loads		
Lights	0	0
People	0	0
Misc	0	0
Sub Total ==>	0	0
Ceiling Load	113	10
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	851	78
Exhaust Heat		
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
System Plenum Heat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	1,088	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-160	4.16
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	-285	-470	12.22
Partition/Door	0	0	0.00
Floor	-272	-272	7.07
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-557	-902	23.45
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-137	0	0.00
Ventilation Load	0	-1,145	29.75
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		-2,085	54.187
RA Preheat Diff.		0	.000
Additional Reheat		0	.000
System Plenum Heat		284	-7.39
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-694	-3,847	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	111.2
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	75.3	2.0
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	50	15
Terminal	50	15
Main Fan	50	15
Sec Fan	0	0
Nom Vent	50	15
AHU Vent	50	15
Infil	0	0
MinStop/Rh	15	15
Return	0	0
Exhaust	0	0
Rm Exh	50	15
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	100.0	100.0
cfm/ft²	0.38	0.11
cfm/ton	1,042.94	
ft²/ton	2,732.51	
Btu/hr·ft²	4.39	-29.37
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	0.6	0.2	15	75.3	69.3	97.4	55.1	55.1	64.3
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
Total	0.1	0.6								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	131		
Part	0		
Int Door	0		
ExFlr	16		
Roof	131	0	0
Wall	224	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.9	15	55.1	106.7
Aux Htg	0.0	0	0.0	0.0
Preheat	-3.0	50	2.0	55.1
Reheat	-0.3	15	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-3.9			

Room Checksums

By RIPCORD ENGINEERING

BATHROOM - REF CIRC

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	67	67	24
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	36	21	57	20
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	36	88	124	44
Internal Loads				
Lights	0	0	0	0
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	0	0	0	0
Ceiling Load	52	-52	0	0
Ventilation Load	0	0	176	62
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	75		75	26
Exhaust Heat		-95	-95	-33
Sup. Fan Heat			4	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	163	-59	285	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 23
OADB: 75

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	46	8
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	46	8
Internal Loads		
Lights	0	0
People	0	0
Misc	0	0
Sub Total ==>	0	0
Ceiling Load	59	11
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	440	81
Grand Total ==>	544	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-83	4.46
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	-116	-191	10.20
Partition/Door	0	0	0.00
Floor	-111	-111	5.90
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-226	-385	20.56
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-71	0	0.00
Ventilation Load	0	-572	30.56
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		-1,042	55.658
RA Preheat Diff.		0	.000
Additional Reheat		0	.000
System Plenum Heat		127	-6.78
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-297	-1,873	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	105.3
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	75.3	2.0
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	25	8
Terminal	25	8
Main Fan	25	8
Sec Fan	0	0
Nom Vent	25	8
AHU Vent	25	8
Infil	0	0
MinStop/Rh	8	8
Return	0	0
Exhaust	0	0
Rm Exh	25	8
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	100.0	100.0
cfm/ft²	0.37	0.11
cfm/ton	1,053.67	
ft²/ton	2,876.53	
Btu/hr·ft²	4.17	-27.44
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.0	0.3	0.1	8	75.3	69.3	97.4	55.1	55.1	64.3
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
Total	0.0	0.3								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	68		
Part	0		
Int Door	0		
ExFlr	7		
Roof	68	0	0
Wall	91	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.4	8	55.1	100.7
Aux Htg	0.0	0	0.0	0.0
Preheat	-1.5	25	2.0	55.1
Reheat	-0.1	8	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-1.9			

Room Checksums

By RIPCORD ENGINEERING

BATHROOM - WOMENS

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	129	129	15
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	129	75	204	24
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	129	204	333	39
Internal Loads				
Lights	0	0	0	0
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	0	0	0	0
Ceiling Load	107	-107	0	0
Ventilation Load	0	0	529	63
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	254		254	30
Exhaust Heat		-286	-286	-34
Sup. Fan Heat			13	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	490	-188	844	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 23
OADB: 75

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	180	11
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	180	11
Internal Loads		
Lights	0	0
People	0	0
Misc	0	0
Sub Total ==>	0	0
Ceiling Load	120	7
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	1,333	82
Exhaust Heat		
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
System Plenum Heat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	1,632	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-170	2.91
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	-480	-793	13.56
Partition/Door	0	0	0.00
Floor	-459	-459	7.85
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-939	-1,422	24.32
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-145	0	0.00
Ventilation Load	0	-1,717	29.36
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		-3,127	53.470
RA Preheat Diff.		0	.000
Additional Reheat		0	.000
System Plenum Heat		418	-7.15
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-1,085	-5,849	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	113.0
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	75.3	2.0
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	75	23
Terminal	75	23
Main Fan	75	23
Sec Fan	0	0
Nom Vent	75	23
AHU Vent	75	23
Infil	0	0
MinStop/Rh	23	23
Return	0	0
Exhaust	0	0
Rm Exh	75	23
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	100.0	100.0
cfm/ft²	0.54	0.16
cfm/ton	1,066.19	
ft²/ton	1,976.00	
Btu/hr·ft²	6.07	-42.08
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	0.8	0.3	23	75.3	69.3	97.4	55.1	55.1	64.3
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
Total	0.1	0.8								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	139		
Part	0		
Int Door	0		
ExFlr	27		
Roof	139	0	0
Wall	378	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-1.4	23	55.1	109.8
Aux Htg	0.0	0	0.0	0.0
Preheat	-4.5	75	2.0	55.1
Reheat	-0.4	23	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-5.9			

Room Checksums

By RIPCORD ENGINEERING

BOOK KEEPING

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 13
Outside Air: OADB/WB/HR: 88 / 76 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	10	10	1
Glass Solar	750	0	750	48
Glass/Door Cond	40	0	40	3
Wall Cond	23	21	44	3
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	814	31	845	54
Internal Loads				
Lights	197	49	246	16
People	223	0	223	14
Misc	102	0	102	6
Sub Total ==>	522	49	571	36
Ceiling Load	38	-38	0	0
Ventilation Load	0	0	134	9
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-13	-13	-1
Sup. Fan Heat			34	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	1,373	30	1,571	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 13
OADB: 88

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	750	60
Glass/Door Cond	40	3
Wall Cond	23	2
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	814	65
Internal Loads		
Lights	197	16
People	95	8
Misc	102	8
Sub Total ==>	395	32
Ceiling Load	38	3
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	1,246	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-111	26.74
Glass Solar	0	0	0.00
Glass/Door Cond	-355	-355	85.33
Wall Cond	-100	-199	47.80
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-455	-665	159.87
Internal Loads			
Lights	0	345	-82.84
People	0	159	-38.23
Misc	0	155	-37.31
Sub Total ==>	0	659	-158.38
Ceiling Load	-95	0	0.00
Ventilation Load	0	-273	65.69
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		14	-3.45
OA Preheat Diff.		0	.000
RA Preheat Diff.		-221	53.036
Additional Reheat		0	.000
System Plenum Heat		70	-16.77
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-551	-416	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	98.6
Ra Plenum	76.3	68.5
Return	76.3	68.5
Ret/OA	76.8	55.1
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	57	17
Terminal	57	17
Main Fan	57	17
Sec Fan	0	0
Nom Vent	9	0
AHU Vent	9	0
Infil	0	0
MinStop/Rh	17	17
Return	57	17
Exhaust	9	9
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	15.1	50.3
cfm/ft²	0.63	0.19
cfm/ton	437.15	
ft²/ton	695.14	
Btu/hr·ft²	17.26	-3.57
No. People	1	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	1.6	1.4	57	76.8	63.7	66.8	55.1	54.6	62.4
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
Total	0.1	1.6								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	91		
Part	0		
Int Door	0		
ExFlr	0		
Roof	91	0	0
Wall	119	24	20
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.3	17	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	9	51.2	55.1
Reheat	-0.3	17	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.3			

Room Checksums

By RIPCORD ENGINEERING

CENTRAL STACK

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	9,385	9,385	6
Glass Solar	19,396	0	19,396	13
Glass/Door Cond	1,023	0	1,023	1
Wall Cond	346	456	802	1
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	20,765	9,841	30,606	20
Internal Loads				
Lights	42,488	10,622	53,110	34
People	36,400	0	36,400	24
Misc	0	0	0	0
Sub Total ==>	78,888	10,622	89,510	58
Ceiling Load	6,991	-6,991	0	0
Ventilation Load	0	0	36,404	24
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-4,209	-4,209	-3
Sup. Fan Heat			2,519	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	106,643	9,263	154,830	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 19
OADB: 83

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	20,829	22
Glass/Door Cond	2,862	3
Wall Cond	439	0
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	24,130	25
Internal Loads		
Lights	42,488	44
People	22,295	23
Misc	0	0
Sub Total ==>	64,783	68
Ceiling Load	6,817	7
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Exhaust Heat		
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
System Plenum Heat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	95,730	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-11,129	38.66
Glass Solar	0	0	0.00
Glass/Door Cond	-18,227	-18,227	63.32
Wall Cond	-1,820	-4,708	16.36
Partition/Door	0	0	0.00
Floor	-4,233	-4,233	14.71
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-24,280	-38,297	133.05
Internal Loads			
Lights	0	53,110	-184.51
People	0	22,295	-77.46
Misc	0	0	0.00
Sub Total ==>	0	75,405	-261.96
Ceiling Load	-9,514	0	0.00
Ventilation Load	0	-27,801	96.58
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		2,189	-7.61
OA Preheat Diff.		-984	3.418
RA Preheat Diff.		-36,240	125.901
Additional Reheat		0	.000
System Plenum Heat		-3,057	10.62
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-33,794	-28,784	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	92.8
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.7	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	4,398	1,319
Terminal	4,398	1,319
Main Fan	4,398	1,319
Sec Fan	0	0
Nom Vent	1,547	0
AHU Vent	1,547	0
Infil	0	0
MinStop/Rh	1,319	1,319
Return	4,398	1,319
Exhaust	1,547	1,319
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	35.2	100.0
cfm/ft²	0.48	0.14
cfm/ton	340.87	
ft²/ton	705.29	
Btu/hr·ft²	17.01	-3.16
No. People	91	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	12.9	154.8	104.9	4,251	76.7	65.6	76.5	55.1	53.8	59.4
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
Total	12.9	154.8								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	9,100		
Part	0		
Int Door	0		
ExFlr	249		
Roof	9,100	0	0
Wall	3,486	1,232	35
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-22.1	1,319	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-6.7	1,547	51.2	55.1
Reheat	-22.1	1,319	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-28.8			

Room Checksums

By RIPCORD ENGINEERING

CHILD COLLECTION

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	4,692	4,692	6
Glass Solar	13,554	0	13,554	17
Glass/Door Cond	690	0	690	1
Wall Cond	338	340	678	1
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	14,583	5,032	19,615	24
Internal Loads				
Lights	21,244	5,311	26,555	32
People	18,200	0	18,200	22
Misc	0	0	0	0
Sub Total ==>	39,444	5,311	44,755	55
Ceiling Load	3,495	-3,495	0	0
Ventilation Load	0	0	18,202	22
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-2,105	-2,105	-3
Sup. Fan Heat			1,374	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	57,522	4,743	81,841	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 18
OADB: 86

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	16,019	30
Glass/Door Cond	2,188	4
Wall Cond	398	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	18,606	34
Internal Loads		
Lights	21,244	39
People	11,148	21
Misc	0	0
Sub Total ==>	32,391	60
Ceiling Load	3,185	6
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	54,182	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-5,565	35.11
Glass Solar	0	0	0.00
Glass/Door Cond	-12,296	-12,296	77.58
Wall Cond	-1,958	-4,382	27.64
Partition/Door	0	0	0.00
Floor	-3,468	-3,468	21.88
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-17,722	-25,710	162.21
Internal Loads			
Lights	0	26,555	-167.54
People	0	11,148	-70.33
Misc	0	0	0.00
Sub Total ==>	0	37,702	-237.87
Ceiling Load	-4,757	0	0.00
Ventilation Load	0	-15,735	99.27
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		1,239	-7.82
OA Preheat Diff.		-116	.729
RA Preheat Diff.		-12,538	79.104
Additional Reheat		0	.000
System Plenum Heat		-693	4.37
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-22,479	-15,850	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	96.8
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.7	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	2,489	747
Terminal	2,489	747
Main Fan	2,489	747
Sec Fan	0	0
Nom Vent	774	0
AHU Vent	774	0
Infil	0	0
MinStop/Rh	747	747
Return	2,489	747
Exhaust	774	747
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	31.1	100.0
cfm/ft²	0.55	0.16
cfm/ton	364.99	
ft²/ton	667.15	
Btu/hr·ft²	17.99	-3.48
No. People	46	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	6.8	81.8	56.9	2,319	76.7	65.5	75.5	55.1	54.0	60.1
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
Total	6.8	81.8								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	4,550		
Part	0		
Int Door	0		
ExFlr	204		
Roof	4,550	0	0
Wall	2,926	831	28
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-12.5	747	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-3.3	774	51.2	55.1
Reheat	-12.5	747	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-15.9			

Room Checksums

By RIPCORD ENGINEERING

CONFERENCE

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	261	261	3
Glass Solar	68	0	68	1
Glass/Door Cond	10	0	10	0
Wall Cond	23	11	34	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	101	272	373	4
Internal Loads				
Lights	850	212	1,062	12
People	5,060	0	5,060	58
Misc	432	0	432	5
Sub Total ==>	6,341	212	6,554	75
Ceiling Load	194	-194	0	0
Ventilation Load	0	0	1,846	21
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-213	-213	-2
Sup. Fan Heat			127	1
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	6,637	77	8,687	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 19
OADB: 83

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	75	2
Glass/Door Cond	28	1
Wall Cond	36	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	140	3
Internal Loads		
Lights	850	18
People	3,099	66
Misc	432	9
Sub Total ==>	4,381	93
Ceiling Load	190	4
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	7	0
Grand Total ==>	4,717	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-309	21.67
Glass Solar	0	0	0.00
Glass/Door Cond	-178	-178	12.44
Wall Cond	-232	-401	28.06
Partition/Door	0	0	0.00
Floor	-247	-247	17.26
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-657	-1,134	79.43
Internal Loads			
Lights	0	1,062	-74.39
People	0	3,099	-217.06
Misc	0	432	-30.24
Sub Total ==>	0	4,593	-321.69
Ceiling Load	-265	0	0.00
Ventilation Load	0	-1,370	95.94
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		108	-7.55
OA Preheat Diff.		-58	4.063
RA Preheat Diff.		-3,606	252.528
Additional Reheat		0	.000
System Plenum Heat		39	-2.72
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-921	-1,428	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	82.6
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.7	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	217	65
Terminal	217	65
Main Fan	217	65
Sec Fan	0	0
Nom Vent	78	0
AHU Vent	78	0
Infil	0	0
MinStop/Rh	65	65
Return	217	65
Exhaust	78	65
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	36.2	100.0
cfm/ft²	0.86	0.26
cfm/ton	299.35	
ft²/ton	349.49	
Btu/hr·ft²	34.34	-5.64
No. People	13	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.7	8.7	4.9	215	76.7	65.7	76.5	55.1	52.3	53.8
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
Total	0.7	8.7								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	253		
Part	0		
Int Door	0		
ExFlr	15		
Roof	253	0	0
Wall	203	12	6
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-1.1	65	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.3	78	51.2	55.1
Reheat	-1.1	65	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-1.4			

Room Checksums

By RIPCORD ENGINEERING

CORRIDOR - ENTRY

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 11
Outside Air: OADB/WB/HR: 82 / 74 / 114

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	-19	-19	0
Glass Solar	5,653	0	5,653	79
Glass/Door Cond	123	0	123	2
Wall Cond	0	27	27	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	5,776	9	5,785	81
Internal Loads				
Lights	562	141	703	10
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	562	141	703	10
Ceiling Load	171	-171	0	0
Ventilation Load	0	0	409	6
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	85		85	1
Exhaust Heat		-36	-36	-1
Sup. Fan Heat			177	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	6,594	-58	7,122	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 11
OADB: 82

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	5,653	87
Glass/Door Cond	123	2
Wall Cond	0	0
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	5,776	89
Internal Loads		
Lights	562	9
People	0	0
Misc	0	0
Sub Total ==>	562	9
Ceiling Load	171	3
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Exhaust Heat		
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
System Plenum Heat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	6,509	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-636	13.36
Glass Solar	0	0	0.00
Glass/Door Cond	-2,131	-2,131	44.77
Wall Cond	0	-151	3.18
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-2,131	-2,918	61.30
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-544	0	0.00
Ventilation Load	0	-1,405	29.53
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		52	-1.09
OA Preheat Diff.		0	.000
RA Preheat Diff.		-883	18.549
Additional Reheat		0	.000
System Plenum Heat		395	-8.29
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-2,674	-4,760	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	96.6
Ra Plenum	76.0	68.5
Return	76.0	68.5
Ret/OA	76.2	55.1
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	299	90
Terminal	299	90
Main Fan	299	90
Sec Fan	0	0
Nom Vent	31	31
AHU Vent	31	31
Infil	0	0
MinStop/Rh	90	90
Return	299	90
Exhaust	31	31
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	10.4	34.8
cfm/ft²	0.58	0.17
cfm/ton	503.87	
ft²/ton	876.14	
Btu/hr·ft²	13.70	-7.71
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.6	7.1	6.8	299	76.2	63.3	66.0	55.1	55.1	64.3
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
Total	0.6	7.1								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	520		
Part	0		
Int Door	0		
ExFlr	0		
Roof	520	0	0
Wall	217	144	66
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-3.9	90	55.1	93.6
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	31	51.2	55.1
Reheat	-1.5	90	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-4.0			

Room Checksums

By RIPCORD ENGINEERING

CORRIDOR - REAR

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 8 / 16
Outside Air: OADB/WB/HR: 86 / 76 / 116

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	136	136	8
Glass Solar	633	0	633	37
Glass/Door Cond	48	0	48	3
Wall Cond	7	7	14	1
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	687	143	831	48
Internal Loads				
Lights	508	127	635	37
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	508	127	635	37
Ceiling Load	156	-156	0	0
Ventilation Load	0	0	259	15
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-33	-33	-2
Sup. Fan Heat			37	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	1,351	81	1,728	100.00

CLG SPACE PEAK

Mo/Hr: 10 / 15
OADB: 66

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	990	66
Glass/Door Cond	-47	-3
Wall Cond	-6	0
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	937	62
Internal Loads		
Lights	508	34
People	0	0
Misc	0	0
Sub Total ==>	508	34
Ceiling Load	63	4
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Exhaust Heat		
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
System Plenum Heat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	1,508	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-345	34.71
Glass Solar	0	0	0.00
Glass/Door Cond	-311	-311	31.27
Wall Cond	-44	-102	10.31
Partition/Door	0	0	0.00
Floor	-85	-85	8.55
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-440	-843	84.85
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-295	0	0.00
Ventilation Load	0	-357	35.88
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		28	-2.83
OA Preheat Diff.		0	.000
RA Preheat Diff.		-58	5.876
Additional Reheat		0	.000
System Plenum Heat		236	-23.78
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-735	-994	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	101.5
Ra Plenum	76.7	68.5
Return	76.7	68.5
Ret/OA	77.4	54.4
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	69	21
Terminal	69	21
Main Fan	69	21
Sec Fan	0	0
Nom Vent	17	17
AHU Vent	17	17
Infil	0	0
MinStop/Rh	21	21
Return	69	21
Exhaust	17	17
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	24.4	81.4
cfm/ft²	0.25	0.07
cfm/ton	481.21	
ft²/ton	1,958.27	
Btu/hr·ft²	6.13	-3.52
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	1.7	1.6	62	77.4	64.3	68.6	55.1	55.1	64.3
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
Total	0.1	1.7								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	282		
Part	0		
Int Door	0		
ExFlr	5		
Roof	282	0	0
Wall	70	21	30
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.9	21	55.1	94.5
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	17	51.2	55.1
Reheat	-0.4	21	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-1.0			

Room Checksums

By RIPCORD ENGINEERING

DIRECTORS OFFICE

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 12
Outside Air: OADB/WB/HR: 86 / 75 / 116

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	6	6	0
Glass Solar	2,379	0	2,379	59
Glass/Door Cond	84	0	84	2
Wall Cond	37	41	79	2
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	2,501	47	2,548	64
Internal Loads				
Lights	384	96	480	12
People	448	0	448	11
Misc	192	0	192	5
Sub Total ==>	1,024	96	1,120	28
Ceiling Load	71	-71	0	0
Ventilation Load	0	0	271	7
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-24	-24	-1
Sup. Fan Heat			90	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	3,596	48	4,005	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 13
OADB: 88

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	2,251	67
Glass/Door Cond	121	4
Wall Cond	38	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	2,410	72
Internal Loads		
Lights	426	13
People	207	6
Misc	221	7
Sub Total ==>	854	26
Ceiling Load	81	2
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	3,345	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-241	6.78
Glass Solar	0	0	0.00
Glass/Door Cond	-1,065	-1,065	29.99
Wall Cond	-185	-406	11.42
Partition/Door	0	0	0.00
Floor	-323	-323	9.09
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-1,574	-2,035	57.28
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-206	0	0.00
Ventilation Load	0	0	0.00
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		-1,114	31.368
RA Preheat Diff.		-696	19.581
Additional Reheat		0	.000
System Plenum Heat		293	-8.23
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-1,780	-3,553	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	104.4
Ra Plenum	76.1	68.5
Return	76.1	68.5
Ret/OA	76.4	68.5
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	154	46
Terminal	154	46
Main Fan	154	46
Sec Fan	0	0
Nom Vent	19	0
AHU Vent	19	0
Infil	0	0
MinStop/Rh	46	46
Return	154	46
Exhaust	19	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	12.2	0.0
cfm/ft²	0.78	0.23
cfm/ton	460.47	
ft²/ton	590.23	
Btu/hr·ft²	20.33	-12.79
No. People	1	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.3	4.0	3.5	153	76.4	63.5	66.3	55.1	54.7	63.1
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
Total	0.3	4.0								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	197		
Part	0		
Int Door	0		
ExFlr	19		
Roof	197	0	0
Wall	266	72	27
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-2.4	46	55.1	102.2
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	19	51.2	55.1
Reheat	-0.8	46	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-2.5			

Room Checksums

By RIPCORD ENGINEERING

GAME ROOM 1

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	118	118	9
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	0	118	118	9
Internal Loads				
Lights	333	83	417	32
People	346	0	346	26
Misc	188	0	188	14
Sub Total ==>	867	83	951	73
Ceiling Load	85	-85	0	0
Ventilation Load	0	0	246	19
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-28	-28	-2
Sup. Fan Heat			22	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	952	89	1,308	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 20
OADB: 81

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	333	42
People	192	24
Misc	188	23
Sub Total ==>	713	89
Ceiling Load	87	11
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	801	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-135	58.52
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	0	-135	58.52
Internal Loads			
Lights	0	417	-181.27
People	0	192	-83.65
Misc	0	188	-81.65
Sub Total ==>	0	797	-346.57
Ceiling Load	-115	0	0.00
Ventilation Load	0	-220	95.74
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		17	-7.54
OA Preheat Diff.		0	.000
RA Preheat Diff.		-671	291.740
Additional Reheat		0	.000
System Plenum Heat		-19	8.12
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-115	-230	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	79.3
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.8	52.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	37	11
Terminal	37	11
Main Fan	37	11
Sec Fan	0	0
Nom Vent	10	0
AHU Vent	10	0
Infil	0	0
MinStop/Rh	11	11
Return	37	11
Exhaust	10	10
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	28.4	94.6
cfm/ft²	0.33	0.10
cfm/ton	337.48	
ft²/ton	1,009.11	
Btu/hr·ft²	11.89	-2.09
No. People	1	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	1.3	0.9	37	76.8	65.2	73.9	55.1	53.5	58.1
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
Total	0.1	1.3								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	110		
Part	0		
Int Door	0		
ExFlr	0		
Roof	110	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.2	11	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	10	51.2	55.1
Reheat	-0.2	11	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.2			

Room Checksums

By RIPCORD ENGINEERING

GAME ROOM 2

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	135	135	9
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	0	135	135	9
Internal Loads				
Lights	379	95	474	32
People	393	0	393	26
Misc	213	0	213	14
Sub Total ==>	986	95	1,080	73
Ceiling Load	96	-96	0	0
Ventilation Load	0	0	279	19
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-32	-32	-2
Sup. Fan Heat			25	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
***Grand Total* ==>**	1,082	101	1,486	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 20
OADB: 81

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	379	42
People	219	24
Misc	213	23
Sub Total ==>	811	89
Ceiling Load	99	11
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
***Grand Total* ==>**	910	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-153	58.51
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	0	-153	58.51
Internal Loads			
Lights	0	474	-181.24
People	0	219	-83.64
Misc	0	213	-81.64
Sub Total ==>	0	905	-346.51
Ceiling Load	-131	0	0.00
Ventilation Load	0	-250	95.73
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		20	-7.54
OA Preheat Diff.		0	.000
RA Preheat Diff.		-762	291.699
Additional Reheat		0	.000
System Plenum Heat		-21	8.12
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
***Grand Total* ==>**	-131	-261	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	79.3
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.8	52.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	42	13
Terminal	42	13
Main Fan	42	13
Sec Fan	0	0
Nom Vent	12	0
AHU Vent	12	0
Infil	0	0
MinStop/Rh	13	13
Return	42	13
Exhaust	12	12
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	28.4	94.6
cfm/ft²	0.33	0.10
cfm/ton	337.48	
ft²/ton	1,009.11	
Btu/hr·ft²	11.89	-2.09
No. People	1	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	1.5	1.0	42	76.8	65.2	73.9	55.1	53.5	58.1
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
Total	0.1	1.5								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	125		
Part	0		
Int Door	0		
ExFlr	0		
Roof	125	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.2	13	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	12	51.2	55.1
Reheat	-0.2	13	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.3			

Room Checksums

By RIPCORD ENGINEERING

GENEAOLOGY

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	204	204	9
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	0	204	204	9
Internal Loads				
Lights	576	144	720	32
People	598	0	598	26
Misc	324	0	324	14
Sub Total ==>	1,498	144	1,642	73
Ceiling Load	146	-146	0	0
Ventilation Load	0	0	425	19
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-49	-49	-2
Sup. Fan Heat			38	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	1,644	153	2,259	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 20
OADB: 81

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	576	42
People	332	24
Misc	324	23
Sub Total ==>	1,232	89
Ceiling Load	151	11
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	1,383	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-232	58.50
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	0	-232	58.50
Internal Loads			
Lights	0	720	-181.23
People	0	332	-83.63
Misc	0	324	-81.64
Sub Total ==>	0	1,376	-346.50
Ceiling Load	-199	0	0.00
Ventilation Load	0	-380	95.72
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		30	-7.54
OA Preheat Diff.		0	.000
RA Preheat Diff.		-1,159	291.691
Additional Reheat		0	.000
System Plenum Heat		-32	8.12
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-199	-397	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	79.3
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.8	52.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	64	19
Terminal	64	19
Main Fan	64	19
Sec Fan	0	0
Nom Vent	18	0
AHU Vent	18	0
Infil	0	0
MinStop/Rh	19	19
Return	64	19
Exhaust	18	18
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	28.4	94.6
cfm/ft²	0.33	0.10
cfm/ton	337.48	
ft²/ton	1,009.11	
Btu/hr·ft²	11.89	-2.09
No. People	1	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.2	2.3	1.6	63	76.8	65.2	73.9	55.1	53.5	58.1
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
Total	0.2	2.3								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	190		
Part	0		
Int Door	0		
ExFlr	0		
Roof	190	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.3	19	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	18	51.2	55.1
Reheat	-0.3	19	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.4			

Room Checksums

By RIPCORD ENGINEERING

INDOOR PLAY AREA

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	589	589	2
Glass Solar	244	0	244	1
Glass/Door Cond	48	0	48	0
Wall Cond	139	93	232	1
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	431	682	1,113	4
Internal Loads				
Lights	2,031	508	2,539	10
People	13,500	0	13,500	54
Misc	0	0	0	0
Sub Total ==>	15,531	508	16,039	64
Ceiling Load	461	-461	0	0
Ventilation Load	0	0	8,754	35
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-1,012	-1,012	-4
Sup. Fan Heat			284	1
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	16,423	-283	25,178	100.00

CLG SPACE PEAK

Mo/Hr: 9 / 17
OADB: 77

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	1,223	11
Glass/Door Cond	16	0
Wall Cond	99	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	1,338	12
Internal Loads		
Lights	2,031	18
People	7,500	67
Misc	0	0
Sub Total ==>	9,531	85
Ceiling Load	292	3
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	11,161	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-734	17.54
Glass Solar	0	0	0.00
Glass/Door Cond	-799	-799	19.09
Wall Cond	-597	-1,061	25.36
Partition/Door	0	0	0.00
Floor	-680	-680	16.25
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-2,076	-3,274	78.24
Internal Loads			
Lights	0	2,539	-60.68
People	0	7,500	-179.23
Misc	0	0	0.00
Sub Total ==>	0	10,039	-239.92
Ceiling Load	-627	0	0.00
Ventilation Load	0	-3,241	77.46
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		255	-6.10
OA Preheat Diff.		-943	22.538
RA Preheat Diff.		-7,174	171.449
Additional Reheat		0	.000
System Plenum Heat		154	-3.67
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-2,703	-4,184	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	85.7
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	75.8	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	513	154
Terminal	513	154
Main Fan	513	154
Sec Fan	0	0
Nom Vent	372	0
AHU Vent	372	0
Infil	0	0
MinStop/Rh	154	154
Return	513	154
Exhaust	372	154
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	72.5	100.0
cfm/ft²	0.85	0.26
cfm/ton	244.39	
ft²/ton	285.96	
Btu/hr·ft²	41.96	-17.56
No. People	30	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	2.1	25.2	10.6	479	75.8	68.0	90.0	55.1	51.1	49.0
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
Total	2.1	25.2								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	600		
Part	0		
Int Door	0		
ExFlr	40		
Roof	600	0	0
Wall	560	54	10
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-2.6	154	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-8.0	372	36.0	55.1
Reheat	-2.6	154	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-10.5			

Room Checksums

By RIPCORD ENGINEERING

MAKER SPACE

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	429	429	3
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	95	54	149	1
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	95	483	578	4
Internal Loads				
Lights	1,454	363	1,817	13
People	6,246	0	6,246	46
Misc	710	0	710	5
Sub Total ==>	8,410	363	8,774	64
Ceiling Load	320	-320	0	0
Ventilation Load	0	0	4,702	34
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-544	-544	-4
Sup. Fan Heat			155	1
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	8,825	-17	13,665	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 20
OADB: 81

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	137	2
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	137	2
Internal Loads		
Lights	1,454	25
People	3,123	54
Misc	710	12
Sub Total ==>	5,287	92
Ceiling Load	330	6
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	5,754	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-509	23.21
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	-391	-646	29.49
Partition/Door	0	0	0.00
Floor	-374	-374	17.06
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-765	-1,529	69.77
Internal Loads			
Lights	0	1,817	-82.91
People	0	3,123	-142.49
Misc	0	710	-32.39
Sub Total ==>	0	5,650	-257.79
Ceiling Load	-435	0	0.00
Ventilation Load	0	-1,671	76.23
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		132	-6.00
OA Preheat Diff.		-521	23.767
RA Preheat Diff.		-4,327	197.402
Additional Reheat		0	.000
System Plenum Heat		74	-3.38
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-1,200	-2,192	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	83.5
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	75.8	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	264	79
Terminal	264	79
Main Fan	264	79
Sec Fan	0	0
Nom Vent	200	0
AHU Vent	200	0
Infil	0	0
MinStop/Rh	79	79
Return	264	79
Exhaust	200	79
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	75.6	100.0
cfm/ft²	0.64	0.19
cfm/ton	232.13	
ft²/ton	365.32	
Btu/hr·ft²	32.85	-14.20
No. People	12	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	1.1	13.7	5.9	262	75.8	68.0	89.6	55.1	51.1	49.1
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
Total	1.1	13.7								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	416		
Part	0		
Int Door	0		
ExFlr	22		
Roof	416	0	0
Wall	308	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-1.3	79	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-4.6	200	34.7	55.1
Reheat	-1.3	79	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-5.9			

Room Checksums

By RIPCORD ENGINEERING

MECHANICAL-JANITOR

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	335	335	17
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	41	17	58	3
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	41	352	393	20
Internal Loads				
Lights	885	221	1,106	56
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	885	221	1,106	56
Ceiling Load	262	-262	0	0
Ventilation Load	0	0	481	25
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-56	-56	-3
Sup. Fan Heat			32	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	1,188	256	1,957	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 23
OADB: 75

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	91	7
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	91	7
Internal Loads		
Lights	885	70
People	0	0
Misc	0	0
Sub Total ==>	885	70
Ceiling Load	293	23
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Exhaust Heat		
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
System Plenum Heat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	1,269	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-417	30.31
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	-427	-705	51.25
Partition/Door	0	0	0.00
Floor	-408	-408	29.65
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-835	-1,530	111.21
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-357	0	0.00
Ventilation Load	0	-369	26.79
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		29	-2.11
OA Preheat Diff.		-13	.932
RA Preheat Diff.		0	.000
Additional Reheat		0	.000
System Plenum Heat		507	-36.82
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-1,191	-1,376	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	130.7
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.6	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	58	17
Terminal	58	17
Main Fan	58	17
Sec Fan	0	0
Nom Vent	20	17
AHU Vent	20	17
Infil	0	0
MinStop/Rh	17	17
Return	58	17
Exhaust	20	17
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	35.1	100.0
cfm/ft²	0.17	0.05
cfm/ton	357.56	
ft²/ton	2,091.07	
Btu/hr·ft²	5.74	-4.03
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.2	2.0	1.5	55	76.6	65.7	76.8	55.1	54.1	60.5
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
Total	0.2	2.0								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	341		
Part	0		
Int Door	0		
ExFlr	24		
Roof	341	0	0
Wall	336	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-1.3	17	55.1	120.7
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	20	51.2	55.1
Reheat	-0.3	17	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-1.4			

Room Checksums

By RIPCORD ENGINEERING

MULTI-PURPOSE ASSEMBLY

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	1,279	1,279	2
Glass Solar	2,642	0	2,642	4
Glass/Door Cond	123	0	123	0
Wall Cond	144	110	254	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	2,909	1,388	4,298	7
Internal Loads				
Lights	4,164	1,041	5,206	8
People	34,100	0	34,100	55
Misc	0	0	0	0
Sub Total ==>	38,264	1,041	39,306	63
Ceiling Load	953	-953	0	0
Ventilation Load	0	0	19,988	32
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-2,311	-2,311	-4
Sup. Fan Heat			852	1
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	42,126	-834	62,132	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 19
OADB: 83

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	2,895	9
Glass/Door Cond	345	1
Wall Cond	186	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	3,427	11
Internal Loads		
Lights	4,164	13
People	23,250	73
Misc	0	0
Sub Total ==>	27,414	86
Ceiling Load	929	3
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	20	0
Grand Total ==>	31,790	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-1,516	13.77
Glass Solar	0	0	0.00
Glass/Door Cond	-2,197	-2,197	19.96
Wall Cond	-770	-1,478	13.42
Partition/Door	0	0	0.00
Floor	-1,037	-1,037	9.42
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-4,005	-6,229	56.57
Internal Loads			
Lights	0	5,206	-47.28
People	0	23,250	-211.17
Misc	0	0	0.00
Sub Total ==>	0	28,456	-258.45
Ceiling Load	-1,296	0	0.00
Ventilation Load	0	-9,232	83.85
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		727	-6.60
OA Preheat Diff.		-1,778	16.147
RA Preheat Diff.		-22,829	207.347
Additional Reheat		0	.000
System Plenum Heat		-125	1.14
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-5,301	-11,010	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	80.8
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.2	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	1,461	438
Terminal	1,461	438
Main Fan	1,461	438
Sec Fan	0	0
Nom Vent	849	0
AHU Vent	849	0
Infil	0	0
MinStop/Rh	438	438
Return	1,461	438
Exhaust	849	438
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	58.2	100.0
cfm/ft²	1.18	0.35
cfm/ton	282.08	
ft²/ton	239.49	
Btu/hr·ft²	50.11	-15.62
No. People	103	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	5.2	62.1	31.6	1,437	76.2	67.0	83.9	55.1	53.1	56.6
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
Total	5.2	62.1								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	1,240		
Part	0		
Int Door	0		
ExFlr	61		
Roof	1,240	0	0
Wall	854	149	17
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-7.3	438	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-12.0	849	42.5	55.1
Reheat	-7.3	438	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-19.4			

Room Checksums

By RIPCORD ENGINEERING

OFFICE - CHILD

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	97	97	9
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	0	97	97	9
Internal Loads				
Lights	273	68	341	32
People	283	0	283	26
Misc	154	0	154	14
Sub Total ==>	710	68	778	73
Ceiling Load	69	-69	0	0
Ventilation Load	0	0	201	19
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-23	-23	-2
Sup. Fan Heat			18	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	779	73	1,070	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 20
OADB: 81

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	273	42
People	157	24
Misc	154	23
Sub Total ==>	584	89
Ceiling Load	71	11
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	655	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-110	58.51
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	0	-110	58.51
Internal Loads			
Lights	0	341	-181.26
People	0	157	-83.64
Misc	0	154	-81.65
Sub Total ==>	0	652	-346.55
Ceiling Load	-94	0	0.00
Ventilation Load	0	-180	95.74
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		14	-7.54
OA Preheat Diff.		0	.000
RA Preheat Diff.		-549	291.718
Additional Reheat		0	.000
System Plenum Heat		-15	8.12
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-94	-188	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	79.3
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.8	52.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	30	9
Terminal	30	9
Main Fan	30	9
Sec Fan	0	0
Nom Vent	9	0
AHU Vent	9	0
Infil	0	0
MinStop/Rh	9	9
Return	30	9
Exhaust	9	9
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	28.4	94.6
cfm/ft²	0.33	0.10
cfm/ton	337.49	
ft²/ton	1,009.11	
Btu/hr·ft²	11.89	-2.09
No. People	1	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	1.1	0.8	30	76.8	65.2	73.9	55.1	53.5	58.1
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
Total	0.1	1.1								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	90		
Part	0		
Int Door	0		
ExFlr	0		
Roof	90	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.2	9	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	9	51.2	55.1
Reheat	-0.2	9	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.2			

Room Checksums

By RIPCORD ENGINEERING

OFFICE - MAKER

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	114	114	7
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	55	31	86	6
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	55	145	201	13
Internal Loads				
Lights	373	93	466	30
People	387	0	387	25
Misc	210	0	210	14
Sub Total ==>	970	93	1,063	69
Ceiling Load	94	-94	0	0
Ventilation Load	0	0	275	18
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-32	-32	-2
Sup. Fan Heat			26	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	1,120	112	1,533	100.00

CLG SPACE PEAK

Mo/Hr: 8 / 20
OADB: 78

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	86	9
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	86	9
Internal Loads		
Lights	373	38
People	215	22
Misc	210	21
Sub Total ==>	798	82
Ceiling Load	93	10
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	977	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-150	54.50
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	-249	-411	149.02
Partition/Door	0	0	0.00
Floor	-238	-238	86.22
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-487	-800	289.74
Internal Loads			
Lights	0	466	-168.81
People	0	215	-77.90
Misc	0	210	-76.04
Sub Total ==>	0	891	-322.75
Ceiling Load	-129	0	0.00
Ventilation Load	0	-246	89.16
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		19	-7.02
OA Preheat Diff.		0	.000
RA Preheat Diff.		-280	101.456
Additional Reheat		0	.000
System Plenum Heat		140	-50.59
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-616	-276	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	110.7
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.9	53.5
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	45	13
Terminal	45	13
Main Fan	45	13
Sec Fan	0	0
Nom Vent	12	0
AHU Vent	12	0
Infil	0	0
MinStop/Rh	13	13
Return	45	13
Exhaust	12	12
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	26.0	86.7
cfm/ft²	0.36	0.11
cfm/ton	351.49	
ft²/ton	963.13	
Btu/hr·ft²	12.46	-2.24
No. People	1	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	1.5	1.1	44	76.9	65.1	73.3	55.1	53.5	58.2
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
Total	0.1	1.5								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	123		
Part	0		
Int Door	0		
ExFlr	14		
Roof	123	0	0
Wall	196	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.2	13	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	12	51.2	55.1
Reheat	-0.2	13	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.3			

Room Checksums

By RIPCORD ENGINEERING

OFFICE GROUP - REF CIRC

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 12
Outside Air: OADB/WB/HR: 86 / 75 / 116

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	15	15	0
Glass Solar	6,074	0	6,074	59
Glass/Door Cond	246	0	246	2
Wall Cond	89	103	192	2
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	6,409	118	6,528	63
Internal Loads				
Lights	1,013	253	1,266	12
People	1,182	0	1,182	11
Misc	507	0	507	5
Sub Total ==>	2,702	253	2,955	29
Ceiling Load	188	-188	0	0
Ventilation Load	0	0	717	7
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-63	-63	-1
Sup. Fan Heat			233	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	9,299	120	10,369	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 12
OADB: 86

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	6,074	71
Glass/Door Cond	246	3
Wall Cond	89	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	6,409	75
Internal Loads		
Lights	1,013	12
People	455	5
Misc	507	6
Sub Total ==>	1,975	23
Ceiling Load	188	2
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing		
Exhaust Heat		
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
System Plenum Heat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	8,572	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-636	6.59
Glass Solar	0	0	0.00
Glass/Door Cond	-3,107	-3,107	32.19
Wall Cond	-489	-1,098	11.37
Partition/Door	0	0	0.00
Floor	-893	-893	9.25
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-4,489	-5,734	59.40
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-544	0	0.00
Ventilation Load	0	0	0.00
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		-2,942	30.475
RA Preheat Diff.		-1,783	18.467
Additional Reheat		0	.000
System Plenum Heat		805	-8.34
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-5,033	-9,653	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	108.0
Ra Plenum	76.1	68.5
Return	76.1	68.5
Ret/OA	76.5	68.5
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	394	118
Terminal	394	118
Main Fan	394	118
Sec Fan	0	0
Nom Vent	49	0
AHU Vent	49	0
Infil	0	0
MinStop/Rh	118	118
Return	394	118
Exhaust	49	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	12.5	0.0
cfm/ft²	0.76	0.23
cfm/ton	455.75	
ft²/ton	601.77	
Btu/hr·ft²	19.94	-13.32
No. People	4	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.9	10.4	9.1	394	76.5	63.5	66.4	55.1	54.7	63.1
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
Total	0.9	10.4								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	520		
Part	0		
Int Door	0		
ExFlr	53		
Roof	520	0	0
Wall	735	210	29
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-6.7	118	55.1	105.7
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.2	49	51.2	55.1
Reheat	-2.0	118	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-6.9			

Room Checksums

By RIPCORD ENGINEERING

REF OFFICE CIRC

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	327	327	9
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	0	327	327	9
Internal Loads				
Lights	921	230	1,152	32
People	957	0	957	26
Misc	519	0	519	14
Sub Total ==>	2,397	230	2,627	73
Ceiling Load	234	-234	0	0
Ventilation Load	0	0	679	19
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-79	-79	-2
Sup. Fan Heat			60	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	2,630	245	3,615	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 20
OADB: 81

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	921	42
People	531	24
Misc	519	23
Sub Total ==>	1,972	89
Ceiling Load	241	11
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	2,213	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-372	58.50
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	0	-372	58.50
Internal Loads			
Lights	0	1,152	-181.22
People	0	531	-83.63
Misc	0	519	-81.63
Sub Total ==>	0	2,202	-346.48
Ceiling Load	-318	0	0.00
Ventilation Load	0	-608	95.72
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		48	-7.54
OA Preheat Diff.		0	.000
RA Preheat Diff.		-1,854	291.684
Additional Reheat		0	.000
System Plenum Heat		-52	8.12
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-318	-636	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	79.3
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.8	52.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	102	31
Terminal	102	31
Main Fan	102	31
Sec Fan	0	0
Nom Vent	29	0
AHU Vent	29	0
Infil	0	0
MinStop/Rh	31	31
Return	102	31
Exhaust	29	29
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	28.4	94.6
cfm/ft²	0.33	0.10
cfm/ton	337.48	
ft²/ton	1,009.11	
Btu/hr·ft²	11.89	-2.09
No. People	2	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.3	3.6	2.5	101	76.8	65.2	73.9	55.1	53.5	58.1
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
Total	0.3	3.6								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	304		
Part	0		
Int Door	0		
ExFlr	0		
Roof	304	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.5	31	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	29	51.2	55.1
Reheat	-0.5	31	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.6			

Room Checksums

By RIPCORD ENGINEERING

SERVER

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 13
Outside Air: OADB/WB/HR: 88 / 76 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	16	16	1
Glass Solar	631	0	631	36
Glass/Door Cond	37	0	37	2
Wall Cond	76	51	127	7
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	744	67	811	46
Internal Loads				
Lights	381	95	477	27
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	381	95	477	27
Ceiling Load	71	-71	0	0
Ventilation Load	0	0	497	28
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-15	-15	-1
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	1,197	76	1,770	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 13
OADB: 88

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	631	53
Glass/Door Cond	37	3
Wall Cond	76	6
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	744	62
Internal Loads		
Lights	381	32
People	0	0
Misc	0	0
Sub Total ==>	381	32
Ceiling Load	71	6
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	1,197	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-172	7.67
Glass Solar	0	0	0.00
Glass/Door Cond	-355	-355	15.79
Wall Cond	-385	-658	29.24
Partition/Door	0	0	0.00
Floor	-417	-417	18.52
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-1,157	-1,602	71.22
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-195	0	0.00
Ventilation Load	0	-673	29.93
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		41	-1.84
OA Preheat Diff.		0	.000
RA Preheat Diff.		0	.000
Additional Reheat		-16	.693
System Plenum Heat		0	0.00
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-1,351	-2,249	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	92.6
Ra Plenum	76.5	65.8
Return	76.5	65.8
Ret/OA	78.4	55.3
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	53	53
Terminal	53	53
Main Fan	53	53
Sec Fan	0	0
Nom Vent	9	9
AHU Vent	9	9
Infil	0	0
MinStop/Rh	53	53
Return	53	53
Exhaust	9	9
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	16.5	16.5
cfm/ft²	0.36	0.36
cfm/ton	361.55	
ft²/ton	996.85	
Btu/hr·ft²	12.04	-15.30
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.2	1.8	1.4	53	78.4	64.3	67.1	55.0	53.2	57.3
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
Total	0.2	1.8								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	147		
Part	0		
Int Door	0		
ExFlr	25		
Roof	147	0	0
Wall	343	24	7
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-2.3	53	55.0	92.6
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Reheat	-1.2	53	55.0	75.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-2.3			

Room Checksums

By RIPCORD ENGINEERING

STORAGE

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	83	83	15
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	29	15	44	8
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	29	98	127	23
Internal Loads				
Lights	160	40	200	36
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	160	40	200	36
Ceiling Load	68	-68	0	0
Ventilation Load	0	0	251	45
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-29	-29	-5
Sup. Fan Heat			7	1
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	258	40	557	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 20
OADB: 81

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	44	16
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	44	16
Internal Loads		
Lights	160	58
People	0	0
Misc	0	0
Sub Total ==>	160	58
Ceiling Load	71	26
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	275	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-109	19.74
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	-205	-338	61.29
Partition/Door	0	0	0.00
Floor	-196	-196	35.46
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-400	-642	116.50
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-93	0	0.00
Ventilation Load	0	-80	14.47
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		6	-1.14
OA Preheat Diff.		-30	5.408
RA Preheat Diff.		0	.000
Additional Reheat		0	.000
System Plenum Heat		194	-35.24
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-493	-551	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	186.0
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	75.5	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	13	4
Terminal	13	4
Main Fan	13	4
Sec Fan	0	0
Nom Vent	11	4
AHU Vent	11	4
Infil	0	0
MinStop/Rh	4	4
Return	13	4
Exhaust	11	4
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	84.7	100.0
cfm/ft²	0.14	0.04
cfm/ton	271.92	
ft²/ton	1,918.19	
Btu/hr·ft²	6.26	-8.97
No. People	0	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	0.6	0.3	12	75.5	68.7	94.1	55.1	54.1	60.6
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
Total	0.1	0.6								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	89		
Part	0		
Int Door	0		
ExFlr	12		
Roof	89	0	0
Wall	161	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.5	4	55.1	174.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.3	11	30.6	55.1
Reheat	-0.1	4	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.8			

Room Checksums

By RIPCORD ENGINEERING

STUDY ROOM 1

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	102	102	3
Glass Solar	114	0	114	3
Glass/Door Cond	24	0	24	1
Wall Cond	15	12	27	1
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	153	114	268	7
Internal Loads				
Lights	349	87	437	12
People	2,080	0	2,080	56
Misc	177	0	177	5
Sub Total ==>	2,607	87	2,694	73
Ceiling Load	80	-80	0	0
Ventilation Load	0	0	759	21
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-88	-88	-2
Sup. Fan Heat			55	2
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	2,840	34	3,688	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 17
OADB: 88

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	188	9
Glass/Door Cond	73	3
Wall Cond	18	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	279	13
Internal Loads		
Lights	349	16
People	1,274	59
Misc	177	8
Sub Total ==>	1,801	84
Ceiling Load	67	3
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	2,147	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-127	20.03
Glass Solar	0	0	0.00
Glass/Door Cond	-400	-400	62.92
Wall Cond	-103	-207	32.64
Partition/Door	0	0	0.00
Floor	-153	-153	24.10
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-655	-887	139.69
Internal Loads			
Lights	0	437	-68.76
People	0	1,274	-200.64
Misc	0	177	-27.95
Sub Total ==>	0	1,888	-297.35
Ceiling Load	-109	0	0.00
Ventilation Load	0	-624	98.20
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		49	-7.73
OA Preheat Diff.		-11	1.803
RA Preheat Diff.		-1,097	172.707
Additional Reheat		0	.000
System Plenum Heat		46	-7.31
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-764	-635	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	93.0
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.7	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	99	30
Terminal	99	30
Main Fan	99	30
Sec Fan	0	0
Nom Vent	32	0
AHU Vent	32	0
Infil	0	0
MinStop/Rh	30	30
Return	99	30
Exhaust	32	30
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	32.7	100.0
cfm/ft²	0.95	0.28
cfm/ton	320.95	
ft²/ton	338.40	
Btu/hr·ft²	35.46	-6.11
No. People	5	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.3	3.7	2.1	93	76.7	65.5	75.9	55.1	52.5	54.5
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
Total	0.3	3.7								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	104		
Part	0		
Int Door	0		
ExFlr	9		
Roof	104	0	0
Wall	126	27	21
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.5	30	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	32	51.2	55.1
Reheat	-0.5	30	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.6			

Room Checksums

By RIPCORD ENGINEERING

STUDY ROOM 2

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 20
Outside Air: OADB/WB/HR: 75 / 69 / 97

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	102	102	3
Glass Solar	57	0	57	2
Glass/Door Cond	12	0	12	0
Wall Cond	20	12	32	1
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0	0	0	0
Infiltration	0		0	0
Sub Total ==>	89	114	203	6
Internal Loads				
Lights	349	87	437	12
People	2,080	0	2,080	57
Misc	177	0	177	5
Sub Total ==>	2,607	87	2,694	74
Ceiling Load	80	-80	0	0
Ventilation Load	0	0	759	21
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-88	-88	-2
Sup. Fan Heat			54	1
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	2,775	34	3,621	100.00

CLG SPACE PEAK

Mo/Hr: 7 / 17
OADB: 88

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	94	5
Glass/Door Cond	37	2
Wall Cond	23	1
Partition/Door	0	0
Floor	0	0
Adjacent Floor	0	0
Infiltration	0	0
Sub Total ==>	153	8
Internal Loads		
Lights	349	17
People	1,274	63
Misc	177	9
Sub Total ==>	1,801	89
Ceiling Load	67	3
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	2,022	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 2

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-127	20.99
Glass Solar	0	0	0.00
Glass/Door Cond	-200	-200	32.96
Wall Cond	-131	-236	38.92
Partition/Door	0	0	0.00
Floor	-153	-153	25.25
Adjacent Floor	0	0	.000
Infiltration	0	0	0.00
Sub Total ==>	-484	-716	118.12
Internal Loads			
Lights	0	437	-72.04
People	0	1,274	-210.23
Misc	0	177	-29.29
Sub Total ==>	0	1,888	-311.56
Ceiling Load	-109	0	0.00
Ventilation Load	0	-587	96.88
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		46	-7.63
OA Preheat Diff.		-19	3.122
RA Preheat Diff.		-1,268	209.208
Additional Reheat		0	.000
System Plenum Heat		49	-8.14
Underflr Sup Ht Pkup		0	.000
Supply Air Leakage		0	.000
Grand Total ==>	-593	-606	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.6	89.0
Ra Plenum	77.4	68.5
Return	77.4	68.5
Ret/OA	76.7	51.2
Fn MtrTD	0.1	0.0
Fn BldTD	0.1	0.0
Fn Frict	0.4	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	93	28
Terminal	93	28
Main Fan	93	28
Sec Fan	0	0
Nom Vent	32	0
AHU Vent	32	0
Infil	0	0
MinStop/Rh	28	28
Return	93	28
Exhaust	32	28
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	34.7	100.0
cfm/ft²	0.89	0.27
cfm/ton	307.76	
ft²/ton	344.62	
Btu/hr·ft²	34.82	-5.83
No. People	5	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.3	3.6	2.1	90	76.7	65.6	76.2	55.1	52.4	54.1
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
Total	0.3	3.6								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	104		
Part	0		
Int Door	0		
ExFlr	9		
Roof	104	0	0
Wall	126	14	11
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.5	28	55.1	70.0
Aux Htg	0.0	0	0.0	0.0
Preheat	-0.1	32	51.2	55.1
Reheat	-0.5	28	55.1	70.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.6			

SYSTEM LOAD PROFILES

By RIPCORD ENGINEERING

16001 2x6 Dense Wall R-55 Roof 3Pane
Server Room

Percent Design Load	---- Cooling Load ---- Cap. (Tons)	Hours (%)	Hours	---- Heating Load ---- Cap. (Btuh)	Hours (%)	Hours	---- Cooling Airflow ---- Cap. (Cfm)	Hours (%)	Hours	---- Heating Airflow---- Cap. (Cfm)	Hours (%)	Hours
0 - 5	0.0	2	64	-112.5	2	71	2.7	0	0	0.0	0	0
5 - 10	0.0	7	200	-224.9	5	159	5.3	0	0	0.0	0	0
10 - 15	0.0	8	248	-337.3	11	317	8.0	0	0	0.0	0	0
15 - 20	0.0	14	403	-449.8	23	697	10.7	0	0	0.0	0	0
20 - 25	0.0	18	523	-562.2	38	1,135	13.3	0	0	0.0	0	0
25 - 30	0.0	17	501	-674.7	17	519	16.0	0	0	0.0	0	0
30 - 35	0.1	7	215	-787.1	3	84	18.7	0	0	0.0	0	0
35 - 40	0.1	10	294	-899.6	0	0	21.3	0	0	0.0	0	0
40 - 45	0.1	9	257	-1,012.0	0	0	24.0	0	0	0.0	0	0
45 - 50	0.1	4	119	-1,124.5	0	0	26.7	0	0	0.0	0	0
50 - 55	0.1	2	67	-1,236.9	0	0	29.3	0	0	0.0	0	0
55 - 60	0.1	3	93	-1,349.3	0	0	32.0	0	0	0.0	0	0
60 - 65	0.1	0	0	-1,461.8	0	0	34.7	0	0	0.0	0	0
65 - 70	0.1	0	0	-1,574.2	0	0	37.3	0	0	0.0	0	0
70 - 75	0.1	0	0	-1,686.7	0	0	40.0	0	0	0.0	0	0
75 - 80	0.1	0	0	-1,799.1	0	0	42.7	0	0	0.0	0	0
80 - 85	0.1	0	0	-1,911.6	0	0	45.3	0	0	0.0	0	0
85 - 90	0.1	0	0	-2,024.0	0	0	48.0	0	0	0.0	0	0
90 - 95	0.1	0	0	-2,136.5	0	0	50.7	0	0	0.0	0	0
95 - 100	0.2	0	0	-2,248.9	0	0	53.3	100	8,760	0.0	0	0
Hours Off	0.0	0	5,776	.0	0	5,778	0.0	0	0	0.0	0	8,760

SYSTEM LOAD PROFILES

By RIPCORD ENGINEERING

16001 2x6 Dense Wall R-55 Roof 3Pane
System - 008

Percent Design Load	---- Cooling Load ---- Cap. (Tons)	Hours (%)	Hours	---- Heating Load ---- Cap. (Btuh)	Hours (%)	Hours	---- Cooling Airflow ---- Cap. (Cfm)	Hours (%)	Hours	---- Heating Airflow---- Cap. (Cfm)	Hours (%)	Hours
0 - 5	1.6	8	8	-4,725.6	89	1,554	524.9	98	8,552	0.0	0	0
5 - 10	3.2	17	16	-9,451.2	5	81	1,049.8	0	0	0.0	0	0
10 - 15	4.9	0	0	-14,176.8	0	0	1,574.7	0	0	0.0	0	0
15 - 20	6.5	0	0	-18,902.4	1	16	2,099.6	0	0	0.0	0	0
20 - 25	8.1	0	0	-23,628.0	0	0	2,624.5	0	0	0.0	0	0
25 - 30	9.7	0	0	-28,353.7	0	0	3,149.4	0	0	0.0	0	0
30 - 35	11.4	0	0	-33,079.3	0	5	3,674.3	1	124	0.0	0	0
35 - 40	13.0	10	10	-37,804.9	0	0	4,199.1	0	12	0.0	0	0
40 - 45	14.6	10	10	-42,530.5	0	0	4,724.0	0	0	0.0	0	0
45 - 50	16.2	0	0	-47,256.1	1	10	5,248.9	0	0	0.0	0	0
50 - 55	17.8	4	4	-51,981.7	0	0	5,773.8	0	0	0.0	0	0
55 - 60	19.5	13	12	-56,707.3	2	37	6,298.7	0	0	0.0	0	0
60 - 65	21.1	0	0	-61,432.9	0	4	6,823.6	0	0	0.0	0	0
65 - 70	22.7	0	0	-66,158.5	0	4	7,348.5	0	0	0.0	0	0
70 - 75	24.3	0	0	-70,884.1	1	12	7,873.4	0	4	0.0	0	0
75 - 80	25.9	0	0	-75,609.7	0	4	8,398.3	0	13	0.0	0	0
80 - 85	27.6	32	31	-80,335.3	0	4	8,923.2	0	19	0.0	0	0
85 - 90	29.2	5	5	-85,061.0	0	8	9,448.1	0	0	0.0	0	0
90 - 95	30.8	0	0	-89,786.6	0	0	9,973.0	0	0	0.0	0	0
95 - 100	32.4	0	0	-94,512.2	0	0	10,497.9	0	36	0.0	0	0
Hours Off	0.0	0	8,664	.0	0	7,021	0.0	0	0	0.0	0	8,760

SYSTEM LOAD PROFILES

By RIPCORD ENGINEERING

16001 2x6 Dense Wall R-55 Roof 3Pane
System Totals

Percent Design Load	---- Cooling Load ---- Cap. (Tons)	Hours (%)	Hours	---- Heating Load ---- Cap. (Btuh)	Hours (%)	Hours	---- Cooling Airflow ---- Cap. (Cfm)	Hours (%)	Hours	---- Heating Airflow---- Cap. (Cfm)	Hours (%)	Hours
0 - 5	1.6	97	2,920	-4,838.1	94	2,863	527.6	98	8,552	0.0	0	0
5 - 10	3.3	1	16	-9,676.1	3	79	1,055.1	0	0	0.0	0	0
10 - 15	4.9	0	0	-14,514.2	0	5	1,582.7	0	0	0.0	0	0
15 - 20	6.5	0	0	-19,352.2	1	16	2,110.2	0	0	0.0	0	0
20 - 25	8.1	0	0	-24,190.3	0	0	2,637.8	0	0	0.0	0	0
25 - 30	9.8	0	0	-29,028.3	0	0	3,165.4	0	0	0.0	0	0
30 - 35	11.4	0	0	-33,866.4	0	5	3,692.9	1	120	0.0	0	0
35 - 40	13.0	0	10	-38,704.4	0	0	4,220.5	0	16	0.0	0	0
40 - 45	14.7	0	10	-43,542.5	0	0	4,748.0	0	0	0.0	0	0
45 - 50	16.3	0	0	-48,380.5	0	10	5,275.6	0	0	0.0	0	0
50 - 55	17.9	0	4	-53,218.6	0	0	5,803.1	0	0	0.0	0	0
55 - 60	19.5	0	12	-58,056.6	1	37	6,330.7	0	0	0.0	0	0
60 - 65	21.2	0	0	-62,894.7	0	4	6,858.3	0	0	0.0	0	0
65 - 70	22.8	0	0	-67,732.7	0	8	7,385.8	0	0	0.0	0	0
70 - 75	24.4	0	0	-72,570.8	0	8	7,913.4	0	4	0.0	0	0
75 - 80	26.1	0	0	-77,408.9	0	4	8,440.9	0	8	0.0	0	0
80 - 85	27.7	1	36	-82,246.9	0	4	8,968.5	0	24	0.0	0	0
85 - 90	29.3	0	0	-87,085.0	0	8	9,496.1	0	0	0.0	0	0
90 - 95	30.9	0	0	-91,923.0	0	0	10,023.6	0	0	0.0	0	0
95 - 100	32.6	0	0	-96,761.1	0	0	10,551.2	0	36	0.0	0	0
Hours Off	0.0	0	5,752	.0	0	5,709	0.0	0	0	0.0	0	8,760

BUILDING COOL HEAT DEMAND

By RIPCORD ENGINEERING

January	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	28.7	26.8	-656	0.0	-541	0.0	-1,131	0.0	-541	0.0	-1,828	0.0
2	28.5	26.7	-865	0.0	-547	0.0	-1,543	0.0	-988	0.0	-1,835	0.0
3	27.9	26.4	-1,121	0.0	-560	0.0	-1,848	0.0	-1,481	0.0	-1,848	0.0
4	27.5	26.1	-1,353	0.0	-572	0.0	-1,860	0.0	-1,860	0.0	-1,860	0.0
5	27.4	25.9	-1,562	0.0	-580	0.0	-1,868	0.0	-1,868	0.0	-1,868	0.0
6	27.0	25.6	-1,628	0.0	-592	0.0	-1,880	0.0	-1,880	0.0	-1,880	0.0
7	26.8	25.5	-1,638	0.0	-602	0.0	-1,890	0.0	-1,890	0.0	-1,890	0.0
8	27.7	26.2	-1,636	0.0	-593	0.0	-1,880	0.0	-1,880	0.0	-1,880	0.0
9	29.3	27.6	-1,586	0.0	-554	0.0	-1,842	0.0	-1,842	0.0	-1,842	0.0
10	30.7	28.5	-1,548	0.0	-528	0.0	-1,815	0.0	-1,815	0.0	-1,815	0.0
11	32.7	29.7	-68,576	0.0	-502	0.0	-70,565	0.0	-1,790	0.0	-1,790	0.0
12	34.0	30.7	-62,461	0.0	-483	0.0	-60,988	0.0	-1,770	0.0	-1,770	0.0
13	35.1	31.4	-44,440	0.0	-462	0.0	-57,072	0.0	-1,749	0.0	-1,749	0.0
14	35.5	31.5	-11,773	0.0	-447	0.0	-55,852	0.0	-1,734	0.0	-1,734	0.0
15	35.5	31.5	-1,878	0.0	-840	0.0	-436	0.0	-1,724	0.0	-1,724	0.0
16	34.5	30.7	-1,520	0.0	-1,045	0.0	-441	0.0	-1,728	0.0	-1,728	0.0
17	33.2	29.9	-1,428	0.0	-1,068	0.0	-472	0.0	-1,760	0.0	-1,760	0.0
18	32.7	29.7	-1,385	0.0	-1,069	0.0	-482	0.0	-1,770	0.0	-1,770	0.0
19	32.0	29.1	-1,338	0.0	-1,067	0.0	-489	0.0	-1,776	0.0	-1,776	0.0
20	31.5	28.9	-1,308	0.0	-1,067	0.0	-494	0.0	-1,781	0.0	-1,781	0.0
21	30.9	28.3	-169	0.0	-1,073	0.0	-501	0.0	-1,789	0.0	-1,789	0.0
22	30.2	27.8	-187	0.0	-1,084	0.0	-512	0.0	-1,800	0.0	-1,800	0.0
23	29.5	27.3	-206	0.0	-1,100	0.0	-525	0.0	-1,812	0.0	-1,812	0.0
24	28.7	26.8	-224	0.0	-1,119	0.0	-537	0.0	-1,825	0.0	-1,825	0.0

February	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	24.5	22.2	-1,596	0.0	-633	0.0	-1,921	0.0	-1,921	0.0	-7,484	0.0
2	24.1	21.8	-1,622	0.0	-643	0.0	-1,931	0.0	-1,931	0.0	-6,875	0.0
3	23.4	21.2	-1,650	0.0	-659	0.0	-1,947	0.0	-1,947	0.0	-7,634	0.0
4	22.9	20.9	-1,678	0.0	-673	0.0	-1,960	0.0	-1,960	0.0	-7,891	0.0
5	22.8	20.8	-1,704	0.0	-683	0.0	-1,971	0.0	-1,971	0.0	-8,045	0.0
6	22.6	20.7	-1,723	0.0	-695	0.0	-1,982	0.0	-1,982	0.0	-8,472	0.0
7	22.4	20.6	-1,737	0.0	-705	0.0	-1,993	0.0	-1,993	0.0	-8,742	0.0
8	23.1	21.3	-1,676	0.0	-664	0.0	-1,951	0.0	-1,951	0.0	-7,410	0.0
9	24.6	22.4	-1,597	0.0	-617	0.0	-1,904	0.0	-1,904	0.0	-5,860	0.0
10	26.6	24.1	-1,543	0.0	-576	0.0	-1,864	0.0	-1,864	0.0	-2,151	0.0
11	28.9	25.8	-74,388	0.0	-545	0.0	-85,110	0.0	-1,832	0.0	-1,832	0.0
12	30.4	26.6	-69,835	0.0	-520	0.0	-82,341	0.0	-1,808	0.0	-1,808	0.0
13	31.6	27.5	-66,233	0.0	-497	0.0	-79,634	0.0	-1,784	0.0	-1,839	0.0
14	32.3	28.1	-66,190	0.0	-475	0.0	-74,294	0.0	-1,763	0.0	-3,757	0.0
15	32.1	28.0	-66,149	0.0	-463	0.0	-463	0.0	-1,750	0.0	-2,038	0.0
16	32.1	27.8	-64,515	0.0	-490	0.0	-490	0.0	-1,778	0.0	-5,004	0.0
17	31.0	27.0	-62,392	0.0	-525	0.0	-525	0.0	-1,812	0.0	-4,787	0.0
18	29.3	25.6	-62,423	0.0	-557	0.0	-557	0.0	-1,844	0.0	-5,886	0.0
19	28.5	25.1	-55,094	0.0	-983	0.0	-565	0.0	-6,994	0.0	-6,270	0.0
20	27.9	24.5	-54,248	0.0	-1,469	0.0	-571	0.0	-9,889	0.0	-6,549	0.0
21	27.2	24.1	-208	0.0	-1,857	0.0	-580	0.0	-8,236	0.0	-6,801	0.0
22	26.4	23.7	-231	0.0	-1,880	0.0	-831	0.0	-1,880	0.0	-7,067	0.0
23	25.8	23.2	-257	0.0	-1,893	0.0	-1,387	0.0	-6,528	0.0	-7,226	0.0
24	25.3	22.8	-283	0.0	-1,904	0.0	-1,844	0.0	-9,361	0.0	-7,485	0.0

BUILDING COOL HEAT DEMAND

By RIPCORD ENGINEERING

March	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	30.4	28.7	-2,453	0.0	0	0.0	-401	0.0	-401	0.0	-1,689	0.0
2	29.8	28.2	-1,443	0.0	0	0.0	-421	0.0	-421	0.0	-1,709	0.0
3	29.2	27.6	-25,439	0.0	0	0.0	-442	0.0	-442	0.0	-1,730	0.0
4	28.0	26.8	-28,199	0.0	-234	0.0	-471	0.0	-471	0.0	-1,758	0.0
5	27.3	26.2	-26,009	0.0	-495	0.0	-495	0.0	-495	0.0	-1,782	0.0
6	26.7	25.6	-26,270	0.0	-517	0.0	-517	0.0	-517	0.0	-1,805	0.0
7	27.2	26.1	-24,822	0.0	-492	0.0	-492	0.0	-492	0.0	-1,780	0.0
8	29.9	28.2	-23,791	0.0	-377	0.0	-377	0.0	-377	0.0	-1,665	0.0
9	32.5	30.0	-23,838	0.0	-288	0.0	-288	0.0	-288	0.0	-1,576	0.0
10	35.4	31.9	-31,969	0.0	-221	0.0	-609	0.0	-221	0.0	-1,508	0.0
11	37.2	33.2	-68,674	0.0	-186	0.0	-69,670	0.0	-186	0.0	-1,473	0.0
12	38.8	34.0	-68,397	0.0	-150	0.0	-66,667	0.0	-150	0.0	-1,438	0.0
13	39.4	34.5	-66,098	0.0	-121	0.0	-65,019	0.0	-720	0.0	-1,408	0.0
14	39.4	34.5	-66,098	0.0	-94	0.0	-56,014	0.0	-678	0.0	-1,382	0.0
15	39.0	34.4	-66,098	0.0	-104	0.0	-104	0.0	-666	0.0	-1,391	0.0
16	38.0	33.9	-64,546	0.0	-183	0.0	-183	0.0	-721	0.0	-1,471	0.0
17	37.0	33.3	-63,980	0.0	-239	0.0	-239	0.0	-928	0.0	-1,527	0.0
18	35.7	32.5	-63,980	0.0	-275	0.0	-275	0.0	-1,130	0.0	-1,563	0.0
19	34.6	31.5	-62,835	0.0	-290	0.0	-290	0.0	-1,274	0.0	-1,577	0.0
20	33.3	30.8	-62,257	0.0	-308	0.0	-308	0.0	-1,401	0.0	-1,595	0.0
21	32.9	30.6	0	0.0	-317	0.0	-317	0.0	-1,509	0.0	-1,605	0.0
22	32.1	30.0	0	0.0	-337	0.0	-337	0.0	-1,625	0.0	-1,625	0.0
23	31.4	29.4	0	0.0	-360	0.0	-360	0.0	-1,647	0.0	-1,647	0.0
24	30.7	28.9	0	0.0	-381	0.0	-381	0.0	-1,669	0.0	-1,669	0.0

April	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	37.7	34.4	-1,287	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2	36.5	33.6	-1,287	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3	35.9	33.3	-1,287	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4	36.0	33.4	-1,287	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	35.2	32.8	-1,287	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	36.4	33.7	-1,287	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7	39.5	35.5	-1,287	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8	41.6	36.8	-1,052	0.0	0	0.0	0	0.0	0	0.0	-35	0.0
9	44.3	38.1	-550	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10	46.5	39.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
11	47.9	39.7	-63,980	0.0	0	0.0	-55,546	0.0	0	0.0	0	0.0
12	48.8	40.2	-63,980	0.0	0	0.0	-53,937	0.0	0	0.0	0	0.0
13	48.7	40.2	-57,269	0.7	0	0.0	-47,034	0.0	0	0.0	-349	0.0
14	48.3	40.1	-57,269	1.2	0	0.0	-46,653	0.0	0	0.0	-329	0.0
15	47.7	39.6	-57,269	1.4	0	0.0	0	0.0	0	0.0	-304	0.0
16	47.1	39.3	-56,679	1.2	0	0.0	0	0.0	0	0.0	0	0.0
17	46.3	39.0	-55,546	0.8	0	0.0	0	0.0	0	0.0	0	0.0
18	44.4	37.7	-55,546	0.2	0	0.0	0	0.0	0	0.0	0	0.0
19	42.8	37.2	-48,208	0.0	0	0.0	0	0.0	0	0.0	0	0.0
20	42.0	36.9	-46,653	0.0	0	0.0	0	0.0	0	0.0	0	0.0
21	41.3	36.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
22	40.2	36.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
23	39.5	35.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
24	39.0	35.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

BUILDING COOL HEAT DEMAND

By RIPCORD ENGINEERING

May	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	49.6	45.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2	48.8	45.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3	48.0	44.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4	47.0	44.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	47.0	44.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	48.6	45.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7	51.7	46.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8	54.2	48.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	57.0	49.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10	59.0	49.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
11	61.1	50.9	-55,546	4.5	0	0.0	-15,928	2.1	0	0.0	0	0.0
12	62.0	51.0	-55,546	5.4	0	0.0	-15,928	2.2	0	0.0	0	0.0
13	63.0	51.6	-55,546	6.0	0	0.0	-15,763	2.6	0	0.0	0	0.0
14	63.5	51.8	-46,653	6.5	0	0.0	-15,423	2.8	0	0.0	0	0.0
15	63.5	51.9	-46,157	6.8	0	0.0	0	0.0	0	0.0	0	0.0
16	62.9	51.8	-42,258	7.2	0	0.0	0	0.0	0	0.0	0	0.0
17	61.3	51.0	-17,233	7.3	0	0.0	0	0.0	0	0.0	0	0.0
18	59.6	50.5	-17,233	6.6	0	0.0	0	0.0	0	0.0	0	0.0
19	57.1	49.5	-17,233	5.5	0	0.0	0	0.0	0	0.0	0	0.0
20	55.0	48.7	-17,056	4.5	0	0.0	0	0.0	0	0.0	0	0.0
21	53.9	48.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
22	52.7	47.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
23	51.7	46.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
24	50.6	46.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

June	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	59.0	56.0	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
2	58.2	55.4	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
3	57.6	55.1	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
4	57.2	54.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	57.9	55.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	60.3	56.2	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
7	62.9	57.7	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
8	66.5	59.4	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
9	69.4	60.4	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
10	71.7	61.5	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
11	73.0	61.7	-14,878	11.0	0	0.1	0	18.8	0	0.1	0	0.1
12	74.6	61.9	-1,950	11.5	0	0.1	0	18.3	0	0.1	0	0.1
13	75.2	61.8	-1,930	11.8	0	0.1	0	18.0	0	0.1	0	0.1
14	75.0	61.8	-802	12.4	0	0.1	0	17.7	0	0.1	0	0.1
15	75.2	61.7	-572	12.9	0	0.1	0	0.1	0	0.1	0	0.1
16	74.2	61.3	-539	13.6	0	0.1	0	0.1	0	0.1	0	0.1
17	73.3	61.0	-516	13.9	0	0.1	0	0.1	0	0.1	0	0.1
18	70.9	60.4	-516	13.7	0	0.0	0	0.0	0	0.0	0	0.0
19	68.1	59.6	-516	13.9	0	0.0	0	0.0	0	0.0	0	0.0
20	65.7	58.9	-516	25.0	0	0.0	0	0.0	0	0.0	0	0.0
21	64.3	58.4	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
22	62.8	57.8	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
23	61.1	57.0	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
24	60.1	56.5	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0

BUILDING COOL HEAT DEMAND

By RIPCORD ENGINEERING

July	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	64.9	61.0	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
2	64.4	60.6	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
3	63.6	60.2	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
4	62.7	59.9	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
5	62.8	60.1	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
6	65.1	61.4	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
7	67.8	62.6	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
8	71.1	63.8	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
9	73.7	64.4	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
10	76.1	65.1	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
11	77.5	65.4	0	28.1	0	0.1	0	27.7	0	0.1	0	0.1
12	78.9	65.7	0	28.0	0	0.1	0	27.4	0	0.1	0	0.1
13	79.6	65.8	0	27.6	0	0.1	0	27.0	0	0.1	0	0.1
14	79.7	65.8	0	27.7	0	0.1	0	26.9	0	0.1	0	0.1
15	79.5	65.6	0	28.0	0	0.1	0	0.1	0	0.1	0	0.1
16	78.6	65.4	0	28.3	0	0.1	0	0.1	0	0.1	0	0.1
17	77.5	65.1	0	28.4	0	0.1	0	0.1	0	0.1	0	0.1
18	75.9	64.4	0	27.6	0	0.1	0	0.1	0	0.1	0	0.1
19	73.0	63.9	0	27.2	0	0.1	0	0.1	0	0.1	0	0.1
20	70.4	62.9	0	27.2	0	0.1	0	0.1	0	0.1	0	0.1
21	69.0	62.5	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
22	67.9	62.5	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
23	66.4	61.9	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
24	66.1	61.7	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0

August	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	63.9	61.0	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
2	63.2	60.7	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
3	63.0	60.5	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
4	62.5	60.1	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
5	62.1	59.6	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
6	63.5	60.5	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
7	65.5	61.1	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
8	68.6	62.6	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
9	71.0	63.5	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
10	73.3	64.4	0	0.1	0	0.1	0	0.1	0	0.1	0	0.1
11	74.8	64.6	0	30.9	0	0.1	0	26.7	0	0.1	0	0.1
12	75.4	64.5	0	30.9	0	0.1	0	26.6	0	0.1	0	0.1
13	76.3	64.7	0	31.1	0	0.1	0	26.8	0	0.1	0	0.1
14	76.4	64.8	0	31.8	0	0.1	0	26.9	0	0.1	0	0.1
15	76.3	64.9	0	32.0	0	0.1	0	0.1	0	0.1	0	0.1
16	75.7	64.8	0	32.1	0	0.1	0	0.1	0	0.1	0	0.1
17	73.7	64.0	0	31.9	0	0.1	0	0.1	0	0.1	0	0.1
18	71.7	63.5	0	31.4	0	0.1	0	0.1	0	0.1	0	0.1
19	68.7	62.7	0	31.1	0	0.0	0	0.0	0	0.0	0	0.0
20	67.4	62.3	0	30.8	0	0.0	0	0.0	0	0.0	0	0.0
21	66.4	61.7	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
22	65.9	61.7	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
23	65.0	61.1	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
24	64.3	61.3	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0

BUILDING COOL HEAT DEMAND

By RIPCORD ENGINEERING

September	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	55.5	53.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2	55.1	53.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3	54.6	52.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4	54.2	52.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	53.8	52.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	53.9	52.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7	56.1	54.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8	59.2	55.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	62.4	57.1	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
10	64.8	57.9	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
11	66.6	58.6	0	28.1	0	0.0	0	12.4	0	0.0	0	0.0
12	67.6	58.9	0	29.5	0	0.0	0	12.7	0	0.0	0	0.0
13	68.8	59.2	0	30.7	0	0.0	0	13.6	0	0.0	0	0.0
14	68.6	59.1	0	28.9	0	0.0	0	13.7	0	0.0	0	0.0
15	67.9	58.8	0	28.9	0	0.0	0	0.0	0	0.0	0	0.0
16	67.1	58.7	0	28.4	0	0.0	0	0.0	0	0.0	0	0.0
17	65.0	58.2	0	30.5	0	0.0	0	0.0	0	0.0	0	0.0
18	61.9	56.9	0	29.2	0	0.0	0	0.0	0	0.0	0	0.0
19	60.3	56.2	0	27.8	0	0.0	0	0.0	0	0.0	0	0.0
20	59.7	55.7	0	26.2	0	0.0	0	0.0	0	0.0	0	0.0
21	58.3	55.1	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
22	57.6	54.8	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
23	56.5	54.1	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0
24	55.7	53.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

October	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	45.0	43.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2	44.4	42.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3	43.7	42.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4	43.4	41.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	43.5	41.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	43.0	41.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7	44.5	42.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8	47.4	43.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	50.1	45.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10	52.7	46.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
11	54.0	47.0	0	4.0	0	0.0	0	0.0	0	0.0	0	0.0
12	55.3	47.7	0	6.4	0	0.0	0	0.0	0	0.0	0	0.0
13	55.7	48.1	0	8.2	0	0.0	0	0.2	0	0.0	0	0.0
14	55.9	48.1	0	8.2	0	0.0	0	0.3	0	0.0	0	0.0
15	55.6	47.9	0	9.1	0	0.0	0	0.0	0	0.0	0	0.0
16	54.4	47.4	0	9.9	0	0.0	0	0.0	0	0.0	0	0.0
17	51.8	46.4	0	9.2	0	0.0	0	0.0	0	0.0	0	0.0
18	49.9	45.6	0	7.3	0	0.0	0	0.0	0	0.0	0	0.0
19	48.9	45.2	0	5.3	0	0.0	0	0.0	0	0.0	0	0.0
20	47.8	44.5	0	2.9	0	0.0	0	0.0	0	0.0	0	0.0
21	47.5	44.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
22	46.5	43.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
23	45.9	43.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
24	45.4	42.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

BUILDING COOL HEAT DEMAND

By RIPCORD ENGINEERING

November	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	35.5	33.6	0	0.0	0	0.0	0	0.0	0	0.0	-695	0.0
2	35.5	33.4	0	0.0	0	0.0	0	0.0	0	0.0	-711	0.0
3	35.6	33.6	0	0.0	0	0.0	0	0.0	0	0.0	-726	0.0
4	35.1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	-750	0.0
5	34.9	33.1	0	0.0	0	0.0	0	0.0	0	0.0	-771	0.0
6	34.5	32.8	0	0.0	0	0.0	0	0.0	0	0.0	-794	0.0
7	34.5	32.7	0	0.0	0	0.0	0	0.0	0	0.0	-812	0.0
8	35.8	33.4	0	0.0	0	0.0	0	0.0	0	0.0	-789	0.0
9	37.7	34.5	0	0.0	0	0.0	0	0.0	0	0.0	-760	0.0
10	40.3	36.1	0	0.0	0	0.0	0	0.0	0	0.0	-732	0.0
11	42.1	37.1	0	0.0	0	0.0	-6,127	0.0	0	0.0	-714	0.0
12	42.8	37.5	0	0.0	0	0.0	-5,252	0.0	0	0.0	-704	0.0
13	43.6	37.9	0	0.0	0	0.0	-2,416	0.0	0	0.0	-686	0.0
14	43.6	37.9	-476	0.0	0	0.0	-2,550	0.0	0	0.0	-671	0.0
15	43.0	37.7	-458	0.0	0	0.0	0	0.0	0	0.0	-660	0.0
16	42.0	37.2	-439	0.0	0	0.0	0	0.0	0	0.0	-675	0.0
17	40.1	36.4	-419	0.0	0	0.0	0	0.0	-343	0.0	-698	0.0
18	39.3	36.0	-402	0.0	0	0.0	0	0.0	-383	0.0	-699	0.0
19	38.9	35.7	-387	0.0	0	0.0	0	0.0	-620	0.0	-695	0.0
20	38.2	35.4	-377	0.0	0	0.0	0	0.0	-624	0.0	-698	0.0
21	37.6	35.1	0	0.0	0	0.0	0	0.0	-632	0.0	-706	0.0
22	37.1	34.7	0	0.0	0	0.0	0	0.0	-644	0.0	-718	0.0
23	36.6	34.4	0	0.0	0	0.0	0	0.0	-658	0.0	-731	0.0
24	35.6	33.4	0	0.0	0	0.0	0	0.0	-681	0.0	-754	0.0

December	Typical Weather (°F)		Design		Weekday		Saturday		Sunday		Monday	
Hour	OADB	OAWB	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)	Htg (Btuh)	Clg (Tons)
1	31.2	29.1	-204	0.0	-456	0.0	-918	0.0	-926	0.0	-1,647	0.0
2	30.6	28.6	-532	0.0	-469	0.0	-943	0.0	-951	0.0	-1,757	0.0
3	30.2	28.1	-604	0.0	-483	0.0	-968	0.0	-976	0.0	-1,770	0.0
4	29.9	27.8	-644	0.0	-494	0.0	-992	0.0	-1,000	0.0	-1,782	0.0
5	29.7	27.6	-682	0.0	-506	0.0	-1,015	0.0	-1,023	0.0	-1,793	0.0
6	29.3	27.3	-714	0.0	-519	0.0	-1,040	0.0	-1,048	0.0	-1,806	0.0
7	28.7	26.8	-740	0.0	-535	0.0	-1,068	0.0	-1,076	0.0	-1,823	0.0
8	29.6	27.6	-754	0.0	-532	0.0	-1,076	0.0	-1,083	0.0	-1,820	0.0
9	32.1	29.5	-726	0.0	-482	0.0	-1,036	0.0	-1,043	0.0	-1,769	0.0
10	34.6	31.3	-707	0.0	-444	0.0	-1,008	0.0	-1,015	0.0	-1,731	0.0
11	36.4	32.4	-62,232	0.0	-903	0.0	-54,789	0.0	-1,000	0.0	-1,707	0.0
12	38.2	33.4	-59,361	0.0	-882	0.0	-53,530	0.0	-978	0.0	-1,679	0.0
13	38.9	33.7	-54,824	0.0	-868	0.0	-53,513	0.0	-964	0.0	-1,662	0.0
14	39.1	33.7	-47,538	0.0	-851	0.0	-31,402	0.0	-946	0.0	-1,647	0.0
15	38.7	33.6	-31,108	0.0	-834	0.0	-350	0.0	-929	0.0	-1,637	0.0
16	37.4	33.0	-31,090	0.0	-826	0.0	-351	0.0	-920	0.0	-1,639	0.0
17	35.4	31.9	-30,720	0.0	-853	0.0	-390	0.0	-947	0.0	-1,678	0.0
18	34.5	31.4	-11,260	0.0	-854	0.0	-728	0.0	-948	0.0	-1,690	0.0
19	34.1	31.1	-11,039	0.0	-846	0.0	-792	0.0	-940	0.0	-1,691	0.0
20	33.0	30.3	-10,783	0.0	-853	0.0	-830	0.0	-947	0.0	-1,704	0.0
21	32.5	30.1	-128	0.0	-859	0.0	-867	0.0	-952	0.0	-1,711	0.0
22	31.7	29.5	-148	0.0	-875	0.0	-883	0.0	-967	0.0	-1,725	0.0
23	31.4	29.1	-168	0.0	-888	0.0	-896	0.0	-981	0.0	-1,733	0.0
24	30.9	28.7	-185	0.0	-907	0.0	-914	0.0	-1,312	0.0	-1,742	0.0

SYSTEM SUMMARY

DESIGN COOLING CAPACITIES

By RIPCORD ENGINEERING

Alternative 1

Building Airside Systems and Plant Capacities

		Peak Plant Loads								Block Plant Loads								
Plant	System	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1 Desic Cond ton	Stg 2 Desic Cond ton	Base Utility ton	Peak Total ton	Time Of Peak mo/hr	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1 Desic Cond ton	Stg 2 Desic Cond ton	Base Utility ton	Block Total ton
Cooling plant - 003		0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	7/11	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	Server Room	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	7/11	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Cooling plant - 008		32.4	0.0	0.0	0.0	0.0	0.0	0.0	32.4	8/16	31.9	0.0	0.0	0.0	0.0	0.0	0.0	31.9
	System - 008	32.4	0.0	0.0	0.0	0.0	0.0	0.0	32.4	8/16	31.9	0.0	0.0	0.0	0.0	0.0	0.0	31.9
Building totals		32.5	0.0	0.0	0.0	0.0	0.0	0.0	32.5		32.1	0.0	0.0	0.0	0.0	0.0	0.0	32.1

Building peak load is 32.6 tons.

Building maximum block load of 32.1 tons occurs in August at hour 16 based on system simulation.

SYSTEM SUMMARY

DESIGN HEATING CAPACITIES

By RIPCORD ENGINEERING

Alternative 1

System Coil Capacities

System Description	System Type	Main System Btu/h	Aux System Btu/h	Preheat Btu/h	Reheat Btu/h	Humid. Btu/h	Optional Vent Btu/h	Stg 1 Desic Regen Btu/h	Stg 2 Desic Regen Btu/h	Stg 1 Frost Prevention Btu/h	Stg 2 Frost Prevention Btu/h	Heating Totals Btu/h
Server Room	Computer Room Unit	-2,249	0	0	-1,197	0	0	0	0	0	0	-2,249
System - 008	Variable Volume Reheat (30% Min Flow Default)	-68,675	0	-25,837	-55,623	0	0	0	0	0	0	-94,512
Totals		**-70,924**	**0**	**-25,837**	**-56,820**	**0**	**0**	**0**	**0**	**0**	**0**	**-96,761**

Building Plant Capacities

		Peak Loads												
Plant	System	Main Coil MBh	Preheat Coil MBh	Reheat Coil MBh	Humid. Coil MBh	Aux Coil MBh	Opt Vent Coil MBh	Misc Load MBh	Stg 1 Desic. Regen. MBh	Stg 2 Desic. Regen. MBh	Stg 1 Frost Prev. MBh	Stg 2 Frost Prev. MBh	Base Utility MBh	Absorption Load MBh
Heating plant - 002		0	26	0	0	0	0	0	0	0	0	0	23	0
	System - 008	0	26	0	0	0	0	0	0	0	0	0	0	0
Heating plant - 004		71	0	0	0	0	0	0	0	0	0	0	0	0
	Server Room	2	0	0	0	0	0	0	0	0	0	0	0	0
	System - 008	69	0	0	0	0	0	0	0	0	0	0	0	0

Building peak load is 119.8 MBh.