



SUNNYLANDS

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OPTION: **MECHANICAL**

PENNSTATE



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EXECUTIVE SUMMARY

Technical Report 2 discusses the building and plant energy consumption for the buildings being added to the Sunnylands complex in Palm Springs, California. The information for this report has been obtained from architectural drawings from O2 Architecture as well as mechanical drawings from HGA Architects and Engineer. The gathered information was then analyzed using Trane Trace 700.

Through Trane Trace 700, the buildings at Sunnylands are modeled and analyzed for peak design loads, energy consumption and the operating costs for a year of use within the buildings. All assumptions made in the modeling process were influenced by assumptions stated in the design documents provided by HGA. If adequate information was not provided in the design documents, ASHRAE Standard 62.1 was consulted as well as load information provided in manufacturer cut sheets for individual elements in the spaces.

Each space in the conditioned buildings was modeled individually for this report due to the small size of the buildings. Each room is documented and assigned to the systems which service each building. The buildings are all served individually (no central plant was used on the campus) and therefore, each building has its own set of AHUs and heaters. The heating loads in the buildings are taken care of by electric heating while the cooling loads are treated with an air-cooled condenser.

For simplification in this report, not every building on campus will be discussed individually. Instead, the Administration Building (which is the most complex of the additions to the campus), will be examined in full and any calculations or information about the other buildings on campus can be found in the Appendix.

The loads calculated through the use of Trane Trace 700 are relatively low in comparison to the loads that are expected on site. The main building already on site (not a part of this design package) was also modeled through Trane Trace 700. The loads in that building are approximately 15-25% higher than those estimated through the energy model even after an updated model was created in hopes of finding more accurate ways to model design conditions in this design package. For this reason, the low estimation in the Trane Trace 700 model generated for the use of this report in comparison to the actual design is to be expected.

Through the use of Trace 700, the Administration Building is projected to 113,585 Btu per square foot per year and cost \$1.52 per square foot per year to operate and maintain. This result is difficult to analyze in terms of accuracy since the additions to the Sunnylands are still under construction. However, an approximate comparison to the existing building can be made. The current building on site is comparable to the administration building in terms of its uses. The main difference between the spaces is the number of electronics outputting heat in each space. The existing building currently would operate at approximately \$1.85 per square foot per year if it were connected to utility services instead of on-site power. This cost is very slightly greater than the cost to operate the Administration Building which is expected due to their different load types.

BUILDING OVERVIEW

The building in focus for this report is the Administration Building on Sunnylands Campus. The building is located on South side of the site as shown in Figure 1 and has a considerable amount of shading from the landscape on both its North and South sides as well as an appreciable overhang on the facades that are heavily clad in glass. In addition to the vegetation and structural overhangs, there is also a semi-permeable awning that will be installed in the North courtyard as shown below in Figure 2. These factors all contribute to the shading factors applied on these facades.

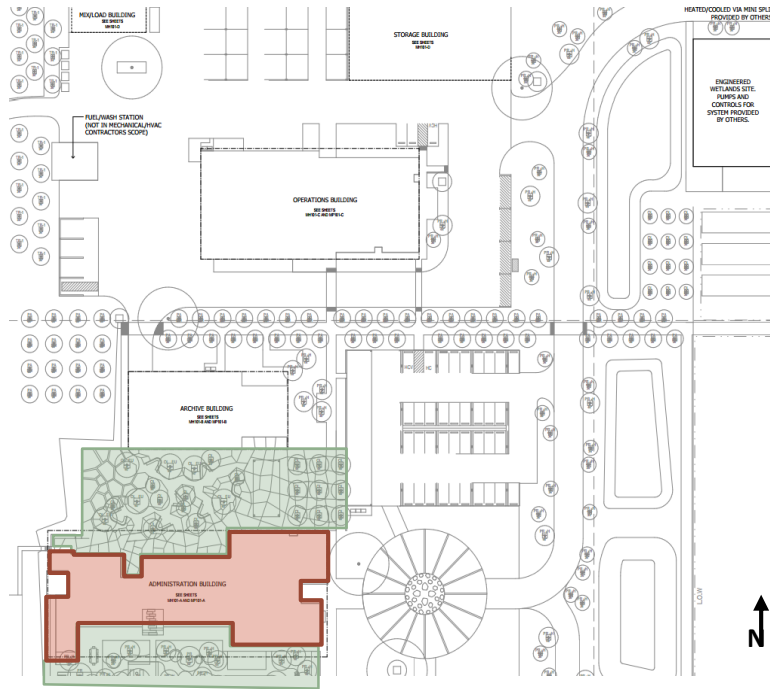


FIGURE 3 SITE PLAN COURTESY OF HGA ARCHITECTS AND ENGINEERS



FIGURE 1 OPEN OFFICE RENDERING COURTESY OF O2



FIGURE 2 ADMINISTRATION BUILDING SHADED COURTYARD RENDERING COURTESY OF O2 ARCHITECTURE

The Administration building is the most occupant dense building being added to the Sunnylands campus. The building will house offices used for those who work for The Annenberg Foundation Trust. The Administration Building is also the most energy intensive addition to the campus. The spaces within can generally be broken down into two space types: office and gathering. The offices include a mix of open office space as well as private offices for the directors. Gathering spaces include meeting rooms, breakout rooms and space for the employees to take their breaks while enjoying the beautiful views of Sunnylands' campus. Aside from the occupiable spaces are the mechanical and electrical spaces which are located on the South-East corner of the building and restrooms/ locker rooms scattered throughout the building.

MECHANICAL SYSTEMS OVERVIEW

The buildings on the Sunnylands campus are all treated in one of three ways:

1. Return air utilizes an energy recovery wheel, combines with outdoor air and is treated at the zone level through DX and/or electric coil
2. Return air is mixed with outdoor air and treated at zone level with DX cooling and/or electric coil heating and is then treated with an electric humidifier in line with the supply air duct
3. 100% outdoor air utilizes an energy wheel and is then supplied to spaces with contaminated air that cannot be re-circulated

The Administration Building falls under category 1. The rooftop unit (RTU-1A) handles at most 3750 CFM with a bi-plenum fan. The air can travel through an energy wheel or bypass the wheel which operates at 80% effectiveness. The air then is then cooled using a variable refrigerant flow direct expansion system or is heated using electric heating coils. At this point, the air is ready to be supplied to the zones.

The building is served by a rooftop unit that supplies air to the ceiling cavity at 75°F DB / 64°F WB where it is then cooled in the space through the use of fan coil units connected in a direct expansion system. These fan coil units then supply air to the spaces at 58°F DB 50°F WB when in cooling mode or 95°F DB when in heating mode.

BUILDING LOAD ESTIMATION

DESIGN CONDITIONS

Location

The addition to the Sunnylands campus is located in Palm Springs, California and falls under climate zone 3b which is characterized as warm and dry. The temperatures in this region range from around 40°F at peak heating design and around 110°F in peak cooling. Figure 4 at right shows this distribution of temperatures as well as precipitation in inches. The site for the new construction studied in this report is an addition to an existing campus. The addition will total to 18% of the total acreage owned by the Annenberg Foundation Trust.

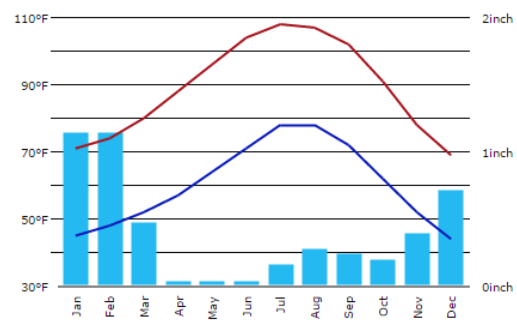


FIGURE 4 WEATHER DATA COURTESY OF HGA

Building Construction

The Administration building at Sunnylands is a one story, two part building. The East part of the building contains the entrance, restrooms, back of house spaces, and space for the president of the Annenberg Foundation Trust. This space, outlined in green blow, is enclosed with mostly wall type 3, depicted at right. This wall contains three layers of insulation and is supported by metal studs. In contrast to this section, the East side of the building, outlined below in blue, is composed mostly of a curtain wall. While the open office area on the West side of the building has a low thermal resistance, there are overhangs (shown below in yellow) that provide ample shading above all curtain walls. Since the driving design mode in Palm Springs is cooling, the overhang helps combat any direct gains from the sun, thus reducing the amount of heat that would otherwise need to be removed from the space.

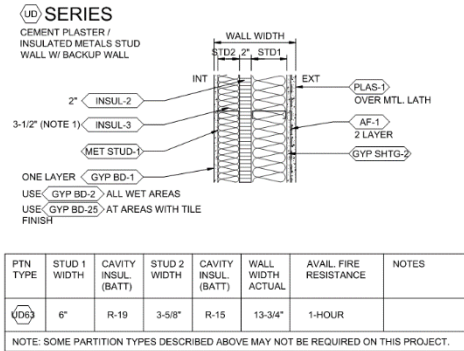


FIGURE 6 WALL SECTION COURTESY OF O2

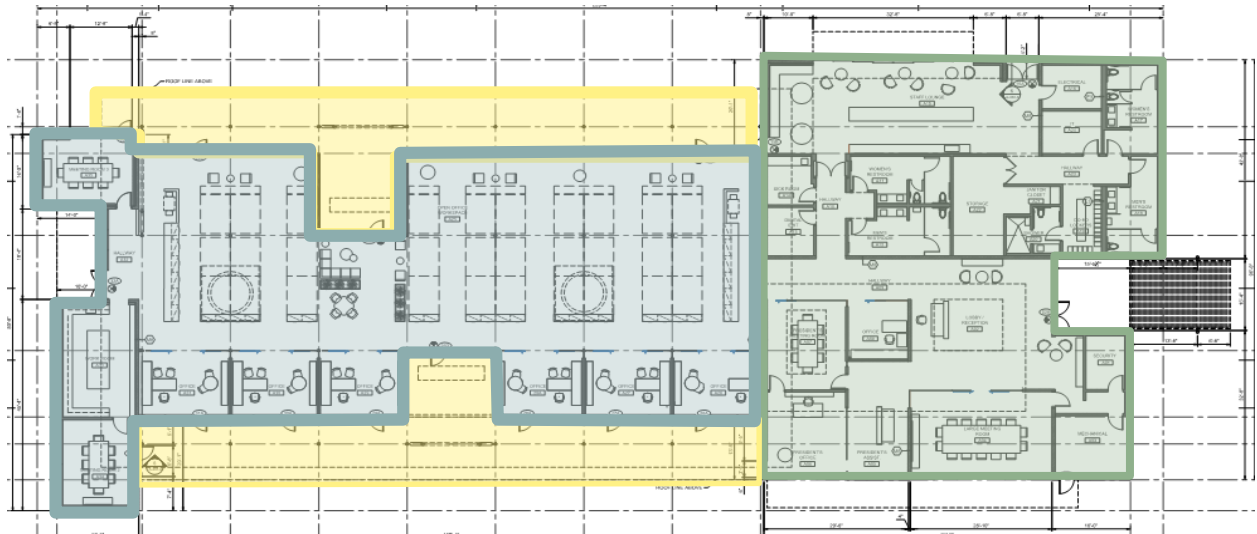


FIGURE 5 EXTERIOR WALL ASSEMBLIES CLASSIFICATION COURTESY OF O2 ARCHITECTURE

Table 1 below documents the exterior assemblies used in the addition to the Sunnylands campus, their associated U values, and their shading coefficients. The assemblies used in the Administration building are highlighted in green. Wall Type 1 is mostly used in the East section highlighted in green while Window Assemblies 1 and 2 are used primarily in the West section highlighted in blue.

TABLE 1 HEAT TRANSFER RATE OF EXTERIOR ASSEMBLIES

Assembly Name	Description	U Value	Shading Coefficient
Wall Type 1	Cement Plaster with Metal Stud with Backup Wall	0.02347	-
Wall Type 2	Cement Plaster with Metal Stud	0.03106	-
Wall Type 3	Medium Weight Concrete Block with Insulation	0.03704	-
Wall Type 4	Medium Weight Concrete Block	0.10869	-
Window Assembly 1	Fritted Two Pane with Argon	0.24000	0.27
Window Assembly 2	Two Pane with Argon	0.48000	0.78
Roof Assembly SA1	8" Concrete on Metal Deck	0.04542	-
Roof Assembly SA2	4" Concrete on Metal Deck	0.06811	-
Skylight	Operable Two Pane Window	2.21645	0.22

LOAD ASSUMPTIONS

Occupancy & Ventilation

Occupant densities for the Administration building is determined by information provided by the Annenberg Foundation Trust. The number of occupants is determined by the number of employees who will occupy the office space on a regular basis. The number of occupants provided by the Annenberg Foundation Trust is lower than the predicted number of occupants estimated by ASHRAE 62.1 Standards. The occupant densities provided by the owner were used in the TRACE model in order to account for ventilation rates.

Lighting

All information regarding lighting has been taken from the electrical drawings provided by HGA Architects and Engineers. The main concern

Schedule

Rooms that will be occupied constantly throughout the workday (offices and reception areas) are assumed to be occupied for 6 hours per day, Monday through Friday. The remaining two hours per work day assume offices may be unoccupied during the day for meetings in the workrooms and meeting rooms as well as an hour long lunch break taken by 60% of employees in the Staff Lounge. The occupancy of these spaces are diversified to reflect the number of hours per week they can be expected to be occupied.

SYSTEM EQUIPMENT

Heating & Cooling

In Palm Springs, California, the main concern for the buildings at Sunnylands is cooling. Electric heating is used on site since there are so few heating days, it doesn't make sense to extend a natural gas line to the site. The heating takes place in the rooftop unit which is built from three, 30 kW electric heating coils. The air leaves these coils at a maximum temperature of 89°F at the Administration Building, 101.2°F in the Archive Building, 93.2°F in the Operations Building, and 87.8°F in the Storage Building.

The cooling for the Administration Building is accomplished through a DX Administration Building is accomplished through a DX system in conjunction with VRF supplied to FCUs within the spaces. These units supply air to the occupiable spaces at temperatures varying between 52 and 75 degrees depending on the needs of the space.

Air-Side Equipment

Each new building being added to the Sunnylands campus is getting its own rooftop unit. The table below documents which units are associated with which building and what key features it contains.

TABLE 2 DOCUMENTATION OF ROOFTOP UNITS INCLUDED IN DESIGN PACKAGE

ITEM	LOCATION	MAX CFM	ENERGY WHEEL	EFFECTIVENESS	COOLING MBH	COOLING SUPPLY	HEATING SUPPLY
RTU-1A	ADMIN	3750	YES	80%	142.3	58°F	87 °F
RTU-1B	ARCHIVE	1250	YES	80%	57.1	53 °F	101.2 °F
RTU-1C	OPERATIONS	2000	YES	80%	80.1	50 °F	93.2 °F
RTU-1D	STOAGE	3750	NO	N/A	142.3	58 °F	87.8 °F

The Administration Building is the largest of the buildings on-site in terms of geometric size and the number of occupants within the space. The rooftop unit supplying this air to the Administration Building, RTU-1A, is located on the roof on the East side of the building.

CONCLUSION

In this report, Trane Trace 700 is used to analyze the energy needs of the buildings being added to the Sunnylands campus. While the values calculated for this report are generally close to those generated by HGA Architects and Engineers, the mechanical design team on the project, they are not close enough to be considered the same. The discrepancies in values can be attributed to two main sources. The first source would be prior knowledge. HGA worked on a project called College of the Desert which is located less than 5 miles away from the site of the Sunnylands campus. By working on a project with near identical design conditions, HGA has an advantage for knowing how a building will perform in that area. With this knowledge, they were able to tweak their design of the Sunnylands buildings proportional to the tweaks required in their final models of the College of the Desert. Additionally, HGA had access to the utility usage of the existing buildings on campus during their design phase which the owner has not shared for the purposes of this thesis work.

ANNUAL ENERGY CONSUMPTION

FUEL CONSUMPTION

The new buildings at the Sunnylands campus are fueled by electricity. There is no natural gas feed to the buildings.

The electrical energy consumption is broken down into five categories for the purpose of understanding what equipment is consuming the greatest portion of energy. The categories include: Cooling Equipment, Heating Equipment, Lights, Fans, and Miscellaneous Loads. The ratio of the energy consumed by these sources can be found at right in figure 7.

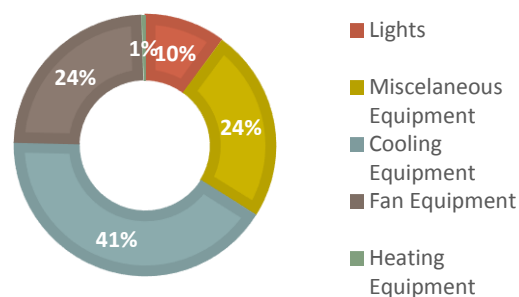


FIGURE 7 VISUAL BREAKDOWN OF ENERGY CONSUMPTION IN ADMINISTRATION BUILDING – GENERATED FROM TRACE 700

Below, in figure 8, a further breakdown of these categories can be found based on monthly consumption in kWh. Since Palm Springs, California is a predominately cooling-dominated climate, the electrical consumption

peaks drastically in the warmest months. It also becomes obvious that minimal heating will only be required for approximately four months of the year.

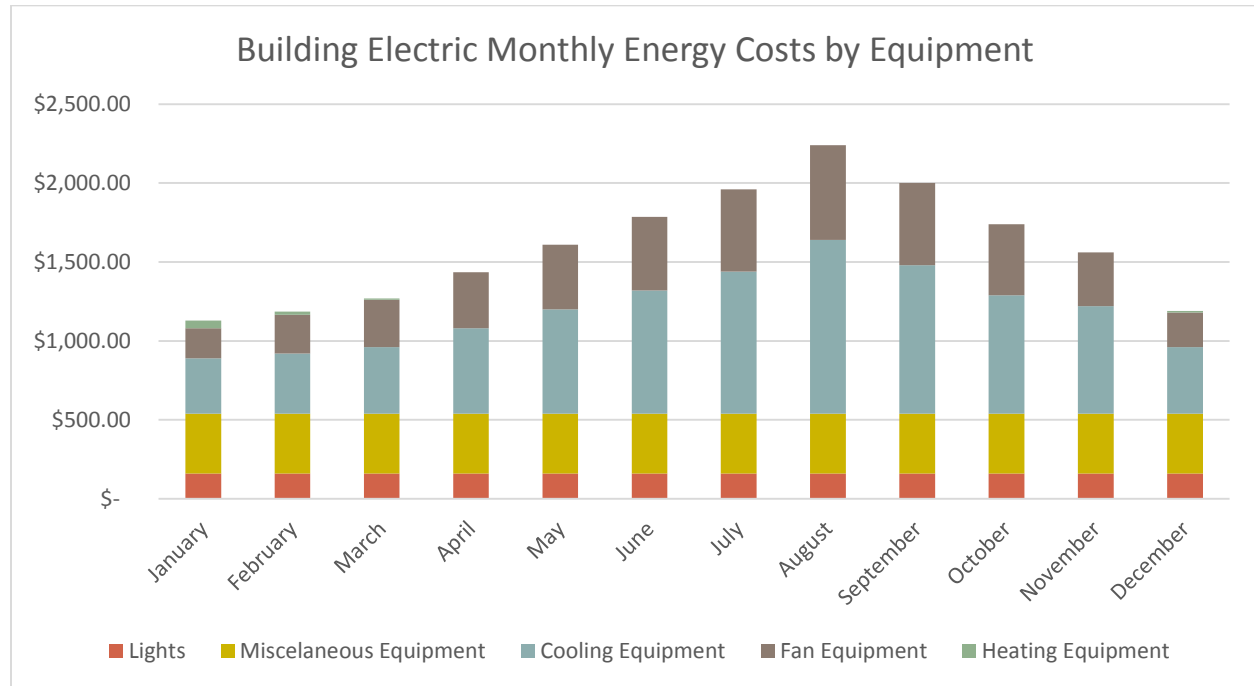


FIGURE 8 VISUAL BREAKDOWN OF ELECTRICITY CONSUMPTION BY MONTH – GENERATED FROM TRACE 700 DATA

WATER CONSUMPTION

Since water conservation was a main goal in the design process of the Sunnylands facilities, there are no water-based cooling systems implemented in the mechanical design of the buildings. Any and all water consumption on the new site can be attributed to occupant use. The only new building that will consume water in the mechanical system is the Archival Building. This building has spaces that require certain humidity levels to preserve the works housed within. Therefore, these spaces require humidifiers and therefore, water consumption.

ANNUAL CONSUMPTION RESULTS

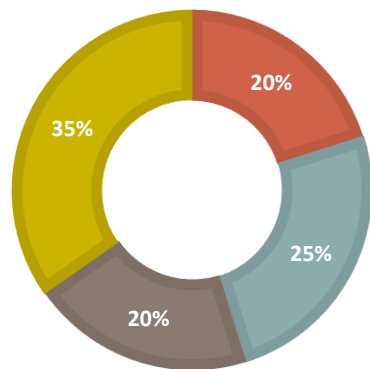
The Administration Building's use demand electricity as documented above demonstrate the standard consumption peaks as expected in a cooling dominated climate zone. The cost of operating the cooling equipment is the largest cost the owner will experience. Additional costs not documented for this process include pumps which were not yet selected at the time the Trace 700 model used for this report was developed. A secondary model was generated with a generic pump modeled. This secondary model documented an increase of approximately 6.5% in the overall cost of operation of the Administration Building documented in the cooling equipment category.

ANNUAL OPERATING CONSUMPTION

OVERVIEW

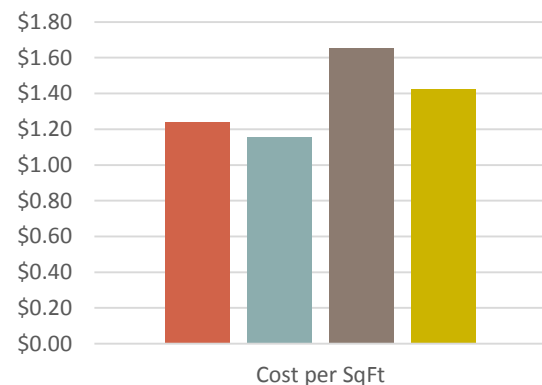
The yearly operational cost of the Administration building totals to \$22,131 which breaks down to \$1.65 per square foot each year. The cost of operating the Administration building is 35% of the total \$55,019.52 per year operational cost of the four buildings added to the Sunnylands campus. With a total added square footage of 40,930 square feet across the four new buildings, the average yearly operational cost per square foot is \$1.34.

**UTILITY COST BREAKDOWN
BY BUILDING**



■ Storage ■ Operations ■ Archive ■ Administration

**UTILITY COSTS RELATIVE TO
BUILDING SIZE**



■ Storage ■ Operations ■ Archive ■ Administration

EQUIPMENT OPERATING COSTS

Below in table 3, there is a breakdown of costs per month associated with each type of energy consumption. The largest energy consumer across all months of the year is the cooling equipment. If a more efficient system could be selected, it would greatly reduce the owners operating costs. Additionally, the cost of operating the fans could greatly be reduced if they were designed to run on variable speed drives instead of constant speeds.

TABLE 3 BREAKDOWN OF OPERATING COSTS BY MONTH

Category	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total
Lights	2495	2258	2733	2377	2614	2614	2377	2733	2377	2614	2495	2377	30064
Miscellaneous Loads	7542	6815	7704	7273	76232	7435	7461	7704	7273	7623	7344	7461	157867
Site Lighting	3720	3360	3720	3600	3720	3600	3720	3720	3600	3720	3600	3720	43800
Air Cooled Unitary	6986	7162	9577	11941	15121	17930	20741	21816	19106	14576	9458	7859	162273
Refrigerant Pump	2914	2704	2973	2918	2991	2982	3119	3078	2918	2991	2900	2937	35427
Heating	631	262	150	0	0	0	0	0	0	0	53	331	1428
VRV Indoor fan 1	514	498	669	751	923	1035	1131	1179	1037	876	657	541	9810
VRV Indoor fan 2	158	147	185	188	214	224	233	245	222	212	179	160	2368
VRV Indoor fan 3	248	258	376	456	581	656	704	722	622	514	363	274	5773
VRV Indoor fan 4	233	211	240	234	247	246	253	260	246	246	231	233	2880
VRV Indoor fan 5	559	569	724	743	865	917	1039	1056	975	850	700	606	9603
VRV Indoor fan 6	70	67	89	95	117	132	134	151	125	109	82	72	1243
VRV Indoor fan 7	241	246	321	307	357	426	506	587	583	490	350	264	4678
VRV Indoor fan 8	436	394	456	361	336	380	507	670	772	705	545	458	6021
VRV Indoor fan 9	73	87	149	219	328	410	443	448	335	215	116	83	2905

VRV Indoor fan 10	75	57	67	50	69	92	125	150	144	111	79	88	1108
VRV Indoor fan 11	113	134	255	375	537	635	677	670	498	323	156	116	4488
VRV Indoor fan 12	75	56	66	49	67	89	121	146	141	110	79	87	1087
VRV Indoor fan 13	113	134	255	375	537	635	677	670	498	323	156	116	4488
VRV Indoor fan 14	223	198	260	303	396	441	529	557	487	351	257	235	4237
VRV Indoor fan 15	99	126	233	355	516	622	675	678	513	328	150	108	4403
VRV Indoor fan 16	46	30	45	57	81	110	147	167	151	96	49	41	1019
VRV Indoor fan 17	75	56	66	49	67	89	121	146	141	110	79	87	1087
VRV Indoor fan 18	102	131	248	376	544	650	700	694	516	327	158	110	4555
VRV Indoor fan 19	75	57	67	50	69	92	125	150	144	111	79	88	1108
VRV Indoor fan 20	170	167	302	443	628	749	825	827	639	424	211	168	5551
VRV Indoor fan 21	13	7	17	26	45	69	86	101	84	48	18	10	524
VRV Indoor fan 22	26	35	58	88	135	186	220	253	207	128	54	38	1427
VRV Indoor Fans	3736	3668	5147	5948	7659	8885	9978	10528	9083	7006	4747	3981	80365

ENERGY CONSUMPTION BY CATEGORY EACH MONTH

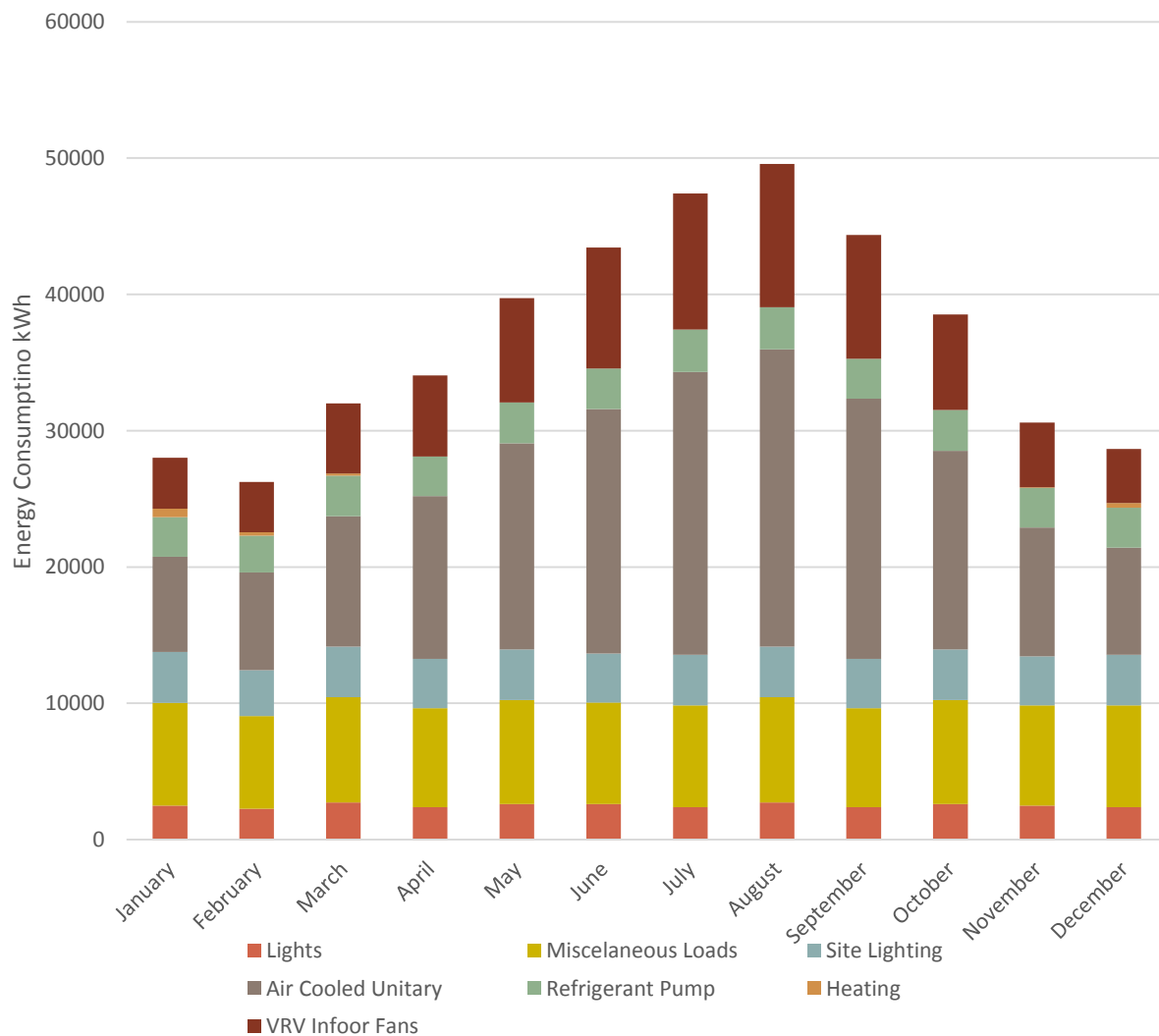


FIGURE 9 ENERGY CONSUMPTION BY CATEGORY EACH MONTH

ANNUAL COST RESULTS

The costs generated in the Trace 700 model used for this report are within 15% of those predicted by HGA Architects and Engineers. It is difficult to gauge the accuracy of these numbers without any current operation data on the building. However, it can be expected that any variance in operation cost will be a percentage difference across all equipment, with no large discrepancies in any particular category. Therefore, recommendations for reducing energy consumption can still be made.

EMISSIONS

The amount of energy consumed on site at the Sunnylands complex is the greatest offender to the environment. With approximately 250,472 pounds of CO₂ produced on a yearly basis from electricity consumption in the Administration Building, Carbon Dioxide is the most abundant byproduct of operation.

The other pollutants tracked in this report include SO₂ (181 gm/yr.) and NO_x compounds (141 gm/yr.). These byproducts, when released into the environment contribute to the global greenhouse effect. It is the social responsibility of designers to reduce this impact as much as possible. In order to do this, the types of refrigerants used on site must be closely analyzed.

REFERENCES

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ANSI/ASHRAE. (2010). Standard 90.1-2010, Energy Standard for Buildings Except Low Rise Residential Buildings. Atlanta, GA: American Society of Heating Refrigeration and Air Conditioning Engineers, Inc.

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Trane Trace® 700 Version 6.3.0. for Academic Use

APPENDIX A – TRACE 700 OUTPUTS

Room Checksums

By ACADEMIC

A01 SECURITY

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 7 / 16					Mo/Hr: 7 / 14					Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 88 / 71 / 85					OADB: 88					OADB: 40							
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total (%)	Space Sens	Tot Sens	Percent Of Total (%)	SADB	Cooling	Heating			
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h		Btu/h	Btu/h							
Envelope Loads					Envelope Loads												
Skylite Solar	0	0	0	0	0	0	0	0.00	Skylite Solar	0	0	0.00	59.0	75.0			
Skylite Cond	0	0	0	0	0	0	0	0.00	Skylite Cond	0	0	0.00	82.1	67.3			
Roof Cond	0	804	20	0	0	0	-310	16.90	Roof Cond	0	0	0.00	82.1	67.3			
Glass Solar	0	0	0	0	0	0	0	0.00	Glass Solar	0	0	0.00	83.0	63.6			
Glass/Door Cond	0	0	0	0	0	0	0	0.00	Glass/Door Cond	0	0	0.00	Fn MtrTD	0.1	0.0		
Wall Cond	606	116	722	18	684	-601	-737	40.17	Wall Cond	-601	-737	40.17	Fn BldTD	0.3	0.0		
Partition/Door	0	0	0	0	0	0	0	0.00	Partition/Door	0	0	0.00	Fn Frict	0.9	0.0		
Floor	0	0	0	0	0	0	0	0.00	Floor	0	0	0.00					
Adjacent Floor	0	0	0	0	0	0	0	0.00	Adjacent Floor	0	0	0.00					
Infiltration	208	208	5	108	4	-241	-241	13.12	Infiltration	-241	-241	13.12					
Sub Total ==>	814	920	1,734	792	31	-841	-1,288	70.19	Sub Total ==>	-841	-1,288	70.19					
Internal Loads					Internal Loads												
Lights	149	37	186	149	6	0	0	0.00	Lights	0	0	0.00					
People	450	0	450	250	10	0	0	0.00	People	0	0	0.00					
Misc	1,179	0	1,179	1,179	46	1,179	1,179	-64.25	Misc	1,179	1,179	-64.25					
Sub Total ==>	1,778	37	1,816	1,578	61	1,179	1,179	-64.25	Sub Total ==>	1,179	1,179	-64.25					
Ceiling Load	204	-204	0	206	8	-77	0	0.00	Ceiling Load	-77	0	0.00					
Ventilation Load	0	0	571	0	0	0	-661	36.03	Ventilation Load	0	-661	36.03					
Adj Air Trans Heat	0	0	0	0	0	0	0	0	Adj Air Trans Heat	0	0	0					
Dehumid. Ov Sizing	0	0	0	0	0	-1,064	-1,064	57.98	Ov/Undr Sizing	-1,064	-1,064	57.98					
Ov/Undr Sizing	0	0	0	0	0	80	80	-4.38	Exhaust Heat	80	-4.38						
Exhaust Heat	0	-213	-213	0	0	0	0	0.00	OA Preheat Diff.	0	0	0.00					
Sup. Fan Heat	0	0	216	0	0	0	0	0.00	RA Preheat Diff.	0	0	0.00					
Ret. Fan Heat	0	0	0	0	0	0	0	0.00	Additional Reheat	0	0	0.00					
Duct Heat Pkup	0	0	0	0	0	-81	-81	4.43	System Plenum Heat	-81	4.43						
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	Underflr Sup Ht Pkup	0	0	0.00					
Supply Air Leakage	0	0	0	0	0	0	0	0.00	Supply Air Leakage	0	0	0.00					
Grand Total ==>	2,796	540	4,123	2,576	100.00	-803	-1,835	100.00	Grand Total ==>	-803	-1,835	100.00					
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION							
Total Capacity	Sens Cap.	Coil Airflow	Enter DB/WB/HR	Leave DB/WB/HR	Gross Total	Glass	Capacity	Coil Airflow	Ent	Capacity	Coil Airflow	Ent	Capacity	Coil Airflow	Ent		
ton	MBh	cfm	°F °F gr/lb	°F °F gr/lb		ft² (%)	MBh	cfm	°F	MBh	cfm	°F	MBh	cfm	°F		
Main Clg	0.3	4.1	3.6	146	84.3 66.1 68.3	59.0 57.1 67.7	-1.8	146	63.6	75.0	0.0	0.0	0.0	0.0	0.0		
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 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	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total	0.3	4.1															

Room Checksums

By ACADEMIC

A02 RECEPTION / LOBBY

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES	
Peaked at Time: Mo/Hr: 9 / 10				Mo/Hr: 11 / 11				Mo/Hr: Heating Design				Cooling	
Outside Air: OADB/WB/HR: 79 / 62 / 58				OADB: 71				OADB: 40				Heating	
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)	Space Sens Btu/h	Coil Peak Btu/h	Percent Of Total (%)	SADB	55.0
Envelope Loads						Envelope Loads						Ra Plenum	77.1
Skylite Solar	0	0	0.0	0	0.0	Skylite Solar	0	0.00	0	0	0.00	Return	77.1
Skylite Cond	0	0	0.0	0	0.0	Skylite Cond	0	0.00	0	0	0.00	Ret/OA	77.2
Roof Cond	0	369	4.0	0	0.0	Roof Cond	-525	14.52	0	0	0.00	Fn MtrTD	0.1
Glass Solar	5,839	0	62.0	6,539	83.0	Glass Solar	0	0.00	0	0	0.00	Fn BldTD	0.3
Glass/Door Cond	82	0	1.0	-390	-5.0	Glass/Door Cond	-1,847	51.11	0	0	0.00	Fn Frict	0.0
Wall Cond	212	97	3.0	80	1.0	Wall Cond	-316	12.86	0	0	0.00		
Partition/Door	0	0	0.0	0	0.0	Partition/Door	0	0.00	0	0	0.00		
Floor	0	0	0.0	0	0.0	Floor	0	0.00	0	0	0.00		
Adjacent Floor	0	0	0.0	0	0.0	Adjacent Floor	0	0.00	0	0	0.00		
Infiltration	203	203	2.0	-56	-1.0	Infiltration	-407	11.27	-407	-407	11.27		
Sub Total ==>	6,336	467	72.0	6,174	79.0	Sub Total ==>	-2,571	89.76	-2,571	-3,244	89.76		
Internal Loads						Internal Loads							
Lights	538	134	7.0	611	8.0	Lights	0	0.00	0	0	0.00		
People	376	0	4.0	219	3.0	People	0	0.00	0	0	0.00		
Misc	788	0	8.0	788	10.0	Misc	788	-21.81	788	788	-21.81		
Sub Total ==>	1,702	134	19.0	1,619	21.0	Sub Total ==>	788	-21.81	788	788	-21.81		
Ceiling Load	104	-104	0.0	57	1.0	Ceiling Load	-130	0.00	-130	0	0.00		
Ventilation Load	0	0	3.0	0	0.0	Ventilation Load	0	18.30	0	-661	18.30		
Adj Air Trans Heat	0	0	0.0	0	0.0	Adj Air Trans Heat	0	0.00	0	0	0.00		
Dehumid. Ov Sizing	0	0	0.0	0	0.0	Ov/Undr Sizing	-49	1.37	-49	-49	1.37		
Ov/Undr Sizing	0	-76	-1.0	0	0.0	Exhaust Heat	95	-2.64	95	95	-2.64		
Exhaust Heat	0	-76	-1.0	0	0.0	OA Preheat Diff.	0	0.00	0	0	0.00		
Sup. Fan Heat	0	528	6.0	0	0.0	RA Preheat Diff.	0	0.00	0	0	0.00		
Ret. Fan Heat	0	0	0.0	0	0.0	Additional Reheat	0	0.00	0	0	0.00		
Duct Heat Pkup	0	0	0.0	0	0.0	System Plenum Heat	-543	15.03	-543	-543	15.03		
Underflr Sup Ht Pkup	0	0	0.0	0	0.0	Underflr Sup Ht Pkup	0	0.00	0	0	0.00		
Supply Air Leakage	0	0	0.0	0	0.0	Supply Air Leakage	0	0.00	0	0	0.00		
Grand Total ==>	8,141	421	100.00	7,850	100.00	Grand Total ==>	-1,963	100.00	-1,963	-3,614	100.00		

COOLING COIL SELECTION				AREAS				HEATING COIL SELECTION			
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)	Leave DB/WB/HR °F °F gr/lb		Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Clg	0.8	9.4	8.8 356 78.6 58.3 41.4	Floor	154	55.0 48.4 40.4		Main Htg	-3.6	356 65.8	75.0
Aux Clg	0.0	0.0	0 0.0 0.0 0.0	Part	0	0.0 0.0 0.0		Aux Htg	0.0	0 0.0	0.0
Opt Vent	0.0	0.0	0 0.0 0.0 0.0	Int Door	0	0.0 0.0 0.0		Preheat	0.0	0 0.0	0.0
				ExFlr	0						
				Roof	154	0 0		Humidif	0.0	0 0.0	0.0
Total	0.8	9.4		Wall	243	100 41		Opt Vent	0.0	0 0.0	0.0
				Ext Door	0	0 0		Total	-3.6		

ENGINEERING CKS			
% OA	Cooling	Heating	
cfm/ft²	5.6	5.6	
cfm/ton	2.31	2.31	
ft³/ton	453.67		
Btu/hr-ft²	196.20		
No. People	61.16	-23.47	

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

TRACE® 700 v6.3 calculated at 02:46 PM on 12/05/2015
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Room Checksums

By ACADEMIC

A04 LARGE MEETING ROOM

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES						
Peaked at Time: Mo/Hr: 11 / 14				Mo/Hr: 12 / 14				Mo/Hr: Heating Design										
Outside Air: OADB/WB/HR: 77 / 60 / 49				OADB: 73				OADB: 40										
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak Space Sens	Coil Peak Tot Sens	Percent Of Total (%)				Cooling	Heating					
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h											
Envelope Loads																		
Skylite Solar	0	0	0	0	0	0	0	0.00	SADB			55.0	75.0					
Skylite Cond	0	0	0	0	0	0	0	0.00	Ra Plenum			76.7	68.9					
Roof Cond	0	2,449	5	0	0	0	0	0.00	Return			76.7	68.9					
Glass Solar	39,568	0	80	40,792	94	0	0	0.00	Ret/OA			76.7	67.7					
Glass/Door Cond	79	0	0	-462	-1	0	-1,930	10.25	Fn MtrTD			0.1	0.0					
Wall Cond	0	377	1	0	0	-4,256	0	0.00	Fn BldTD			0.3	0.0					
Partition/Door	0	0	0	0	0	0	-4,256	22.60	Fn Frict			0.9	0.0					
Floor	0	0	0	0	0	0	-186	0.99										
Adjacent Floor	0	0	0	0	0	0	0	0.00										
Infiltration	132	132	0	-80	0	-1,418	-1,418	7.53										
Sub Total ==>	39,780	2,826	86	40,249	92	-5,674	-7,790	41.36										
Internal Loads																		
Lights	1,772	443	4	1,772	4	0	0	0.00										
People	900	0	2	500	1	0	0	0.00										
Misc	773	0	2	773	2	0	0	0.00										
Sub Total ==>	3,445	443	8	3,045	7	0	0	0.00										
Ceiling Load	290	-290	0	236	1	-193	0	0.00										
Ventilation Load	0	0	0	0	0	0	-2,645	14.05										
Adj Air Trans Heat	0	0	0	0	0	0	0	0										
Dehumid. Ov Sizing	0	0	0	0	0	-7,949	-7,949	42.21										
Ov/Undr Sizing	0	0	0	0	0	0	154	-0.82										
Exhaust Heat	-231	-231	0	0	0	0	0	0.00										
Sup. Fan Heat	0	2,925	6	0	0	0	0	0.00										
Ret. Fan Heat	0	0	0	0	0	0	0	0.00										
Duct Heat Pkup	0	0	0	0	0	0	-604	3.21										
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00										
Supply Air Leakage	0	0	0	0	0	0	0	0.00										
Grand Total ==>	43,516	2,747	49,435	43,530	100.00	-13,816	-18,834	100.00										
AIRFLOWS																		
												Cooling	Heating					
Diffuser												1,975	1,975					
Terminal												1,975	1,975					
Main Fan												1,975	1,975					
Sec Fan												0	0					
Nom Vent												80	80					
AHU Vent												80	80					
Infil												43	43					
MinStop/Rh												0	0					
Return												2,018	2,018					
Exhaust												123	123					
Rm Exh												0	0					
Auxiliary												0	0					
Leakage Dwn												0	0					
Leakage Ups												0	0					
ENGINEERING CKS																		
												Cooling	Heating					
% OA												4.1	4.1					
cfm/ft²												3.68	3.68					
cfm/ton												479.33						
ft³/ton												130.11						
Btu/hr-ft²												92.23	-29.67					
No. People												4						
ONLY																		
COOLING COIL SELECTION										AREAS				HEATING COIL SELECTION				
Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR		Leave DB/WB/HR		Gross Total	Glass	Capacity		Coil Airflow	Ent	Lv				
ton	MBh	MBh	cfm	°F	°F	gr/lb	°F	°F	gr/lb	ft²	MBh	cfm	°F	°F				
Main Clg	4.1	49.4	49.0	1,975	78.1	59.8	48.2	55.0	50.5	48.2	536	1,975	67.7	75.0				
Aux Clg	0.0	0.0	0.0	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	0	0	0.0	0.0				
Total	4.1	49.4																
FLOOR										FLOOR					FLOOR			
Part										Part					Part			
Int Door										Int Door					Int Door			
ExFlr										ExFlr					ExFlr			
Roof										Roof					Roof			
Wall										Wall					Wall			
Ext Door										Ext Door					Ext Door			

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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Room Checksums

By ACADEMIC

A05 PRESIDENTS ASSISTANT

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 7 / 15					Mo/Hr: 7 / 15					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 70 / 81					OADB: 89					OADB: 40									
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total		Space Sensible	Percent Of Total				Space Peak Space Sens	Coil Peak Tot Sens	Percent Of Total			Cooling	Heating			
Btu/h	Btu/h	Btu/h	(%)		Btu/h	(%)				Btu/h	Btu/h	(%)							
Envelope Loads					Envelope Loads					Envelope Loads									
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	SADB	59.9			
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ra Plenum	78.3			
Roof Cond	0	2,971	27	0	0	0	0	0	0	0	-1,092	27.38	0	0	Return	78.3			
Glass Solar	3,245	0	29	3,245	48	0	0	0	0	0	0	0.00	0	0.00	Ret/OA	78.8			
Glass/Door Cond	776	0	7	776	12	0	0	0	0	-1,892	-1,892	47.45	0	0	Fn MtrTD	0.1			
Wall Cond	0	56	1	0	0	0	0	0	0	0	-82	2.07	0	0	Fn BldTD	0.3			
Partition/Door	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0	Fn Frict	0.9			
Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0		0.0			
Adjacent Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0		0.0			
Infiltration	628	0	6	628	375	6	0	0	-804	-804	20.17		0	0		0.0			
Sub Total ==>	4,649	3,027	7,676	69	4,396	65	0	0	-2,696	-3,870	97.07		0	0					
Internal Loads					Internal Loads					Internal Loads									
Lights	942	236	11	1,178	942	14	0	0	0	0	0	0.00	0	0.00	Diffuser	405			
People	450	0	4	450	250	4	0	0	0	0	0	0.00	0	0.00	Terminal	405			
Misc	819	0	7	819	819	12	0	0	0	0	0	0.00	0	0.00	Main Fan	405			
Sub Total ==>	2,212	236	22	2,447	2,012	30	0	0	0	0	0	0.00	0	0.00	Sec Fan	0			
Ceiling Load	316	-316	0	0	316	5	0	0	-117	0	0	0.00	0	0.00	Nom Vent	20			
Ventilation Load	0	0	517	5	0	0	0	0	0	-661	16.59		0	0.00	AHU Vent	20			
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0		0	0.00	Infil	24			
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	MinStop/Rh	0			
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	59	-1.48		0	0.00	Return	429			
Exhaust Heat	0	-160	-1	-160	0	0	0	0	0	0	0	0.00	0	0.00	Exhaust	44			
Sup. Fan Heat	0	0	600	5	0	0	0	0	0	0	0	0.00	0	0.00	Rm Exh	0			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Auxiliary	0			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	485	-12.17		0	0.00	Leakage Dwn	0			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Leakage Ups	0			
Supply Air Leakage	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00					
Grand Total ==>	7,177	2,786	11,079	100.00	6,724	100.00	0	0	-2,812	-3,987	100.00		0	0					
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION									
Total Capacity	Sens Cap.	Coil Airflow	Enter DB/WB/HR	Leave DB/WB/HR	Gross Total	Glass				Capacity	Coil Airflow	Ent °F	Lvg °F						
ton	MBh	cfm	°F °F gr/lb	°F °F gr/lb		ft² (%)				MBh	cfm	°F	°F						
Main Clg	0.9	11.1	10.4	405	80.2 64.4 66.2	59.9 55.4 59.0	0	0	0	-4.0	405	67.4	76.3	0	0				
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	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	0	0	0	0.0	0	0.0	0.0	0	0				
Total	0.9	11.1																	

Room Checksums

By ACADEMIC

A06 PRESIDENTS OFFICE

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 11 / 14					Mo/Hr: 12 / 14					Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 77 / 60 / 49					OADB: 73					OADB: 40							
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)		Space Sensible Btu/h	Percent Of Total (%)				Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)			Cooling	Heating	
Envelope Loads					Envelope Loads					Envelope Loads							
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	SADB	55.0	75.0
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ra Plenum	76.7	68.8
Roof Cond	0	1,359	1,359	5	0	0	0	0	0	0	-1,067	12.04	0	0.00	Return	76.7	68.8
Glass Solar	23,943	0	23,943	80	24,565	93	1	1	1	0	0	0.00	0	0.00	Ret/OA	76.7	68.3
Glass/Door Cond	52	0	52	0	-300	-1	0	0	0	-2,760	-2,760	31.16	0	0.00	Fn MtrTD	0.1	0.0
Wall Cond	201	119	320	1	143	1	0	0	0	-314	-510	5.76	0	0.00	Fn BldTD	0.3	0.0
Partition/Door	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn Frict	0.9	0.0
Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Adjacent Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Infiltration	78	0	78	0	-45	0	0	0	0	-786	-786	8.87	0	0.00			
Sub Total ==>	24,273	1,478	25,751	86	24,363	92	0	0	0	-3,860	-5,122	57.82	0	0.00			
Internal Loads					Internal Loads					Internal Loads							
Lights	979	245	1,223	4	979	4	0	0	0	0	0	0.00	0	0.00			
People	450	0	450	2	250	1	0	0	0	0	0	0.00	0	0.00			
Misc	771	0	771	3	771	3	0	0	0	0	0	0.00	0	0.00			
Sub Total ==>	2,200	245	2,444	8	2,000	8	0	0	0	0	0	0.00	0	0.00			
Ceiling Load	157	-157	0	0	124	0	0	0	0	-114	0	0.00	0	0.00			
Ventilation Load	0	0	66	0	0	0	0	0	0	0	-661	7.47	0	0.00			
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00			
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	-2,648	-2,648	29.89	0	0.00			
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	58	-0.66	0.00	0	0.00			
Exhaust Heat	0	-80	-80	0	0	0	0	0	0	0	0	0.00	0	0.00			
Sup. Fan Heat	0	0	1,780	6	0	0	0	0	0	0	0	0.00	0	0.00			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	-485	5.48	0.00	0	0.00			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Supply Air Leakage	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Grand Total ==>	26,630	1,485	29,961	100.00	26,487	100.00	0	0	0	-6,622	-8,858	100.00	0	0.00			
COOLING COIL SELECTION					CLG SPACE SELECTION					HEATING COIL SELECTION							
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F	Leave DB/WB/HR °F °F	Gross Total ft²	Glass ft²	Grass ft²	Grass ft²	Grass ft²	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F				
Main Clg	2.5	30.0	29.7	1,202	78.0	59.7	47.9	55.0	50.5	47.9	55.0	50.5	47.9	55.0	50.5	47.9	55.0
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.5	30.0															
					AREAS												
					Floor	297	0	0	0								
					Part	0	0	0	0								
					Int Door	0	0	0	0								
					ExFlr	0	0	0	0								
					Roof	297	0	0	0								
					Wall	304	149	49	49								
					Ext Door	0	0	0	0								
					Main Htg	-8.9	1,202	68.3	75.0								
					Aux Htg	0.0	0	0.0	0.0								
					Preheat	0.0	0	0.0	0.0								
					Humidif	0.0	0	0.0	0.0								
					Opt Vent	0.0	0	0.0	0.0								
					Total	-8.9											

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

TRACE® 700 v6.3 calculated at 02:46 PM on 12/05/2015
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Room Checksums

By ACADEMIC

A07 PRESIDENTS MEETING ROOM

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 9 / 16					Mo/Hr: 7 / 15					Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 89 / 72 / 89					OADB: 89					OADB: 40							
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total		Space Sensible	Percent Of Total				Space Peak Space Sens	Coil Peak Tot Sens	Percent Of Total			Cooling	Heating	
Btu/h	Btu/h	Btu/h	(%)		Btu/h	(%)				Btu/h	Btu/h	(%)					
Envelope Loads					Envelope Loads					Envelope Loads							
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	SADB	55.9	
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ra Plenum	82.9	
Roof Cond	0	2,191	26	0	0	0	0	0	0	0	-1,006	24.57	0	0.00	Return	82.9	
Glass Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ret/OA	85.7	
Glass/Door Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn MtrTD	0.1	
Wall Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn BldTD	0.3	
Partition/Door	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn Frict	0.9	
Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00		0.0	
Adjacent Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00		0.0	
Infiltration	768	768	9	370	9	370	9	370	9	-794	-794	19.38	0	0.00			
Sub Total ==>	768	2,191	2,959	36	370	9	370	9	370	-794	-1,800	43.95	0	0.00			
Internal Loads					Internal Loads					Internal Loads							
Lights	1,682	420	2,102	25	1,682	43	1,682	43	1,682	0	0	0.00	0	0.00			
People	900	0	900	11	500	13	500	13	500	0	0	0.00	0	0.00			
Misc	445	0	445	5	449	12	449	12	449	0	0	0.00	0	0.00			
Sub Total ==>	3,027	420	3,447	41	2,631	67	2,631	67	2,631	0	0	0.00	0	0.00			
Ceiling Load	754	-754	0	0	903	23	903	23	903	-295	0	0.00	0	0.00			
Ventilation Load	0	0	2,559	31	0	0	0	0	0	0	-2,645	64.59	0	0.00			
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00			
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	0	356	-8.69	0	0.00			
Exhaust Heat	0	-909	-909	-11	0	0	0	0	0	0	0	0.00	0	0.00			
Sup. Fan Heat	0	275	275	3	0	0	0	0	0	0	0	0.00	0	0.00			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	0	-6	0.16	0	0.00			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Supply Air Leakage	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Grand Total ==>	4,549	948	8,331	100.00	3,904	100.00	3,904	100.00	3,904	-1,089	-4,096	100.00	0	0.00			
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION							
Total Capacity	Sens Cap.	Coil Airflow	Enter DB/WB/HR	Leave DB/WB/HR	Gross Total	Glass				Capacity	Coil Airflow	Ent °F	Lvg °F				
ton	MBh	cfm	°F °F gr/lb	°F °F gr/lb		ft² (%)				MBh	cfm	°F	°F				
Main Clg	0.7	8.3	6.3	186	87.1 68.4 75.7	55.9 54.2 60.7	0	0	0	-4.1	186	55.3	75.3	0	0.0	0.0	
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 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	0	0	0	0.0	0	0.0	0.0	0	0.0	0.0	
Total	0.7	8.3															

Room Checksums

By ACADEMIC

A08 OFFICE

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 8 / 16					Mo/Hr: 7 / 15					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 71 / 88					OADB: 89					OADB: 40									
Space Sens. + Lat.		Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible		Percent Of Total (%)	Space Peak Space Sens		Coil Peak Tot Sens	Percent Of Total (%)								
Btu/h		Btu/h	Btu/h		Btu/h			Btu/h		Btu/h									
Envelope Loads																			
Skylite Solar		0	0	0	0		0	Skylite Solar		0	0	0.00	SADB		55.6	75.5			
Skylite Cond		0	0	0	0		0	Skylite Cond		0	0	0.00	Ra Plenum		83.8	66.9			
Roof Cond		0	972	972	33		0	Roof Cond		0	-396	31.37	Return		83.8	66.9			
Glass Solar		0	0	0	0		0	Glass Solar		0	0	0.00	Ret/OA		85.1	59.3			
Glass/Door Cond		0	0	0	0		0	Glass/Door Cond		0	0	0.00	Fn MtrTD		0.1	0.0			
Wall Cond		0	0	0	0		0	Wall Cond		0	0	0.00	Fn BldTD		0.3	0.0			
Partition/Door		0	0	0	0		0	Partition/Door		0	0	0.00	Fn Frict		0.9	0.0			
Floor		0	0	0	0		0	Floor		0	0	0.00							
Adjacent Floor		0	0	0	0		0	Adjacent Floor		0	0	0.00							
Infiltration		283	0	283	10		146	Infiltration		-312	-312	24.73							
Sub Total ==>		283	972	1,256	42		146	Sub Total ==>		-312	-708	56.10							
Internal Loads																			
Lights		433	108	542	18		433	Lights		0	0	0.00							
People		450	0	450	15		250	People		0	0	0.00							
Misc		315	0	315	11		318	Misc		0	0	0.00							
Sub Total ==>		1,199	108	1,307	44		1,001	Sub Total ==>		0	0	0.00							
Ceiling Load		329	-329	0	0		355	Ceiling Load		-116	0	0.00							
Ventilation Load		0	0	600	20		0	Ventilation Load		0	-661	52.40							
Adj Air Trans Heat		0	0	0	0		0	Adj Air Trans Heat		0	0	0							
Dehumid. Ov Sizing		0	0	0	0		0	Ov/Undr Sizing		0	0	0.00							
Ov/Undr Sizing		0	0	0	0		0	Exhaust Heat		0	101	-7.99							
Exhaust Heat		0	-286	-286	-10		0	OA Preheat Diff.		0	0	0.00							
Sup. Fan Heat		0	0	104	3		0	RA Preheat Diff.		0	0	0.00							
Ret. Fan Heat		0	0	0	0		0	Additional Reheat		0	0	0.00							
Duct Heat Pkup		0	0	0	0		0	System Plenum Heat		6	-0.51	0.00							
Underflr Sup Ht Pkup		0	0	0	0		0	Underflr Sup Ht Pkup		0	0	0.00							
Supply Air Leakage		0	0	0	0		0	Supply Air Leakage		0	0	0.00							
Grand Total ==>		1,811	466	2,982	100.00		1,502	Grand Total ==>		-428	-1,262	100.00							
AIRFLOWS																			
Cooling Heating																			
Diffuser		70	70	70															
Terminal		70	70	70															
Main Fan		70	70	70															
Sec Fan		0	0	0															
Nom Vent		20	20	20															
AHU Vent		20	20	20															
Infil		9	9	9															
MinStop/Rh		0	0	0															
Return		80	80	80															
Exhaust		29	29	29															
Rm Exh		0	0	0															
Auxiliary		0	0	0															
Leakage Dwn		0	0	0															
Leakage Ups		0	0	0															
ENGINEERING CKS																			
Cooling Heating																			
% OA		28.4	28.4	28.4															
cfm/ft²		0.60	0.60	0.60															
cfm/ton		283.25	283.25	283.25															
ft²/ton		474.89	474.89	474.89															
Btu/hr-ft²		25.27	-10.70	-10.70															
No. People		1	1	1															
ONLY																			
COOLING COIL SELECTION										AREAS					HEATING COIL SELECTION				
Total Capacity ton MBh		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F		gr/lb	Leave DB/WB/HR °F °F		gr/lb	Gross Total	Glass ft² (%)								
Main Clg		0.3 3.0	2.3	70	86.5 67.5	71.9	55.6 53.9	59.9		Floor	118		Main Htg		-1.3	70 59.3	75.5		
Aux Clg		0.0 0.0	0.0	0	0.0 0.0	0.0	0.0 0.0	0.0		Part	0		Aux Htg		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		Int Door	0		Preheat		0.0	0 0.0	0.0		
Total		0.3 3.0								ExFlr	0		Humidif		0.0	0 0.0	0.0		
										Roof	118	0 0	Opt Vent		0.0	0 0.0	0.0		
										Wall	0	0 0	Total		-1.3				
										Ext Door	0	0 0							

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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By ACADEMIC

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 7 / 15					Mo/Hr: 7 / 15					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 70 / 81					OADB: 89					OADB: 40									
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total	Space Sensible	Percent Of Total	Space Peak	Coil Peak	Percent Of Total	Space Sens	Coil Sens	Percent Of Total	SADB	Cooling	Heating					
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	(%)	Btu/h	Btu/h	(%)								
Envelope Loads					Envelope Loads														
Skyline Solar	0	0	0	0	0	0	0	0.00	Skyline Solar	0	0	0.00	Ra Plenum	82.3	67.3				
Skyline Cond	0	0	0	0	0	0	0	0.00	Skyline Cond	0	0	0.00	Return	82.3	67.3				
Roof Cond	0	9,724	50	0	0	0	-3,576	65.35	Roof Cond	0	0	0.00	Ret/OA	82.3	67.3				
Glass Solar	0	0	0	0	0	0	0	0.00	Glass Solar	0	0	0.00	Fn MtrTD	0.1	0.0				
Glass/Door Cond	0	0	0	0	0	0	0	0.00	Glass/Door Cond	0	0	0.00	Fn BldTD	0.3	0.0				
Wall Cond	0	0	0	0	0	0	0	0.00	Wall Cond	0	0	0.00	Fn Frict	0.9	0.0				
Partition/Door	0	0	0	0	0	0	0	0.00	Partition/Door	0	0	0.00							
Floor	0	0	0	0	0	0	0	0.00	Floor	0	0	0.00							
Adjacent Floor	0	0	0	0	0	0	0	0.00	Adjacent Floor	0	0	0.00							
Infiltration	2,168	2,168	11	1,295	12	-2,775	-2,775	50.72	Infiltration	-2,775	-2,775	50.72							
Sub Total ==>	2,168	9,724	61	1,295	12	-2,775	-6,351	116.06	Sub Total ==>	-2,775	-6,351	116.06							
Internal Loads					Internal Loads														
Lights	1,572	393	10	1,572	15	0	0	0.00	Lights	0	0	0.00							
People	0	0	0	0	0	0	0	0.00	People	0	0	0.00							
Misc	5,370	0	28	5,370	50	5,370	5,370	-98.15	Misc	5,370	5,370	-98.15							
Sub Total ==>	6,943	393	38	6,943	65	5,370	5,370	-98.15	Sub Total ==>	5,370	5,370	-98.15							
Ceiling Load	2,434	-2,434	0	2,434	23	-889	0	0.00	Ceiling Load	-889	0	0.00							
Ventilation Load	0	0	0	0	0	0	0	0.00	Ventilation Load	0	0	0.00							
Adj Air Trans Heat	0	0	0	0	0	0	0	0.00	Adj Air Trans Heat	0	0	0.00							
Dehumid. Ov Sizing	0	0	0	0	0	-5,272	-5,272	96.34	Ov/Undr Sizing	-5,272	-5,272	96.34							
Ov/Undr Sizing	0	0	0	0	0	247	247	-4.52	Exhaust Heat	247	247	-4.52							
Exhaust Heat	-677	-677	-3	0	0	0	0	0.00	OA Preheat Diff.	0	0	0.00							
Sup. Fan Heat	0	958	5	0	0	0	0	0.00	RA Preheat Diff.	0	0	0.00							
Ret. Fan Heat	0	0	0	0	0	0	0	0.00	Additional Reheat	0	0	0.00							
Duct Heat Pkup	0	0	0	0	0	533	533	-9.74	System Plenum Heat	533	533	-9.74							
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	Underflr Sup Ht Pkup	0	0	0.00							
Supply Air Leakage	0	0	0	0	0	0	0	0.00	Supply Air Leakage	0	0	0.00							
Grand Total ==>	11,545	7,005	19,508	100.00	10,672	100.00	-3,565	100.00	Grand Total ==>	-3,565	-5,472	100.00							

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Room Checksums

By ACADEMIC

A10 HALLWAY

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 7 / 15					Mo/Hr: 7 / 15					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 70 / 81					OADB: 89					OADB: 40									
Space		Plenum	Net	Percent	Space		Percent	Space Peak		Coil Peak	Percent								
Sens. + Lat.	Sens. + Lat.	Total	Of Total		Sensible	Of Total		Space Sens	Space Sens	Tot Sens	Of Total			Cooling	Heating				
Btu/h	Btu/h	Btu/h	(%)		Btu/h	(%)		Btu/h	Btu/h	Btu/h	(%)								
ACADEMIC																			
Envelope Loads					Envelope Loads					Envelope Loads									
Skylite Solar	0	0	0	0	0	0	0	Skylite Solar	0	0	0.00	SADB	60.1	75.0					
Skylite Cond	0	0	0	0	0	0	0	Skylite Cond	0	0	0.00	Ra Plenum	82.3	67.3					
Roof Cond	0	1,186	1,186	48	0	0	0	Roof Cond	0	-436	64.33	Return	82.3	67.3					
Glass Solar	0	0	0	0	0	0	0	Glass Solar	0	0	0.00	Ret/OA	82.3	67.3					
Glass/Door Cond	0	0	0	0	0	0	0	Glass/Door Cond	0	0	0.00	Fn MtrTD	0.1	0.0					
Wall Cond	0	0	0	0	0	0	0	Wall Cond	0	0	0.00	Fn BldTD	0.3	0.0					
Partition/Door	0	0	0	0	0	0	0	Partition/Door	0	0	0.00	Fn Frict	0.9	0.0					
Floor	0	0	0	0	0	0	0	Floor	0	0	0.00								
Adjacent Floor	0	0	0	0	0	0	0	Adjacent Floor	0	0	0.00								
Infiltration	265	265	11	158	12	12	12	Infiltration	-339	-339	49.93								
Sub Total ==>	265	1,186	1,451	58	158	12	12	Sub Total ==>	-339	-775	114.26								
Internal Loads					Internal Loads					Internal Loads									
Lights	210	52	262	11	210	16	16	Lights	0	0	0.00								
People	0	0	0	0	0	0	0	People	0	0	0.00								
Misc	655	0	655	26	655	50	50	Misc	655	655	-96.62								
Sub Total ==>	865	52	917	37	865	66	66	Sub Total ==>	655	655	-96.62								
Ceiling Load					Ceiling Load					Ceiling Load									
Ventilation Load	297	-297	0	0	297	23	23	Ceiling Load	-108	0	0.00								
Adj Air Trans Heat	0	0	0	0	0	0	0	Ventilation Load	0	0	0.00								
Dehumid. Ov Sizing	0	0	0	0	0	0	0	Adj Air Trans Heat	0	0	0								
Ov/Undr Sizing	0	0	0	0	0	0	0	Ov/Undr Sizing	-650	-650	95.86								
Exhaust Heat	0	0	0	0	0	0	0	Exhaust Heat	0	0	0.00								
Sup. Fan Heat	0	119	5	0	0	0	0	OA Preheat Diff.	0	0	0.00								
Ret. Fan Heat	0	0	0	0	0	0	0	RA Preheat Diff.	0	0	0.00								
Duct Heat Pkup	0	0	0	0	0	0	0	Additional Reheat	92	-13.49	2.00								
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	System Plenum Heat	0	0	0.00								
Supply Air Leakage	0	0	0	0	0	0	0	Underflr Sup Ht Pkup	0	0	0.00								
								Supply Air Leakage	0	0	0.00								
Grand Total ==>	1,427	942	2,487	100.00	1,320	100.00	100.00	Grand Total ==>	-442	-678	100.00								
USE																			
ONLY																			
AREAS																			
HEATING COIL SELECTION																			
Capacity Coil Airflow Ent Lv																			
MBh cfm °F °F																			
Main Htg -0.7 80 67.3 75.0																			
Aux Htg 0.0 0 0.0 0.0																			
Preheat 0.0 0 0.0 0.0																			
Humidif 0.0 0 0.0 0.0																			
Opt Vent 0.0 0 0.0 0.0																			
Total -0.7																			

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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Room Checksums

By ACADEMIC

A11 WOMENS RESTROOM

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 7 / 15					Mo/Hr: 7 / 15					Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 89 / 70 / 81					OADB: 89					OADB: 40							
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)		Space Sensible Btu/h	Percent Of Total (%)				Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)			Cooling	Heating	
Envelope Loads					Envelope Loads					Envelope Loads							
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	SADB	60.4	75.0
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ra Plenum	81.1	67.8
Roof Cond	0	1,837	1,837	47	0	0	0	0	0	0	-675	80.04	0	0.00	Return	81.1	67.8
Glass Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ret/OA	81.1	67.8
Glass/Door Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn MtrTD	0.1	0.0
Wall Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn BldTD	0.3	0.0
Partition/Door	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn Frict	0.9	0.0
Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Adjacent Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Infiltration	398	398	10	241	12	241	12	241	12	-516	-516	61.18	-516	61.18			
Sub Total ==>	398	1,837	2,235	57	241	12	241	12	241	12	-516	141.22	-1,191	141.22			
Internal Loads					Internal Loads					Internal Loads							
Lights	360	90	450	12	360	18	360	18	360	18	0	0.00	0	0.00			
People	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Misc	998	0	998	26	998	50	998	50	998	998	998	-118.40	998	-118.40			
Sub Total ==>	1,358	90	1,448	37	1,358	68	1,358	68	998	998	-118.40	-118.40	998	-118.40			
Ceiling Load					Ceiling Load					Ceiling Load							
Ventilation Load	377	-377	0	0	377	19	377	19	-139	-139	0	0.00	-139	0			
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Dehumid. Ov Sizing	34	34	1	34	2	34	2	34	2	-34	-34	4	-34	4			
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	-842	-842	99.91	-842	99.91			
Exhaust Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Sup. Fan Heat	0	185	5	0	0	0	0	0	0	0	0	0.00	0	0.00			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	226	-26.75	-26.75	226	-26.75			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Supply Air Leakage	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Grand Total ==>	2,167	1,550	3,902	100.00	2,010	100.00	2,010	100.00	-533	-533	-843	100.00	-843	100.00			
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION							
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)				Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F				
Main Clg	0.3	3.9	3.7	125	82.5 65.1	66.0	60.4 54.8	56.0	195	-1.0	125	67.8	75.0	Main Htg			
Aux Clg	0.0	0.0	0.0	0	0.0 0.0	0.0	0.0 0.0	0.0	0	0.0	0	0.0	0.0	Aux Htg	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	0	0.0	0	0.0	0.0	Preheat	0.0	0	0.0
Total	0.3	3.9							0	0.0	0	0.0	0.0	Humidif	0.0	0	0.0
									0	0.0	0	0.0	0.0	Opt Vent	0.0	0	0.0
									0	0	0			Total	-1.0		

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Room Checksums

By ACADEMIC

A12 MENS RESTROOM

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES						
Peaked at Time: Mo/Hr: 7 / 15					Mo/Hr: 7 / 15					Mo/Hr: Heating Design											
Outside Air: OADB/WB/HR: 89 / 70 / 81					OADB: 89					OADB: 40											
Space Sens. + Lat.		Plenum Sens. + Lat.	Net Total	Percent Of Total	Space Sensible		Percent Of Total	Space Peak		Coil Peak	Percent Of Total										
Btu/h		Btu/h	Btu/h	(%)	Btu/h		(%)	Btu/h		Btu/h	(%)										
Envelope Loads																					
Skylite Solar		0	0	0	0		0	Skylite Solar		0	0	0.00	SADB		60.4	75.0					
Skylite Cond		0	0	0	0		0	Skylite Cond		0	0	0.00	Ra Plenum		81.1	67.8					
Roof Cond		0	1,837	1,837	47			Roof Cond		0	-675	80.04	Return		81.1	67.8					
Glass Solar		0	0	0	0		0	Glass Solar		0	0	0.00	Ret/OA		81.1	67.8					
Glass/Door Cond		0	0	0	0		0	Glass/Door Cond		0	0	0.00	Fn MtrTD		0.1	0.0					
Wall Cond		0	0	0	0		0	Wall Cond		0	0	0.00	Fn BldTD		0.3	0.0					
Partition/Door		0	0	0	0		0	Partition/Door		0	0	0.00	Fn Frict		0.9	0.0					
Floor		0	0	0	0		0	Floor		0	0	0.00									
Adjacent Floor		0	0	0	0		0	Adjacent Floor		0	0	0.00									
Infiltration		398	0	398	10		241	Infiltration		-516	-516	61.18									
Sub Total ==>		398	1,837	2,235	57		241	Sub Total ==>		-516	-1,191	141.22									
Internal Loads																					
Lights		360	90	450	12		360	Lights		0	0	0.00									
People		0	0	0	0		0	People		0	0	0.00									
Misc		998	0	998	26		998	Misc		998	998	-118.40									
Sub Total ==>		1,358	90	1,448	37		1,358	Sub Total ==>		998	998	-118.40									
Ceiling Load																					
Ventilation Load		377	-377	0	0		377	Ventilation Load		-139	0	0.00									
Adj Air Trans Heat		34	0	34	1		34	Adj Air Trans Heat		-34	-34	4									
Dehumid. Ov Sizing		0	0	0	0		0	Ov/Undr Sizing		-842	-842	99.91									
Exhaust Heat		0	0	0	0		0	Exhaust Heat		0	0	0.00									
Sup. Fan Heat		0	0	185	5			OA Preheat Diff.		0	0	0.00									
Ret. Fan Heat		0	0	0	0			RA Preheat Diff.		0	0	0.00									
Duct Heat PkUp		0	0	0	0			Additional Reheat		0	0	0.00									
Underflr Sup Ht PkUp		0	0	0	0			System Plenum Heat		226	-26.75										
Supply Air Leakage		0	0	0	0			Underflr Sup Ht PkUp		0	0	0.00									
		0	0	0	0			Supply Air Leakage		0	0	0.00									
Grand Total ==>		2,167	1,550	3,902	100.00		2,010	Grand Total ==>		-533	-843	100.00									
AIRFLOWS																					
Cooling Heating																					
Diffuser		125		125																	
Terminal		125		125																	
Main Fan		125		125																	
Sec Fan		0		0																	
Nom Vent		0		0																	
AHU Vent		0		0																	
Infil		16		16																	
MinStop/Rh		0		0																	
Return		125		125																	
Exhaust		0		0																	
Rm Exh		21		21																	
Auxiliary		0		0																	
Leakage Dwn		0		0																	
Leakage Ups		0		0																	
ENGINEERING CKS																					
Cooling Heating																					
% OA		0.0		0.0																	
cfm/ft²		0.64		0.64																	
cfm/ton		383.78		383.78																	
ft²/ton		599.68		599.68																	
Btu/hr-ft²		20.01		-5.12																	
No. People		0		0																	
ONLY																					
COOLING COIL SELECTION										AREAS					HEATING COIL SELECTION						
Total Capacity		Sens Cap.		Coil Airflow		Enter DB/WB/HR		Leave DB/WB/HR		Gross Total		Glass		Capacity		Coil Airflow		Ent		Lv	
ton MBh		MBh		cfm		°F °F gr/lb		°F °F gr/lb				ft² (%)		MBh		cfm		°F °F			
Main Clg		0.3	3.9	3.7	125	82.5	65.1	66.0	60.4	54.8	56.0	Floor		195	-1.0	125	67.8	75.0			
Aux Clg		0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Part		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	Int Door		0	0.0	0	0.0	0.0			
												ExFlr		0	0.0	0	0.0	0.0			
Total		0.3	3.9									Roof		195	0.0	0	0.0	0.0			
												Wall		0	0.0	0	0.0	0.0			
												Ext Door		0	0.0	0	0.0	0.0			
												Total		-1.0							

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Room Checksums

By ACADEMIC

A13 DIGITAL EDIT

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 8 / 16					Mo/Hr: 7 / 15					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 71 / 88					OADB: 89					OADB: 40									
Space Sens. + Lat.		Plenum Sens. + Lat.	Net Total	Percent Of Total (%)	Space Sensible		Percent Of Total (%)	Space Peak Space Sens		Coil Peak Tot Sens	Percent Of Total (%)	SADB		Cooling	Heating				
Btu/h		Btu/h	Btu/h		Btu/h			Btu/h		Btu/h									
Envelope Loads																			
Skylite Solar		0	0	0	0		0	Skylite Solar		0	0	0.00	59.2		75.0				
Skylite Cond		0	0	0	0		0	Skylite Cond		0	0	0.00	80.3		68.0				
Roof Cond		0	868	868	16		0	Roof Cond		0	-349	16.16	80.3		68.0				
Glass Solar		0	0	0	0		0	Glass Solar		0	0	0.00	81.1		65.2				
Glass/Door Cond		0	0	0	0		0	Glass/Door Cond		0	0	0.00	Fn MtrTD		0.1				
Wall Cond		0	0	0	0		0	Wall Cond		0	0	0.00	Fn BldTD		0.3				
Partition/Door		0	0	0	0		0	Partition/Door		0	0	0.00	Fn Frict		0.9				
Floor		0	0	0	0		0	Floor		0	0	0.00			0.0				
Adjacent Floor		0	0	0	0		0	Adjacent Floor		0	0	0.00			0.0				
Infiltration		241	0	241	5		123	Infiltration		-265	-265	12.24			0.0				
Sub Total ==>		241	868	1,109	21		123	Sub Total ==>		-265	-614	28.41							
Internal Loads																			
Lights		205	51	256	5		205	Lights		0	0	0.00							
People		450	0	450	9		250	People		0	0	0.00							
Misc		2,730	0	2,730	52		2,730	Misc		2,730	2,730	-126.38							
Sub Total ==>		3,385	51	3,436	65		3,185	Sub Total ==>		2,730	2,730	-126.38							
Ceiling Load		167	-167	0	0		182	Ceiling Load		-64	0	0.00							
Ventilation Load		0	0	602	11		0	Ventilation Load		0	-661	30.61							
Adj Air Trans Heat		0	0	0	0		0	Adj Air Trans Heat		0	0	0							
Dehumid. Ov Sizing		0	0	0	0		0	Ov/Undr Sizing		-3,503	-3,503	162.16							
Ov/Undr Sizing		0	0	0	0		0	Exhaust Heat		62	-2.87								
Exhaust Heat		0	-163	-163	-3		0	OA Preheat Diff.		0	0.00								
Sup. Fan Heat		0	0	296	6		0	RA Preheat Diff.		0	0.00								
Ret. Fan Heat		0	0	0	0		0	Additional Reheat		0	0.00								
Duct Heat Pkup		0	0	0	0		0	System Plenum Heat		-174	8.07								
Underflr Sup Ht Pkup		0	0	0	0		0	Underflr Sup Ht Pkup		0	0.00								
Supply Air Leakage		0	0	0	0		0	Supply Air Leakage		0	0.00								
Grand Total ==>		3,794	588	5,280	100.00		3,490	Grand Total ==>		-1,101	-2,160	100.00							
ACADEMIC USE ONLY																			
COOLING COIL SELECTION										AREAS			HEATING COIL SELECTION						
Total Capacity ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F	gr/lb	Leave DB/WB/HR °F °F	gr/lb	Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lv °F						
Main Clg	0.4	5.3	4.7	200	82.5 65.4	67.7	59.2 56.9	66.6	Floor	100	-2.2	200	65.2	75.0					
Aux Clg	0.0	0.0	0.0	0	0.0 0.0	0.0	0.0 0.0	0.0	Part	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	Int Door	0	0.0	0	0.0	0.0					
									ExFlr	0	0.0	0	0.0	0.0					
Total	0.4	5.3							Roof	100	0.0	0	0.0	0.0					
									Wall	0	0.0	0	0.0	0.0					
									Ext Door	0	0.0	0	0.0	0.0					
										Humidif			0.0	0	0.0	0.0			
										Opt Vent			0.0	0	0.0	0.0			
										Total			-2.2						

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Room Checksums

By ACADEMIC

A14 SICK ROOM

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 8 / 16					Mo/Hr: 7 / 15					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 71 / 88					OADB: 89					OADB: 40									
Space Sens. + Lat.		Plenum Sens. + Lat.	Net Total	Percent Of Total (%)	Space Sensible		Percent Of Total (%)	Space Peak Space Sens		Coil Peak Tot Sens	Percent Of Total (%)	SADB	Cooling	Heating					
Btu/h		Btu/h	Btu/h		Btu/h			Btu/h		Btu/h									
Envelope Loads																			
Skylite Solar		0	0	0	0	0		0		0	0.00	Skylite Solar	55.0	75.0					
Skylite Cond		0	0	0	0	0		0		0	0.00	Ra Plenum	80.3	68.0					
Roof Cond		0	868	868	36	0		0		-349	37.02	Return	80.3	68.0					
Glass Solar		0	0	0	0	0		0		0	0.00	Ret/OA	84.2	54.7					
Glass/Door Cond		0	0	0	0	0		0		0	0.00	Fn MtrTD	0.1	0.0					
Wall Cond		0	0	0	0	0		0		0	0.00	Fn BldTD	0.3	0.0					
Partition/Door		0	0	0	0	0		0		0	0.00	Fn Frict	0.9	0.0					
Floor		0	0	0	0	0		0		0	0.00								
Adjacent Floor		0	0	0	0	0		0		0	0.00								
Infiltration		224	0	224	9	123		13		-265	28.05								
Sub Total ==>		224	868	1,092	45	123		13		-265	65.07								
Internal Loads																			
Lights		205	51	256	11	205		22		0	0.00	Lights	0	0					
People		450	0	450	19	250		27		0	0.00	People	0	0					
Misc		171	0	171	7	171		18		171	-18.09	Misc	171	-18.09					
Sub Total ==>		825	51	877	36	625		67		171	-18.09	Sub Total ==>	171	-18.09					
Ceiling Load		167	-167	0	0	182		20		-64	0.00	Ceiling Load	-64	0					
Ventilation Load		0	0	560	23	0		0		0	70.12	Ventilation Load	0	-661					
Adj Air Trans Heat		0	0	0	0	0		0		0	0	Adj Air Trans Heat	0	0					
Dehumid. Ov Sizing		0	0	0	0	0		0		-75	7.97	Ov/Undr Sizing	-75	7.97					
Ov/Undr Sizing		0	0	0	0	0		0		62	-6.57	Exhaust Heat	62	-6.57					
Exhaust Heat		0	-163	-163	-7	0		0		0	0.00	OA Preheat Diff.	0	0.00					
Sup. Fan Heat		0	63	63	3	0		0		0	0.00	RA Preheat Diff.	0	0.00					
Ret. Fan Heat		0	0	0	0	0		0		0	0.00	Additional Reheat	0	0.00					
Duct Heat Pkup		0	0	0	0	0		0		174	-18.49	System Plenum Heat	174	-18.49					
Underflr Sup Ht Pkup		0	0	0	0	0		0		0	0.00	Underflr Sup Ht Pkup	0	0.00					
Supply Air Leakage		0	0	0	0	0		0		0	0.00	Supply Air Leakage	0	0.00					
Grand Total ==>		1,217	588	2,427	100.00	931		100.00		-233	100.00	Grand Total ==>	-233	-943	100.00				
AIRFLOWS																			
Cooling Heating																			
Diffuser		42		42		42		42		42		42		42		42			
Terminal		42		42		42		42		42		42		42		42			
Main Fan		42		42		42		42		42		42		42		42			
Sec Fan		0		0		0		0		0		0		0		0			
Nom Vent		20		20		20		20		20		20		20		20			
AHU Vent		20		20		20		20		20		20		20		20			
Infil		8		8		8		8		8		8		8		8			
MinStop/Rh		0		0		0		0		0		0		0		0			
Return		50		50		50		50		50		50		50		50			
Exhaust		28		28		28		28		28		28		28		28			
Rm Exh		0		0		0		0		0		0		0		0			
Auxiliary		0		0		0		0		0		0		0		0			
Leakage Dwn		0		0		0		0		0		0		0		0			
Leakage Ups		0		0		0		0		0		0		0		0			
ENGINEERING CKS																			
Cooling Heating																			
% OA		47.4		47.4		47.4		47.4		47.4		47.4		47.4		47.4			
cfm/ft²		0.42		0.42		0.42		0.42		0.42		0.42		0.42		0.42			
cfm/ton		208.74		208.74		208.74		208.74		208.74		208.74		208.74		208.74			
ft³/ton		494.38		494.38		494.38		494.38		494.38		494.38		494.38		494.38			
Btu/hr-ft²		24.27		24.27		24.27		24.27		24.27		24.27		24.27		24.27			
No. People		1		1		1		1		1		1		1		1			
AREAS																			
Gross Total Glass ft² (%)																			
Floor		100		100		100		100		100		100		100		100			
Part		0		0		0		0		0		0		0		0			
Int Door		0		0		0		0		0		0		0		0			
ExFlr		0		0		0		0		0		0		0		0			
Roof		100		100		100		100		100		100		100		100			
Wall		0		0		0		0		0		0		0		0			
Ext Door		0		0		0		0		0		0		0		0			
COOLING COIL SELECTION																			
Total Capacity Sens Cap. Coil Airflow Enter DB/WB/HR Leave DB/WB/HR																			
ton MBh		Sens Cap. MBh		Coil Airflow cfm		Enter DB/WB/HR °F °F gr/lb		Leave DB/WB/HR °F °F gr/lb		Gross Total		Glass ft² (%)		Capacity MBh		Coil Airflow cfm			
Main Clg		0.2 2.4		1.9		42 85.5 68.3		77.6 55.0 49.3		43.5				-0.9		42 54.7			
Aux Clg		0.0 0.0		0.0		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				0.0		0 0.0			
Total		0.2 2.4												0.0		0 0.0			
HEATING COIL SELECTION																			
Ent °F																			
Main Htg		0.0		42		54.7		75.0						0.0		0.0			
Aux Htg		0.0		0		0.0		0.0						0.0		0.0			
Preheat		0.0		0		0.0		0.0						0.0		0.0			
Humidif		0.0		0		0.0		0.0						0.0		0.0			
Opt Vent		0.0		0		0.0		0.0						0.0		0.0			
Total		-0.9												-0.9					

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By ACADEMIC

COOLING COIL PEAK						CLG SPACE PEAK						HEATING COIL PEAK						TEMPERATURES			
Peaked at Time:				Mo/Hr: 7 / 16						Mo/Hr: 7 / 16		Mo/Hr: Heating Design					Cooling	Heating			
Outside Air:				OADB/WB/HR: 88 / 71 / 85						OADB: 88		OADB: 40				SADB	57.3	75.0			
Envelope Loads	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Envelope Loads	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)		Ra Plenum	83.5	66.7							
Skyllite Solar	0	0	0	0	0	0	Skyllite Solar	0	0	0.00	Return	83.5	66.7								
Skyllite Cond	0	0	0	0	0	0	Skyllite Cond	0	0	0.00	Ret/OA	85.1	58.2								
Roof Cond	0	9,177	9,177	25	0	0	Roof Cond	0	-3,481	19.88	Fn MtrTD	0.1	0.0								
Glass Solar	3,421	0	3,421	9	3,421	19	Glass Solar	0	0	0.00	Fn BldTD	0.3	0.0								
Glass/Door Cond	873	0	873	2	873	5	Glass/Door Cond	-2,076	-2,076	11.86	Fn Frict	0.9	0.0								
Wall Cond	1,952	428	2,381	7	1,952	11	Wall Cond	-1,859	-2,356	13.45											
Partition/Door	0	0	0	0	0	0	Partition/Door	0	0	0.00											
Floor	0	0	0	0	0	0	Floor	0	0	0.00											
Adjacent Floor	0	0	0	0	0	0	Adjacent Floor	0	0	0.00											
Infiltration	2,381	0	2,381	7	1,237	7	Infiltration	-2,770	-2,770	15.82											
Sub Total ==>	8,628	9,605	18,233	50	7,484	41	Sub Total ==>	-6,705	-10,683	61.01											
Internal Loads							Internal Loads														
Lights	1,995	499	2,494	7	1,995	11	Lights	0	0	0.00											
People	1,350	0	1,350	4	750	4	People	0	0	0.00											
Misc	5,360	0	5,360	15	5,360	29	Misc	5,360	5,360	-30.61											
Sub Total ==>	8,706	499	9,204	25	8,106	44	Sub Total ==>	5,360	5,360	-30.61											
Ceiling Load	2,825	-2,825	0	0	2,825	15	Ceiling Load	-1,111	0	0.00											
Ventilation Load	0	0	8,529	24	0	0	Ventilation Load	0	-9,920	56.65											
Adj Air Trans Heat	0	0	0	0	0	0	Adj Air Trans Heat	0	0	0											
Dehumid. Ov Sizing	0	0	0	0	0	0	Ov/Undr Sizing	-2,752	-2,752	15.72											
Ov/Undr Sizing	0	0	0	0	0	0	Exhaust Heat	485	-2.77												
Exhaust Heat	-1,232	-1,232	-3	-3			OA Preheat Diff.	0	0.00												
Sup. Fan Heat	0	1,400	4	4			RA Preheat Diff.	0	0.00												
Ret. Fan Heat	0	0	0	0			Additional Reheat	0	0.00												
Duct Heat Pkup	0	0	0	0			System Plenum Heat	0	0.00												
Underflr Sup Ht Pkpu	0	0	0	0			Underflr Sup Ht Pkpu	0	0.00												
Supply Air Leakage	0	0	0	0			Supply Air Leakage	0	0.00												
Grand Total ==>	20,158	6,047	36,134	100.00	18,414	100.00	Grand Total ==>	-5,208	-17,510	100.00											
												SADB	57.3	75.0							
												Ra Plenum	83.5	66.7							
												Return	83.5	66.7							
												Ret/OA	85.1	58.2							
												Fn MtrTD	0.1	0.0							
												Fn BldTD	0.3	0.0							
												Fn Frict	0.9	0.0							

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By ACADEMIC

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 7 / 16					Mo/Hr: 7 / 16					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 88 / 71 / 85					OADB: 88					OADB: 40									
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total	Space Sensible	Percent Of Total	Space Peak	Coil Peak	Percent Of Total	Space Sens	Coil Sens	Percent Of Total	SADB	Cooling	Heating					
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	(%)	Btu/h	Btu/h	(%)								
Envelope Loads					Envelope Loads														
Skyline Solar	0	0	0	0	0	0	0	0.00	Skyline Solar	0	0	0.00	Ra Plenum	59.9	75.0				
Skyline Cond	0	0	0	0	0	0	0	0.00	Skyline Cond	0	0	0.00	Return	82.8	67.1				
Roof Cond	0	1,000	41	0	0	0	-382	50.03	Roof Cond	0	0	0.00	Ret/OA	82.8	67.1				
Glass Solar	0	0	0	0	0	0	0	0.00	Glass Solar	0	0	0.00	Fn MtrTD	0.1	0.0				
Glass/Door Cond	0	0	0	0	0	0	0	0.00	Glass/Door Cond	0	0	0.00	Fn BldTD	0.3	0.0				
Wall Cond	284	49	332	14	19	-343	-421	55.06	Wall Cond	-343	-421	55.06	Fn Frict	0.9	0.0				
Partition/Door	0	0	0	0	0	0	0	0.00	Partition/Door	0	0	0.00							
Floor	0	0	0	0	0	0	0	0.00	Floor	0	0	0.00							
Adjacent Floor	0	0	0	0	0	0	0	0.00	Adjacent Floor	0	0	0.00							
Infiltration	258	258	11	134	9	-299	-299	39.12	Infiltration	-299	-299	39.12							
Sub Total ==>	542	1,049	1,591	65	417	29	-642	144.20	Sub Total ==>	-642	-1,102	144.20							
Internal Loads					Internal Loads														
Lights	188	47	235	10	188	13	0	0.00	Lights	0	0	0.00	Diffuser	88	8				
People	0	0	0	0	0	0	0	0.00	People	0	0	0.00	Terminal	88	8				
Misc	579	0	579	24	579	40	579	-75.70	Misc	579	579	-75.70	Main Fan	88	8				
Sub Total ==>	766	47	813	33	766	52	579	-75.70	Sub Total ==>	579	579	-75.70	Sec Fan	0	0				
Ceiling Load	279	-279	0	0	279	19	-103	0.00	Ceiling Load	-103	0	0.00	Nom Vent	0	0				
Ventilation Load	0	0	0	0	0	0	0	0.00	Ventilation Load	0	0	0.00	AHU Vent	0	0				
Adj Air Trans Heat	0	0	0	0	0	0	0	0.00	Adj Air Trans Heat	0	0	0.00	Infil	9	0				
Dehumid. Ov Sizing	0	0	0	0	0	0	-318	41.65	Ov/Undr Sizing	-318	-318	41.65	MinStop/Rh	0	0				
Ov/Undr Sizing	0	0	0	0	0	0	29	-3.75	Exhaust Heat	29	29	-3.75	Return	97	9				
Exhaust Heat	-78	-78	-3	0	0	0	0	0.00	OA Preheat Diff.	0	0	0.00	Exhaust	9	0				
Sup. Fan Heat	0	130	5	0	0	0	0	0.00	RA Preheat Diff.	0	0	0.00	Rm Exh	0	0				
Ret. Fan Heat	0	0	0	0	0	0	0	0.00	Additional Reheat	0	0	0.00	Auxiliary	0	0				
Duct Heat Pkup	0	0	0	0	0	0	49	-6.40	System Plenum Heat	49	49	-6.40	Leakage Dwn	0	0				
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	Underflr Sup Ht Pkup	0	0	0.00	Leakage Ups	0	0				
Supply Air Leakage	0	0	0	0	0	0	0	0.00	Supply Air Leakage	0	0								

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Room Checksums

By ACADEMIC

A17 WOMENS RESTROOM

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 7 / 15					Mo/Hr: 7 / 15					Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 89 / 70 / 81					OADB: 89					OADB: 40							
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)		Space Sensible Btu/h	Percent Of Total (%)				Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)			Cooling	Heating	
Envelope Loads					Envelope Loads					Envelope Loads							
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	SADB	62.0	75.0
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ra Plenum	81.1	67.8
Roof Cond	0	1,837	1,837	15	0	0	0	0	0	0	-675	9.19	0	0.00	Return	81.1	67.8
Glass Solar	5,732	0	5,732	46	5,732	59	14	0	0	0	0	0.00	0	0.00	Ret/OA	81.1	67.8
Glass/Door Cond	1,371	0	1,371	11	1,371	14	2	0	0	-3,342	-3,342	45.53	0	0.00	Fn MtrTD	0.1	0.0
Wall Cond	203	123	326	3	203	2	0	0	0	-265	-467	6.36	0	0.00	Fn BldTD	0.3	0.0
Partition/Door	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn Frict	0.9	0.0
Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Adjacent Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Infiltration	409	0	409	3	241	2	0	0	0	-516	-516	7.03	0	0.00			
Sub Total ==>	7,715	1,960	9,675	77	7,547	77	0	0	0	-4,123	-4,999	68.11	0	0.00			
Internal Loads					Internal Loads					Internal Loads							
Lights	266	67	333	3	266	3	0	0	0	0	0	0.00	0	0.00			
People	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Misc	998	0	998	8	998	10	0	0	0	998	998	-13.60	0	0.00			
Sub Total ==>	1,265	67	1,331	11	1,265	13	0	0	0	998	998	-13.60	0	0.00			
Ceiling Load					Ceiling Load					Ceiling Load							
Ventilation Load	377	-377	0	0	377	4	0	0	0	-139	0	0.00	0	0.00			
Adj Air Trans Heat	558	0	558	4	558	6	0	0	0	0	0	0.00	0	0.00			
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	-558	-558	8	0	0.00			
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	-1,831	-1,831	24.95	0	0.00			
Exhaust Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Sup. Fan Heat	0	0	1,006	8	0	0	0	0	0	0	0	0.00	0	0.00			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0	-950	-950	12.94	0	0.00			
Supply Air Leakage	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Grand Total ==>	9,915	1,649	12,570	100.00	9,746	100.00	0	0	0	-5,653	-7,340	100.00	0	0.00			
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION							
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)				Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F				
Main Clg	1.1	12.6	12.4	679	82.5 64.9	64.9	62.0 57.6	64.9	195	-5.4	679	67.8	75.0	Main Htg			
Aux Clg	0.0	0.0	0.0	0	0.0 0.0	0.0	0.0 0.0	0.0	0	0.0	0	0.0	0.0	Aux Htg			
Opt Vent	0.0	0.0	0.0	0	0.0 0.0	0.0	0.0 0.0	0.0	0	0.0	0	0.0	0.0	Preheat			
Total	1.1	12.6							0	0.0	0	0.0	0.0	Humidif			
									0	0.0	0	0.0	0.0	Opt Vent			
									195	0	0	0.0	0.0	Total			
									325	181	56	0.0	0.0				
									0	0	0						

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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Room Checksums

By ACADEMIC

A18 MENS RESTROOM

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 8 / 15					Mo/Hr: 9 / 14					Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 89 / 70 / 83					OADB: 89					OADB: 40							
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)		Space Sensible Btu/h	Percent Of Total (%)				Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)			Cooling	Heating	
Envelope Loads					Envelope Loads					Envelope Loads							
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	SADB	62.1	75.0
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ra Plenum	80.9	67.8
Roof Cond	0	1,618	1,618	28	0	0	0	0	0	0	-640	24.00	0	0.00	Return	80.9	67.8
Glass Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Ret/OA	80.9	67.8
Glass/Door Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn MtrTD	0.1	0.0
Wall Cond	1,278	274	1,552	27	1,397	38	0	0	0	-930	-1,145	42.93	0	0.00	Fn BldTD	0.3	0.0
Partition/Door	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	Fn Frict	0.9	0.0
Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Adjacent Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Infiltration	402	0	402	7	235	6	0	0	0	-489	-489	18.34	0	0.00			
Sub Total ==>	1,680	1,891	3,571	62	1,632	44	0	0	0	-1,420	-2,275	85.26	0	0.00			
Internal Loads					Internal Loads					Internal Loads							
Lights	253	63	316	5	253	7	0	0	0	0	0	0.00	0	0.00			
People	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Misc	947	0	947	16	947	26	0	0	0	947	947	-35.49	0	0.00			
Sub Total ==>	1,200	63	1,263	22	1,200	32	0	0	0	947	947	-35.49	0	0.00			
Ceiling Load					Ceiling Load					Ceiling Load							
Ventilation Load	345	-345	0	0	309	8	0	0	0	-132	0	0.00	0	0.00			
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Dehumid. Ov Sizing	563	0	563	10	563	15	0	0	0	-563	-563	21	0	0.00			
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	-852	-852	31.95	0	0.00			
Exhaust Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Sup. Fan Heat	0	0	386	7	0	0	0	0	0	0	0	0.00	0	0.00			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	76	-2.83	0.00	0	0.00			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Supply Air Leakage	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Grand Total ==>	3,788	1,609	5,783	100.00	3,705	100.00	0	0	0	-2,021	-2,668	100.00	0	0.00			
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION							
Total Capacity	ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)		Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F				
Main Clg	0.5	5.8	5.6	261	82.2 64.9 65.7	62.1 57.8 65.6	Floor	185		Main Htg	-2.1	261	67.8	75.0			
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 0.0	Part	0		Aux Htg	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	Int Door	0		Preheat	0.0	0	0.0	0.0			
Total	0.5	5.8					ExFlr	0		Humidif	0.0	0	0.0	0.0			
							Roof	185	0 0	Opt Vent	0.0	0	0.0	0.0			
							Wall	347	0 0	Total	-2.1						
							Ext Door	0	0 0								

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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Room Checksums

By ACADEMIC

A19 CO-ED LOCKERS

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES	
Peaked at Time: Mo/Hr: 9 / 15 Outside Air: OADB/WB/HR: 90 / 71 / 83				Mo/Hr: 9 / 15 OADB: 90				Mo/Hr: Heating Design OADB: 40					
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)			Cooling	Heating	
Envelope Loads				Envelope Loads						SADB 60.9 75.0			
Skylite Solar	0	0	0	0	0	0	0	0.00	Ra Plenum 80.4 67.8				
Skylite Cond	0	0	0	0	0	0	0	0.00	Return 80.4 67.8				
Roof Cond	0	930	30	0	0	0	-395	34.12	Ret/OA 80.4 67.8				
Glass Solar	0	0	0	0	0	0	0	0.00	Fn MtrTD 0.1 0.0				
Glass/Door Cond	0	0	0	0	0	0	0	0.00	Fn BldTD 0.3 0.0				
Wall Cond	533	122	655	21	533	28	-260	-320	27.69	Fn Frict 0.9 0.0			
Partition/Door	0	0	0	0	0	0	0	0.00					
Floor	0	0	0	0	0	0	0	0.00					
Adjacent Floor	0	0	0	0	0	0	0	0.00					
Infiltration	258	258	8	151	8	-302	-302	26.08					
Sub Total ==>	791	1,052	1,843	59	684	35	-562	-1,016	87.90				
Internal Loads				Internal Loads									
Lights	198	49	247	8	198	10	0	0	0.00				
People	0	0	0	0	0	0	0	0	0.00				
Misc	584	0	584	19	584	30	584	584	-50.48				
Sub Total ==>	782	49	831	27	782	40	584	584	-50.48				
Ceiling Load	195	-195	0	0	195	10	-81	0	0.00				
Ventilation Load	0	0	0	0	0	0	0	0	0.00				
Adj Air Trans Heat	270	270	9	270	14	-270	-270	23					
Dehumid. Ov Sizing	0	0	0	0	0	0	-518	-518	44.83				
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0.00				
Exhaust Heat	0	0	0	0	0	0	0	0	0.00				
Sup. Fan Heat	0	184	6	0	0	0	0	0	0.00				
Ret. Fan Heat	0	0	0	0	0	0	0	0	0.00				
Duct Heat Pkup	0	0	0	0	0	65	-5.64	-5.64					
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00					
Supply Air Leakage	0	0	0	0	0	0	0	0.00					
Grand Total ==>	2,037	907	3,128	100.00	1,931	100.00	-848	-1,156	100.00				
COOLING COIL SELECTION				AREAS				HEATING COIL SELECTION					
Total Capacity ton MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)			Capacity MBh	Coil Airflow cfm	Ent °F	Lv °F	
Main Clg	0.3 3.1	3.0	124 81.7 64.8 65.7	60.9 56.6 62.5	Floor	114		Main Htg	-1.0	124	67.8	75.0	
Aux Clg	0.0 0.0	0.0	0 0.0 0.0 0.0	0.0 0.0 0.0	Part	0		Aux Htg	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	Int Door	0		Preheat	0.0	0	0.0	0.0	
					ExFlr	0							
Total	0.3 3.1				Roof	114	0 0	Humidif	0.0	0	0.0	0.0	
					Wall	97	0 0	Opt Vent	0.0	0	0.0	0.0	
					Ext Door	0	0 0	Total	-1.0				

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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Room Checksums

By ACADEMIC

A20 SHOWER

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES	
Peaked at Time: Mo/Hr: 7 / 15 Outside Air: OADB/WB/HR: 89 / 70 / 81				Mo/Hr: 7 / 15 OADB: 89				Mo/Hr: Heating Design OADB: 40					
Envelope Loads	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Envelope Loads	Space Sensible Btu/h	Percent Of Total (%)	Envelope Loads	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)	SADB	Cooling
Skylite Solar	0	0	0	0	Skylite Solar	0	0	Skylite Solar	0	0	0.00	Ra Plenum	75.0
Skylite Cond	0	0	0	0	Skylite Cond	0	0	Skylite Cond	0	0	0.00	Return	67.8
Roof Cond	0	942	942	42	Roof Cond	0	0	Roof Cond	0	-346	50.74	Ret/OA	67.8
Glass Solar	0	0	0	0	Glass Solar	0	0	Glass Solar	0	0	0.00	Fn MtrTD	0.0
Glass/Door Cond	0	0	0	0	Glass/Door Cond	0	0	Glass/Door Cond	0	0	0.00	Fn BldTD	0.0
Wall Cond	0	0	0	0	Wall Cond	0	0	Wall Cond	0	0	0.00	Fn Frict	0.0
Partition/Door	0	0	0	0	Partition/Door	0	0	Partition/Door	0	0	0.00		
Floor	0	0	0	0	Floor	0	0	Floor	0	0	0.00		
Adjacent Floor	0	0	0	0	Adjacent Floor	0	0	Adjacent Floor	0	0	0.00		
Infiltration	206	0	206	9	Infiltration	123	10	Infiltration	-265	-265	38.78		
Sub Total ==>	206	942	1,148	51	Sub Total ==>	123	10	Sub Total ==>	-265	-611	89.52		
Internal Loads					Internal Loads			Internal Loads				AIRFLOWS	
Lights	152	38	190	8	Lights	152	12	Lights	0	0	0.00	Diffuser	Cooling
People	0	0	0	0	People	0	0	People	0	0	0.00	Terminal	Heating
Misc	512	0	512	23	Misc	512	41	Misc	512	512	-75.05	Main Fan	79
Sub Total ==>	664	38	702	31	Sub Total ==>	664	53	Sub Total ==>	512	-75.05	79	Sec Fan	79
Ceiling Load	193	-193	0	0	Ceiling Load	193	15	Ceiling Load	-71	0	0.00	Nom Vent	0
Ventilation Load	0	0	0	0	Ventilation Load	0	0	Ventilation Load	0	0	0.00	AHU Vent	0
Adj Air Trans Heat	278	0	278	12	Adj Air Trans Heat	278	22	Adj Air Trans Heat	-278	-278	41	Infil	8
Dehumid. Ov Sizing	0	0	0	0	Ov/Undr Sizing	0	0	Ov/Undr Sizing	-384	-384	56.32	MinStop/Rh	0
Exhaust Heat	0	0	0	0	Exhaust Heat	0	0	Exhaust Heat	0	0	0.00	Return	79
Sup. Fan Heat	0	117	5	0	OA Preheat Diff.	0	0	OA Preheat Diff.	0	0	0.00	Exhaust	0
Ret. Fan Heat	0	0	0	0	RA Preheat Diff.	0	0	RA Preheat Diff.	0	0	0.00	Rm Exh	50
Duct Heat Pkup	0	0	0	0	Additional Reheat	0	0	Additional Reheat	0	0	0.00	Auxiliary	0
Underflr Sup Ht Pkup	0	0	0	0	System Plenum Heat	79	-11.51	System Plenum Heat	0	0	0.00	Leakage Dwn	0
Supply Air Leakage	0	0	0	0	Underflr Sup Ht Pkup	0	0	Underflr Sup Ht Pkup	0	0	0.00	Leakage Ups	0
Supply Air Leakage	0	0	0	0	Supply Air Leakage	0	0	Supply Air Leakage	0	0	0.00		
Grand Total ==>	1,341	787	2,244	100.00	Grand Total ==>	1,258	100.00	Grand Total ==>	-486	-682	100.00	ENGINEERING CKS	
COOLING COIL SELECTION				AREAS				HEATING COIL SELECTION					
Total Capacity ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F		
Main Clg	0.2	2.2	2.2	79	82.5 65.0 65.7	60.5 55.8 59.5	Floor	100	-0.6	79	67.8	75.0	
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 0.0	Part	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	Int Door	0	0.0	0	0.0	0.0	
Total	0.2	2.2					ExFlr	0	0.0	0	0.0	0.0	
							Roof	100	0.0	0	0.0	0.0	
							Wall	0	0.0	0	0.0	0.0	
							Ext Door	0	0.0	0	0.0	0.0	

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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Room Checksums

By ACADEMIC

A21 JANITOR CLOSET

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 7 / 15					Mo/Hr: 7 / 15					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 70 / 81					OADB: 89					OADB: 40									
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)	Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)	SADB	Cooling	Heating					
Envelope Loads					Envelope Loads					Envelope Loads					SADB				
Skylite Solar	0	0	0	0	0	Skylite Solar	0	0.00	Skylite Solar	0	0.00	Ra Plenum	60.3	75.0					
Skylite Cond	0	0	0	0	0	Skylite Cond	0	0.00	Skylite Cond	0	0.00	Return	81.1	67.8					
Roof Cond	0	499	499	50	0	Roof Cond	0	87.50	Roof Cond	0	0.00	Ret/OA	81.1	67.8					
Glass Solar	0	0	0	0	0	Glass Solar	0	0.00	Glass Solar	0	0.00	Fn MtrTD	0.1	0.0					
Glass/Door Cond	0	0	0	0	0	Glass/Door Cond	0	0.00	Glass/Door Cond	0	0.00	Fn BldTD	0.3	0.0					
Wall Cond	0	0	0	0	0	Wall Cond	0	0.00	Wall Cond	0	0.00	Fn Frict	0.9	0.0					
Partition/Door	0	0	0	0	0	Partition/Door	0	0.00	Partition/Door	0	0.00								
Floor	0	0	0	0	0	Floor	0	0.00	Floor	0	0.00								
Adjacent Floor	0	0	0	0	0	Adjacent Floor	0	0.00	Adjacent Floor	0	0.00								
Infiltration	108	108	11	65	13	Infiltration	-140	66.88	Infiltration	-140	66.88								
Sub Total ==>	108	499	608	61	13	Sub Total ==>	-140	154.37	Sub Total ==>	-140	154.37								
Internal Loads					Internal Loads					Internal Loads									
Lights	80	20	101	10	15	Lights	0	0.00	Lights	0	0.00								
People	0	0	0	0	0	People	0	0.00	People	0	0.00								
Misc	271	0	271	27	52	Misc	271	-129.43	Misc	271	-129.43								
Sub Total ==>	352	20	372	37	68	Sub Total ==>	271	-129.43	Sub Total ==>	271	-129.43								
Ceiling Load	103	-103	0	0	20	Ceiling Load	-38	0.00	Ceiling Load	-38	0.00								
Ventilation Load	0	0	0	0	0	Ventilation Load	0	0.00	Ventilation Load	0	0.00								
Adj Air Trans Heat	0	0	0	0	0	Adj Air Trans Heat	0	0	Adj Air Trans Heat	0	0								
Dehumid. Ov Sizing	0	0	0	0	0	Ov/Undr Sizing	-223	106.50	Ov/Undr Sizing	-223	106.50								
Ov/Undr Sizing	0	0	0	0	0	Exhaust Heat	11	-5.03	Exhaust Heat	11	-5.03								
Exhaust Heat	-29	-29	-3	0	0	OA Preheat Diff.	0	0.00	OA Preheat Diff.	0	0.00								
Sup. Fan Heat	0	47	5	0	0	RA Preheat Diff.	0	0.00	RA Preheat Diff.	0	0.00								
Ret. Fan Heat	0	0	0	0	0	Additional Reheat	55	-26.42	Additional Reheat	55	-26.42								
Duct Heat PkUp	0	0	0	0	0	System Plenum Heat	0	0.00	System Plenum Heat	0	0.00								
Underflr Sup Ht PkUp	0	0	0	0	0	Underflr Sup Ht PkUp	0	0.00	Underflr Sup Ht PkUp	0	0.00								
Supply Air Leakage	0	0	0	0	0	Supply Air Leakage	0	0.00	Supply Air Leakage	0	0.00								
Grand Total ==>	562	388	998	100.00	520	Grand Total ==>	-130	100.00	Grand Total ==>	-130	100.00								

COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION				
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F				
Main Clg	0.1	1.0	1.0	32 82.5 65.1 66.0	60.3 54.9 56.3	Floor	-0.3	32	67.8	75.0				
Aux Clg	0.0	0.0	0.0	0 0.0 0.0 0.0	0.0 0.0 0.0	Part	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	Int Door	0.0	0	0.0	0.0				
Total	0.1	1.0				ExFlr	0.0	0	0.0	0.0				
						Roof	0.0	0	0.0	0.0				
						Wall	0.0	0	0.0	0.0				
						Ext Door	0.0	0	0.0	0.0				
						Total	-0.3							

HEATING COIL SELECTION				
Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F	
Main Htg	0.0	0	0.0	0.0
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.3			

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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Room Checksums

By ACADEMIC

A22 STORAGE

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES	
Peaked at Time: Mo/Hr: 7 / 15 Outside Air: OADB/WB/HR: 89 / 70 / 81				Mo/Hr: 7 / 15 OADB: 89				Mo/Hr: Heating Design OADB: 40					
Envelope Loads	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Envelope Loads	Space Sensible Btu/h	Percent Of Total (%)	Envelope Loads	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)	SADB	Cooling
Skylite Solar	0	0	0	0	Skylite Solar	0	0	Skylite Solar	0	0	0.00	60.3	75.0
Skylite Cond	0	0	0	0	Skylite Cond	0	0	Skylite Cond	0	0	0.00	81.1	67.8
Roof Cond	0	2,073	2,073	50	Roof Cond	0	0	Roof Cond	0	-761	85.74	81.1	67.8
Glass Solar	0	0	0	0	Glass Solar	0	0	Glass Solar	0	0	0.00	Ret/OA	
Glass/Door Cond	0	0	0	0	Glass/Door Cond	0	0	Glass/Door Cond	0	0	0.00	Fn MtrTD	0.1
Wall Cond	0	0	0	0	Wall Cond	0	0	Wall Cond	0	0	0.00	Fn BldTD	0.3
Partition/Door	0	0	0	0	Partition/Door	0	0	Partition/Door	0	0	0.00	Fn Frict	0.9
Floor	0	0	0	0	Floor	0	0	Floor	0	0	0.00		
Adjacent Floor	0	0	0	0	Adjacent Floor	0	0	Adjacent Floor	0	0	0.00		
Infiltration	449	0	449	11	Infiltration	272	12	Infiltration	-582	-582	65.53		
Sub Total ==>	449	2,073	2,521	60	Sub Total ==>	272	12	Sub Total ==>	-582	-1,343	151.26		
Internal Loads					Internal Loads							AIRFLOWS	
Lights	366	91	457	11	Lights	366	17	Lights	0	0	0.00	Diffuser	Cooling
People	0	0	0	0	People	0	0	People	0	0	0.00	Terminal	Heating
Misc	1,126	0	1,126	27	Misc	1,126	51	Misc	1,126	1,126	-126.82	Main Fan	135
Sub Total ==>	1,492	91	1,584	38	Sub Total ==>	1,492	68	Sub Total ==>	1,126	1,126	-126.82	Sec Fan	135
Ceiling Load	426	-426	0	0	Ceiling Load	426	19	Ceiling Load	-157	0	0.00	Nom Vent	0
Ventilation Load	0	0	0	0	Ventilation Load	0	0	Ventilation Load	0	0	0.00	AHU Vent	0
Adj Air Trans Heat	0	0	0	0	Adj Air Trans Heat	0	0	Adj Air Trans Heat	0	0	0.00	Infil	18
Dehumid. Ov Sizing	0	0	0	0	Dehumid. Ov Sizing	0	0	Dehumid. Ov Sizing	0	0	0.00	MinStop/Rh	0
Ov/Undr Sizing	0	0	0	0	Ov/Undr Sizing	0	0	Ov/Undr Sizing	-939	-939	105.74	Return	153
Exhaust Heat	0	-118	-118	-3	Exhaust Heat	0	0	Exhaust Heat	0	44	-4.92	Exhaust	18
Sup. Fan Heat	0	0	200	5	OA Preheat Diff.	0	0	OA Preheat Diff.	0	0	0.00	Rm Exh	0
Ret. Fan Heat	0	0	0	0	RA Preheat Diff.	0	0	RA Preheat Diff.	0	0	0.00	Auxiliary	0
Duct Heat Pkup	0	0	0	0	Additional Reheat	0	0	Additional Reheat	0	0	0.00	Leakage Dwn	0
Underflr Sup Ht Pkup	0	0	0	0	System Plenum Heat	224	-25.27	System Plenum Heat	0	0	0.00	Leakage Ups	0
Supply Air Leakage	0	0	0	0	Underflr Sup Ht Pkup	0	0	Underflr Sup Ht Pkup	0	0	0.00		
Supply Air Leakage	0	0	0	0	Supply Air Leakage	0	0	Supply Air Leakage	0	0	0.00		
Grand Total ==>	2,366	1,620	4,187	100.00	Grand Total ==>	2,189	100.00	Grand Total ==>	-552	-888	100.00	ENGINEERING CKS	
COOLING COIL SELECTION				AREAS				HEATING COIL SELECTION					
Total Capacity ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F		
Main Clg	0.4	4.2	4.0	135	82.5 65.1	66.0	60.3 54.9	66.0	60.3 54.9	56.6	56.6	Main Htg	-1.1
Aux Clg	0.0	0.0	0.0	0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	Aux Htg	0.0
Opt Vent	0.0	0.0	0.0	0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	Preheat	0.0
Total	0.4	4.2	4.0	135	82.5 65.1	66.0	60.3 54.9	66.0	60.3 54.9	56.6	56.6	Humidif	0.0
												Opt Vent	0.0
												Total	-1.1

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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By ACADEMIC

COOLING COIL PEAK

CLG SPACE PEAK

HEATING COIL PEAK

TEMPERATURES

Space				Plenum				Coil Peak				Return			
Sens. + Lat.		Sens. + Lat		Total		Of Total		Space Sens		Tot Sens		Of Total		Ret/OA	
Btu/h		Btu/h		Btu/h		Of Total (%)		Btu/h		Btu/h		Of Total (%)		Fm MtrTD	
Envelope Loads				Envelope Loads				Envelope Loads				Envelope Loads			
Skylite Solar		0		0		0		Skylite Solar		0		0		0.00	
Skylite Cond		0		0		0		Skylite Cond		0		0		0.00	
Roof Cond		0		1,377		41		Roof Cond		-507		45.68		Fm BldTD	
Glass Solar		0		0		0		Glass Solar		0		0		0.00	
Glass/Door Cond		0		0		0		Glass/Door Cond		0		0		0.00	
Wall Cond		0		0		0		Wall Cond		0		0		0.00	
Partition/Door		0		0		0		Partition/Door		0		0		0.00	
Floor		0		0		0		Floor		0		0		0.00	
Adjacent Floor		0		0		0		Adjacent Floor		0		0		0.00	
Infiltration		310		310		9		Infiltration		-397		35.71		Fm Frict	
Sub Total ==>		310		1,377		50		Sub Total ==>		-397		81.39		0.00	
Internal Loads				Internal Loads				Internal Loads				Internal Loads			
Lights		685		171		856		25		685		34		19	
People		0		0		0		0		685		34		19	
Misc		768		0		768		23		768		38		72	
Sub Total ==>		1,453		171		1,624		48		1,453		72		72	
Ceiling Load				Ceiling Load				Ceiling Load				Ceiling Load			
Ventilation Load		383		-383		0		0		383		19		19	
Adj Air Trans Heat		0		0		0		0		0		0		0	
Dehumid. Ov Sizing		0		0		0		0		0		0		0	
Ov/Undr Sizing		0		0		0		0		0		0		0	
Exhaust Heat		0		-106		-106		-3		0		0		0	
Sup. Fan Heat		0		190		6		6		0		0		0	
Ret. Fan Heat		0		0		0		0		0		0		0	
Duct Heat Pkup		0		0		0		0		0		0		0	
Underflr Sup Ht Pkup		0		0		0		0		0		0		0	
Supply Air Leakage		0		0		0		0		0		0		0	
Grand Total ==>				Grand Total ==>				Grand Total ==>				Grand Total ==>			
2,145		1,059		3,394		100.00		2,021		100.00		-705		-1,111	

Space				Plenum				Coil Peak				Return			
Sens. + Lat.		Sens. + Lat		Total		Of Total		Space Sens		Tot Sens		Of Total		Ret/OA	
Btu/h		Btu/h		Btu/h		Of Total (%)		Btu/h		Btu/h		Of Total (%)		Fm MtrTD	
Envelope Loads				Envelope Loads				Envelope Loads				Envelope Loads			
Skylite Solar		0		0		0		Skylite Solar		0		0		0.00	
Skylite Cond		0		0		0		Skylite Cond		0		0		0.00	
Roof Cond		0		1,377		41		Roof Cond		-507		45.68		Fm BldTD	
Glass Solar		0		0		0		Glass Solar		0		0		0.00	
Glass/Door Cond		0		0		0		Glass/Door Cond		0		0		0.00	
Wall Cond		0		0		0		Wall Cond		0		0		0.00	
Partition/Door		0		0		0		Partition/Door		0		0		0.00	
Floor		0		0		0		Floor		0		0		0.00	
Adjacent Floor		0		0		0		Adjacent Floor		0		0		0.00	
Infiltration		310		310		9		Infiltration		-397		35.71		Fm Frict	
Sub Total ==>		310		1,377		50		Sub Total ==>		-397		81.39		0.00	
Internal Loads				Internal Loads				Internal Loads				Internal Loads			
Lights		685		171		856		25		685		34		19	
People		0		0		0		0		685		34		19	
Misc		768		0		768		23		768		38		72	
Sub Total ==>		1,453		171		1,624		48		1,453		72		72	
Ceiling Load				Ceiling Load				Ceiling Load				Ceiling Load			
Ventilation Load		383		-383		0		0		383		19		19	
Adj Air Trans Heat		0		0		0		0		0		0		0	
Dehumid. Ov Sizing		0		0		0		0		0		0		0	
Ov/Undr Sizing		0		0		0		0		0		0		0	
Exhaust Heat		0		-106		-106		-3		0		0		0	
Sup. Fan Heat		0		190		6		6		0		0		0	
Ret. Fan Heat		0		0		0		0		0		0		0	
Duct Heat Pkup		0		0		0		0		0		0		0	
Underflr Sup Ht Pkup		0		0		0		0		0		0		0	
Supply Air Leakage		0		0		0		0		0		0		0	
Grand Total ==>				Grand Total ==>				Grand Total ==>				Grand Total ==>			
2,145		1,059		3,394		100.00		2,021		100.00		-705		-1,111	

Space				Plenum				Coil Peak				Return			
Sens. + Lat.		Sens. + Lat		Total		Of Total		Space Sens		Tot Sens		Of Total		Ret/OA	
Btu/h		Btu/h		Btu/h		Of Total (%)		Btu/h		Btu/h		Of Total (%)		Fm MtrTD	
Envelope Loads				Envelope Loads				Envelope Loads				Envelope Loads			
Skylite Solar		0		0		0		Skylite Solar		0		0		0.00	
Skylite Cond		0		0		0		Skylite Cond		0		0		0.00	
Roof Cond		0		1,377		41		Roof Cond		-507		45.68		Fm BldTD	
Glass Solar		0		0		0		Glass Solar		0		0		0.00	
Glass/Door Cond		0		0		0		Glass/Door Cond		0		0		0.00	
Wall Cond		0		0		0		Wall Cond		0		0		0.00	
Partition/Door		0		0		0		Partition/Door		0		0		0.00	
Floor		0		0		0		Floor		0		0		0.00	
Adjacent Floor		0		0		0		Adjacent Floor		0		0		0.00	
Infiltration		310		310		9		Infiltration		-397		35.71		Fm Frict	
Sub Total ==>		310		1,377		50		Sub Total ==>		-397		81.39		0.00	
Internal Loads				Internal Loads				Internal Loads				Internal Loads			
Lights		685		171		856		25		685		34		19	
People		0		0		0		0		685		34		19	
Misc		768		0		768		23		768		38		72	
Sub Total ==>		1,453		171		1,624		48		1,453		72		72	
Ceiling Load				Ceiling Load				Ceiling Load				Ceiling Load			
Ventilation Load		383		-383		0		0		383		19		19	
Adj Air Trans Heat		0		0		0		0		0		0		0	
Dehumid. Ov Sizing		0		0		0		0		0		0		0	
Ov/Undr Sizing		0		0		0		0		0		0		0	
Exhaust Heat		0		-106		-106		-3		0		0		0	
Sup. Fan Heat		0		190		6		6		0		0		0	
Ret. Fan Heat		0		0		0		0		0		0		0	
Duct Heat Pkup		0		0		0		0		0		0		0	
Underflr Sup Ht Pkup		0		0		0		0		0		0		0	
Supply Air Leakage		0		0		0		0		0		0		0	
Grand Total ==>				Grand Total ==>				Grand Total ==>				Grand Total ==>			
2,145		1,059		3,394		100.00		2,021		100.00		-705		-1,111	

Space				Plenum				Coil Peak				Return			
Sens. + Lat.		Sens. + Lat		Total		Of Total		Space Sens		Tot Sens		Of Total		Ret/OA	
Btu/h		Btu/h		Btu/h		Of Total (%)		Btu/h		Btu/h		Of Total (%)		Fm MtrTD	
Envelope Loads				Envelope Loads				Envelope Loads				Envelope Loads			
Skylite Solar		0		0		0		Skylite Solar		0		0		0.00	
Skylite Cond		0		0		0		Skylite Cond		0		0		0.00	
Roof Cond		0		1,377		41		Roof Cond		-507		45.68		Fm BldTD	
Glass Solar		0		0		0		Glass Solar		0		0		0.00	
Glass/Door Cond		0		0		0		Glass/Door Cond		0		0		0.00	
Wall Cond		0		0		0		Wall Cond		0		0		0.00	
Partition/Door		0		0		0		Partition/Door		0		0		0.00	
Floor		0		0		0		Floor		0		0		0.00	
Adjacent Floor		0		0		0		Adjacent Floor		0		0		0.00	
Infiltration		310		310		9		Infiltration		-397		35.71		Fm Frict	
Sub Total ==>		310		1,377		50		Sub Total ==>		-397		81.39		0.00	
Internal Loads				Internal Loads				Internal Loads				Internal Loads			
Lights		685		171		856		25		685		34		19	
People		0		0		0		0		685		34		19	
Misc		768		0		768		23		768		38		72	
Sub Total ==>		1,453		171		1,624		48		1,453		72		72	
Ceiling Load				Ceiling Load				Ceiling Load				Ceiling Load			
Ventilation Load		383		-383		0		0		383		19		19	
Adj Air Trans Heat		0		0		0		0		0		0		0	
Dehumid. Ov Sizing		0		0		0		0		0		0		0	
Ov/Undr Sizing		0		0		0		0		0		0		0	
Exhaust Heat		0		-106		-106		-3		0		0		0	
Sup. Fan Heat		0		190		6		6		0		0		0	
Ret. Fan Heat		0		0		0		0		0		0		0	
Duct Heat Pkup		0		0		0		0		0		0		0	
Underflr Sup Ht Pkup		0		0		0		0		0		0		0	
Supply Air Leakage		0		0		0		0		0		0		0	
Grand Total ==>				Grand Total ==>				Grand Total ==>				Grand Total ==>			
2,145		1,059		3,394		100.00		2,021		100.00		-705		-1,111	

Space				Plenum				Coil Peak				Return			
Sens. + Lat.		Sens. + Lat		Total		Of Total		Space Sens		Tot Sens		Of Total		Ret/OA	
Btu/h		Btu/h		Btu/h		Of Total (%)		Btu/h		Btu/h		Of Total (%)		Fm MtrTD	
Envelope Loads				Envelope Loads				Envelope Loads				Envelope Loads			
Skylite Solar		0		0		0		Skylite Solar		0		0		0.00	
Skylite Cond		0		0		0		Skylite Cond		0		0		0.00	
Roof Cond		0		1,377		41		Roof Cond		-507		45.68		Fm BldTD	
Glass Solar		0		0		0		Glass Solar		0		0		0.00	
Glass/Door Cond		0		0		0		Glass/Door Cond		0		0		0.00	
Wall Cond		0		0		0		Wall Cond		0		0		0.00	
Partition/Door		0		0		0		Partition/Door		0		0		0.00	
Floor		0		0		0		Floor		0		0		0.00	
Adjacent Floor		0		0		0		Adjacent Floor		0		0		0.00	
Infiltration		310		310		9		Infiltration		-397		35.71		Fm Frict	
Sub Total ==>		310		1,377		50		Sub Total ==>		-397		81.39		0.00	
Internal Loads				Internal Loads				Internal Loads				Internal Loads			
Lights		685		171		856		25		685		34		19	
People		0		0		0		0		685		34		19	
Misc		768		0		768		23		768		38		72	
Sub Total ==>		1,453		171		1,624		48		1,453		72		72	
Ceiling Load				Ceiling Load				Ceiling Load				Ceiling Load			
Ventilation Load		383		-383		0		0		383		19		19	
Adj Air Trans Heat		0		0											

[illegible]

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Room Checksums

By ACADEMIC

A24 IT

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 8 / 16					Mo/Hr: 7 / 15					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 71 / 88					OADB: 89					OADB: 40									
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)		Space Sensible Btu/h	Percent Of Total (%)		Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)		SADB	Cooling	Heating					
Envelope Loads																			
Skylite Solar	0	0	0	0	0	0	0	Skylite Solar	0	0	0.00	Skylite Solar	55.6	75.0					
Skylite Cond	0	0	0	0	0	0	0	Skylite Cond	0	0	0.00	Ra Plenum	82.4	67.1					
Roof Cond	0	925	925	31	0	0	0	Roof Cond	0	-372	31.06	Return	82.4	67.1					
Glass Solar	0	0	0	0	0	0	0	Glass Solar	0	0	0.00	Ret/OA	84.2	59.3					
Glass/Door Cond	0	0	0	0	0	0	0	Glass/Door Cond	0	0	0.00	Fn MtrTD	0.1	0.0					
Wall Cond	0	0	0	0	0	0	0	Wall Cond	0	0	0.00	Fn BldTD	0.3	0.0					
Partition/Door	0	0	0	0	0	0	0	Partition/Door	0	0	0.00	Fn Frict	0.9	0.0					
Floor	0	0	0	0	0	0	0	Floor	0	0	0.00								
Adjacent Floor	0	0	0	0	0	0	0	Adjacent Floor	0	0	0.00								
Infiltration	264	264	9		136	9		Infiltration	-291	-291	24.29								
Sub Total ==>	264	925	1,189	40	136	9		Sub Total ==>	-291	-663	55.35								
Internal Loads																			
Lights	246	61	307	10	246	17		Lights	0	0	0.00	Diffuser	69	69					
People	450	0	450	15	250	17		People	0	0	0.00	Terminal	69	69					
Misc	563	0	563	19	563	38		Misc	563	563	-47.00	Main Fan	69	69					
Sub Total ==>	1,259	61	1,320	44	1,059	72		Sub Total ==>	563	563	-47.00	Sec Fan	0	0					
Ceiling Load	259	-259	0	0	281	19		Ceiling Load	-100	0	0.00	Nom Vent	20	20					
Ventilation Load	0	0	600	20	0	0		Ventilation Load	0	-661	55.20	AHU Vent	20	20					
Adj Air Trans Heat	0	0	0	0	0	0		Adj Air Trans Heat	0	0	0	Infil	9	9					
Dehumid. Ov Sizing	0	0	0	0	0	0		Ov/Undr Sizing	-553	-553	46.13	MinStop/Rh	0	0					
Ov/Undr Sizing	0	0	0	0	0	0		Exhaust Heat	91	-7.63		Return	78	78					
Exhaust Heat	-236	-236	-8		0	0		OA Preheat Diff.	0	0	0.00	Exhaust	29	29					
Sup. Fan Heat	0	102	3		0	0		RA Preheat Diff.	0	0	0.00	Rm Exh	0	0					
Ret. Fan Heat	0	0	0	0	0	0		Additional Reheat	0	0	0.00	Auxiliary	0	0					
Duct Heat Pkup	0	0	0	0	0	0		System Plenum Heat	25	-2.05		Leakage Dwn	0	0					
Underflr Sup Ht Pkup	0	0	0	0	0	0		Underflr Sup Ht Pkup	0	0	0.00	Leakage Ups	0	0					
Supply Air Leakage	0	0	0	0	0	0		Supply Air Leakage	0	0	0.00								
Grand Total ==>	1,782	491	2,976	100.00	1,475	100.00		Grand Total ==>	-381	-1,198	100.00								

COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION				
Total Capacity ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)	Total Capacity ton	MBh	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F	
Main Clg	0.3	3.0	2.3	69 85.5 67.3	72.0 55.6 53.3 57.6	Floor	110	Main Htg	-1.2	69	59.3	75.0		
Aux Clg	0.0	0.0	0.0	0 0.0 0.0	0.0 0.0 0.0	Part	0	Aux Htg	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	Int Door	0	Preheat	0.0	0	0.0	0.0		
Total	0.3	3.0				ExFlr	0	Humidif	0.0	0	0.0	0.0		
						Roof	110 0 0	Opt Vent	0.0	0	0.0	0.0		
						Wall	0 0 0	Total	-1.2					
						Ext Door	0 0 0							

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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By ACADEMIC

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES			
Peaked at Time:		Mo/Hr: 7 / 15		Mo/Hr: 7 / 15		Mo/Hr: Heating Design									
Outside Air:		OADB/WB/HR: 89 / 70 / 81		OADB: 89		OADB: 40									
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total	Space Sensible	Percent Of Total	Space Peak	Coil Peak	Percent Of Total	SADB	Cooling	Heating	SADB	Cooling	Heating	
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Space Sens	Tot Sens	(%)	Ra Plenum			Return			
Envelope Loads									Envelope Loads						
Skyline Solar	4,290	0	4,290	16	4,290	26	0	0.00	Skyline Solar	0	0	0.00	Fm MtrTD	0.1	0.00
Skyline Cond	0	125	125	0	0	0	-501	3.64	Skyline Cond	0	0	0.00	Fm BldTD	0.3	0.00
Roof Cond	0	6,956	6,956	25	0	0	-2,530	18.40	Roof Cond	0	0	0.00	Fm Frict	0.9	0.00
Glass Solar	2,674	0	2,674	10	2,674	16	0	0.00	Glass Solar	0	0	0.00			
Glass/Door Cond	1,279	0	1,279	5	1,279	8	-3,118	22.68	Glass/Door Cond	-3,118	-3,118	22.68			
Wall Cond	0	81	81	0	0	0	-130	0.94	Wall Cond	0	0	0.00			
Partition/Door	0	0	0	0	0	0	0	0.00	Partition/Door	0	0	0.00			
Floor	0	0	0	0	0	0	0	0.00	Floor	0	0	0.00			
Adjacent Floor	0	0	0	0	0	0	0	0.00	Adjacent Floor	0	0	0.00			
Infiltration	1,689	0	1,689	6	1,010	6	-2,164	15.74	Infiltration	-2,164	-2,164	15.74			
Sub Total ==>	9,932	7,161	17,094	62	9,253	57	-5,282	61.40	Sub Total ==>	-5,282	-8,443	61.40			
Internal Loads									Internal Loads						
Lights	1,769	442	2,211	8	1,769	11	0	0.00	Lights	0	0	0.00			
People	2,700	0	2,700	10	1,500	9	0	0.00	People	0	0	0.00			
Misc	2,205	0	2,205	8	2,205	14	0	0.00	Misc	0	0	0.00			
Sub Total ==>	6,674	442	7,116	26	5,474	34	0	0.00	Sub Total ==>	0	0	0.00			
Ceiling Load									Ceiling Load						
Ventilation Load	1,527	-1,527	0	0	1,527	9	-635	0.00	Ventilation Load	0	-3,968	28.86			
Adj Air Trans Heat	0	0	0	0	0	0	0	0.00	Adj Air Trans Heat	0	0	0.00			
Dehumid. Ov Sizing	0	0	0	0	0	0	-1,840	13.38	Ov/Undr Sizing	-1,840	500	-3.64			
Ov/Undr Sizing	0	0	0	0	0	0	0	0.00	Exhaust Heat	0	0	0.00			
Exhaust Heat	-1,204	-1,204	-4	0	0	0	0	0.00	OA Preheat Diff.	0	0	0.00			
Sup. Fan Heat	0	1,290	5	0	0	0	0	0.00	RA Preheat Diff.	0	0	0.00			
Ret. Fan Heat	0	0	0	0	0	0	0	0.00	Additional Reheat	0	0	0.00			
Duct Heat Pkup	0	0	0	0	0	0	0	0.00	System Plenum Heat	0	0	0.00			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	Underflr Sup Ht Pkup	0	0	0.00			
Supply Air Leakage	0	0	0	0	0	0	0	0.00	Supply Air Leakage	0	0	0.00			
Grand Total ==>	18,133	4,873	27,393	100.00											

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Room Checksums

By ACADEMIC

A25-2 OPEN OFFICE SPACE 2

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES	
Peaked at Time: Mo/Hr: 7 / 15				Mo/Hr: 7 / 14				Mo/Hr: Heating Design					
Outside Air: OADB/WB/HR: 89 / 70 / 81				OADB: 88				OADB: 40					
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)	Space Sens Btu/h	Coil Peak Btu/h	Percent Of Total (%)	Cooling	Heating
Envelope Loads				Envelope Loads				Envelope Loads				SADB	59.8
Skyline Solar	10,316	0	30	10,665	48	Skyline Solar	0	0.00	Skyline Solar	0	0.00	Ra Plenum	79.5
Skyline Cond	0	386	1	0	0	Skyline Cond	0	-1,349	Skyline Cond	0	-1,349	Return	79.5
Roof Cond	0	7,083	20	0	0	Roof Cond	0	-2,547	Roof Cond	0	-2,547	Ret/OA	80.4
Glass Solar	2,674	0	8	2,715	12	Glass Solar	0	0.00	Glass Solar	0	0.00	Fn MtrTD	0.1
Glass/Door Cond	1,279	0	4	1,145	5	Glass/Door Cond	-3,118	18.23	Glass/Door Cond	-3,118	18.23	Fn BldTD	0.3
Wall Cond	0	87	0	0	0	Wall Cond	0	-131	Wall Cond	0	-131	Fn Frict	0.9
Partition/Door	0	0	0	0	0	Partition/Door	0	0.00	Partition/Door	0	0.00		
Floor	0	0	0	0	0	Floor	0	0.00	Floor	0	0.00		
Adjacent Floor	0	0	0	0	0	Adjacent Floor	0	0.00	Adjacent Floor	0	0.00		
Infiltration	1,682	1,682	5	967	4	Infiltration	-2,164	12.65	Infiltration	-2,164	12.65		
Sub Total ==>	15,951	7,556	23,507	68	15,491	70	Sub Total ==>	-5,282	-9,309	54.42			
Internal Loads				Internal Loads				Internal Loads				AIRFLOWS	
Lights	1,769	442	6	1,769	8	Lights	0	0.00	Lights	0	0.00	Diffuser	Cooling
People	2,700	0	8	1,500	7	People	0	0.00	People	0	0.00	Terminal	1,311
Misc	2,205	0	6	2,123	10	Misc	0	0.00	Misc	0	0.00	Main Fan	1,311
Sub Total ==>	6,674	442	7,116	20	5,392	24	Sub Total ==>	0	0.00	0	0.00	Sec Fan	0
Ceiling Load	1,167	-1,167	0	1,130	5	Ceiling Load	-588	0.00	Ceiling Load	-588	0.00	Nom Vent	120
Ventilation Load	0	0	0	0	0	Ventilation Load	0	-3,968	Ventilation Load	0	-3,968	AHU Vent	120
Adj Air Trans Heat	0	0	0	0	0	Adj Air Trans Heat	0	0.00	Adj Air Trans Heat	0	0.00	Infil	65
Dehumid. Ov Sizing	0	0	0	0	0	Dehumid. Ov Sizing	-4,291	25.09	Dehumid. Ov Sizing	-4,291	25.09	MinStop/Rh	0
Ov/Undr Sizing	0	0	0	0	0	Ov/Undr Sizing	463	-2.71	Ov/Undr Sizing	463	-2.71	Return	1,377
Exhaust Heat	-920	-920	-3	0	0	Exhaust Heat	0	0.00	Exhaust Heat	0	0.00	Exhaust	185
Sup. Fan Heat	0	1,942	6	0	0	OA Preheat Diff.	0	0.00	OA Preheat Diff.	0	0.00	Rm Exh	0
Ret. Fan Heat	0	0	0	0	0	RA Preheat Diff.	0	0.00	RA Preheat Diff.	0	0.00	Auxiliary	0
Duct Heat Pkup	0	0	0	0	0	Additional Reheat	0	0.00	Additional Reheat	0	0.00	Leakage Dwn	0
Underflr Sup Ht Pkup	0	0	0	0	0	System Plenum Heat	0	0.00	System Plenum Heat	0	0.00	Leakage Ups	0
Supply Air Leakage	0	0	0	0	0	Underflr Sup Ht Pkup	0	0.00	Underflr Sup Ht Pkup	0	0.00		
						Supply Air Leakage	0	0.00	Supply Air Leakage	0	0.00		
Grand Total ==>	23,792	5,911	34,730	100.00	22,013	100.00	Grand Total ==>	-10,161	-17,105	100.00		ENGINEERING CKS	
COOLING COIL SELECTION				CLG SPACE SELECTION				HEATING COIL SELECTION					
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total ft²	Glass (%)		Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F		
Main Clg	2.9	34.7	31.6	1,311	81.7	65.1	67.0	59.8	56.5	63.7			
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	2.9	34.7											
				AREAS									
				Floor				Main Htg					
				Part				Aux Htg					
				Int Door				Preheat					
				ExFlr				Humidif					
				Roof				Opt Vent					
				Wall				Total					
				Ext Door									

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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Room Checksums

By ACADEMIC

A25-3 OPEN OFFICE SPACE 3

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES			
Peaked at Time: Mo/Hr: 7 / 15				Mo/Hr: 7 / 14				Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 89 / 70 / 81				OADB: 88				OADB: 40							
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total	Space Sensible	Percent Of Total	Space Peak	Coil Peak	Percent Of Total	Space Sens	Coil Peak	Percent Of Total	SADB	Heating		
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	(%)	Btu/h	Btu/h	(%)				
Envelope Loads				Envelope Loads				Envelope Loads				Ra Plenum			
Skyline Solar	10,316	0	30	10,665	48	0	0	0.00	0	0	0.00	Return	75.0		
Skyline Cond	0	386	1	0	0	0	-1,349	7.89	0	-1,349	14.89	Ret/OA	67.7		
Roof Cond	0	7,083	20	0	0	0	-2,547	14.89	0	-2,547	14.89	Fn MtrTD	65.2		
Glass Solar	2,674	0	8	2,715	12	0	0	0.00	0	0	0.00	Fn BldTD	0.1		
Glass/Door Cond	1,279	0	4	1,145	5	-3,118	-3,118	18.23	0	-3,118	18.23	Fn Frict	0.0		
Wall Cond	0	87	0	0	0	0	-131	0.76	0	-131	0.76				
Partition/Door	0	0	0	0	0	0	0	0.00	0	0	0.00				
Floor	0	0	0	0	0	0	0	0.00	0	0	0.00				
Adjacent Floor	0	0	0	0	0	0	0	0.00	0	0	0.00				
Infiltration	1,682	1,682	5	967	4	-2,164	-2,164	12.65	-2,164	-2,164	12.65				
Sub Total ==>	15,951	7,556	23,507	68	15,491	-5,282	-9,309	54.42	-5,282	-9,309	54.42				
Internal Loads				Internal Loads				Internal Loads				AIRFLOWS			
Lights	1,769	442	6	1,769	8	0	0	0.00	0	0	0.00	Diffuser	1,311		
People	2,700	0	8	1,500	7	0	0	0.00	0	0	0.00	Terminal	1,311		
Misc	2,205	0	6	2,123	10	0	0	0.00	0	0	0.00	Main Fan	1,311		
Sub Total ==>	6,674	442	7,116	20	5,392	0	0	0.00	0	0	0.00	Sec Fan	0		
Ceiling Load	1,167	-1,167	0	1,130	5	-588	0	0.00	-588	0	0.00	Nom Vent	120		
Ventilation Load	0	0	0	0	0	0	-3,968	23.20	0	-3,968	23.20	AHU Vent	120		
Adj Air Trans Heat	0	0	0	0	0	0	0	0.00	0	0	0.00	Infil	65		
Dehumid. Ov Sizing	0	0	0	0	0	-4,291	-4,291	25.09	-4,291	-4,291	25.09	MinStop/Rh	0		
Ov/Undr Sizing	0	0	0	0	0	0	463	-2.71	0	463	-2.71	Return	1,377		
Exhaust Heat	-920	-920	-3	0	0	0	0	0.00	0	0	0.00	Exhaust	185		
Sup. Fan Heat	0	1,942	6	0	0	0	0	0.00	0	0	0.00	Rm Exh	0		
Ret. Fan Heat	0	0	0	0	0	0	0	0.00	0	0	0.00	Auxiliary	0		
Duct Heat Pkup	0	0	0	0	0	0	0	0.00	0	0	0.00	Leakage Dwn	0		
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	0	0	0.00	Leakage Ups	0		
Supply Air Leakage	0	0	0	0	0	0	0	0.00	0	0	0.00	ENGINEERING CKS			
Grand Total ==>	23,792	5,911	34,730	100.00	22,013	-10,161	-17,105	100.00	-10,161	-17,105	100.00	% OA	9.2		
COOLING COIL SELECTION				AREAS				HEATING COIL SELECTION				% OA	9.2		
Total Capacity	ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F	Leave DB/WB/HR °F °F	Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F	cfm/ft²		
Main Clg	2.9	34.7	31.6	1,311	81.7 65.1	67.0	818	82 10	-14.2	1,311	65.2	75.0	1.60		
Aux Clg	0.0	0.0	0.0	0	0.0 0.0	0.0	0	0 0	0.0	0	0.0	0.0	453.04		
Opt Vent	0.0	0.0	0.0	0	0.0 0.0	0.0	0	0 0	0.0	0	0.0	0.0	282.64		
Total	2.9	34.7											42.46		
												No. People	-17.32		
													6		

Room Checksums

By ACADEMIC

A25-4 OPEN OFFICE SPACE 4

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES				
Peaked at Time: Mo/Hr: 7 / 15 Outside Air: OADB/WB/HR: 89 / 70 / 81				Mo/Hr: 7 / 15 OADB: 89				Mo/Hr: Heating Design OADB: 40								
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Envelope Loads	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)			Cooling	Heating			
Envelope Loads														SADB	59.2	75.0
Skylite Solar	10,316	0	10,316	29	10,316	45	0	0	0.00	Ra Plenum	79.6	67.6				
Skylite Cond	0	380	380	1	0	0	0	-1,344	7.56	Return	79.6	67.6				
Roof Cond	0	7,072	7,072	20	0	0	0	-2,538	14.27	Ret/OA	80.5	65.1				
Glass Solar	2,674	0	2,674	7	2,674	12	0	0	0.00	Fn MtrTD	0.1	0.0				
Glass/Door Cond	1,279	0	1,279	4	1,279	6	-3,118	-3,118	17.53	Fn BldTD	0.3	0.0				
Wall Cond	1,051	365	1,416	4	1,051	5	-930	-1,275	7.17	Fn Frict	0.9	0.0				
Partition/Door	0	0	0	0	0	0	0	0	0.00							
Floor	0	0	0	0	0	0	0	0	0.00							
Adjacent Floor	0	0	0	0	0	0	0	0	0.00							
Infiltration	1,690	1,690	5	1,010	4	Infiltration	-2,164	-2,164	12.16							
Sub Total ==>	17,010	7,818	24,828	69	16,330	71	Sub Total ==>	-6,213	-10,439	58.68						
Internal Loads														AIRFLOWS		
Lights	1,769	442	2,211	6	1,769	8	0	0	0.00	Diffuser	Cooling	1,321	1,321			
People	2,700	0	2,700	7	1,500	7	0	0	0.00	Terminal		1,321	1,321			
Misc	2,205	0	2,205	6	2,205	10	0	0	0.00	Main Fan		1,321	1,321			
Sub Total ==>	6,674	442	7,116	20	5,474	24	Sub Total ==>	0	0.00	Sec Fan		0	0			
Ceiling Load	1,198	-1,198	0	0	1,198	5	0	0	0.00	Nom Vent		120	120			
Ventilation Load	0	0	3,098	9	0	0	-613	-3,968	22.30	AHU Vent		120	120			
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0.00	Infil		65	65			
Dehumid. Ov Sizing	0	0	0	0	0	0	-3,866	-3,866	21.73	MinStop/Rh		0	0			
Ov/Undr Sizing	0	0	0	0	0	0	483	-2,72	-0.00	Return		1,386	1,386			
Exhaust Heat	-945	-945	-3	0	0	0	0	0	0.00	Exhaust		185	185			
Sup. Fan Heat	0	1,957	5	0	0	0	0	0	0.00	Rm Exh		0	0			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0.00	Auxiliary		0	0			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0.00	Leakage Dwn		0	0			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0.00	Leakage Ups		0	0			
Supply Air Leakage	0	0	0	0	0	0	0	0	0.00							
Grand Total ==>	24,882	6,117	36,054	100.00	23,002	100.00	Grand Total ==>	-10,692	-17,790	100.00						
COOLING COIL SELECTION														ENGINEERING CKS		
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)			Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F				
Main Clg	3.0	36.1	32.9	1,321	81.8	65.1	66.9	59.2	56.2	63.5						
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	3.0	36.1														
AREAS														HEATING COIL SELECTION		
Floor	818															
Part	0															
Int Door	0															
ExFlr	0															
Roof	818	82	10													
Wall	558	169	30													
Ext Door	0	0	0													
Main Htg	-14.4	1,321	65.1	75.0												
Aux Htg	0.0	0	0.0	0.0												
Preheat	0.0	0	0.0	0.0												
Humidif	0.0	0	0.0	0.0												
Opt Vent	0.0	0	0.0	0.0												
Total	-14.4															

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Room Checksums

By ACADEMIC

A25-5 OPEN OFFICE SPACE 5

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES	
Peaked at Time: Mo/Hr: 7 / 15 Outside Air: OADB/WB/HR: 89 / 70 / 81				Mo/Hr: 7 / 14 OADB: 88				Mo/Hr: Heating Design OADB: 40					
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Envelope Loads	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)			Cooling	Heating
Envelope Loads										SADB		59.8	75.0
Skylite Solar	10,316	0	10,316	29	10,665	47	0	0	0.00	Ra Plenum		79.5	67.7
Skylite Cond	0	387	387	1	0	0	0	-1,349	7.63	Return		79.5	67.7
Roof Cond	0	7,085	7,085	20	0	0	0	-2,547	14.41	Ret/OA		80.3	65.3
Glass Solar	2,674	0	2,674	8	2,715	12	0	0	0.00	Fn MtrTD		0.1	0.0
Glass/Door Cond	1,279	0	1,279	4	1,145	5	-3,118	-3,118	17.64	Fn BldTD		0.3	0.0
Wall Cond	533	258	791	2	604	3	-461	-698	3.95	Fn Frict		0.9	0.0
Partition/Door	0	0	0	0	0	0	0	0	0.00				
Floor	0	0	0	0	0	0	0	0	0.00	AIRFLOWS			
Adjacent Floor	0	0	0	0	0	0	0	0	0.00	Diffuser	Cooling	1,353	1,353
Infiltration	1,690	1,690	5	967	4	0	-2,164	-2,164	12.24	Terminal		1,353	1,353
Sub Total ==>	16,492	7,730	24,222	68	16,096	71	-5,743	-9,877	55.89	Main Fan		1,353	1,353
Internal Loads										Sec Fan		0	0
Lights	1,769	442	2,211	6	1,769	8	0	0	0.00	Nom Vent		120	120
People	2,700	0	2,700	8	1,500	7	0	0	0.00	AHU Vent		120	120
Misc	2,205	0	2,205	6	2,123	9	0	0	0.00	Infil		65	65
Sub Total ==>	6,674	442	7,116	20	5,392	24	0	0	0.00	MinStop/Rh		0	0
Ceiling Load	1,162	-1,162	0	0	1,133	5	-588	0	0.00	Return		1,418	1,418
Ventilation Load	0	0	3,099	9	0	0	0	-3,968	22.45	Exhaust		185	185
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0.00	Rm Exh		0	0
Dehumid. Ov Sizing	0	0	0	0	0	0	-4,291	-4,291	24.28	Auxiliary		0	0
Ov/Undr Sizing	0	0	0	0	0	0	0	464	-2.62	Leakage Dwn		0	0
Exhaust Heat	-916	-916	-3	0	0	0	0	0	0.00	Leakage Ups		0	0
Sup. Fan Heat	0	2,005	6	0	0	0	0	0	0.00	ENGINEERING CKS			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0.00	% OA	Cooling	8.9	8.9
Duct Heat Pkup	0	0	0	0	0	0	0	0	0.00	cfm/ft²		1.65	1.65
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0.00	cfm/ton		457.04	
Supply Air Leakage	0	0	0	0	0	0	0	0	0.00	ft²/ton		276.31	
Grand Total ==>	24,328	6,094	35,526	100.00	22,620	100.00	-10,622	-17,672	100.00	Btu/hr-ft²		43.43	-17.73
										No. People		6	
COOLING COIL SELECTION				CLG SPACE SELECTION				HEATING COIL SELECTION					
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)		Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F		
Main Clg	3.0	35.5	32.4	1,353	81.7	65.0	66.8	59.8	56.5	63.7			
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	3.0	35.5											
AREAS													
Floor	818												
Part	0												
Int Door	0												
ExFlr	0												
Roof	818	82	10										
Wall	383	169	44										
Ext Door	0	0	0										
Main Htg	-14.5	1,353	65.3	75.0									
Aux Htg	0.0	0	0.0	0.0									
Preheat	0.0	0	0.0	0.0									
Humidif	0.0	0	0.0	0.0									
Opt Vent	0.0	0	0.0	0.0									
Total	-14.5												

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Room Checksums

By ACADEMIC

A25-6 OPEN OFFICE SPACE 6

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES	
Peaked at Time:		Mo/Hr: 7 / 15		Mo/Hr: 7 / 14		Mo/Hr: Heating Design		Mo/Hr: Heating Design					
Outside Air:		OADB/WB/HR: 89 / 70 / 81		OADB: 88		OADB: 40		OADB: 40					
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)	Space Sens Btu/h	Coil Peak Btu/h	Percent Of Total (%)	Cooling	Heating
Envelope Loads				Envelope Loads				Envelope Loads				SADB	59.8 75.0
Skylite Solar	10,316	0	10,316 30	10,665	49	0	0	0.00	0	0	0.00	Ra Plenum	79.1 68.0
Skylite Cond	0	407	407 1	0	0	0	-1,363	8.19	0	-1,363	8.19	Return	79.1 68.0
Roof Cond	0	7,124	7,124 20	0	0	0	-2,573	15.47	0	-2,573	15.47	Ret/OA	80.0 65.4
Glass Solar	2,674	0	2,674 8	2,715	12	0	0	0.00	0	0	0.00	Fn MtrTD	0.1 0.0
Glass/Door Cond	1,279	0	1,279 4	1,145	5	-3,118	-3,118	18.75	0	-3,118	18.75	Fn BldTD	0.3 0.0
Wall Cond	0	89	89 0	0	0	0	-132	0.79	0	-132	0.79	Fn Frict	0.9 0.0
Partition/Door	0	0	0 0	0	0	0	0	0.00	0	0	0.00		
Floor	0	0	0 0	0	0	0	0	0.00	0	0	0.00		
Adjacent Floor	0	0	0 0	0	0	0	0	0.00	0	0	0.00		
Infiltration	1,690	0	1,690 5	967	4	-2,164	-2,164	13.01	0	-2,164	13.01		
Sub Total ==>	15,959	7,621	23,580 68	15,491	71	-5,282	-9,350	56.21					
Internal Loads				Internal Loads				Internal Loads				AIRFLOWS	
Lights	1,769	442	2,211 6	1,769	8	0	0	0.00	0	0	0.00	Diffuser	Cooling Heating
People	2,700	0	2,700 8	1,500	7	0	0	0.00	0	0	0.00	Terminal	1,303 1,303
Misc	2,205	0	2,205 6	2,123	10	0	0	0.00	0	0	0.00	Main Fan	1,303 1,303
Sub Total ==>	6,674	442	7,116 20	5,392	25	0	0	0.00	0	0	0.00	Sec Fan	0 0
Ceiling Load	1,051	-1,051	0 0	1,014	5	-514	0	0.00	0	0	0.00	Nom Vent	120 120
Ventilation Load	0	0	3,099 9	0	0	0	-3,968	23.86	0	-3,968	23.86	AHU Vent	120 120
Adj Air Trans Heat	0	0	0 0	0	0	0	0	0.00	0	0	0.00	Infil	65 65
Dehumid. Ov Sizing	0	0	0 0	0	0	-4,284	-4,284	25.76	0	-4,284	25.76	MinStop/Rh	0 0
Ov/Undr Sizing	0	0	0 0	0	0	0	405	-2.44	0	405	-2.44	Return	1,369 1,369
Exhaust Heat	0	-829	-829 -2	0	0	0	0	0.00	0	0	0.00	Exhaust	185 185
Sup. Fan Heat	0	1,931	1,931 6	0	0	0	0	0.00	0	0	0.00	Rm Exh	0 0
Ret. Fan Heat	0	0	0 0	0	0	0	0	0.00	0	0	0.00	Auxiliary	0 0
Duct Heat Pkup	0	0	0 0	0	0	0	0	0.00	0	0	0.00	Leakage Dwn	0 0
Underflr Sup Ht Pkup	0	0	0 0	0	0	0	0	0.00	0	0	0.00	Leakage Ups	0 0
Supply Air Leakage	0	0	0 0	0	0	0	0	0.00	0	0	0.00		
Grand Total ==>	23,683	6,184	34,896 100.00	21,898	100.00	-10,080	-16,633	100.00				ENGINEERING CKS	
COOLING COIL SELECTION				CLG SPACE SELECTION				HEATING COIL SELECTION					
Total Capacity ton	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total ft²	Glass ft² (%)		Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F		
Main Clg	2.9	34.9	31.8	1,303	81.3 64.9	66.9	59.8 56.2 62.6	-13.7	1,303	65.4	75.0		
Aux Clg	0.0	0.0	0.0	0	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	0.0	0	0.0	0.0		
Total	2.9	34.9											
				AREAS									
				Floor				Main Htg					
				Part				Aux Htg					
				Int Door				Preheat					
				ExFlr				Humidif					
				Roof				Opt Vent					
				Wall				Total					
				Ext Door									

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Room Checksums

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A26 OFFICE

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES	
Peaked at Time: Mo/Hr: 9 / 16				Mo/Hr: 12 / 16				Mo/Hr: Heating Design					
Outside Air: OADB/WB/HR: 89 / 72 / 89				OADB: 73				OADB: 40					
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)	Space Sens Btu/h	Coil Peak Btu/h	Percent Of Total (%)	SADB	Heating
Envelope Loads				Envelope Loads				Envelope Loads				Ra Plenum	75.0
Skylite Solar	0	0	0	0	0	0	0	0.00	0	0	0.00	Return	68.2
Skylite Cond	0	0	0	0	0	0	0	0.00	0	0	0.00	Ret/OA	66.9
Roof Cond	0	1,944	17	0	0	0	-880	15.90	0	0	0.00	Fn MtrTD	0.0
Glass Solar	4,116	4,116	35	7,709	83	0	0	0.00	0	0	0.00	Fn BldTD	0.0
Glass/Door Cond	1,249	1,249	11	-161	-2	-2,764	-2,764	49.92	0	0	0.00	Fn Frict	0.0
Wall Cond	0	241	2	0	0	0	-118	2.13	0	0	0.00		
Partition/Door	0	0	0	0	0	0	0	0.00	0	0	0.00		
Floor	0	0	0	0	0	0	0	0.00	0	0	0.00		
Adjacent Floor	0	0	0	0	0	0	0	0.00	0	0	0.00		
Infiltration	857	857	7	-37	0	-661	-661	11.94	-661	-661	11.94		
Sub Total ==>	6,222	2,185	8,407	72	7,511	-3,425	-4,423	79.89	-3,425	-4,423	79.89		
Internal Loads				Internal Loads				Internal Loads				AIRFLOWS	
Lights	655	164	819	7	655	0	0	0.00	0	0	0.00	Diffuser	Heating
People	450	0	450	4	250	0	0	0.00	0	0	0.00	Terminal	420
Misc	668	0	668	6	668	0	0	0.00	0	0	0.00	Main Fan	420
Sub Total ==>	1,773	164	1,937	17	1,573	0	0	0.00	0	0	0.00	Sec Fan	0
Ceiling Load	330	-330	0	0	167	-140	0	0.00	-140	0	0.00	Nom Vent	20
Ventilation Load	0	0	857	7	0	0	-661	11.94	0	-661	11.94	AHU Vent	20
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0	Infil	20
Dehumid. Ov Sizing	0	0	0	0	0	-530	-530	9.57	0	-530	9.57	MinStop/Rh	0
Ov/Undr Sizing	0	0	0	0	0	0	78	-1.41	0	0	0.00	Return	440
Exhaust Heat	-184	-184	-2	0	0	0	0	0.00	0	0	0.00	Exhaust	40
Sup. Fan Heat	0	622	5	0	0	0	0	0.00	0	0	0.00	Rm Exh	0
Ret. Fan Heat	0	0	0	0	0	0	0	0.00	0	0	0.00	Auxiliary	0
Duct Heat Pkup	0	0	0	0	0	0	0	0.00	0	0	0.00	Leakage Dwn	0
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	0	0	0.00	Leakage Ups	0
Supply Air Leakage	0	0	0	0	0	0	0	0.00	0	0	0.00		
Grand Total ==>	8,326	1,835	11,640	100.00	9,251	-4,095	-5,537	100.00	-4,095	-5,537	100.00	ENGINEERING CKS	
COOLING COIL SELECTION				AREAS				HEATING COIL SELECTION					
Total Capacity ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total ft²	Glass (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F		
Main Clg	1.0	11.6	10.4	420	81.0 61.6 51.8	55.0 51.5 51.8		Main Htg	-3.8	420	66.9	75.0	
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 0.0		Aux Htg	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		Preheat	0.0	0	0.0	0.0	
Total	1.0	11.6						Humidif	0.0	0	0.0	0.0	
								Opt Vent	0.0	0	0.0	0.0	
								Total	-3.8				

Project Name: Sunnylands
Dataset Name: AdminBuildingDecember3.trc

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	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-3.8	420	66.9	75.0
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-3.8			

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Room Checksums

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A32 HALLWAY

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 9 / 17					Mo/Hr: 10 / 17					Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 88 / 71 / 86					OADB: 80					OADB: 40							
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)		Space Sensible Btu/h	Percent Of Total (%)				Space Peak Btu/h	Coil Peak Btu/h	Percent Of Total (%)			SADB	Cooling	Heating
Envelope Loads					Envelope Loads					Envelope Loads							
Skylite Solar	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	78.0	55.0	75.0
Skylite Cond	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	78.0	78.0	68.0
Roof Cond	0	838	838	7	0	0	0	0	0	0	-437	8.90	0	0.00	78.0	78.0	68.0
Glass Solar	7,606	0	7,606	64	8,738	85	5	0	0	0	0	0.00	0	0.00	0.1	0.1	0.0
Glass/Door Cond	1,241	0	1,241	10	525	5	0	0	0	-2,852	-2,852	58.11	0	0.00	0.3	0.3	0.0
Wall Cond	0	235	235	2	0	0	0	0	0	0	-121	2.46	0	0.00	0.9	0.9	0.0
Partition/Door	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Adjacent Floor	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Infiltration	392	0	392	3	57	1	0	0	0	-331	-331	6.74	0	0.00			
Sub Total ==>	9,239	1,073	10,312	86	9,321	90				-3,183	-3,741	76.21					
Internal Loads					Internal Loads					Internal Loads							
Lights	263	66	329	3	263	3	0	0	0	0	0	0.00	0	0.00			
People	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Misc	640	0	640	5	640	6	0	0	0	640	640	-13.04	0	0.00			
Sub Total ==>	903	66	969	8	903	9				640	640	-13.04					
Ceiling Load	121	-121	0	0	81	1	0	0	0	-79	0	0.00	0	0.00			
Ventilation Load	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0	0	-1,265	-1,265	25.78	0	0.00			
Ov/Undr Sizing	0	0	0	0	0	0	0	0	0	22	22	-0.45	0	0.00			
Exhaust Heat	0	-34	-34	0	0	0	0	0	0	0	0	0.00	0	0.00			
Sup. Fan Heat	0	0	693	6	0	0	0	0	0	0	0	0.00	0	0.00			
Ret. Fan Heat	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Duct Heat Pkup	0	0	0	0	0	0	0	0	0	-564	-564	11.49	0	0.00			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Supply Air Leakage	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00			
Grand Total ==>	10,262	985	11,940	100.00	10,304	100.00				-3,887	-4,908	100.00					
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION							
Total Capacity ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)			Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F				
Main Clg	1.0	11.9	11.7	467	79.4 60.7 50.2	55.0 51.1 50.2	125	0	0	Main Htg	-3.6	467	68.0	75.0			
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 0.0	0	0	0	Aux Htg	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	0	0	0	Preheat	0.0	0	0.0	0.0			
Total	1.0	11.9					125	0	0	Humidif	0.0	0	0.0	0.0			
							193	154	80	Opt Vent	0.0	0	0.0	0.0			
							0	0	0	Total	-3.6						

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Room Checksums

By ACADEMIC

A34 MEETINGROOM 2

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES				
Peaked at Time: Mo/Hr: 9 / 16					Mo/Hr: 9 / 16					Mo/Hr: Heating Design									
Outside Air: OADB/WB/HR: 89 / 72 / 89					OADB: 89					OADB: 40									
Space Sens. + Lat. Btu/h	Plenum Sens. + Lat. Btu/h	Net Total Btu/h	Percent Of Total (%)	Space Sensible Btu/h	Percent Of Total (%)	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)	SADB	Cooling	Heating					
Envelope Loads																			
Skylite Solar	0	0	0	0	0	Skylite Solar	0	0.00	Skylite Solar	0	0.00	Ra Plenum	55.9	75.0					
Skylite Cond	0	0	0	0	0	Skylite Cond	0	0.00	Skylite Cond	0	0.00	Return	82.4	66.7					
Roof Cond	0	1,918	20	0	0	Roof Cond	0	15.35	Roof Cond	0	15.35	Ret/OA	84.9	57.3					
Glass Solar	0	0	0	0	0	Glass Solar	0	0.00	Glass Solar	0	0.00	Fn MtrTD	0.1	0.0					
Glass/Door Cond	0	0	0	0	0	Glass/Door Cond	0	0.00	Glass/Door Cond	0	0.00	Fn BldTD	0.3	0.0					
Wall Cond	2,213	460	28	0	0	Wall Cond	-1,507	32.34	Wall Cond	-1,841	32.34	Fn Frict	0.9	0.0					
Partition/Door	0	0	0	0	0	Partition/Door	0	0.00	Partition/Door	0	0.00								
Floor	0	0	0	0	0	Floor	0	0.00	Floor	0	0.00								
Adjacent Floor	0	0	0	0	0	Adjacent Floor	0	0.00	Adjacent Floor	0	0.00								
Infiltration	673	673	7	334	7	Infiltration	-696	12.22	Infiltration	-696	12.22								
Sub Total ==>	2,885	2,378	55	2,547	53	Sub Total ==>	-2,202	59.91	Sub Total ==>	-3,411	59.91								
Internal Loads																			
Lights	759	190	10	759	16	Lights	0	0.00	Lights	0	0.00	Diffuser	229	229					
People	900	0	9	500	10	People	0	0.00	People	0	0.00	Terminal	229	229					
Misc	396	0	4	396	8	Misc	0	0.00	Misc	0	0.00	Main Fan	229	229					
Sub Total ==>	2,055	190	23	1,655	34	Sub Total ==>	0	0.00	Sub Total ==>	0	0.00	Sec Fan	0	0					
Ceiling Load	619	-619	0	619	13	Ceiling Load	-279	0.00	Ceiling Load	-279	0.00	Nom Vent	80	80					
Ventilation Load	0	0	27	0	0	Ventilation Load	0	46.46	Ventilation Load	-2,645	46.46	AHU Vent	80	80					
Adj Air Trans Heat	0	0	0	0	0	Adj Air Trans Heat	0	0	Adj Air Trans Heat	0	0	Infil	21	21					
Dehumid. Ov Sizing	0	0	0	0	0	Ov/Undr Sizing	-19	0.33	Ov/Undr Sizing	-19	0.33	MinStop/Rh	0	0					
Ov/Undr Sizing	0	0	0	0	0	Exhaust Heat	373	-6.55	Exhaust Heat	373	-6.55	Return	250	250					
Exhaust Heat	-827	-827	-9	0	0	OA Preheat Diff.	0	0.00	OA Preheat Diff.	0	0.00	Exhaust	101	101					
Sup. Fan Heat	0	339	4	0	0	RA Preheat Diff.	0	0.00	RA Preheat Diff.	0	0.00	Rm Exh	0	0					
Ret. Fan Heat	0	0	0	0	0	Additional Reheat	0	0.00	Additional Reheat	0	0.00	Auxiliary	0	0					
Duct Heat Pkup	0	0	0	0	0	System Plenum Heat	8	-0.13	System Plenum Heat	8	-0.13	Leakage Dwn	0	0					
Underflr Sup Ht Pkup	0	0	0	0	0	Underflr Sup Ht Pkup	0	0.00	Underflr Sup Ht Pkup	0	0.00	Leakage Ups	0	0					
Supply Air Leakage	0	0	0	0	0	Supply Air Leakage	0	0.00	Supply Air Leakage	0	0.00								
Grand Total ==>	5,559	1,122	9,578	4,820	100.00	Grand Total ==>	-2,500	100.00	Grand Total ==>	-5,694	100.00								
AIRFLOWS																			
Cooling															Heating				
Diffuser															229				
Terminal															229				
Main Fan															229				
Sec Fan															0				
Nom Vent															80				
AHU Vent															80				
Infil															21				
MinStop/Rh															0				
Return															250				
Exhaust															101				
Rm Exh															0				
Auxiliary															0				
Leakage Dwn															0				
Leakage Ups															0				
ENGINEERING CKS																			
Cooling															Heating				
% OA															35.0				
cfm/ft²															0.87				
cfm/ton															286.31				
ft³/ton															329.50				
Btu/hr-ft²															36.42				
No. People															4				
COOLING COIL SELECTION																			
Total Capacity ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb	Gross Total	Glass ft² (%)												
Main Clg	0.8	9.6	7.6	229	86.2 67.8 73.8	55.9 54.4 61.7	Floor	263											
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 0.0	Part	0											
Opt Vent	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 0.0	Int Door	0											
Total	0.8	9.6					ExFlr	0											
							Roof	263	0	0									
							Wall	562	0	0									
							Ext Door	0	0	0									
HEATING COIL SELECTION																			
Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F																
Main Htg	-4.5	229	57.3	75.0															
Aux Htg	0.0	0	0.0	0.0															
Preheat	0.0	0	0.0	0.0															
Humidif	0.0	0	0.0	0.0															
Opt Vent	0.0	0	0.0	0.0															
Total	-4.5																		

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Room Checksums

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A35 MEETING ROOM 3

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES			
Peaked at Time: Mo/Hr: 9 / 16				Mo/Hr: 9 / 17				Mo/Hr: Heating Design							
Outside Air: OADB/WB/HR: 89 / 72 / 89				OADB: 88				OADB: 40							
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total (%)	Space Sens	Coil Peak	Percent Of Total (%)	SADB	Cooling	Heating	
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h		Btu/h	Btu/h					
Envelope Loads															
Skylite Solar	0	0	0	0	0	0	0	0.00	0	0	0.00	Ra Plenum	55.8	75.3	
Skylite Cond	0	0	0	0	0	0	0	0.00	0	0	0.00	Return	82.2	66.5	
Roof Cond	0	1,800	20	0	0	0	-813	14.78	0	0	0.00	Ret/OA	85.1	56.1	
Glass Solar	0	0	0	0	0	0	0	0.00	0	0	0.00	Fn MtrTD	0.1	0.0	
Glass/Door Cond	0	0	0	0	0	0	0	0.00	0	0	0.00	Fn BldTD	0.3	0.0	
Wall Cond	1,870	380	26	1,990	46	-1,456	-1,777	32.31	0	0	0.00	Fn Frict	0.9	0.0	
Partition/Door	0	0	0	0	0	0	0	0.00	0	0	0.00	AIRFLOWS			
Floor	0	0	0	0	0	0	0	0.00	0	0	0.00	Diffuser	Cooling	Heating	
Adjacent Floor	0	0	0	0	0	0	0	0.00	0	0	0.00	Terminal	203	203	
Infiltration	629	629	7	282	7	-651	-651	11.83	0	0	0.00	Main Fan	203	203	
Sub Total ==>	2,499	2,180	53	2,272	53	-2,107	-3,241	58.92	0	0	0.00	Sec Fan	0	0	
Internal Loads															
Lights	632	158	9	632	15	0	0	0.00	0	0	0.00	Nom Vent	80	80	
People	900	0	10	500	12	0	0	0.00	0	0	0.00	AHU Vent	80	80	
Misc	370	0	4	379	9	0	0	0.00	0	0	0.00	Infil	20	20	
Sub Total ==>	1,902	158	23	1,511	35	0	0	0.00	0	0	0.00	MinStop/Rh	0	0	
Ceiling Load	563	-563	0	517	12	-273	0	0.00	0	0	0.00	Return	223	223	
Ventilation Load	0	0	29	0	0	0	-2,645	48.09	0	0	0.00	Exhaust	100	100	
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0.00	Rm Exh	0	0	
Dehumid. Ov Sizing	0	0	0	0	0	0	385	-7.00	0	0	0.00	Auxiliary	0	0	
Ov/Undr Sizing	0	0	0	0	0	0	0	0.00	0	0	0.00	Leakage Dwn	0	0	
Exhaust Heat	-794	-794	-9	0	0	0	0	0.00	0	0	0.00	Leakage Ups	0	0	
Sup. Fan Heat	0	301	3	0	0	0	0	0.00	0	0	0.00	ENGINEERING CKS			
Ret. Fan Heat	0	0	0	0	0	0	0	0.00	0	0	0.00	% OA	Cooling	Heating	
Duct Heat Pkup	0	0	0	0	0	0	0	0.00	0	0	0.00	cfm/ft²	39.4	39.4	
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	0	0	0.00	cfm/ton	0.83	0.83	
Supply Air Leakage	0	0	0	0	0	0	0	0.00	0	0	0.00	ft²/ton	276.80		
Grand Total ==>	4,965	981	8,805	4,300	100.00	-2,380	-5,501	100.00				Btu/hr-ft²	35.79	-17.52	
No. People 4															

COOLING COIL SELECTION								AREAS				HEATING COIL SELECTION			
Total Capacity	Sens Cap.	Coil Airflow	Enter DB/WB/HR		Leave DB/WB/HR		Gross Total	Glass	Capacity		Coil Airflow	Ent		Lv	
ton	MBh	cfm	°F	°F	gr/lb	°F	°F	gr/lb	ft² (%)	MBh	cfm	°F	°F	°F	
Main Clg	0.7	8.8	6.8	203	86.4	68.1	74.8	55.8	54.3	61.1	-4.3	203	56.1	75.3	
Aux Clg	0.0	0.0	0.0	0	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	0	0.0	0.0	0.0	
Total	0.7	8.8													
Main Htg															
Aux Htg															
Preheat															
Humidif															
Opt Vent															
Total															

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