

CECIS UNIDAD ALTAMIRA

Location	ALTAMIRA,TAMAULIPAS
Building owner	INFONAVIT
Program user	ING MEZA
Company	INGENOR
Comments	

By	Trial
Dataset name	C:\Users\AMH\Documents\TRACE 700 Projects\CECIS-ALTAMIRA-01-080218.trc

Calculation time	04:12 PM on 02/09/2018
TRACE® 700 version	6.3.2

Location	Altamira, Mexico	
Latitude	22.3	deg
Longitude	97.6	deg
Time Zone	6	
Elevation	82	ft
Barometric pressure	28.1	in. Hg
Air density	0.0714	lb/cu ft
Air specific heat	0.2444	Btu/lb·°F
Density-specific heat product	1.0465	Btu/h·cfm·°F
Latent heat factor	4,606.8	Btu·min/h·cu ft
Enthalpy factor	4.2814	lb·min/hr·cu ft
Summer design dry bulb	91.4	°F
Summer design wet bulb	80.6	°F
Winter design dry bulb	24.8	°F
Summer clearness number	1.00	
Winter clearness number	1.00	
Summer ground reflectance	0.20	
Winter ground reflectance	0.20	
Carbon Dioxide Level	400	ppm
Design simulation period	January - December	
Cooling load methodology	CLTD-CLF (ASHRAE TFM)	
Heating load methodology	UATD	



System Checksums

By Trial

UC/UE CC

Fan Coil

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES		
Peaked at Time:		Mo/Hr: 8 / 16		Mo/Hr: Sum of		Mo/Hr: Heating Design		Mo/Hr: Heating Design				Cooling	Heating	
Outside Air:		OADB/WB/HR: 101 / 75 / 98		OADB: Peaks		OADB: 25		OADB: 25				SADB	60.2	85.4
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	Ra Plenum	75.0	70.0
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h		Btu/h	Btu/h		Return	75.0	70.0
Envelope Loads				Envelope Loads								Ret/OA	75.6	70.0
Skylite Solar	0	0	0	0	0	Skylite Solar	0	0.00	Fn MtrTD	0.0	0.0	Fn BldTD	0.0	0.0
Skylite Cond	0	0	0	0	0	Skylite Cond	0	0.00	Fn Frict	0.0	0.0			
Roof Cond	3,535	0	3,535	24	3,535	28	Roof Cond	-1,712	-1,712	12.05				
Glass Solar	0	0	0	0	0	0	Glass Solar	0	0	0.00				
Glass/Door Cond	0	0	0	0	0	0	Glass/Door Cond	0	0	0.00				
Wall Cond	0	0	0	0	0	0	Wall Cond	0	0	0.00				
Partition/Door	6,009	0	6,009	41	6,009	47	Partition/Door	-11,554	-11,554	81.30				
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				
Infiltration	0	0	0	0	0	0	Infiltration	0	0	0.00				
<i>Sub Total ==></i>	9,544	0	9,544	66	9,544	75	<i>Sub Total ==></i>	-13,267	-13,267	93.34				
Internal Loads				Internal Loads								AIRFLOWS		
Lights	1,823	0	1,823	13	1,823	14	Lights	0	0	0.00	Diffuser	822	822	
People	1,742	0	1,742	12	922	7	People	0	0	0.00	Terminal	822	822	
Misc	492	0	492	3	492	4	Misc	0	0	0.00	Main Fan	822	822	
<i>Sub Total ==></i>	4,057	0	4,057	28	3,237	25	<i>Sub Total ==></i>	0	0	0.00	Sec Fan	0	0	
Ceiling Load				Ceiling Load								Nom Vent	20	0
Ventilation Load	0	0	934	6	0	0	Ventilation Load	0	0	0.00	AHU Vent	20	0	
Adj Air Trans Heat	0	0	0	0	0	0	Adj Air Trans Heat	0	0	0	Infil	0	0	
Dehumid. Ov Sizing	0	0	0	0	0	0	Ov/Undr Sizing	0	0	0.00	MinStop/Rh	0	0	
Ov/Undr Sizing	0	0	0	0	0	0	Exhaust Heat	0	0	0.00	Return	822	822	
Exhaust Heat	0	0	0	0	0	0	OA Preheat Diff.	-740	5.21		Exhaust	20	0	
Sup. Fan Heat	0	0	0	0	0	0	RA Preheat Diff.	-206	1.45		Rm Exh	0	0	
Ret. Fan Heat	0	0	0	0	0	0	Additional Reheat	0	0.00		Auxiliary	0	0	
Duct Heat Pkup	0	0	0	0	0	0	Underflr Sup Ht Pkup	0	0.00		Leakage Dwn	0	0	
Underflr Sup Ht Pkup	0	0	0	0	0	0	Supply Air Leakage	0	0.00		Leakage Ups	0	0	
Supply Air Leakage	0	0	0	0	0	0	<i>Grand Total ==></i>	-13,267	-14,213	100.00	ENGINEERING CKS			
<i>Grand Total ==></i>	13,600	0	14,535	100.00	12,780	100.00	<i>Grand Total ==></i>	-13,267	-14,213	100.00	% OA	2.4	0.0	

COOLING COIL SELECTION										AREAS			HEATING COIL SELECTION				
	Total Capacity		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR			Leave DB/WB/HR			Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F	
	ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb							
Main Clg	1.2	14.5	13.3	822	75.6	62.6	69.9	60.2	56.7	67.7	Floor	304	Main Htg	-14.2	822	68.9	85.4
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Part	659	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	1.2	14.5									Roof	304	Humidif	0.0	0	0.0	0.0
											Wall	0	Opt Vent	0.0	0	0.0	0.0
											Ext Door	0	Total	-14.2			

System Checksums

By Trial

UC/UE PR1

Fan Coil

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES		
Peaked at Time:		Mo/Hr: 8 / 15		Mo/Hr: Sum of		Mo/Hr: Heating Design		Mo/Hr: Heating Design				Cooling	Heating	
Outside Air:		OADB/WB/HR: 102 / 76 / 104		OADB: Peaks		OADB: 25		OADB: 25				SADB	59.2	76.6
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	Return	75.0	70.0
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h		Btu/h	Btu/h		Ret/OA	76.0	70.0
Envelope Loads				Envelope Loads								Fn MtrTD	0.0	0.0
Skylite Solar	0	0	0	0	0	Skylite Solar	0	0.00				Fn BldTD	0.0	0.0
Skylite Cond	0	0	0	0	0	Skylite Cond	0	0.00				Fn Frict	0.0	0.0
Roof Cond	1,799	0	1,799	22	1,752	26	Roof Cond	-839	-839	23.54		AIRFLOWS		
Glass Solar	0	0	0	0	0	0	Glass Solar	0	0	0.00		Diffuser	412	412
Glass/Door Cond	0	0	0	0	0	0	Glass/Door Cond	0	0	0.00		Terminal	412	412
Wall Cond	0	0	0	0	0	0	Wall Cond	0	0	0.00		Main Fan	412	412
Partition/Door	999	0	999	12	1,054	16	Partition/Door	-2,017	-2,017	56.56		Sec Fan	0	0
Floor	0	0	0	0	0	0	Floor	0	0	0.00		Nom Vent	15	0
Adjacent Floor	0	0	0	0	0	0	Adjacent Floor	0	0	0		AHU Vent	15	0
Infiltration	0	0	0	0	0	0	Infiltration	0	0	0.00		Infil	0	0
Sub Total ==>	2,798	0	2,798	34	2,807	41	Sub Total ==>	-2,856	-2,856	80.10		MinStop/Rh	0	0
Internal Loads				Internal Loads								Return	412	412
Lights	894	0	894	11	916	13	Lights	0	0	0.00		Exhaust	15	0
People	1,308	0	1,308	16	701	10	People	0	0	0.00		Rm Exh	0	0
Misc	2,352	0	2,352	29	2,374	35	Misc	0	0	0.00		Auxiliary	0	0
Sub Total ==>	4,554	0	4,554	56	3,990	59	Sub Total ==>	0	0	0.00		Leakage Dwn	0	0
Ceiling Load				Ceiling Load								Leakage Ups	0	0
Ventilation Load	0	0	772	10	0	0	Ventilation Load	0	0	0.00		ENGINEERING CKS		
Adj Air Trans Heat	0	0	0	0	0	0	Adj Air Trans Heat	0	0	0		% OA	3.6	0.0
Dehumid. Ov Sizing	0	0	0	0	0	0	Ov/Undr Sizing	0	0	0.00		cfm/ft²	2.77	2.77
Ov/Undr Sizing	0	0	0	0	0	0	Exhaust Heat	0	0	0.00		cfm/ton	608.84	
Exhaust Heat	0	0	0	0	0	0	OA Preheat Diff.	-541	15.16		ft²/ton	219.90		
Sup. Fan Heat	0	0	0	0	0	0	RA Preheat Diff.	-169	4.74		Btu/hr-ft²	54.57	-23.95	
Ret. Fan Heat	0	0	0	0	0	0	Additional Reheat	0	0.00		No. People	3		
Duct Heat Pkup	0	0	0	0	0	0	Underflr Sup Ht Pkup	0	0.00					
Underflr Sup Ht Pkup	0	0	0	0	0	0	Supply Air Leakage	0	0.00					
Supply Air Leakage	0	0	0	0	0	0	Grand Total ==>	-2,856	-3,566	100.00				
Grand Total ==>	7,352	0	8,124	100.00	6,797	100.00	Grand Total ==>	-2,856	-3,566	100.00				

COOLING COIL SELECTION										AREAS			HEATING COIL SELECTION				
	Total Capacity		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR			Leave DB/WB/HR			Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F	
	ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb							
Main Clg	0.7	8.1	7.2	412	76.0	62.9	70.5	59.2	56.2	67.2	Floor	149	-3.6	412	68.4	76.6	
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Part	115	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	0.7	8.1									Roof	149	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	-3.6					

System Checksums

By Trial

UC/UE PR2

Fan Coil

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES		
Peaked at Time:		Mo/Hr: 8 / 15		Mo/Hr: Sum of		Mo/Hr: Heating Design		Mo/Hr: Heating Design				Cooling	Heating	
Outside Air:		OADB/WB/HR: 102 / 76 / 104		OADB: Peaks		OADB: 25		OADB: 25				SADB	59.2	76.6
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	Ra Plenum	75.0	70.0
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Btu/h		Btu/h	Btu/h		Return	75.0	70.0
Envelope Loads				Envelope Loads								Fn MtrTD	0.0	0.0
Skylite Solar	0	0	0	0	0	0	0	0.00	0	0	0.00	Fn BldTD	0.0	0.0
Skylite Cond	0	0	0	0	0	0	0	0.00	0	0	0.00	Fn Frict	0.0	0.0
Roof Cond	1,799	0	1,799	22	1,752	26	-839	23.54	-839	-839	23.54	AIRFLOWS		
Glass Solar	0	0	0	0	0	0	0	0.00	0	0	0.00	Diffuser	412	412
Glass/Door Cond	0	0	0	0	0	0	0	0.00	0	0	0.00	Terminal	412	412
Wall Cond	0	0	0	0	0	0	0	0.00	0	0	0.00	Main Fan	412	412
Partition/Door	999	0	999	12	1,054	16	-2,017	56.56	-2,017	-2,017	56.56	Sec Fan	0	0
Floor	0	0	0	0	0	0	0	0.00	0	0	0.00	Nom Vent	15	0
Adjacent Floor	0	0	0	0	0	0	0	0	0	0	0	AHU Vent	15	0
Infiltration	0	0	0	0	0	0	0	0.00	0	0	0.00	Infil	0	0
Sub Total ==>	2,798	0	2,798	34	2,807	41	-2,856	80.10	-2,856	-2,856	80.10	MinStop/Rh	0	0
Internal Loads				Internal Loads								Return	412	412
Lights	894	0	894	11	916	13	0	0.00	0	0	0.00	Exhaust	15	0
People	1,308	0	1,308	16	701	10	0	0.00	0	0	0.00	Rm Exh	0	0
Misc	2,352	0	2,352	29	2,374	35	0	0.00	0	0	0.00	Auxiliary	0	0
Sub Total ==>	4,554	0	4,554	56	3,990	59	0	0.00	0	0	0.00	Leakage Dwn	0	0
Ceiling Load				Ceiling Load								Leakage Ups	0	0
Ventilation Load	0	0	772	10	0	0	0	0.00	0	0	0.00	ENGINEERING CKS		
Adj Air Trans Heat	0	0	0	0	0	0	0	0	0	0	0	% OA	3.6	0.0
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0.00	0	0	0.00	cfm/ft²	2.77	2.77
Ov/Undr Sizing	0	0	0	0	0	0	0	0.00	0	0	0.00	cfm/ton	608.84	
Exhaust Heat	0	0	0	0	0	0	0	0.00	0	0	0.00	ft²/ton	219.90	
Sup. Fan Heat	0	0	0	0	0	0	-541	15.16	-541	-541	15.16	Btu/hr-ft²	54.57	-23.95
Ret. Fan Heat	0	0	0	0	0	0	-169	4.74	-169	-169	4.74	No. People	3	
Duct Heat Pkup	0	0	0	0	0	0	0	0.00	0	0	0.00			
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00	0	0	0.00			
Supply Air Leakage	0	0	0	0	0	0	0	0.00	0	0	0.00			
Grand Total ==>	7,352	0	8,124	100.00	6,797	100.00	-2,856	100.00	-2,856	-3,566	100.00			

COOLING COIL SELECTION										AREAS			HEATING COIL SELECTION				
	Total Capacity		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR			Leave DB/WB/HR			Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F	
	ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb							
Main Clg	0.7	8.1	7.2	412	76.0	62.9	70.5	59.2	56.2	67.2	Floor	149					
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Part	115					
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Int Door	0					
											ExFlr	0					
Total	0.7	8.1									Roof	149	0	0			
											Wall	0	0	0			
											Ext Door	0	0	0			

System Checksums

By Trial

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Variable Temperature Constant Volume

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK			TEMPERATURES			
Peaked at Time:		Mo/Hr: 9 / 16		Mo/Hr: Sum of		Mo/Hr: Heating Design			Cooling			Heating		
Outside Air:		OADB/WB/HR: 96 / 76 / 110		OADB: Peaks		OADB: 25			SADB			Ra Plenum		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total	Return	Ret/OA	Fn MtrTD	Fn BldTD	Fn Frict	
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Tot Sens Btu/h	(%)	75.0	76.7	0.1	0.1	0.4	
Envelope Loads				Envelope Loads										
Skylite Solar	0	0	0	0	0	Skylite Solar	0	0.00						
Skylite Cond	0	0	0	0	0	Skylite Cond	0	0.00						
Roof Cond	33,849	0	33,849	17	29,938	Roof Cond	-18,088	31.82						
Glass Solar	36,703	0	36,703	18	40,333	Glass Solar	0	0.00						
Glass/Door Cond	6,003	0	6,003	3	5,827	Glass/Door Cond	-15,463	27.21						
Wall Cond	2,210	0	2,210	1	2,666	Wall Cond	-2,002	3.52						
Partition/Door	0	0	0	0	0	Partition/Door	0	0.00						
Floor	0	0	0	0	0	Floor	0	0.00						
Adjacent Floor	0	0	0	0	0	Adjacent Floor	0	0						
Infiltration	0	0	0	0	0	Infiltration	0	0.00						
Sub Total ==>	78,766	0	78,766	39	78,763	Sub Total ==>	-35,553	62.55						
Internal Loads				Internal Loads										
Lights	16,538	4,134	20,672	10	16,770	Lights	0	0.00						
People	39,879	0	39,879	20	21,576	People	0	0.00						
Misc	38,648	0	38,648	19	38,875	Misc	0	0.00						
Sub Total ==>	95,064	4,134	99,199	49	77,221	Sub Total ==>	0	0.00						
Ceiling Load	0	0	0	0	0	Ceiling Load	0	0.00						
Ventilation Load	0	0	21,841	11	0	Ventilation Load	0	0.00						
Adj Air Trans Heat	0	0	0	0	0	Adj Air Trans Heat	0	0						
Dehumid. Ov Sizing	0	0	0	0	0	Ov/Undr Sizing	0	0.00						
Ov/Undr Sizing	0	0	0	0	0	Exhaust Heat	0	0.00						
Exhaust Heat	0	-250	-250	0	0	OA Preheat Diff.	-13,956	24.55						
Sup. Fan Heat	0	0	4,416	2	0	RA Preheat Diff.	-7,330	12.90						
Ret. Fan Heat	0	0	0	0	0	Additional Reheat	0	0.00						
Duct Heat Pkup	0	0	0	0	0	Underflr Sup Ht Pkup	0	0.00						
Underflr Sup Ht Pkup	0	0	0	0	0	Supply Air Leakage	0	0.00						
Supply Air Leakage	0	0	0	0	0	Grand Total ==>	-35,553	56.840	100.00					
Grand Total ==>	173,830	3,885	203,973	100.00	155,984	Grand Total ==>	-35,553	-56,840	100.00					

AIRFLOWS		
	Cooling	Heating
Diffuser	7,453	7,453
Terminal	7,453	7,453
Main Fan	7,453	7,453
Sec Fan	0	0
Nom Vent	450	0
AHU Vent	450	0
Infil	0	0
MinStop/Rh	0	0
Return	7,453	7,453
Exhaust	450	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	6.0	0.0
cfm/ft²	2.32	2.32
cfm/ton	438.46	
ft²/ton	188.73	
Btu/hr-ft²	63.58	0.00
No. People	90	

COOLING COIL SELECTION										
	Total Capacity		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb
Main Clg	17.0	204.0	173.3	7,453	76.7	63.4	71.7	54.4	54.0	65.6
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	17.0	204.0								

AREAS			
	Gross Total	Glass ft²	(%)
Floor	3,208		
Part	0		
Int Door	0		
ExFlr	0		
Roof	3,208	0	0
Wall	475	380	80
Ext Door	0	0	0

HEATING COIL SELECTION				
	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	0.0	7,453	67.3	74.6
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	0.0			

System Checksums

By Trial

UC/UE SJ

Fan Coil

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK			TEMPERATURES			
Peaked at Time:		Mo/Hr: 8 / 15		Mo/Hr: Sum of		Mo/Hr: Heating Design			Cooling			Heating		
Outside Air:		OADB/WB/HR: 102 / 76 / 104		OADB: Peaks		OADB: 25			SADB			Ra Plenum		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total	Return	Ret/OA	Fn MtrTD	Fn BldTD	Fn Frict	
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Tot Sens Btu/h		75.0	76.3	0.0	0.0	0.0	
Envelope Loads				Envelope Loads										
Skylite Solar	0	0	0	0	0	0	0	0.00						
Skylite Cond	0	0	0	0	0	0	0	0.00						
Roof Cond	3,663	0	3,663	11	3,566	14	-1,712	16.20						
Glass Solar	0	0	0	0	0	0	0	0.00						
Glass/Door Cond	0	0	0	0	0	0	0	0.00						
Wall Cond	0	0	0	0	0	0	0	0.00						
Partition/Door	2,745	0	2,745	9	2,896	11	-5,547	52.48						
Floor	0	0	0	0	0	0	0	0.00						
Adjacent Floor	0	0	0	0	0	0	0	0						
Infiltration	0	0	0	0	0	0	0	0.00						
<i>Sub Total ==></i>	6,408	0	6,408	20	6,462	25	-7,260	68.68						
Internal Loads				Internal Loads										
Lights	1,817	0	1,817	6	1,861	7	0	0.00						
People	6,091	0	6,091	19	3,257	13	0	0.00						
Misc	14,075	0	14,075	44	14,210	55	0	0.00						
<i>Sub Total ==></i>	21,983	0	21,983	69	19,328	75	0	0.00						
Ceiling Load	0	0	0	0	0	0	0	0.00						
Ventilation Load	0	0	3,602	11	0	0	0	0.00						
Adj Air Trans Heat	0	0	0	0	0	0	0	0						
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0.00						
Ov/Undr Sizing	0	0	0	0	0	0	0	0.00						
Exhaust Heat	0	0	0	0	0	0	0	0.00						
Sup. Fan Heat	0	0	0	0	0	0	-2,477	23.43						
Ret. Fan Heat	0	0	0	0	0	0	-834	7.89						
Duct Heat Pkup	0	0	0	0	0	0	0	0.00						
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 ==>	28,391	0	31,992	100.00	25,790	100.00	-7,260	100.00						

	Cooling	Heating
SADB	58.6	74.6
Ra Plenum	75.0	70.0
Return	75.0	70.0
Ret/OA	76.3	70.0
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS		
	Cooling	Heating
Diffuser	1,503	1,503
Terminal	1,503	1,503
Main Fan	1,503	1,503
Sec Fan	0	0
Nom Vent	70	0
AHU Vent	70	0
Infil	0	0
MinStop/Rh	0	0
Return	1,503	1,503
Exhaust	70	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	4.7	0.0
cfm/ft²	4.95	4.95
cfm/ton	563.94	
ft²/ton	113.90	
Btu/hr-ft²	105.36	-34.81
No. People	14	

COOLING COIL SELECTION										
	Total Capacity		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb
Main Clg	2.7	32.0	27.5	1,503	76.3	63.0	70.8	58.6	55.9	66.6
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.7	32.0								

AREAS			
	Gross Total	Glass ft²	(%)
Floor	304		
Part	316		
Int Door	0		
ExFlr	0		
Roof	304	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION				
	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-10.6	1,503	67.9	74.6
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	-10.6			

Room Checksums

By Trial

CECIS AVI ALTAMIRA

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			Cooling			Heating		
Outside Air:		OADB/WB/HR: 96 / 76 / 110		OADB: 94		OADB: 25			SADB			Ra Plenum		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total	Return	Ret/OA	Fn MtrTD	Fn BldTD	Fn Frict	
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Tot Sens Btu/h							
Envelope Loads				Envelope Loads										
Skylite Solar	0	0	0	0	0	0	0	0.00						
Skylite Cond	0	0	0	0	0	0	0	0.00						
Roof Cond	33,849	0	33,849	17	29,938	19	-18,088	31.82						
Glass Solar	36,703	0	36,703	18	40,333	26	0	0.00						
Glass/Door Cond	6,003	0	6,003	3	5,827	4	-15,463	27.21						
Wall Cond	2,210	0	2,210	1	2,666	2	-2,002	3.52						
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	0	0	0	0	0	0	0	0.00						
Sub Total ==>	78,766	0	78,766	39	78,763	50	-35,553	62.55						
Internal Loads				Internal Loads										
Lights	16,538	4,134	20,672	10	16,770	11	0	0.00						
People	39,879	0	39,879	20	21,576	14	0	0.00						
Misc	38,648	0	38,648	19	38,875	25	0	0.00						
Sub Total ==>	95,064	4,134	99,199	49	77,221	50	0	0.00						
Ceiling Load	0	0	0	0	0	0	0	0.00						
Ventilation Load	0	0	21,841	11	0	0	0	0.00						
Adj Air Trans Heat	0	0	0	0	0	0	0	0						
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0.00						
Ov/Undr Sizing	0	0	0	0	0	0	0	0.00						
Exhaust Heat	0	-250	-250	0	0	0	0	0.00						
Sup. Fan Heat	0	0	4,416	2	0	0	-13,956	24.55						
Ret. Fan Heat	0	0	0	0	0	0	-7,330	12.90						
Duct Heat Pkup	0	0	0	0	0	0	0	0.00						
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 ==>	173,830	3,885	203,973	100.00	155,984	100.00	-35,553	-56,840	100.00					

AIRFLOWS		
	Cooling	Heating
Diffuser	7,453	7,453
Terminal	7,453	7,453
Main Fan	7,453	7,453
Sec Fan	0	0
Nom Vent	450	0
AHU Vent	450	0
Infil	0	0
MinStop/Rh	0	0
Return	7,453	7,453
Exhaust	450	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	6.0	0.0
cfm/ft²	2.32	2.32
cfm/ton	438.46	
ft²/ton	188.73	
Btu/hr-ft²	63.58	0.00
No. People	90.0	28.1/1000 ft²

COOLING COIL SELECTION										
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh	MBh	cfm	°F	°F	gr/lb	°F	°F	gr/lb
Main Clg	17.0	204.0	173.3	7,453	76.7	63.4	71.7	54.4	54.0	65.6
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	17.0	204.0								

AREAS			
	Gross Total	Glass	
		ft²	(%)
Floor	3,208		
Part	0		
Int Door	0		
ExFlr	0		
Roof	3,208	0	0
Wall	475	380	80
Ext Door	0	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent	Lvg
	MBh	cfm	°F	°F
Main Htg	0.0	7,453	67.3	74.6
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	0.0			

Room Checksums

By Trial

CECIS CC ALTARIMA

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK			TEMPERATURES			
Peaked at Time:		Mo/Hr: 8 / 16		Mo/Hr: 8 / 16		Mo/Hr: Heating Design			Cooling			Heating		
Outside Air:		OADB/WB/HR: 101 / 75 / 98		OADB: 101		OADB: 25			SADB			Ra Plenum		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total	Return	Ret/OA	Fn MtrTD	Fn BldTD	Fn Frict	
Btu/h	Btu/h	Btu/h		Btu/h		Btu/h	Tot Sens Btu/h							
Envelope Loads				Envelope Loads										
Skylite Solar	0	0	0	0	0	0	0	0.00						
Skylite Cond	0	0	0	0	0	0	0	0.00						
Roof Cond	3,535	0	3,535	24	3,535	28	-1,712	12.05						
Glass Solar	0	0	0	0	0	0	0	0.00						
Glass/Door Cond	0	0	0	0	0	0	0	0.00						
Wall Cond	0	0	0	0	0	0	0	0.00						
Partition/Door	6,009		6,009	41	6,009	47	-11,554	81.30						
Floor	0		0	0	0	0	0	0.00						
Adjacent Floor	0		0	0	0	0	0	0.00						
Infiltration	0		0	0	0	0	0	0.00						
<i>Sub Total ==></i>	9,544		9,544	66	9,544	75	-13,267	93.34						
Internal Loads				Internal Loads										
Lights	1,823	0	1,823	13	1,823	14	0	0.00						
People	1,742	0	1,742	12	922	7	0	0.00						
Misc	492	0	492	3	492	4	0	0.00						
<i>Sub Total ==></i>	4,057		4,057	28	3,237	25	0	0.00						
Ceiling Load	0	0	0	0	0	0	0	0.00						
Ventilation Load	0	0	934	6	0	0	0	0.00						
Adj Air Trans Heat	0		0	0	0	0	0	0						
Dehumid. Ov Sizing			0	0			0	0.00						
Ov/Undr Sizing	0		0	0	0	0	0	0.00						
Exhaust Heat		0	0	0				0.00						
Sup. Fan Heat			0	0				-740	5.21					
Ret. Fan Heat			0	0				-206	1.45					
Duct Heat Pkup			0	0				0	0.00					
Underflr Sup Ht Pkup			0	0				0	0.00					
Supply Air Leakage			0	0				0	0.00					
Grand Total ==>	13,600		14,535	100.00	12,780	100.00	-13,267	-14,213	100.00					

AIRFLOWS		
	Cooling	Heating
Diffuser	822	822
Terminal	822	822
Main Fan	822	822
Sec Fan	0	0
Nom Vent	20	0
AHU Vent	20	0
Infil	0	0
MinStop/Rh	0	0
Return	822	822
Exhaust	20	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	2.4	0.0
cfm/ft²	2.71	2.71
cfm/ton	678.84	
ft²/ton	250.71	
Btu/hr-ft²	47.86	-46.80
No. People	4.0	13.2/1000 ft²

COOLING COIL SELECTION										
	Total Capacity		Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb
Main Clg	1.2	14.5	13.3	822	75.6	62.6	69.9	60.2	56.7	67.7
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	1.2	14.5								

AREAS			
	Gross Total	Glass ft²	(%)
Floor	304		
Part	659		
Int Door	0		
ExFlr	0		
Roof	304	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION				
	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-14.2	822	68.9	85.4
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-14.2			

Room Checksums

By Trial

CECIS PR1 ALTARIMA

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK			TEMPERATURES			
Peaked at Time:		Mo/Hr: 8 / 15		Mo/Hr: 8 / 16		Mo/Hr: Heating Design			Cooling			Heating		
Outside Air:		OADB/WB/HR: 102 / 76 / 104		OADB: 101		OADB: 25			SADB			Ra Plenum		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total	Return	Ret/OA	Fn MtrTD	Fn BldTD	Fn Frict	
Btu/h	Btu/h	Btu/h		Btu/h		Space Sens	Tot Sens							
Envelope Loads				Envelope Loads										
Skylite Solar	0	0	0	0	0	0	0	0.00						
Skylite Cond	0	0	0	0	0	0	0	0.00						
Roof Cond	1,799	0	1,799	22	1,752	26	-839	23.54						
Glass Solar	0	0	0	0	0	0	0	0.00						
Glass/Door Cond	0	0	0	0	0	0	0	0.00						
Wall Cond	0	0	0	0	0	0	0	0.00						
Partition/Door	999		999	12	1,054	16	-2,017	56.56						
Floor	0		0	0	0	0	0	0.00						
Adjacent Floor	0		0	0	0	0	0	0.00						
Infiltration	0		0	0	0	0	0	0.00						
<i>Sub Total ==></i>	2,798	0	2,798	34	2,807	41	-2,856	80.10						
Internal Loads				Internal Loads										
Lights	894	0	894	11	916	13	0	0.00						
People	1,308	0	1,308	16	701	10	0	0.00						
Misc	2,352	0	2,352	29	2,374	35	0	0.00						
<i>Sub Total ==></i>	4,554	0	4,554	56	3,990	59	0	0.00						
Ceiling Load	0	0	0	0	0	0	0	0.00						
Ventilation Load	0	0	772	10	0	0	0	0.00						
Adj Air Trans Heat	0		0	0	0	0	0	0						
Dehumid. Ov Sizing			0	0			0	0.00						
Ov/Undr Sizing	0		0	0	0	0	0	0.00						
Exhaust Heat		0	0	0			0	0.00						
Sup. Fan Heat			0	0			-541	15.16						
Ret. Fan Heat			0	0			-169	4.74						
Duct Heat Pkup			0	0			0	0.00						
Underflr Sup Ht Pkup			0	0			0	0.00						
Supply Air Leakage			0	0			0	0.00						
<i>Grand Total ==></i>	7,352	0	8,124	100.00	6,797	100.00	-2,856	-3,566	100.00					

AIRFLOWS		
	Cooling	Heating
Diffuser	412	412
Terminal	412	412
Main Fan	412	412
Sec Fan	0	0
Nom Vent	15	0
AHU Vent	15	0
Infil	0	0
MinStop/Rh	0	0
Return	412	412
Exhaust	15	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	3.6	0.0
cfm/ft²	2.77	2.77
cfm/ton	608.84	
ft²/ton	219.90	
Btu/hr-ft²	54.57	-23.95
No. People	3.0	20.2/1000 ft²

COOLING COIL SELECTION										
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh	MBh	cfm	°F	°F	gr/lb	°F	°F	gr/lb
Main Clg	0.7	8.1	7.2	412	76.0	62.9	70.5	59.2	56.2	67.2
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.7	8.1								

AREAS			
	Gross Total	Glass	
		ft²	(%)
Floor	149		
Part	115		
Int Door	0		
ExFlr	0		
Roof	149	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent	Lvg
	MBh	cfm	°F	°F
Main Htg	-3.6	412	68.4	76.6
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	-3.6			

Room Checksums

By Trial

CECIS PR2 ALTARIMA

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK			TEMPERATURES			
Peaked at Time:		Mo/Hr: 8 / 15		Mo/Hr: 8 / 16		Mo/Hr: Heating Design			Cooling			Heating		
Outside Air:		OADB/WB/HR: 102 / 76 / 104		OADB: 101		OADB: 25			SADB			Ra Plenum		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total	Return	Ret/OA	Fn MtrTD	Fn BldTD	Fn Frict	
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Space Sens	Tot Sens	(%)	Btu/h	Btu/h	Btu/h	Btu/h	Btu/h	
Envelope Loads				Envelope Loads										
Skylite Solar	0	0	0	0	0	Skylite Solar	0	0.00						
Skylite Cond	0	0	0	0	0	Skylite Cond	0	0.00						
Roof Cond	1,799	0	1,799	22	1,752	26	Roof Cond	-839	-839	23.54				
Glass Solar	0	0	0	0	0	Glass Solar	0	0.00						
Glass/Door Cond	0	0	0	0	0	Glass/Door Cond	0	0.00						
Wall Cond	0	0	0	0	0	Wall Cond	0	0.00						
Partition/Door	999	0	999	12	1,054	16	Partition/Door	-2,017	-2,017	56.56				
Floor	0	0	0	0	0	Floor	0	0.00						
Adjacent Floor	0	0	0	0	0	Adjacent Floor	0	0.00						
Infiltration	0	0	0	0	0	Infiltration	0	0.00						
<i>Sub Total ==></i>	2,798	0	2,798	34	2,807	41	<i>Sub Total ==></i>	-2,856	-2,856	80.10				
Internal Loads				Internal Loads										
Lights	894	0	894	11	916	13	Lights	0	0	0.00				
People	1,308	0	1,308	16	701	10	People	0	0	0.00				
Misc	2,352	0	2,352	29	2,374	35	Misc	0	0	0.00				
<i>Sub Total ==></i>	4,554	0	4,554	56	3,990	59	<i>Sub Total ==></i>	0	0	0.00				
Ceiling Load	0	0	0	0	0	0	Ceiling Load	0	0	0.00				
Ventilation Load	0	0	772	10	0	0	Ventilation Load	0	0	0.00				
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	0	0	0.00				
Ov/Undr Sizing	0	0	0	0	0	0	Exhaust Heat	0	0	0.00				
Exhaust Heat	0	0	0	0	0	0	OA Preheat Diff.	-541	15.16					
Sup. Fan Heat	0	0	0	0	0	0	RA Preheat Diff.	-169	4.74					
Ret. Fan Heat	0	0	0	0	0	0	Additional Reheat	0	0.00					
Duct Heat Pkup	0	0	0	0	0	0	System Plenum Heat	0	0.00					
Underflr Sup Ht Pkup	0	0	0	0	0	0	Underflr Sup Ht Pkup	0	0.00					
Supply Air Leakage	0	0	0	0	0	0	Supply Air Leakage	0	0.00					
<i>Grand Total ==></i>	7,352	0	8,124	100.00	6,797	100.00	<i>Grand Total ==></i>	-2,856	-3,566	100.00				

AIRFLOWS		
	Cooling	Heating
Diffuser	412	412
Terminal	412	412
Main Fan	412	412
Sec Fan	0	0
Nom Vent	15	0
AHU Vent	15	0
Infil	0	0
MinStop/Rh	0	0
Return	412	412
Exhaust	15	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	3.6	0.0
cfm/ft²	2.77	2.77
cfm/ton	608.84	
ft²/ton	219.90	
Btu/hr-ft²	54.57	-23.95
No. People	3.0	20.2/1000 ft²

COOLING COIL SELECTION										
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh	MBh	cfm	°F	°F	gr/lb	°F	°F	gr/lb
Main Clg	0.7	8.1	7.2	412	76.0	62.9	70.5	59.2	56.2	67.2
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.7	8.1								

AREAS			
	Gross Total	Glass	(%)
		ft²	
Floor	149		
Part	115		
Int Door	0		
ExFlr	0		
Roof	149	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent	Lvg
	MBh	cfm	°F	°F
Main Htg	-3.6	412	68.4	76.6
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	-3.6			

Room Checksums

By Trial

CECIS SJ ALTAMIRA

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK			TEMPERATURES			
Peaked at Time:		Mo/Hr: 8 / 15		Mo/Hr: 8 / 16		Mo/Hr: Heating Design			Cooling			Heating		
Outside Air:		OADB/WB/HR: 102 / 76 / 104		OADB: 101		OADB: 25			SADB			Ra Plenum		
Space Sens. + Lat.	Plenum Sens. + Lat	Net Total	Percent Of Total (%)	Space Sensible	Percent Of Total (%)	Space Peak	Coil Peak	Percent Of Total	Return	Ret/OA	Fn MtrTD	Fn BldTD	Fn Frict	
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 Cond	0	0	0	0	0	0	0	0.00						
Roof Cond	3,663	0	3,663	11	3,566	14	-1,712	16.20						
Glass Solar	0	0	0	0	0	0	0	0.00						
Glass/Door Cond	0	0	0	0	0	0	0	0.00						
Wall Cond	0	0	0	0	0	0	0	0.00						
Partition/Door	2,745	0	2,745	9	2,896	11	-5,547	52.48						
Floor	0	0	0	0	0	0	0	0.00						
Adjacent Floor	0	0	0	0	0	0	0	0.00						
Infiltration	0	0	0	0	0	0	0	0.00						
<i>Sub Total ==></i>	6,408	0	6,408	20	6,462	25	-7,260	68.68						
Internal Loads				Internal Loads										
Lights	1,817	0	1,817	6	1,861	7	0	0.00						
People	6,091	0	6,091	19	3,257	13	0	0.00						
Misc	14,075	0	14,075	44	14,210	55	0	0.00						
<i>Sub Total ==></i>	21,983	0	21,983	69	19,328	75	0	0.00						
Ceiling Load	0	0	0	0	0	0	0	0.00						
Ventilation Load	0	0	3,602	11	0	0	0	0.00						
Adj Air Trans Heat	0	0	0	0	0	0	0	0						
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0.00						
Ov/Undr Sizing	0	0	0	0	0	0	0	0.00						
Exhaust Heat	0	0	0	0	0	0	0	0.00						
Sup. Fan Heat	0	0	0	0	0	0	-2,477	23.43						
Ret. Fan Heat	0	0	0	0	0	0	-834	7.89						
Duct Heat Pkup	0	0	0	0	0	0	0	0.00						
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 ==>	28,391	0	31,992	100.00	25,790	100.00	-7,260	100.00						

AIRFLOWS		
	Cooling	Heating
Diffuser	1,503	1,503
Terminal	1,503	1,503
Main Fan	1,503	1,503
Sec Fan	0	0
Nom Vent	70	0
AHU Vent	70	0
Infil	0	0
MinStop/Rh	0	0
Return	1,503	1,503
Exhaust	70	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS		
	Cooling	Heating
% OA	4.7	0.0
cfm/ft²	4.95	4.95
cfm/ton	563.94	
ft²/ton	113.90	
Btu/hr-ft²	105.36	-34.81
No. People	14.0	46.1/1000 ft²

COOLING COIL SELECTION										
	Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR		
	ton	MBh	MBh	cfm	°F	°F	gr/lb	°F	°F	gr/lb
Main Clg	2.7	32.0	27.5	1,503	76.3	63.0	70.8	58.6	55.9	66.6
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.7	32.0								

AREAS			
	Gross Total	Glass	
		ft²	(%)
Floor	304		
Part	316		
Int Door	0		
ExFlr	0		
Roof	304	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION				
	Capacity	Coil Airflow	Ent	Lvg
	MBh	cfm	°F	°F
Main Htg	-10.6	1,503	67.9	74.6
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	-10.6			

System Component Selection Summary

By Trial

Alternative 1

System Description: UC/UE CC

System Type: Fan Coil
 Number of Zones: 1
 Number of Rooms: 1

Component	Sizing Method	Location	Quantity
Cooling			
Main Clg Coil	Block	Room	1
Primary Clg Fan	Peak	Room	1
Heating			
Main Htg Coil	Peak	Room	1
Miscellaneous			
System Exhaust Fan	Vent+Inf-RmExh	System	1
Return Fan	Return Airflow	System	1

Coil Location			Cooling Coil Selection											
System	Zone	Room	Component	Time Of Peak Mo/Hr	Total Capacity ton	MBh	Sensible Capacity MBh	Airflow At Coil Peak cfm	Enter DB/ °F	WB/ °F	HR gr/lb	Leave DB/ °F	WB/ °F	HR gr/lb
		CECIS CC ALTARIMA	Main Clg Coil	8/16	1.2	14.5	13.3	822	75.6	62.6	69.9	60.2	56.7	67.7

Coil Location			Heating Coil Selection				
System	Zone	Room	Component	Total Capacity MBh	Airflow cfm	Entering Dry Bulb °F	Leaving Dry Bulb °F
		CECIS CC ALTARIMA	Main Htg Coil	-14.2	822	68.9	85.4

Component Location			Miscellaneous Component Selection							
System	Zone	Room	Component	Design Airflow cfm	Ach/hr	Outside Air %	SADB Clg °F	Htg °F	Clg VAV Minimum cfm	Htg VAV Maximum cfm
UC/UE CC			Return Fan	822						
UC/UE CC			Optional Vent Fan	20		100				
UC/UE CC			System Exhaust Fan	20						
		CECIS CC ALTARIMA	Primary Fan	822	13.2	2.4	60.0			
		CECIS CC ALTARIMA	Diffuser	822	13.2	2.4	60.0	85.0		

System Description: UC/UE PR1

System Type: Fan Coil
 Number of Zones: 1
 Number of Rooms: 1

Component	Sizing Method	Location	Quantity
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Design Cooling Load Summary

By Trial
 CECIS UNIDAD ALTAMIRA
 ALTAMIRA, TAMAULIPAS

System - UC/UE CC
Zone - CECIS CC ALTARIMA
Room - CECIS CC ALTARIMA

Coil Location - Room

Coil Peak Calculation Time: August, hour 16
 Ambient DB/WB/HR: 101 / 75 / 98

COOLING COIL LOAD INFORMATION

COOLING COIL SELECTION

Load Component	Sensible Btu/h	Latent Btu/h	Total Btu/h	Percent of Total
Solar Gain	0		0	0.0%
Glass Transmission	0		0	0.0%
Wall Transmission	0		0	0.0%
Roof Transmission	3,535		3,535	24.3%
Floor Transmission	0		0	0.0%
Adj Floor Transmission	0		0.00	0.0%
Partition Transmission	6,009		6,009	41.3%
Net Ceiling Load	0		0	0.0%
Lighting	1,823		1,823	12.5%
People	922	820	1,742	12.0%
Misc. Equipment Loads	492	0	492	3.4%
Cooling Infiltration	0	0	0	0.0%
Sub-Total ==>	12,780	820	13,600	93.6%
Ventilation Load	552	383	934	6.4%
Exhaust Heat	0	0	0	0.0%
Supply Fan Load	0		0	0.0%
Return Fan Load	0		0	0.0%
Net Duct Heat Pickup	0		0	0.0%
Wall Load to Plenum	0		0	0.0%
Roof Load to Plenum	0		0	0.0%
Adj Floor to Plenum	0		0	0.0%
Lighting Load to Plenum	0		0	0.0%
Misc. Equip. Load to Plenum	0	0	0	0.0%
Glass Transmission to Plenum	0		0	0.0%
Glass Solar to Plenum	0		0	0.0%
Over/Under Sizing	0		0	0.0%
Reheat at Design	0	0	0	0.0%
Underfloor Sup Heat Pickup	0		0	0.0%
Supply Air Leakage	0	0	0	0.0%
Total Cooling Loads	13,332	1,203	14,535	100.0 %

Coil Selection Parameters	
Coil Entering Air (DB / WB)	75.6 / 62.6 °F
Coil Entering Humidity Ratio	69.87 gr/lb
Coil Leaving Air (DB / WB)	60.2 / 56.7 °F
Coil Leaving Humidity Ratio	67.67 gr/lb
Coil Sensible Load	13.33 MBh
Coil Total Load	14.53 MBh
Cooling Supply Air Temperature	60.15 °F
Total Cooling Airflow	822.22 cfm
Resulting Room Relative Humidity	50.00 %

General Engineering Checks

Total Cooling Load	1.2 ton
Area / Load	250.71 ft²/ton
Total Floor Area	304 ft²
Cooling Airflow	2.71 cfm/ft²
Airflow / Load	678.84 cfm/ton
Percent Outdoor Air	2.4 %
Cooling Load Methodology	CLTD-CLF (ASHRAE TFM)

Design Cooling Load Summary

By Trial
 CECIS UNIDAD ALTAMIRA
 ALTAMIRA, TAMAULIPAS

System - UC/UE PR1
Zone - CECIS PR1 ALTARIMA
Room - CECIS PR1 ALTARIMA

Coil Location - Room

Coil Peak Calculation Time: August, hour 15
 Ambient DB/WB/HR: 102 / 76 / 104

COOLING COIL LOAD INFORMATION

COOLING COIL SELECTION

Load Component	Sensible Btu/h	Latent Btu/h	Total Btu/h	Percent of Total
Solar Gain	0		0	0.0%
Glass Transmission	0		0	0.0%
Wall Transmission	0		0	0.0%
Roof Transmission	1,799		1,799	22.2%
Floor Transmission	0		0	0.0%
Adj Floor Transmission	0		0.00	0.0%
Partition Transmission	999		999	12.3%
Net Ceiling Load	0		0	0.0%
Lighting	894		894	11.0%
People	693	615	1,308	16.1%
Misc. Equipment Loads	2,352	0	2,352	29.0%
Cooling Infiltration	0	0	0	0.0%
Sub-Total ==>	6,737	615	7,352	90.5%
Ventilation Load	424	348	772	9.5%
Exhaust Heat	0	0	0	0.0%
Supply Fan Load	0		0	0.0%
Return Fan Load	0		0	0.0%
Net Duct Heat Pickup	0		0	0.0%
Wall Load to Plenum	0		0	0.0%
Roof Load to Plenum	0		0	0.0%
Adj Floor to Plenum	0		0	0.0%
Lighting Load to Plenum	0		0	0.0%
Misc. Equip. Load to Plenum	0	0	0	0.0%
Glass Transmission to Plenum	0		0	0.0%
Glass Solar to Plenum	0		0	0.0%
Over/Under Sizing	0		0	0.0%
Reheat at Design	0	0	0	0.0%
Underfloor Sup Heat Pickup	0		0	0.0%
Supply Air Leakage	0	0	0	0.0%
Total Cooling Loads	7,161	963	8,124	100.0 %

Coil Selection Parameters	
Coil Entering Air (DB / WB)	76.0 / 62.9 °F
Coil Entering Humidity Ratio	70.45 gr/lb
Coil Leaving Air (DB / WB)	59.2 / 56.2 °F
Coil Leaving Humidity Ratio	67.15 gr/lb
Coil Sensible Load	7.16 MBh
Coil Total Load	8.12 MBh
Cooling Supply Air Temperature	59.24 °F
Total Cooling Airflow	412.17 cfm
Resulting Room Relative Humidity	50.00 %

General Engineering Checks

Total Cooling Load	0.7 ton
Area / Load	219.90 ft ² /ton
Total Floor Area	149 ft ²
Cooling Airflow	2.77 cfm/ft ²
Airflow / Load	608.84 cfm/ton
Percent Outdoor Air	3.6 %
Cooling Load Methodology	CLTD-CLF (ASHRAE TFM)

Design Cooling Load Summary

By Trial
 CECIS UNIDAD ALTAMIRA
 ALTAMIRA, TAMAULIPAS

System - UC/UE PR2

Zone - CECIS PR2 ALTARIMA

Room - CECIS PR2 ALTARIMA

Coil Location - Room

Coil Peak Calculation Time: August, hour 15
 Ambient DB/WB/HR: 102 / 76 / 104

COOLING COIL LOAD INFORMATION

COOLING COIL SELECTION

Load Component	Sensible Btu/h	Latent Btu/h	Total Btu/h	Percent of Total
Solar Gain	0		0	0.0%
Glass Transmission	0		0	0.0%
Wall Transmission	0		0	0.0%
Roof Transmission	1,799		1,799	22.2%
Floor Transmission	0		0	0.0%
Adj Floor Transmission	0		0.00	0.0%
Partition Transmission	999		999	12.3%
Net Ceiling Load	0		0	0.0%
Lighting	894		894	11.0%
People	693	615	1,308	16.1%
Misc. Equipment Loads	2,352	0	2,352	29.0%
Cooling Infiltration	0	0	0	0.0%
Sub-Total ==>	6,737	615	7,352	90.5%
Ventilation Load	424	348	772	9.5%
Exhaust Heat	0	0	0	0.0%
Supply Fan Load	0		0	0.0%
Return Fan Load	0		0	0.0%
Net Duct Heat Pickup	0		0	0.0%
Wall Load to Plenum	0		0	0.0%
Roof Load to Plenum	0		0	0.0%
Adj Floor to Plenum	0		0	0.0%
Lighting Load to Plenum	0		0	0.0%
Misc. Equip. Load to Plenum	0	0	0	0.0%
Glass Transmission to Plenum	0		0	0.0%
Glass Solar to Plenum	0		0	0.0%
Over/Under Sizing	0		0	0.0%
Reheat at Design	0	0	0	0.0%
Underfloor Sup Heat Pickup	0		0	0.0%
Supply Air Leakage	0	0	0	0.0%
Total Cooling Loads	7,161	963	8,124	100.0 %

Coil Selection Parameters	
Coil Entering Air (DB / WB)	76.0 / 62.9 °F
Coil Entering Humidity Ratio	70.45 gr/lb
Coil Leaving Air (DB / WB)	59.2 / 56.2 °F
Coil Leaving Humidity Ratio	67.15 gr/lb
Coil Sensible Load	7.16 MBh
Coil Total Load	8.12 MBh
Cooling Supply Air Temperature	59.24 °F
Total Cooling Airflow	412.17 cfm
Resulting Room Relative Humidity	50.00 %

General Engineering Checks

Total Cooling Load	0.7 ton
Area / Load	219.90 ft ² /ton
Total Floor Area	149 ft ²
Cooling Airflow	2.77 cfm/ft ²
Airflow / Load	608.84 cfm/ton
Percent Outdoor Air	3.6 %
Cooling Load Methodology	CLTD-CLF (ASHRAE TFM)

Design Cooling Load Summary

By Trial
 CECIS UNIDAD ALTAMIRA
 ALTAMIRA, TAMAULIPAS

System - UC/UE SJ

Zone - CECIS SJ ALTAMIRA

Room - CECIS SJ ALTAMIRA

Coil Location - Room

Coil Peak Calculation Time: August, hour 15
 Ambient DB/WB/HR: 102 / 76 / 104

COOLING COIL LOAD INFORMATION

COOLING COIL SELECTION

Load Component	Sensible Btu/h	Latent Btu/h	Total Btu/h	Percent of Total
Solar Gain	0		0	0.0%
Glass Transmission	0		0	0.0%
Wall Transmission	0		0	0.0%
Roof Transmission	3,663		3,663	11.4%
Floor Transmission	0		0	0.0%
Adj Floor Transmission	0		0.00	0.0%
Partition Transmission	2,745		2,745	8.6%
Net Ceiling Load	0		0	0.0%
Lighting	1,817		1,817	5.7%
People	3,221	2,870	6,091	19.0%
Misc. Equipment Loads	14,075	0	14,075	44.0%
Cooling Infiltration	0	0	0	0.0%
Sub-Total ==>	25,521	2,870	28,391	88.7%
Ventilation Load	1,978	1,624	3,602	11.3%
Exhaust Heat	0	0	0	0.0%
Supply Fan Load	0		0	0.0%
Return Fan Load	0		0	0.0%
Net Duct Heat Pickup	0		0	0.0%
Wall Load to Plenum	0		0	0.0%
Roof Load to Plenum	0		0	0.0%
Adj Floor to Plenum	0		0	0.0%
Lighting Load to Plenum	0		0	0.0%
Misc. Equip. Load to Plenum	0	0	0	0.0%
Glass Transmission to Plenum	0		0	0.0%
Glass Solar to Plenum	0		0	0.0%
Over/Under Sizing	0		0	0.0%
Reheat at Design	0	0	0	0.0%
Underfloor Sup Heat Pickup	0		0	0.0%
Supply Air Leakage	0	0	0	0.0%
Total Cooling Loads	27,499	4,494	31,992	100.0 %

Coil Selection Parameters	
Coil Entering Air (DB / WB)	76.3 / 63.0 °F
Coil Entering Humidity Ratio	70.81 gr/lb
Coil Leaving Air (DB / WB)	58.6 / 55.9 °F
Coil Leaving Humidity Ratio	66.59 gr/lb
Coil Sensible Load	27.50 MBh
Coil Total Load	31.99 MBh
Cooling Supply Air Temperature	58.61 °F
Total Cooling Airflow	1,503.46 cfm
Resulting Room Relative Humidity	50.00 %

General Engineering Checks

Total Cooling Load	2.7 ton
Area / Load	113.90 ft ² /ton
Total Floor Area	304 ft ²
Cooling Airflow	4.95 cfm/ft ²
Airflow / Load	563.94 cfm/ton
Percent Outdoor Air	4.7 %
Cooling Load Methodology	CLTD-CLF (ASHRAE TFM)

Design Cooling Load Summary

By Trial
CECIS UNIDAD ALTAMIRA
ALTAMIRA, TAMAULIPAS

System - UP AVI
Zone - CECIS AVI ALTAMIRA

Coil Location - Zone

Coil Peak Calculation Time: September, hour 16
Ambient DB/WB/HR: 96 / 76 / 110

COOLING COIL LOAD INFORMATION

COOLING COIL SELECTION

Load Component	Sensible Btu/h	Latent Btu/h	Total Btu/h	Percent of Total
Solar Gain	36,703		36,703	18.0%
Glass Transmission	6,003		6,003	2.9%
Wall Transmission	2,210		2,210	1.1%
Roof Transmission	33,849		33,849	16.6%
Floor Transmission	0		0	0.0%
Adj Floor Transmission	0		0.00	0.0%
Partition Transmission	0		0	0.0%
Net Ceiling Load	0		0	0.0%
Lighting	16,538		16,538	8.1%
People	21,429	18,450	39,879	19.6%
Misc. Equipment Loads	38,648	0	38,648	18.9%
Cooling Infiltration	0	0	0	0.0%
Sub-Total ==>	155,380	18,450	173,830	85.2%
Ventilation Load	9,659	12,182	21,841	10.7%
Exhaust Heat	-250	0	-250	-0.1%
Supply Fan Load	4,416		4,416	2.2%
Return Fan Load	0		0	0.0%
Net Duct Heat Pickup	0		0	0.0%
Wall Load to Plenum	0		0	0.0%
Roof Load to Plenum	0		0	0.0%
Adj Floor to Plenum	0		0	0.0%
Lighting Load to Plenum	4,134		4,134	2.0%
Misc. Equip. Load to Plenum	0	0	0	0.0%
Glass Transmission to Plenum	0		0	0.0%
Glass Solar to Plenum	0		0	0.0%
Over/Under Sizing	0		0	0.0%
Reheat at Design	0	0	0	0.0%
Underfloor Sup Heat Pickup	0		0	0.0%
Supply Air Leakage	0	0	0	0.0%
Total Cooling Loads	173,340	30,632	203,973	100.0 %

Coil Selection Parameters	
Coil Entering Air (DB / WB)	76.7 / 63.4 °F
Coil Entering Humidity Ratio	71.65 gr/lb
Coil Leaving Air (DB / WB)	54.4 / 54.0 °F
Coil Leaving Humidity Ratio	65.59 gr/lb
Coil Sensible Load	173.34 MBh
Coil Total Load	203.97 MBh
Cooling Supply Air Temperature	55.00 °F
Total Cooling Airflow	7,452.75 cfm
Resulting Room Relative Humidity	50.00 %

General Engineering Checks

Total Cooling Load	17.0 ton
Area / Load	188.73 ft ² /ton
Total Floor Area	3,208 ft ²
Cooling Airflow	2.32 cfm/ft ²
Airflow / Load	438.46 cfm/ton
Percent Outdoor Air	6.0 %
Cooling Load Methodology	CLTD-CLF (ASHRAE TFM)

System Component Selection Summary

By Trial

Cooling

Main Clg Coil	Block	Room	1
Primary Clg Fan	Peak	Room	1

Heating

Main Htg Coil	Peak	Room	1
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Miscellaneous

System Exhaust Fan	Vent+Inf-RmExh	System	1
Return Fan	Return Airflow	System	1

Coil Location			Cooling Coil Selection											
System	Zone	Room	Component	Time Of Peak Mo/Hr	Total Capacity ton MBh		Sensible Capacity MBh	Airflow At Coil Peak cfm	Enter DB/ WB/ HR °F °F gr/lb			Leave DB/ WB/ HR °F °F gr/lb		
		CECIS PR1 ALTARIMA	Main Clg Coil	8/15	0.7	8.1	7.2	412	76.0	62.9	70.5	59.2	56.2	67.2

Coil Location			Heating Coil Selection				
System	Zone	Room	Component	Total Capacity MBh	Airflow cfm	Entering Dry Bulb °F	Leaving Dry Bulb °F
		CECIS PR1 ALTARIMA	Main Htg Coil	-3.6	412	68.4	76.6

Component Location			Miscellaneous Component Selection							
System	Zone	Room	Component	Design Airflow cfm Ach/hr		Outside Air %	SADB Clg Htg °F °F		Clg VAV Minimum cfm	Htg VAV Maximum cfm
UC/UE PR1			Return Fan	412						
UC/UE PR1			Optional Vent Fan	15		100				
UC/UE PR1			System Exhaust Fan	15						
		CECIS PR1 ALTARIMA	Primary Fan	412	13.5	3.6	59.0			
		CECIS PR1 ALTARIMA	Diffuser	412	13.5	3.6	59.0	77.0		

System Description: UC/UE PR2

System Type: Fan Coil

Number of Zones: 1

Number of Rooms: 1

Component	Sizing Method	Location	Quantity
Cooling			
Main Clg Coil	Block	Room	1
Primary Clg Fan	Peak	Room	1
Heating			
Main Htg Coil	Peak	Room	1
Miscellaneous			
System Exhaust Fan	Vent+Inf-RmExh	System	1
Return Fan	Return Airflow	System	1

System Component Selection Summary

By Trial

Coil Location			Cooling Coil Selection											
System	Zone	Room	Component	Time Of Peak Mo/Hr	Total Capacity		Sensible Capacity MBh	Airflow At Coil Peak cfm	Enter DB/ WB/ HR			Leave DB/ WB/ HR		
					ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb
		CECIS PR2 ALTARIMA	Main Clg Coil	8/15	0.7	8.1	7.2	412	76.0	62.9	70.5	59.2	56.2	67.2

Coil Location			Heating Coil Selection				
System	Zone	Room	Component	Total Capacity MBh	Airflow cfm	Entering Dry Bulb °F	Leaving Dry Bulb °F
		CECIS PR2 ALTARIMA	Main Htg Coil	-3.6	412	68.4	76.6

Component Location			Miscellaneous Component Selection							
System	Zone	Room	Component	Design Airflow		Outside Air	SADB		Clg VAV Minimum cfm	Htg VAV Maximum cfm
				cfm	Ach/hr	%	Clg °F	Htg °F		
UC/UE PR2			Return Fan	412						
UC/UE PR2			Optional Vent Fan	15		100				
UC/UE PR2			System Exhaust Fan	15						
		CECIS PR2 ALTARIMA	Primary Fan	412	13.5	3.6	59.0			
		CECIS PR2 ALTARIMA	Diffuser	412	13.5	3.6	59.0	77.0		

System Description: UC/UE SJ

System Type: Fan Coil

Number of Zones: 1

Number of Rooms: 1

Component	Sizing Method	Location	Quantity
Cooling			
Main Clg Coil	Block	Room	1
Primary Clg Fan	Peak	Room	1
Heating			
Main Htg Coil	Peak	Room	1
Miscellaneous			
System Exhaust Fan	Vent+Inf-RmExh	System	1
Return Fan	Return Airflow	System	1

Coil Location			Cooling Coil Selection											
System	Zone	Room	Component	Time Of Peak Mo/Hr	Total Capacity		Sensible Capacity MBh	Airflow At Coil Peak cfm	Enter DB/ WB/ HR			Leave DB/ WB/ HR		
					ton	MBh			°F	°F	gr/lb	°F	°F	gr/lb
		CECIS SJ ALTAMIRA	Main Clg Coil	8/15	2.7	32.0	27.5	1,503	76.3	63.0	70.8	58.6	55.9	66.6

System Component Selection Summary

By Trial

Coil Location			Heating Coil Selection				
System	Zone	Room	Component	Total Capacity MBh	Airflow cfm	Entering Dry Bulb °F	Leaving Dry Bulb °F
		CECIS SJ ALTAMIRA	Main Htg Coil	-10.6	1,503	67.9	74.6

Component Location			Miscellaneous Component Selection							
System	Zone	Room	Component	Design Airflow cfm	Airflow Ach/hr	Outside Air %	SADB		Clg VAV Minimum cfm	Htg VAV Maximum cfm
							Clg °F	Htg °F		
UC/UE SJ			Return Fan	1,503						
UC/UE SJ			Optional Vent Fan	70		100				
UC/UE SJ			System Exhaust Fan	70						
		CECIS SJ ALTAMIRA	Primary Fan	1,503	24.2	4.7	59.0			
		CECIS SJ ALTAMIRA	Diffuser	1,503	24.2	4.7	59.0	75.0		

System Description: UP AVI

System Type: Variable Temperature Constant Volume

Number of Zones: 1

Number of Rooms: 1

Component	Sizing Method	Location	Quantity
Cooling			
Main Clg Coil	Peak	Zone	1
Primary Clg Fan	Peak	Zone	1
Heating			
Main Htg Coil	Peak	Zone	1
Miscellaneous			
System Exhaust Fan	Vent+Inf-RmExh	System	1
Return Fan	Return Airflow	System	1

Coil Location			Cooling Coil Selection											
System	Zone	Room	Component	Time Of Peak Mo/Hr	Total Capacity ton	MBh	Sensible Capacity MBh	Airflow At Coil Peak cfm	Enter DB/ WB/ HR			Leave DB/ WB/ HR		
									°F	°F	gr/lb	°F	°F	gr/lb
		CECIS AVI ALTAMIRA	Main Clg Coil	9/16	17.0	204.0	173.3	7,453	76.7	63.4	71.7	54.4	54.0	65.6

Coil Location			Heating Coil Selection				
System	Zone	Room	Component	Total Capacity MBh	Airflow cfm	Entering Dry Bulb °F	Leaving Dry Bulb °F
		CECIS AVI ALTAMIRA	Main Htg Coil	0.0	7,453	67.3	74.6

System Component Selection Summary

By Trial

Component Location			Miscellaneous Component Selection							
System	Zone	Room	Component	Design Airflow		Outside Air %	SADB		Clg VAV Minimum cfm	Htg VAV Maximum cfm
				cfm	Ach/hr		Clg °F	Htg °F		
UP AVI			Return Fan	7,453						
UP AVI			Optional Vent Fan	450		100				
UP AVI			System Exhaust Fan	450						
		CECIS AVI ALTAMIRA	Primary Fan	7,453		6.0	55.0			
		CECIS AVI ALTAMIRA	Diffuser	7,453	11.3	6.0	55.0	75.0		

ZONE PSYCHROMETRIC STATE POINTS

By Trial

CECIS AVI ALTAMIRA

	Dry Bulb °F	Wet Bulb °F	Relative Humidity %	Humidity Ratio gr/lb	Enthalpy Btu/lb	Temperature Difference °F
Space	75.0	62.3	50.0	69.2	28.8	
Main System						
Return Fan						0.0
Return Air	75.5	62.5	49.1	69.2	28.9	
Return Air Heat Pickup						0.5
Outdoor Air	94.3	75.1	42.3	109.6	39.9	
Entering OA preconditioning	94.3	75.1	42.3	109.6	39.9	
Leaving OA preconditioning	94.3	75.1	42.3	109.6	39.9	
Return/Outdoor Air Mix	76.7	63.3	48.9	71.6	29.6	
Blow Through Fan						0.0
Entering Coil	76.7	63.3	48.9	71.6	29.6	
Leaving Coil	54.4	52.8	90.4	60.9	22.5	
Draw Through Fan						0.2
Fan Frictional Heat						0.4
Supply Duct Heat Gain						0.0
Reheat Device						0.0
Cold Deck Supply Air	55.0	53.0	88.6	60.9	22.6	
Supply Air	55.0	53.0	88.6	60.9	22.6	
Percent Outside Air	6.04					
Sensible Heat Ratio (SHR)	0.89	%				
Coil Airflow	7,453	cfm				