ENERGY CONSUMPTION SUMMARY

By THORNTON TOMASETTI, INC.

	Elect Cons. (kWh)	% of Total Building Energy	Total Building Energy (kBtu/yr)	Total Source Energy* (kBtu/yr)
Alternative 1				
Primary heating				
Primary heating	34,013	12.9 %	116,085	348,291
Other Htg Accessories	5,990	2.3 %	20,444	61,337
Heating Subtotal	**40,003**	**15.2** %	**136,529**	**409,628**
Primary cooling				
Cooling Compressor	5,200	2.0 %	17,747	53,248
Tower/Cond Fans		0.0 %	0	0
Condenser Pump		0.0 %	0	0
Other Clg Accessories	8,492	3.2 %	28,983	86,959
Cooling Subtotal....	**13,692**	**5.2** %	**46,731**	**140,207**
Auxiliary				
Supply Fans	34,341	13.0 %	117,205	351,649
Pumps	45,143	17.2 %	154,075	462,270
Stand-alone Base Utilities	29,617	11.3 %	101,081	303,274
Aux Subtotal....	109,101	41.4 %	372,361	1,117,193
Lighting				
Lighting	38,187	14.5 %	130,331	391,032
Receptacle				
Receptacles	62,269	23.7 %	212,522	637,631
Cogeneration				
Cogeneration		0.0 %	0	0
Totals				
Totals**	**263,250**	**100.0** %	**898,474**	**2,695,691**

* Note: Resource Utilization factors are included in the Total Source Energy value .

** Note: This report can display a maximum of 7 utilities. If additional utilities are used, they will be included in the total.

ENERGY CONSUMPTION SUMMARY

By THORNTON TOMASETTI, INC.

	Elect Cons. (kWh)	% of Total Building Energy	Total Building Energy (kBtu/yr)	Total Source Energy* (kBtu/yr)
Alternative 2				
Primary heating				
Primary heating	100,956	26.5 %	344,564	1,033,794
Other Htg Accessories	368	0.1 %	1,257	3,773
Heating Subtotal	**101,325**	**26.6** %	**345,821**	**1,037,567**
Primary cooling				
Cooling Compressor	17,725	4.7 %	60,494	181,500
Tower/Cond Fans	2,834	0.7 %	9,672	29,018
Condenser Pump		0.0 %	0	0
Other Clg Accessories	612	0.2 %	2,088	6,266
Cooling Subtotal....	**21,170**	**5.6** %	**72,254**	**216,783**
Auxiliary				
Supply Fans	69,340	18.2 %	236,658	710,046
Pumps		0.0 %	0	0
Stand-alone Base Utilities	45,098	11.8 %	153,921	461,808
Aux Subtotal....	114,439	30.0 %	390,579	1,171,854
Lighting				
Lighting	82,007	21.5 %	279,889	839,750
Receptacle				
Receptacles	62,269	16.3 %	212,522	637,631
Cogeneration				
Cogeneration		0.0 %	0	0
Totals				
Totals**	**381,209**	**100.0** %	**1,301,065**	**3,903,584**

* Note: Resource Utilization factors are included in the Total Source Energy value .

** Note: This report can display a maximum of 7 utilities. If additional utilities are used, they will be included in the total.

Energy Cost Budget / PRM Summary

By THORNTON TOMASETTI, INC.

Project Name:	Date: June 10, 2015
City:	Weather Data: BRUNSWICK NAS, Maine

Note: The percentage displayed for the "Proposed/ Base %" column of the base case is actually the percentage of the total energy consumption.

* Denotes the base alternative for the ECB study.

		* Alt-2 ASHRAE Baseline 90.1-0			Alt-1 Proposed Building		
		Energy 10^6 Btu/yr	Proposed / Base %	Peak kBtuh	Energy 10^6 Btu/yr	Proposed / Base %	Peak kBtuh
Lighting - Conditioned	Electricity	260.2	20	76	124.8	48	36
Lighting - Unconditioned	Electricity	19.7	2	6	5.6	28	2
Space Heating	Electricity	346.8	27	741	136.5	39	82
Space Cooling	Electricity	61.3	5	107	46.7	76	92
Pumps	Electricity	0.0	0	0	154.1	0	67
Heat Rejection	Electricity	9.6	1	10	0.0	0	0
Fans - Conditioned	Electricity	229.9	18	55	117.2	51	47
Receptacles - Conditioned	Electricity	212.5	16	62	212.5	100	62
Stand-alone Base Utilities	Electricity	153.9	12	67	101.1	66	55
Total Building Consumption		**1,293.9**			**898.5**		

		* Alt-2 ASHRAE Baseline 90.1-0	Alt-1 Proposed Building
Total	**Number of hours heating load not met**	0	0
	Number of hours cooling load not met	22	23

	* Alt-2 ASHRAE Baseline 90.1-0		Alt-1 Proposed Building	
	Energy 10^6 Btu/yr	Cost/yr $/yr	Energy 10^6 Btu/yr	Cost/yr $/yr
Electricity	1,293.9	48,069	898.5	33,380
Total	**1,294**	**48,069**	**898**	**33,380**

ENTERED VALUES
PLANTS

By THORNTON TOMASETTI, INC.

Cooling Plant: GEOTHERMAL PLANT

Sizing method: Peak
Heat rejection type: None
Secondary distribution pump: Var vol chill water pump
Secondary pump consumption: 5 kW
Thermal storage type: GLHE designed for 3F (2C) TD wellfield
Thermal storage capacity: 480 gal/ton
Thermal storage schedule: Heatpump

Geothermal Loop

TLoop Ent Bldg:	Custom	Flow scheme:	Fully mixed
TLoop schedule:	P14009-GRND TEMP PROFILE	Loop fluid glycol:	0%
Flow rate:	120.00% of condenser flow rate	Heat exchanger approach:	0°F
Loop pump	90.1 Pump Riding the Pump Curve		
Pump F.L. rate:	10.87kw		

Equipment tag: HP-01 — Cooling Type: P14009-WSHP-D — GEOTHERMAL PLANT

Operating Mode	Capacity	Energy Rate	Pumps	Type	Full Load Consumption
Cooling:	10.0 tons	20.8600 EER (compressor only)	Chilled water:	Var vol chill water pump	0.21 kW
Heat recovery:	113.0 Mbh	2.7700 COP (compressor only)	Condenser water:	None	
Tank charging:			Heat recovery or aux cond:	None	
Tank charging & heat recovery:			Free cooling:	None	

Heat Rejection and Thermal Storage

Heat rejection type: None
Thermal storage type: None
T-storage capacity: 144 gal/ton
T-storage schedule: Heatpump

Equipment Options

Sequencing type: Parallel
Demand lim priority:
Dsn chilled water delta T: 10 °F
Dsn cond water delta T: 10 °F
Free clg type: None
Fluid cooler type:
Load shed econ: no
Evap precooling: no
Hot gas reheat No
Energy source: BACKUP-HEAT
Reject cond heat: Ground Loop
Cond. heat to plant: BACKUP-HEAT
Equip schedule: Available (100%)

Reset Based On		Reset Curve	Max Reset TD
Chilled Water:	Outside air	CHW - 45f - 55f	0°F
Condenser Water:	None	None	0°F

Equipment tag: HP-02 — Cooling Type: P14009-WSHP-D — GEOTHERMAL PLANT

Operating Mode	Capacity	Energy Rate	Pumps	Type	Full Load Consumption
Cooling:	10.0 tons	20.8600 EER (compressor only)	Chilled water:	Var vol chill water pump	0.21 kW
Heat recovery:	113.0 Mbh	2.7700 COP (compressor only)	Condenser water:	None	
Tank charging:			Heat recovery or aux cond:	None	
Tank charging & heat recovery:			Free cooling:	None	

Heat Rejection and Thermal Storage

Heat rejection type: None
Thermal storage type: None
T-storage capacity: 144 gal/ton
T-storage schedule: Heatpump

Equipment Options

Sequencing type: Parallel
Demand lim priority:
Dsn chilled water delta T: 10 °F
Dsn cond water delta T: 10 °F
Free clg type: None
Fluid cooler type:
Load shed econ: no
Evap precooling: no
Hot gas reheat No
Energy source: BACKUP-HEAT
Reject cond heat: Ground Loop
Cond. heat to plant: BACKUP-HEAT
Equip schedule: Available (100%)

Reset Based On		Reset Curve	Max Reset TD
Chilled Water:	Outside air	CHW - 45f - 55f	10°F
Condenser Water:	None	None	0°F

Equipment tag: HP-03 — Cooling Type: P14009-WSHP-D — GEOTHERMAL PLANT

Operating Mode	Capacity	Energy Rate	Pumps	Type	Full Load Consumption
Cooling:	10.0 tons	20.8600 EER (compressor only)	Chilled water:	Var vol chill water pump	0.21 kW
Heat recovery:	113.0 Mbh	2.7700 COP (compressor only)	Condenser water:	None	
Tank charging:			Heat recovery or aux cond:	None	
Tank charging & heat recovery:			Free cooling:	None	

Heat Rejection and Thermal Storage — Equipment Options

ENTERED VALUES
PLANTS

By THORNTON TOMASETTI, INC.

Heat rejection type: None
Thermal storage type: None
T-storage capacity: 144 gal/ton
T-storage schedule: Heatpump

Sequencing type: Parallel
Demand lim priority:
Dsn chilled water delta T: 10 °F
Dsn cond water delta T: 10 °F

Free clg type: None
Fluid cooler type:
Load shed econ: no
Evap precooling: no
Hot gas reheat No

Energy source: BACKUP-HEAT
Reject cond heat: Ground Loop
Cond. heat to plant: BACKUP-HEAT
Equip schedule: Available (100%)

	Reset Based On	Reset Curve	Max Reset TD
Chilled Water:	Outside air	CHW - 45f - 55f	10°F
Condenser Water:	None	None	0°F

Equipment tag: HP-04

Cooling Type: P14009-WSHP-D

GEOTHERMAL PLANT

Operating Mode	Capacity	Energy Rate	Pumps	Type	Full Load Consumption
Cooling:	10.0 tons	20.8600 EER (compressor only)	Chilled water:	Var vol chill water pump	0.21 kW
Heat recovery:	113.0 Mbh	2.7700 COP (compressor only)	Condenser water:	None	
Tank charging:			Heat recovery or aux cond:	None	
Tank charging & heat recovery:			Free cooling:	None	

Heat Rejection and Thermal Storage

Heat rejection type: None
Thermal storage type: None
T-storage capacity: 144 gal/ton
T-storage schedule: Heatpump

Sequencing type: Parallel
Demand lim priority:
Dsn chilled water delta T: 10 °F
Dsn cond water delta T: 10 °F

Equipment Options

Free clg type: None
Fluid cooler type:
Load shed econ: no
Evap precooling: no
Hot gas reheat No

Energy source: BACKUP-HEAT
Reject cond heat: Ground Loop
Cond. heat to plant: BACKUP-HEAT
Equip schedule: Available (100%)

	Reset Based On	Reset Curve	Max Reset TD
Chilled Water:	Outside air	CHW - 45f - 55f	10°F
Condenser Water:	None	None	0°F

Equipment tag: HP-05

Cooling Type: P14009-WSHP-D

GEOTHERMAL PLANT

Operating Mode	Capacity	Energy Rate	Pumps	Type	Full Load Consumption
Cooling:	10.0 tons	20.8600 EER (compressor only)	Chilled water:	Var vol chill water pump	0.21 kW
Heat recovery:	113.0 Mbh	2.7700 COP (compressor only)	Condenser water:	None	
Tank charging:			Heat recovery or aux cond:	None	
Tank charging & heat recovery:			Free cooling:	None	

Heat Rejection and Thermal Storage

Heat rejection type: None
Thermal storage type: None
T-storage capacity: 144 gal/ton
T-storage schedule: Heatpump

Sequencing type: Parallel
Demand lim priority:
Dsn chilled water delta T: 10 °F
Dsn cond water delta T: 10 °F

Equipment Options

Free clg type: None
Fluid cooler type:
Load shed econ: no
Evap precooling: no
Hot gas reheat No

Energy source: BACKUP-HEAT
Reject cond heat: Ground Loop
Cond. heat to plant: BACKUP-HEAT
Equip schedule: Available (100%)

	Reset Based On	Reset Curve	Max Reset TD
Chilled Water:	Outside air	CHW - 45f - 55f	10°F
Condenser Water:	None	None	0°F

Equipment tag: HP-06

Cooling Type: P14009-WSHP-D

GEOTHERMAL PLANT

Operating Mode	Capacity	Energy Rate	Pumps	Type	Full Load Consumption
Cooling:	10.0 tons	20.8600 EER (compressor only)	Chilled water:	Var vol chill water pump	0.21 kW
Heat recovery:	113.0 Mbh	2.7700 COP (compressor only)	Condenser water:	None	
Tank charging:			Heat recovery or aux cond:	None	
Tank charging & heat recovery:			Free cooling:	None	

Heat Rejection and Thermal Storage

Equipment Options

ENTERED VALUES
PLANTS

By THORNTON TOMASETTI, INC.

Heat rejection type: None
Thermal storage type: None
T-storage capacity: 144 gal/ton
T-storage schedule: Heatpump

Sequencing type: Parallel
Demand lim priority:
Dsn chilled water delta T: 10 °F
Dsn cond water delta T: 10 °F

Free clg type: None
Fluid cooler type:
Load shed econ: no
Evap precooling: no
Hot gas reheat No

Energy source: BACKUP-HEAT
Reject cond heat: Ground Loop
Cond. heat to plant: BACKUP-HEAT
Equip schedule: Available (100%)

	Reset Based On	Reset Curve	Max Reset TD
Chilled Water:	Outside air	CHW - 45f - 55f	10°F
Condenser Water:	None	None	0°F

Heating Plant: BACKUP-HEAT

Sizing method: Block
Cogeneration type: None
Secondary distribution pump: Var vol chill water pump
Secondary pump consumption: 5 kW
Thermal storage type: None
Thermal storage capacity: 0 ton-hr

Equipment tag: BACKUP-HEAT — Heating Type: P14009-BACKUP — BACKUP-HEAT

Heating capacity:
Energy rate: 100.00 % Effic.

Thermal storage type: None
Thermal storage capacity: 0 ton-hr
Thermal storage schedule: Storage

Hot water pump type: VV Hot Water Circ
Hot water pump cons: 1.26 Ft Water

Equipment schedule: Available (100%)
Demand limiting priority:

Heating Plant: UNCONDITIONED

Sizing method: Peak
Cogeneration type: None
Secondary distribution pump: None
Secondary pump consumption: 0 Ft Water
Thermal storage type: None
Thermal storage capacity: 0 ton-hr

Equipment tag: UNCONDITIONED — Heating Type: Default electric resistance — UNCONDITIONED

Heating capacity:
Energy rate: 100.00 % Effic.

Thermal storage type: None
Thermal storage capacity: 0 ton-hr
Thermal storage schedule: Storage

Equipment schedule: Available (100%)
Demand limiting priority:

ENTERED VALUES
PLANTS

By THORNTON TOMASETTI, INC.

Base Utilities

Plant assigned to: Stand-alone	Description: Exhaust Fans	Schedule: On 100%
Type: Exhaust Fan	Demand limiting priority:	Hourly demand: 0.10 kW
Plant assigned to: Stand-alone	Description: DHW CIRC PUMP	Schedule: On 100%
Type: DHW CIRC PUMP	Demand limiting priority:	Hourly demand: 0.02 kW
Plant assigned to: Stand-alone	Description: EXTERIOR LIGHTING	Schedule: Parking lot lights
Type: Parking lot lights	Demand limiting priority:	Hourly demand: 1.17 kW
Plant assigned to: Stand-alone	Description: Elevator	Schedule: P14009- Elevator
Type: Elevator	Demand limiting priority:	Hourly demand: 18.65 kW
Plant assigned to: Stand-alone	Description: P14009-DHW	Schedule: Hot water - Low rise office
Type: P14009-DHW	Demand limiting priority:	Hourly demand: 0.18 gpm

Miscellaneous accessories

Plant assigned to: GEOTHERMAL PLANT	Type: Var vol chill water pump	Schedule: Available (100%)
Equipment tag: All	Description: Var vol chill water pump	Energy: 1.46 kW

ENTERED VALUES
PLANTS

By THORNTON TOMASETTI, INC.

Cooling Plant: 901-07 Min ACHP AllHeat SP < 65

Sizing method: Peak
Heat rejection type: None
Secondary distribution pump: None
Secondary pump consumption: 0 Ft Water
Thermal storage type: None
Thermal storage capacity: 0 ton-hr
Thermal storage schedule: Off (0%)

Geothermal Loop

TLoop Ent Bldg: None
TLoop schedule: None
Flow rate: 100.00% of condenser flow rate
Loop pump None
Pump F.L. rate: 0.00ft water
Flow scheme: Fully mixed
Loop fluid glycol: 0%
Heat exchanger approach: 0°F

Equipment tag: 901-07 Min ACHP AllHeat SP < 65 Cooling Type: 90.1-07 Min ACHP AllHeat SP < 65 MBh 901-07 Min ACHP AllHeat SP < 65

Operating Mode	Capacity	Energy Rate
Cooling:		11.0000 Packaged EER
Heat recovery:	14.4 Mbh/ton	7.7000 Packaged EER
Tank charging:		
Tank charging & heat recovery:		

Pumps	Type
Chilled water:	None
Condenser water:	None
Heat recovery or aux cond:	None
Free cooling:	None

Full Load Consumption

Heat Rejection and Thermal Storage

Heat rejection type: 90.1 Min Air Cooled Condenser
Thermal storage type: None
T-storage capacity: 0 ton-hr
T-storage schedule: Storage

Equipment Options

Sequencing type: Single
Demand lim priority:
Dsn chilled water delta T: 12 °F
Dsn cond water delta T: 0 °F
Free clg type: None
Fluid cooler type: None
Load shed econ: no
Evap precooling: no
Hot gas reheat No
Energy source: H901-07 Min ACHP - SP < 65 MBh
Reject cond heat: Heat Reject.Equip
Cond. heat to plant:
Equip schedule: Available (100%)

Reset Based On	Reset Curve	Max Reset TD
Chilled Water: None	None	0°F
Condenser Water: None	None	0°F

Package energy breakout	Primary fan	Secondary fan	Exhaust fan	Optional ventilation fan	Condenser fan
Included in full load energy rate	Yes	No	No	No	Yes

Apply same fans for heat recovery energy breakout: Yes

Cooling Plant: 901-07 Min ACHP Elec SS/SP 065-135

Sizing method: Peak
Heat rejection type: None
Secondary distribution pump: None
Secondary pump consumption: 0 Ft Water
Thermal storage type: None
Thermal storage capacity: 0 ton-hr
Thermal storage schedule: Off (0%)

Geothermal Loop

TLoop Ent Bldg: None
TLoop schedule: None
Flow rate: 100.00% of condenser flow rate
Loop pump None
Pump F.L. rate: 0.00ft water
Flow scheme: Fully mixed
Loop fluid glycol: 0%
Heat exchanger approach: 0°F

Equipment tag: 901-07 Min ACHP Elec SS/SP 065-135 Cooling Type: 90.1-07 Min ACHP Elec SS/SP 65-135 MBh 901-07 Min ACHP Elec SS/SP 065-135

Operating Mode	Capacity	Energy Rate
Cooling:		11.0000 Packaged EER
Heat recovery:	14.4 Mbh/ton	3.3000 Packaged COP
Tank charging:		
Tank charging & heat recovery:		

Pumps	Type
Chilled water:	None
Condenser water:	None
Heat recovery or aux cond:	None
Free cooling:	None

Full Load Consumption

Heat Rejection and Thermal Storage

Equipment Options

ENTERED VALUES
PLANTS

By THORNTON TOMASETTI, INC.

Heat rejection type: 90.1 Min Air Cooled Condenser
Thermal storage type: None
T-storage capacity: 0 ton-hr
T-storage schedule: Storage

Sequencing type: Single
Demand lim priority:
Dsn chilled water delta T: 12 °F
Dsn cond water delta T: 0 °F

Free clg type: None
Fluid cooler type: None
Load shed econ: no
Evap precooling: no
Hot gas reheat No

Energy source: H901-07 Min ACHP - SP < 65 MBh
Reject cond heat: Heat Reject.Equip
Cond. heat to plant:
Equip schedule: Available (100%)

	Reset Based On	Reset Curve	Max Reset TD
Chilled Water:	None	None	0°F
Condenser Water:	None	None	0°F

Package energy breakout	Primary fan	Secondary fan	Exhaust fan	Optional ventilation fan	Condenser fan
Included in full load energy rate	Yes	No	No	No	Yes

Apply same fans for heat recovery energy breakout: Yes

ENTERED VALUES
PLANTS

By THORNTON TOMASETTI, INC.

Heating Plant: H901-07 Min ACHP - SP < 65 MBh

Sizing method: Peak
Cogeneration type: None
Secondary distribution pump: None
Secondary pump consumption: 0 Ft Water
Thermal storage type: None
Thermal storage capacity: 0 ton-hr

Equipment tag: H901-07 Min ACHP - SP < 65 MBh Heating Type: Default electric resistance H901-07 Min ACHP - SP < 65 MBh

Heating capacity:
Energy rate: 100.00 % Effic.

Thermal storage type: None
Thermal storage capacity: 0 ton-hr
Thermal storage schedule: Storage

Equipment schedule: Available (100%)
Demand limiting priority:

Heating Plant: H901-07 Min ACHP Elec SS/SP 065-135

Sizing method: Peak
Cogeneration type: None
Secondary distribution pump: None
Secondary pump consumption: 0 Ft Water
Thermal storage type: None
Thermal storage capacity: 0 ton-hr

Equipment tag: H901-07 Min ACHP Elec SS/SP 065-135 Heating Type: Default electric resistance H901-07 Min ACHP Elec SS/SP 065-135

Heating capacity:
Energy rate: 100.00 % Effic.

Thermal storage type: None
Thermal storage capacity: 0 ton-hr
Thermal storage schedule: Storage

Equipment schedule: Available (100%)
Demand limiting priority:

Heating Plant: H901-07 SYSTEM 10 ELECTRIC RES

Sizing method: Peak
Cogeneration type: None
Secondary distribution pump: None
Secondary pump consumption: 0 Ft Water
Thermal storage type: None
Thermal storage capacity: 0 ton-hr

Equipment tag: H901-07 SYSTEM 10 ELECTRIC RES Heating Type: Default electric resistance H901-07 SYSTEM 10 ELECTRIC RES

Heating capacity:
Energy rate: 100.00 % Effic.

Thermal storage type: None
Thermal storage capacity: 0 ton-hr
Thermal storage schedule: Storage

Equipment schedule: Available (100%)
Demand limiting priority:

ENTERED VALUES
PLANTS

By THORNTON TOMASETTI, INC.

Heating Plant: UNCONDITIONED

Sizing method: Peak
Cogeneration type: None
Secondary distribution pump: None
Secondary pump consumption: 0 Ft Water
Thermal storage type: None
Thermal storage capacity: 0 ton-hr

Equipment tag: UNCONDITIONED

Heating Type: Default electric resistance

UNCONDITIONED

Heating capacity:
Energy rate: 100.00 % Effic.

Thermal storage type: None
Thermal storage capacity: 0 ton-hr
Thermal storage schedule: Storage

Equipment schedule: Available (100%)
Demand limiting priority:

Base Utilities

Plant assigned to: Stand-alone	Description: Exhaust Fans	Schedule: On 100%
Type: Exhaust Fan	Demand limiting priority:	Hourly demand: 0.10 kW
Plant assigned to: Stand-alone	Description: DHW CIRC PUMP	Schedule: On 100%
Type: DHW CIRC PUMP	Demand limiting priority:	Hourly demand: 0.02 kW
Plant assigned to: Stand-alone	Description: EXTERIOR LIGHTING	Schedule: Parking lot lights
Type: Parking lot lights	Demand limiting priority:	Hourly demand: 4.19 kW
Plant assigned to: Stand-alone	Description: Elevator	Schedule: P14009- Elevator
Type: Elevator	Demand limiting priority:	Hourly demand: 18.65 kW
Plant assigned to: Stand-alone	Description: P14009-DHW	Schedule: Hot water - Low rise office
Type: P14009-DHW	Demand limiting priority:	Hourly demand: 0.23 gpm

Miscellaneous accessories

Plant assigned to: 901-07 Min ACHP AllHeat SP < 65	Type: None	Schedule: Off (0%)
Equipment tag: All	Description:	Energy: 0.00 kW

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	HP-07	
System Type:	Single Zone	
User-entered Total Fan Power	0.07	kW
Design Supply Airflow	406	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	406
Main Exhaust	0.00	406
Room Exhaust	0.00	0
Return	0.00	406
Ventilation	0.00	0

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.38	Bhp
Total Fan Power	0.35	kW
Fan Ratio Override	4.792	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
HP-07						
	FC Centrifugal Const Vol	Primary fan	Zone	406	0.07	0.35

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-01	
System Type:	Single Zone	
User-entered Total Fan Power	0.18	kW
Design Supply Airflow	1,017	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	1,017
Main Exhaust	0.00	1,017
Room Exhaust	0.00	0
Return	0.00	1,045
Ventilation	0.00	204

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.96	Bhp
Total Fan Power	0.86	kW
Fan Ratio Override	4.773	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-01						
	FC Centrifugal Const Vol	Primary fan	Zone	1,017	0.18	0.86

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-02	
System Type:	Single Zone	
User-entered Total Fan Power	0.17	kW
Design Supply Airflow	948	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	948
Main Exhaust	0.00	948
Room Exhaust	0.00	0
Return	0.00	969
Ventilation	0.00	204

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.89	Bhp
Total Fan Power	0.81	kW
Fan Ratio Override	4.769	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-02						
	FC Centrifugal Const Vol	Primary fan	Zone	948	0.17	0.81

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-03	
System Type:	Single Zone	
User-entered Total Fan Power	0.21	kW
Design Supply Airflow	1,185	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	1,185
Main Exhaust	0.00	1,185
Room Exhaust	0.00	0
Return	0.00	1,225
Ventilation	0.00	184

PRM Fan Motor Efficiency	84.00	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	1.11	Bhp
Total Fan Power	0.99	kW
Fan Ratio Override	4.687	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-03						
	FC Centrifugal Const Vol	Primary fan	Zone	1,185	0.21	0.99

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-04	
System Type:	Single Zone	
User-entered Total Fan Power	0.11	kW
Design Supply Airflow	610	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	610
Main Exhaust	0.00	610
Room Exhaust	0.00	0
Return	0.00	625
Ventilation	0.00	31

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.57	Bhp
Total Fan Power	0.52	kW
Fan Ratio Override	4.752	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-04						
	FC Centrifugal Const Vol	Primary fan	Zone	610	0.11	0.52

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-05	
System Type:	Single Zone	
User-entered Total Fan Power	0.27	kW
Design Supply Airflow	1,522	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	1,522
Main Exhaust	0.00	1,522
Room Exhaust	0.00	0
Return	0.00	1,587
Ventilation	0.00	130

PRM Fan Motor Efficiency	84.00	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	1.43	Bhp
Total Fan Power	1.27	kW
Fan Ratio Override	4.686	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-05						
	FC Centrifugal Const Vol	Primary fan	Zone	1,522	0.27	1.27

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-06	
System Type:	Single Zone	
User-entered Total Fan Power	0.08	kW
Design Supply Airflow	468	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	468
Main Exhaust	0.00	468
Room Exhaust	0.00	0
Return	0.00	486
Ventilation	0.00	54

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.44	Bhp
Total Fan Power	0.40	kW
Fan Ratio Override	4.738	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-06						
	FC Centrifugal Const Vol	Primary fan	Zone	468	0.08	0.40

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-07	
System Type:	Single Zone	
User-entered Total Fan Power	0.07	kW
Design Supply Airflow	375	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	375
Main Exhaust	0.00	375
Room Exhaust	0.00	0
Return	0.00	375
Ventilation	0.00	174

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.35	Bhp
Total Fan Power	0.32	kW
Fan Ratio Override	4.746	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-07						
	FC Centrifugal Const Vol	Primary fan	Zone	375	0.07	0.32

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-08	
System Type:	Single Zone	
User-entered Total Fan Power	0.11	kW
Design Supply Airflow	604	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	604
Main Exhaust	0.00	604
Room Exhaust	0.00	0
Return	0.00	618
Ventilation	0.00	54

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.57	Bhp
Total Fan Power	0.51	kW
Fan Ratio Override	4.750	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-08						
	FC Centrifugal Const Vol	Primary fan	Zone	604	0.11	0.51

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-09	
System Type:	Single Zone	
User-entered Total Fan Power	0.39	kW
Design Supply Airflow	2,186	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	2,186
Main Exhaust	0.00	2,186
Room Exhaust	0.00	0
Return	0.00	2,259
Ventilation	0.00	319

PRM Fan Motor Efficiency	87.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	2.06	Bhp
Total Fan Power	1.75	kW
Fan Ratio Override	4.492	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-09						
	FC Centrifugal Const Vol	Primary fan	Zone	2,186	0.39	1.75

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-10	
System Type:	Single Zone	
User-entered Total Fan Power	0.11	kW
Design Supply Airflow	594	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	594
Main Exhaust	0.00	594
Room Exhaust	0.00	0
Return	0.00	607
Ventilation	0.00	57

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.56	Bhp
Total Fan Power	0.51	kW
Fan Ratio Override	4.764	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-10						
	FC Centrifugal Const Vol	Primary fan	Zone	594	0.11	0.51

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-11	
System Type:	Single Zone	
User-entered Total Fan Power	0.09	kW
Design Supply Airflow	493	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	493
Main Exhaust	0.00	493
Room Exhaust	0.00	0
Return	0.00	504
Ventilation	0.00	20

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.46	Bhp
Total Fan Power	0.42	kW
Fan Ratio Override	4.761	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-11						
	FC Centrifugal Const Vol	Primary fan	Zone	493	0.09	0.42

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-12	
System Type:	Single Zone	
User-entered Total Fan Power	0.10	kW
Design Supply Airflow	544	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	544
Main Exhaust	0.00	544
Room Exhaust	0.00	0
Return	0.00	554
Ventilation	0.00	15

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.51	Bhp
Total Fan Power	0.46	kW
Fan Ratio Override	4.773	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-12						
	FC Centrifugal Const Vol	Primary fan	Zone	544	0.10	0.46

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-13	
System Type:	Single Zone	
User-entered Total Fan Power	0.20	kW
Design Supply Airflow	1,139	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	1,139
Main Exhaust	0.00	1,139
Room Exhaust	0.00	0
Return	0.00	1,161
Ventilation	0.00	92

PRM Fan Motor Efficiency	84.00	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	1.07	Bhp
Total Fan Power	0.95	kW
Fan Ratio Override	4.685	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-13						
	FC Centrifugal Const Vol	Primary fan	Zone	1,139	0.20	0.95

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-14	
System Type:	Single Zone	
User-entered Total Fan Power	0.39	kW
Design Supply Airflow	2,163	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	2,163
Main Exhaust	0.00	2,163
Room Exhaust	0.00	0
Return	0.00	2,226
Ventilation	0.00	305

PRM Fan Motor Efficiency	87.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	2.03	Bhp
Total Fan Power	1.73	kW
Fan Ratio Override	4.490	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-14						
	FC Centrifugal Const Vol	Primary fan	Zone	2,163	0.39	1.73

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-15	
System Type:	Single Zone	
User-entered Total Fan Power	0.10	kW
Design Supply Airflow	552	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	552
Main Exhaust	0.00	552
Room Exhaust	0.00	0
Return	0.00	566
Ventilation	0.00	31

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.52	Bhp
Total Fan Power	0.47	kW
Fan Ratio Override	4.786	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-15						
	FC Centrifugal Const Vol	Primary fan	Zone	552	0.10	0.47

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-16	
System Type:	Single Zone	
User-entered Total Fan Power	0.03	kW
Design Supply Airflow	162	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	162
Main Exhaust	0.00	162
Room Exhaust	0.00	0
Return	0.00	167
Ventilation	0.00	20

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.15	Bhp
Total Fan Power	0.14	kW
Fan Ratio Override	4.724	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-16						
	FC Centrifugal Const Vol	Primary fan	Zone	162	0.03	0.14

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-17	
System Type:	Single Zone	
User-entered Total Fan Power	0.10	kW
Design Supply Airflow	568	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	568
Main Exhaust	0.00	568
Room Exhaust	0.00	0
Return	0.00	585
Ventilation	0.00	76

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.53	Bhp
Total Fan Power	0.48	kW
Fan Ratio Override	4.782	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-17						
	FC Centrifugal Const Vol	Primary fan	Zone	568	0.10	0.48

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-18	
System Type:	Single Zone	
User-entered Total Fan Power	0.03	kW
Design Supply Airflow	162	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	162
Main Exhaust	0.00	162
Room Exhaust	0.00	0
Return	0.00	162
Ventilation	0.00	64

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.15	Bhp
Total Fan Power	0.14	kW
Fan Ratio Override	4.759	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-18						
	FC Centrifugal Const Vol	Primary fan	Zone	162	0.03	0.14

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-19	
System Type:	Single Zone	
User-entered Total Fan Power	0.10	kW
Design Supply Airflow	550	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	550
Main Exhaust	0.00	550
Room Exhaust	0.00	0
Return	0.00	564
Ventilation	0.00	35

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.52	Bhp
Total Fan Power	0.47	kW
Fan Ratio Override	4.765	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-19						
	FC Centrifugal Const Vol	Primary fan	Zone	550	0.10	0.47

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-20	
System Type:	Single Zone	
User-entered Total Fan Power	0.44	kW
Design Supply Airflow	2,449	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	2,449
Main Exhaust	0.00	2,449
Room Exhaust	0.00	0
Return	0.00	2,521
Ventilation	0.00	330

PRM Fan Motor Efficiency	87.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	2.30	Bhp
Total Fan Power	1.96	kW
Fan Ratio Override	4.492	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-20						
	FC Centrifugal Const Vol	Primary fan	Zone	2,449	0.44	1.96

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-21	
System Type:	Single Zone	
User-entered Total Fan Power	0.06	kW
Design Supply Airflow	333	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	333
Main Exhaust	0.00	333
Room Exhaust	0.00	0
Return	0.00	333
Ventilation	0.00	144

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.31	Bhp
Total Fan Power	0.28	kW
Fan Ratio Override	4.797	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-21						
	FC Centrifugal Const Vol	Primary fan	Zone	333	0.06	0.28

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-22	
System Type:	Single Zone	
User-entered Total Fan Power	0.11	kW
Design Supply Airflow	623	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	623
Main Exhaust	0.00	623
Room Exhaust	0.00	0
Return	0.00	636
Ventilation	0.00	52

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.59	Bhp
Total Fan Power	0.53	kW
Fan Ratio Override	4.766	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-22						
	FC Centrifugal Const Vol	Primary fan	Zone	623	0.11	0.53

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-23	
System Type:	Single Zone	
User-entered Total Fan Power	0.04	kW
Design Supply Airflow	211	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	211
Main Exhaust	0.00	211
Room Exhaust	0.00	0
Return	0.00	218
Ventilation	0.00	22

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.20	Bhp
Total Fan Power	0.18	kW
Fan Ratio Override	4.711	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-23						
	FC Centrifugal Const Vol	Primary fan	Zone	211	0.04	0.18

PRM Fan Power Details

By THORNTON TOMASETTI, INC.

Baseline Alternative: Alternative 2 - ASHRAE Baseline 90.1-07 Climate Zone 6A

Method: 90.1-2007 Performance Rating Method

System Description:	VAV-24	
System Type:	Single Zone	
User-entered Total Fan Power	0.03	kW
Design Supply Airflow	157	cfm

PRM Fan Power Adjustment Factor	Static Adjustment in. H2O	Airflow cfm
Primary	0.00	157
Main Exhaust	0.00	157
Room Exhaust	0.00	0
Return	0.00	157
Ventilation	0.00	43

PRM Fan Motor Efficiency	82.50	%
PRM Fan Power Adjustment BHP	0.00	Bhp
Calculated System BHP	0.15	Bhp
Total Fan Power	0.13	kW
Fan Ratio Override	4.786	

Zone Description	Fan Name	Fan Type	Fan Level	Design Airflow (cfm)	Original F.L. Rate (kW)	PRM Fan Power (kW)
VAV-24						
	FC Centrifugal Const Vol	Primary fan	Zone	157	0.03	0.13

Entered Values

TRACE® 700 version 6.3.1

By THORNTON TOMASETTI, INC.

Project Name:
Dataset Name: C:\Users\jbeaumont\Documents\TRACE PROJECTS\P14009\REVIEW\P14009E150610.TRC
Location:
Building Owner:
Program User:
Company:
Comments: WING_TEMPLATE_PROCESSING

Cooling Design Period:	January thru December
Peak Hour Override:	0
Daylight Savings Period:	April Thru October
Summer Period:	
Cooling Methodology:	RTS (Heat Balance)
Heating Methodology:	CLTD-CLF (ASHRAE-TFM)
Infiltration Methodology:	Vary with wind speed
Outside Film Methodology:	Vary with wind speed
Terrain Methodology:	Urban, industrial, or forest area
Room Circ Rate:	Medium
Wall Load To Plenum:	YES
Building Orientation:	65 degrees from north
Simulation Hours:	Full year
Calendar Code:	Standard (1978)
Energy Simulation Period:	January thru December

Location:	BRUNSWICK NAS, Maine	
Summer Design Dry Bulb:	83.30	°F
Summer Design Wet Bulb:	68.80	°F
Winter Design Dry Bulb:	-1.90	°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

Force VAV Min => Nominal Ventilation at Design:	Yes
Allow Energy Recovery/Transfer at Design:	No
Retest Design Peaks:	Yes
Calculate Building Block Loads:	No

Close ventilation dampers during unoccupied hours: Yes

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 001 - STAIR 2 **Zone Description: BASEBOARD** **System Description: BASEBOARD**

GENERAL INFORMATION

Floor Area:	203 ft²	Flr-Flr Height:	40.5 ft
Plenum Height:	0.0 ft	Height Above Flr:	-11 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	55.0 °F / 55.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	Neutral, Poor Const.	Neutral, Poor Const.
Infil Value:	1.00 air changes/hr	1.00 air changes/hr
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	188 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
N1	492 ft²	0	0	P14009-WALL	0.0520	0.90											
B2				Window			P14009-WINDOW	94	0.43	0.35	Overhang - None	None	0.00				
SPN- 2				Door			Standard Door	44	0.00	0.20	Overhang - None	None	0.00				
GLZ DOORS				Window			P14009-WINDOW	72	0.43	0.35	Overhang - None	None	0.00				
N2	294 ft²	0	0	P14009-WALL	0.0520	0.90											
B2				Window			P14009-WINDOW	55	0.43	0.35	Overhang - None	None	0.00				
SPN - 2				Door			Standard Door	26	0.00	0.20	Overhang - None	None	0.00				
A2				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
Partition - 1	373 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Partition - 2	102 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Partition - 3	102 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Floor - 1																33	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 138-SERVER **Zone Description: HP-07** **System Description: HP-07**

GENERAL INFORMATION

Floor Area:	135 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	74.0 °F / 74.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 70.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1,000 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	760.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	20.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 002 - MECHANICAL ROOM (UNCOND) **Zone Description: UNCONDITIONED** **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	1,015 ft²	Flr-Flr Height:	11.3 ft
Plenum Height:	0.0 ft	Height Above Flr:	-11 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	55.0 °F / 55.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	1,000 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Partition - 1	362 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Partition - 2	362 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Partition - 3	396 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 108-TRASH/RECYCLE (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	48 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 109-STORAGE (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	42 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.9 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 127-STORAGE (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	60 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 129-STORAGE (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	82 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 222-CLOSET (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	27 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.4 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	27 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					

Room Description: 247-JANITOR (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	45 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	5.7 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	45 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 128-A-BOARDROOM **Zone Description: VAV-01** **System Description: VAV-01**

GENERAL INFORMATION

Floor Area:	670 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	25 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	2,000.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
W	328 ft²	270	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	49	0.43	0.35	Overhang - None	None	0.00				
D1				Window			P14009-WINDOW	65	0.43	0.35	Overhang - None	None	0.00				
SPN-D1				Door			Standard Door	65	0.00	0.20	Overhang - None	None	0.00				
N	425 ft²	0	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	49	0.43	0.35	Overhang - None	None	0.00				
C1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	35	0.00	0.20	Overhang - None	None	0.00				
F1				Window			P14009-WINDOW	37	0.43	0.35	Overhang - None	None	0.00				
SPN-F2				Window			P14009-WINDOW	26	0.43	0.35	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																51	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 128-B-BOARDROOM **Zone Description: VAV-02** **System Description: VAV-02**

GENERAL INFORMATION

Floor Area:	803 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	25 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	2,000.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
N	428 ft²	0	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	49	0.43	0.35	Overhang - None	None	0.00				
C1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	35	0.00	0.20	Overhang - None	None	0.00				
F1				Window			P14009-WINDOW	37	0.43	0.35	Overhang - None	None	0.00				
SPN-F2				Door			Standard Door	26	0.00	0.20	Overhang - None	None	0.00				
E	144 ft²	90	0	P14009-WALL	0.0520	0.90											
E1				Window			P14009-WINDOW	77	0.43	0.35	Overhang - None	None	0.00				
SPN				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																38	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 112-126 - OPEN OFFICE **Zone Description: VAV-03** **System Description: VAV-03**

GENERAL INFORMATION

Floor Area: 1,615 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 8 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.5 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	1,800.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
S	417 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
B1				Window			P14009-WINDOW	94	0.43	0.35	Overhang - None	None	0.00				
SPN-B1				Door			Standard Door	94	0.00	0.20	Overhang - None	None	0.00				
W	574 ft²	270	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	122	0.43	0.35	Overhang - None	None	0.00				
N	30 ft²	0	0	P14009-WALL	0.0520	0.90											
S2	30 ft²	180	0	P14009-WALL	0.0520	0.90											
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																71	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 118-CONFERENCE ROOM **Zone Description: VAV-04** **System Description: VAV-04**

GENERAL INFORMATION

Floor Area:	140 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	3 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	300.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
S	243 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
C1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	35	0.00	0.20	Overhang - None	None	0.00				
W	149 ft²	270	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	35	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																26	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 100-VESTIBULE **Zone Description: VAV-05** **System Description: VAV-05**

GENERAL INFORMATION

Floor Area:	98 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	55.0 °F / 55.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Corridors	Corridors
Vent Value:	0.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	Neutral, Loose Const.	Neutral, Loose Const.
Infil Value:	2.50 air changes/hr	2.50 air changes/hr
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	75.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	98 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
S	164 ft²	180	0	P14009-WALL	0.0520	0.90											
J1				Window			P14009-WINDOW	97	0.43	0.35	Overhang - None	None	0.00				
SPN-J1				Door			Standard Door	15	0.00	0.20	Overhang - None	None	0.00				
W	149 ft²	270	0	P14009-WALL	0.0520	0.90											
G1				Window			P14009-WINDOW	63	0.43	0.35	Overhang - None	None	0.00				
SPN-G1				Door			Standard Door	34	0.00	0.20	Overhang - None	None	0.00				
Floor - 1																21	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 101-LOBBY **Zone Description: VAV-05** **System Description: VAV-05**

GENERAL INFORMATION

Floor Area:	750 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	Reception Area
# of People:	2 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Reception areas	Reception areas
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	600.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
S	432 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	73	0.43	0.35	Overhang - None	None	0.00				
K1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-K1				Window			P14009-WINDOW	14	0.43	0.35	Overhang - None	None	0.00				
SPN				Window			P14009-WINDOW	35	0.43	0.35	Overhang - None	None	0.00				
Misc Load 1	150.000 W			Misc - Low rise office			Electricity							100	100	0	60.00
Misc Load 2	150.000 W			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																29	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 107-SITTING | **Zone Description: VAV-05** | **System Description: VAV-05**

GENERAL INFORMATION

Floor Area: 500 ft² | Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft | Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None | Floor Multiplier: 1
Humidistat Location: Room | Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: Reception Area
# of People: 2 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.4 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Reception areas	Reception areas
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	600.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return — 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return — 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 130-STAFF LOUNGE | **Zone Description: VAV-06** | **System Description: VAV-06**

GENERAL INFORMATION

Floor Area: 545 ft² | Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft | Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room | Floor Multiplier: 1
Humidistat Location: Room | Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 10 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.6 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Break Rooms	Break Rooms
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	400.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return — 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return — 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
N	417 ft²	0	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	73	0.43	0.35	Overhang - None	None	0.00				
W	45 ft²	270	0	P14009-WALL	0.0520	0.90											
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																31	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 105-WOMENS TOILET | **Zone Description: VAV-07** | **System Description: VAV-07**

GENERAL INFORMATION

Floor Area:	165 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	5.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	85.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 106-MENS TOILET | **Zone Description: VAV-07** | **System Description: VAV-07**

GENERAL INFORMATION

Floor Area:	156 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	5.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	85.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 131-133-CORRIDOR | **Zone Description: VAV-07** | **System Description: VAV-07**

GENERAL INFORMATION

Floor Area:	310 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Corridors	Corridors
Vent Value:	0.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	115.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 136-TECHNICAL SERVICES | **Zone Description: VAV-07** | **System Description: VAV-07**

GENERAL INFORMATION

Floor Area:	357 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	3 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	590.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 137-TECH SERVICES OFFICE **Zone Description: VAV-07** **System Description: VAV-07**

GENERAL INFORMATION

Floor Area: 103 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 1 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.1 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	235.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 140-WORKROOM **Zone Description: VAV-07** **System Description: VAV-07**

GENERAL INFORMATION

Floor Area: 165 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 6.4 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 1 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.7 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	160.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
COPIERS (2X)	800.000 W			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 144-CONFERENCE ROOM **Zone Description: VAV-08** **System Description: VAV-08**

GENERAL INFORMATION

Floor Area:	132 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	3 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	400.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
N	142 ft²	0	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	35	0.00	0.20	Overhang - None	None	0.00				
E	238 ft²	90	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
C1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	35	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																26	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 103-MAIL **Zone Description: VAV-09** **System Description: VAV-09**

GENERAL INFORMATION

Floor Area:	130 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	100.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
S	112 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																8	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 147-LOANS SERV OPEN OFFICE **Zone Description: VAV-09** **System Description: VAV-09**

GENERAL INFORMATION

Floor Area: 2,656 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 12 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.5 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	2,250.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
N	365 ft²	0	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	98	0.43	0.35	Overhang - None	None	0.00				
E1	50 ft²	90	0	P14009-WALL	0.0520	0.90											
E2	621 ft²	90	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	146	0.43	0.35	Overhang - None	None	0.00				
S	779 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	122	0.43	0.35	Overhang - None	None	0.00				
B1				Window			P14009-WINDOW	94	0.43	0.35	Overhang - None	None	0.00				
SPN-B1				Door			Standard Door	44	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																122	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 149-CONFERENCE ROOM **Zone Description: VAV-10** **System Description: VAV-10**

GENERAL INFORMATION

Floor Area:	121 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	2 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	420.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
E	214 ft²	90	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
C1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	35	0.00	0.20	Overhang - None	None	0.00				
S	144 ft²	180	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	62	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	16	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	35	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																24	0.55

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 219-CONFERENCE ROOM **Zone Description: VAV-11** **System Description: VAV-11**

GENERAL INFORMATION

Floor Area:	84 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	2 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.4 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	200.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	84 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
W	149 ft²	270	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	18	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	33	0.00	0.20	Overhang - None	None	0.00				
N	142 ft²	0	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	18	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	33	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 220-CONFERENCE ROOM **Zone Description: VAV-12** **System Description: VAV-12**

GENERAL INFORMATION

Floor Area:	69 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	2 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	150.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	69 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
N	123 ft²	0	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	18	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	33	0.00	0.20	Overhang - None	None	0.00				
E	135 ft²	90	0	P14009-WALL	0.0520	0.90											
E1				Window			P14009-WINDOW	81	0.43	0.35	Overhang - None	None	0.00				
SPN-E1				Window			P14009-WINDOW	18	0.43	0.35	Overhang - None	None	0.00				
SPN				Window			P14009-WINDOW	35	0.43	0.35	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 201-LOBBY **Zone Description: VAV-13** **System Description: VAV-13**

GENERAL INFORMATION

Floor Area:	1,200 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	Reception Area
# of People:	5 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Reception areas	Reception areas
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	900.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	1,200 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
S	412 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	73	0.43	0.35	Overhang - None	None	0.00				
K1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-K1				Window			P14009-WINDOW	16	0.43	0.35	Overhang - None	None	0.00				
SPN				Window			P14009-WINDOW	32	0.43	0.35	Overhang - None	None	0.00				
W	152 ft²	270	0	P14009-WALL	0.0520	0.90											
H1				Window			P14009-WINDOW	85	0.43	0.35	Overhang - None	None	0.00				
SPN-H1				Door			Standard Door	66	0.00	0.20	Overhang - None	None	0.00				

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 221-CAP MNGMT OPEN OFFICE **Zone Description: VAV-14** **System Description: VAV-14**

GENERAL INFORMATION

Floor Area: 3,214 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 22 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.6 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	2,990.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	3,214 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
S1	334 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
B1				Window			P14009-WINDOW	83	0.43	0.35	Overhang - None	None	0.00				
SPN-B1				Door			Standard Door	39	0.00	0.20	Overhang - None	None	0.00				
W	720 ft²	270	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	195	0.43	0.35	Overhang - None	None	0.00				
S2	28 ft²	180	0	P14009-WALL	0.0520	0.90											
N2	28 ft²	0	0	P14009-WALL	0.0520	0.90											
N1	549 ft²	0	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	98	0.43	0.35	Overhang - None	None	0.00				
F1				Window			P14009-WINDOW	72	0.43	0.35	Overhang - None	None	0.00				
SPN-F1				Door			Standard Door	52	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
COPIER	400.000 W			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 210-CONFERENCE ROOM **Zone Description: VAV-15** **System Description: VAV-15**

GENERAL INFORMATION

Floor Area: 134 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: Room
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 4 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.6 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	300.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	134 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
S	227 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	18	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	33	0.00	0.20	Overhang - None	None	0.00				
W	142 ft²	270	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	18	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	33	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 207-CONFERENCE ROOM **Zone Description: VAV-16** **System Description: VAV-16**

GENERAL INFORMATION

Floor Area:	94 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	2 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	200.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

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Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	94 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
S	135 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 223-CONFERENCE ROOM **Zone Description: VAV-17** **System Description: VAV-17**

GENERAL INFORMATION

Floor Area: 478 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: Room
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 15 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.5 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	560.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	478 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
N	398 ft²	0	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	98	0.43	0.35	Overhang - None	None	0.00				
W	43 ft²	270	0	P14009-WALL	0.0520	0.90											
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 225-CAPITAL VENTURE OPEN OFFICE **Zone Description: VAV-18** **System Description: VAV-18**

GENERAL INFORMATION

Floor Area:	400 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	3 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	470.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

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Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	400 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 232-CONFERENCE ROOM **Zone Description: VAV-19** **System Description: VAV-19**

GENERAL INFORMATION

Floor Area: 132 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: Room
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 3 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.6 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	260.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	132 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
N	135 ft²	0	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	18	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	33	0.00	0.20	Overhang - None	None	0.00				
E	227 ft²	90	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	18	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	33	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 237-LENDING OPEN OFFICE **Zone Description: VAV-20** **System Description: VAV-20**

GENERAL INFORMATION

Floor Area: 3,066 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 16 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.5 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	2,430.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

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Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	3,066 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
N	345 ft²	0	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	98	0.43	0.35	Overhang - None	None	0.00				
E2	47 ft²	90	0	P14009-WALL	0.0520	0.90											
E1	589 ft²	90	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	146	0.43	0.35	Overhang - None	None	0.00				
S	918 ft²	180	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	171	0.43	0.35	Overhang - None	None	0.00				
B1				Window			P14009-WINDOW	83	0.43	0.35	Overhang - None	None	0.00				
SPN-B1				Door			Standard Door	39	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 224-KITCHENETTE | **Zone Description: VAV-21** | **System Description: VAV-21**

GENERAL INFORMATION

Floor Area:	332 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	3 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.4 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Break Rooms	Break Rooms
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	540.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

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Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	332 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 228-CORRIDOR | **Zone Description: VAV-21** | **System Description: VAV-21**

GENERAL INFORMATION

Floor Area:	207 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Corridors	Corridors
Vent Value:	0.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	150.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	207 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 248-WORK AREA | **Zone Description: VAV-21** | **System Description: VAV-21**

GENERAL INFORMATION

Floor Area:	186 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	5.7 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	2 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	200.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
COPIER	400.000 W			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 249-MENS TOILET | **Zone Description: VAV-21** | **System Description: VAV-21**

GENERAL INFORMATION

Floor Area:	165 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	5.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	85.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	165 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 250-WOMENS TOILET **Zone Description: VAV-21** **System Description: VAV-21**

GENERAL INFORMATION

Floor Area: 165 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 5.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 0 sq ft/person
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.6 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	85.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	165 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 240-CONFERENCE ROOM **Zone Description: VAV-22** **System Description: VAV-22**

GENERAL INFORMATION

Floor Area: 115 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: Room
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 3 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.6 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	380.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez: Ceiling clg supply, ceiling return 100 %
Heating Ez: Ceiling supply > Trm+15°F(8°C), ceiling return 80 %
Er: Default based on system type

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	115 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
E	206 ft²	90	0	P14009-WALL	0.0520	0.90											
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Window			P14009-WINDOW	18	0.43	0.35	Overhang - None	None	0.00				
SPN				Window			P14009-WINDOW	33	0.43	0.35	Overhang - None	None	0.00				
S	137 ft²	180	0	P14009-WALL	0.0520	0.90											
C1				Window			P14009-WINDOW	68	0.43	0.35	Overhang - None	None	0.00				
SPN-C1				Door			Standard Door	18	0.00	0.20	Overhang - None	None	0.00				
SPN				Door			Standard Door	33	0.00	0.20	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 226-CCVI OFFICE **Zone Description: VAV-23** **System Description: VAV-23**

GENERAL INFORMATION

Floor Area:	116 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.6 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	165.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	116 ft²	0	90	P14009-ROOF B	0.0234	0.55		0			Overhang - None	None					
N	185 ft²	0	0	P14009-WALL	0.0520	0.90											
B1				Window			P14009-WINDOW	28	0.43	0.35	Overhang - None	None	0.00				
SPN-B1				Door			Standard Door	13	0.00	0.20	Overhang - None	None	0.00				
A1				Window			P14009-WINDOW	24	0.43	0.35	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 122-CONFERENCE ROOM | **Zone Description: VAV-24** | **System Description: VAV-24**

GENERAL INFORMATION

Floor Area:	100 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	5.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	1 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.7 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	90.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 123-OFFICE | **Zone Description: VAV-24** | **System Description: VAV-24**

GENERAL INFORMATION

Floor Area:	205 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.7 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	190.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 124-OFFICE **Zone Description: VAV-24** **System Description: VAV-24**

GENERAL INFORMATION

Floor Area:	158 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling (Peop-based)	Heating (Area-based)
Vent Type:	Office space	Office space
Vent Value:	5.00 cfm/person	0.06 cfm/sq ft
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:	Min: 30.00 % Clg Airflow	Max: 60.00 % Clg Airflow
Vav Sched:	Available (100%)	
Supply:	145.00 cfm	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Std 62.1-2004

Cooling Ez:	Ceiling clg supply, ceiling return	100 %
Heating Ez:	Ceiling supply > Trm+15°F(8°C), ceiling return	80 %
Er:	Default based on system type	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 001 - STAIR 2 **Zone Description: BASEBOARD** **System Description: BASEBOARD**

GENERAL INFORMATION

Floor Area:	203 ft²	Flr-Flr Height:	40.5 ft
Plenum Height:	0.0 ft	Height Above Flr:	-11 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	55.0 °F / 55.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Corridors	Corridors
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	Neutral, Poor Const.	Neutral, Poor Const.
Infil Value:	1.00 air changes/hr	1.00 air changes/hr
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	188 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
N1	492 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
B2				Window			90.1 Window Zone 4-6	94	0.46	0.55	Overhang - None	None	0.00				
SPN- 2				Door			90.1-07 Min Swinging	44	0.00	0.70	Overhang - None	None	0.00				
GLZ DOORS				Window			90.1 Window Zone 4-6	72	0.46	0.55	Overhang - None	None	0.00				
N2	294 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
B2				Window			90.1 Window Zone 4-6	55	0.46	0.55	Overhang - None	None	0.00				
SPN - 2				Door			90.1-07 Min Swinging	26	0.00	0.70	Overhang - None	None	0.00				
A2				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
Partition - 1	373 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Partition - 2	102 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Partition - 3	102 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Floor - 1																33	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 138-SERVER | **Zone Description: HP-07** | **System Description: HP-07**

GENERAL INFORMATION

Floor Area:	135 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	74.0 °F / 74.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 70.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1,000 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	20.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 002 - MECHANICAL ROOM (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	1,015 ft²	Flr-Flr Height:	11.3 ft
Plenum Height:	0.0 ft	Height Above Flr:	-11 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	55.0 °F / 55.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	1,000 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Partition - 1	362 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Partition - 2	362 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		
Partition - 3	396 ft²			8* HW Conc, 2* EPS	0.0964								Ground	0,000	10,000		

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 108-TRASH/RECYCLE (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	48 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 109-STORAGE (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	42 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 127-STORAGE (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	60 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 129-STORAGE (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	82 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 222-CLOSET (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	27 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	27 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					

Room Description: 247-JANITOR (UNCOND) | **Zone Description: UNCONDITIONED** | **System Description: UNCONDITIONED**

GENERAL INFORMATION

Floor Area:	45 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	5.7 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	None	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Unconditioned		

PEOPLE

People Type:	General Office Space
# of People:	143 sq ft/person
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.8 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	None	None
Vent Value:	0.00 cfm	0.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	45 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 128-A-BOARDROOM **Zone Description: VAV-01** **System Description: VAV-01**

GENERAL INFORMATION

Floor Area:	670 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	25 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	204.00 cfm	204.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
W	328 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	49	0.46	0.55	Overhang - None	None	0.00				
D1				Window			90.1 Window Zone 4-6	65	0.46	0.55	Overhang - None	None	0.00				
SPN-D1				Door			90.1-07 Min Swinging	65	0.00	0.70	Overhang - None	None	0.00				
N	425 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	49	0.46	0.55	Overhang - None	None	0.00				
C1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	35	0.00	0.70	Overhang - None	None	0.00				
F1				Window			90.1 Window Zone 4-6	37	0.46	0.55	Overhang - None	None	0.00				
SPN-F2				Window			90.1 Window Zone 4-6	26	0.46	0.55	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																51	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 128-B-BOARDROOM **Zone Description: VAV-02** **System Description: VAV-02**

GENERAL INFORMATION

Floor Area:	803 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	25 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	204.00 cfm	204.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
N	428 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	49	0.46	0.55	Overhang - None	None	0.00				
C1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	35	0.00	0.70	Overhang - None	None	0.00				
F1				Window			90.1 Window Zone 4-6	37	0.46	0.55	Overhang - None	None	0.00				
SPN-F2				Door			90.1-07 Min Swinging	26	0.00	0.70	Overhang - None	None	0.00				
E	144 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
E1				Window			90.1 Window Zone 4-6	77	0.46	0.55	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																38	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 112-126 - OPEN OFFICE **Zone Description: VAV-03** **System Description: VAV-03**

GENERAL INFORMATION

Floor Area: 1,615 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 8 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.1 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	184.00 cfm	184.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
S	417 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
B1				Window			90.1 Window Zone 4-6	94	0.46	0.55	Overhang - None	None	0.00				
SPN-B1				Door			90.1-07 Min Swinging	94	0.00	0.70	Overhang - None	None	0.00				
W	574 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	122	0.46	0.55	Overhang - None	None	0.00				
N	30 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
S2	30 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																71	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 118-CONFERENCE ROOM **Zone Description: VAV-04** **System Description: VAV-04**

GENERAL INFORMATION

Floor Area: 140 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 3 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.3 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	31.00 cfm	31.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
S	243 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
C1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	35	0.00	0.70	Overhang - None	None	0.00				
W	149 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	35	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																26	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 100-VESTIBULE **Zone Description: VAV-05** **System Description: VAV-05**

GENERAL INFORMATION

Floor Area: 98 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 55.0 °F / 55.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 0 sq ft/person
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.5 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Corridors	Corridors
Vent Value:	8.00 cfm	8.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	Neutral, Loose Const.	Neutral, Loose Const.
Infil Value:	2.50 air changes/hr	2.50 air changes/hr
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	98 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
S	164 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
J1				Window			90.1 Window Zone 4-6	97	0.46	0.55	Overhang - None	None	0.00				
SPN-J1				Door			90.1-07 Min Swinging	15	0.00	0.70	Overhang - None	None	0.00				
W	149 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
G1				Window			90.1 Window Zone 4-6	63	0.46	0.55	Overhang - None	None	0.00				
SPN-G1				Door			90.1-07 Min Swinging	34	0.00	0.70	Overhang - None	None	0.00				
Floor - 1																21	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 101-LOBBY **Zone Description: VAV-05** **System Description: VAV-05**

GENERAL INFORMATION

Floor Area: 750 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: Reception Area
# of People: 2 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.3 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Reception areas	Reception areas
Vent Value:	61.00 cfm	61.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
S	432 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	73	0.46	0.55	Overhang - None	None	0.00				
K1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-K1				Window			90.1 Window Zone 4-6	14	0.46	0.55	Overhang - None	None	0.00				
SPN				Window			90.1 Window Zone 4-6	35	0.46	0.55	Overhang - None	None	0.00				
Misc Load 1	150.000 W			Misc - Low rise office			Electricity							100	100	0	60.00
Misc Load 2	150.000 W			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																29	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 107-SITTING | **Zone Description: VAV-05** | **System Description: VAV-05**

GENERAL INFORMATION

Floor Area: 500 ft² | Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft | Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None | Floor Multiplier: 1
Humidistat Location: Room | Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: Reception Area
# of People: 2 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.3 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Reception areas	Reception areas
Vent Value:	61.00 cfm	61.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 130-STAFF LOUNGE | **Zone Description: VAV-06** | **System Description: VAV-06**

GENERAL INFORMATION

Floor Area: 545 ft² | Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft | Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room | Floor Multiplier: 1
Humidistat Location: Room | Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 10 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.2 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Break Rooms	Break Rooms
Vent Value:	54.00 cfm	54.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
N	417 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	73	0.46	0.55	Overhang - None	None	0.00				
W	45 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																31	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 105-WOMENS TOILET | **Zone Description: VAV-07** | **System Description: VAV-07**

GENERAL INFORMATION

Floor Area:	165 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	5.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.9 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Rest Room	Rest Room
Vent Value:	12.00 cfm	12.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 106-MENS TOILET | **Zone Description: VAV-07** | **System Description: VAV-07**

GENERAL INFORMATION

Floor Area:	156 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	5.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.9 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Rest Room	Rest Room
Vent Value:	12.00 cfm	12.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 131-133-CORRIDOR | **Zone Description: VAV-07** | **System Description: VAV-07**

GENERAL INFORMATION

Floor Area:	310 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Corridors	Corridors
Vent Value:	16.00 cfm	16.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef

Room Description: 136-TECHNICAL SERVICES | **Zone Description: VAV-07** | **System Description: VAV-07**

GENERAL INFORMATION

Floor Area:	357 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	3 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.1 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	80.00 cfm	80.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 137-TECH SERVICES OFFICE **Zone Description: VAV-07** **System Description: VAV-07**

GENERAL INFORMATION

Floor Area: 103 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 1 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.1 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	32.00 cfm	32.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 140-WORKROOM **Zone Description: VAV-07** **System Description: VAV-07**

GENERAL INFORMATION

Floor Area: 165 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 6.4 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 1 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.1 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	22.00 cfm	22.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
COPIERS (2X)	800.000 W			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 144-CONFERENCE ROOM **Zone Description: VAV-08** **System Description: VAV-08**

GENERAL INFORMATION

Floor Area:	132 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	3 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	54.00 cfm	54.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
N	142 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	35	0.00	0.70	Overhang - None	None	0.00				
E	238 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
C1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	35	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																26	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 103-MAIL **Zone Description: VAV-09** **System Description: VAV-09**

GENERAL INFORMATION

Floor Area:	130 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	2.9 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.1 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	14.00 cfm	14.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
S	112 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																8	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 147-LOANS SERV OPEN OFFICE **Zone Description: VAV-09** **System Description: VAV-09**

GENERAL INFORMATION

Floor Area: 2,656 ft² Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 12 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.1 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	305.00 cfm	305.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
N	365 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	98	0.46	0.55	Overhang - None	None	0.00				
E1	50 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
E2	621 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	146	0.46	0.55	Overhang - None	None	0.00				
S	779 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	122	0.46	0.55	Overhang - None	None	0.00				
B1				Window			90.1 Window Zone 4-6	94	0.46	0.55	Overhang - None	None	0.00				
SPN-B1				Door			90.1-07 Min Swinging	44	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																122	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 149-CONFERENCE ROOM **Zone Description: VAV-10** **System Description: VAV-10**

GENERAL INFORMATION

Floor Area: 121 ft²
Flr-Flr Height: 14.9 ft
Plenum Height: 2.9 ft
Height Above Flr:
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room
Floor Multiplier: 1
Humidistat Location: Room
Room Multiplier: 1
CO2 Sensor Location: Room
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 2 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.3 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	57.00 cfm	57.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
E	214 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
C1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	35	0.00	0.70	Overhang - None	None	0.00				
S	144 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	62	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	16	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	35	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
Floor - 1																24	0.73

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 219-CONFERENCE ROOM **Zone Description: VAV-11** **System Description: VAV-11**

GENERAL INFORMATION

Floor Area:	84 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	2 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	20.00 cfm	20.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	84 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
W	149 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	18	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	33	0.00	0.70	Overhang - None	None	0.00				
N	142 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	18	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	33	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 220-CONFERENCE ROOM **Zone Description: VAV-12** **System Description: VAV-12**

GENERAL INFORMATION

Floor Area:	69 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	2 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	15.00 cfm	15.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	69 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
N	123 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	18	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	33	0.00	0.70	Overhang - None	None	0.00				
E	135 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
E1				Window			90.1 Window Zone 4-6	81	0.46	0.55	Overhang - None	None	0.00				
SPN-E1				Window			90.1 Window Zone 4-6	18	0.46	0.55	Overhang - None	None	0.00				
SPN				Window			90.1 Window Zone 4-6	35	0.46	0.55	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 201-LOBBY **Zone Description: VAV-13** **System Description: VAV-13**

GENERAL INFORMATION

Floor Area: 1,200 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: Reception Area
# of People: 5 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.3 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Reception areas	Reception areas
Vent Value:	92.00 cfm	92.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	1,200 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
S	412 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	73	0.46	0.55	Overhang - None	None	0.00				
K1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-K1				Window			90.1 Window Zone 4-6	16	0.46	0.55	Overhang - None	None	0.00				
SPN				Window			90.1 Window Zone 4-6	32	0.46	0.55	Overhang - None	None	0.00				
W	152 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
H1				Window			90.1 Window Zone 4-6	85	0.46	0.55	Overhang - None	None	0.00				
SPN-H1				Door			90.1-07 Min Swinging	66	0.00	0.70	Overhang - None	None	0.00				

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 221-CAP MNGMT OPEN OFFICE **Zone Description: VAV-14** **System Description: VAV-14**

GENERAL INFORMATION

Floor Area: 3,214 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 22 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.1 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	305.00 cfm	305.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	3,214 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
S1	334 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
B1				Window			90.1 Window Zone 4-6	83	0.46	0.55	Overhang - None	None	0.00				
SPN-B1				Door			90.1-07 Min Swinging	39	0.00	0.70	Overhang - None	None	0.00				
W	720 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	195	0.46	0.55	Overhang - None	None	0.00				
S2	28 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
N2	28 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
N1	549 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	98	0.46	0.55	Overhang - None	None	0.00				
F1				Window			90.1 Window Zone 4-6	72	0.46	0.55	Overhang - None	None	0.00				
SPN-F1				Door			90.1-07 Min Swinging	52	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00
COPIER	400.000 W			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 210-CONFERENCE ROOM **Zone Description: VAV-15** **System Description: VAV-15**

GENERAL INFORMATION

Floor Area: 134 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: Room
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 4 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.3 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	31.00 cfm	31.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	134 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
S	227 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	18	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	33	0.00	0.70	Overhang - None	None	0.00				
W	142 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	18	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	33	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 207-CONFERENCE ROOM **Zone Description: VAV-16** **System Description: VAV-16**

GENERAL INFORMATION

Floor Area:	94 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	2 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	20.00 cfm	20.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	94 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
S	135 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 223-CONFERENCE ROOM **Zone Description: VAV-17** **System Description: VAV-17**

GENERAL INFORMATION

Floor Area:	478 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	Room		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	15 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	76.00 cfm	76.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	478 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
N	398 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	98	0.46	0.55	Overhang - None	None	0.00				
W	43 ft²	270	0	90.1-07 Min Wall Nonres	0.0646	0.90											
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 225-CAPITAL VENTURE OPEN OFFICE **Zone Description: VAV-18** **System Description: VAV-18**

GENERAL INFORMATION

Floor Area:	400 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	3 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.1 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	64.00 cfm	64.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	400 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 232-CONFERENCE ROOM **Zone Description: VAV-19** **System Description: VAV-19**

GENERAL INFORMATION

Floor Area: 132 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: Room
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 3 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.3 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	35.00 cfm	35.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	132 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
N	135 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	18	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	33	0.00	0.70	Overhang - None	None	0.00				
E	227 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	18	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	33	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 237-LENDING OPEN OFFICE **Zone Description: VAV-20** **System Description: VAV-20**

GENERAL INFORMATION

Floor Area: 3,066 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 16 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.1 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	330.00 cfm	330.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	3,066 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
N	345 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	98	0.46	0.55	Overhang - None	None	0.00				
E2	47 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
E1	589 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	146	0.46	0.55	Overhang - None	None	0.00				
S	918 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	171	0.46	0.55	Overhang - None	None	0.00				
B1				Window			90.1 Window Zone 4-6	83	0.46	0.55	Overhang - None	None	0.00				
SPN-B1				Door			90.1-07 Min Swinging	39	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 224-KITCHENETTE | **Zone Description: VAV-21** | **System Description: VAV-21**

GENERAL INFORMATION

Floor Area:	332 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	3 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.2 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Break Rooms	Break Rooms
Vent Value:	73.00 cfm	73.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	332 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 228-CORRIDOR | **Zone Description: VAV-21** | **System Description: VAV-21**

GENERAL INFORMATION

Floor Area:	207 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	3.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.5 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Corridors	Corridors
Vent Value:	20.00 cfm	20.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	207 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 248-WORK AREA | **Zone Description: VAV-21** | **System Description: VAV-21**

GENERAL INFORMATION

Floor Area:	186 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	5.7 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	2 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.1 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	27.00 cfm	27.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
COPIER	400.000 W			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 249-MENS TOILET | **Zone Description: VAV-21** | **System Description: VAV-21**

GENERAL INFORMATION

Floor Area:	165 ft²	Flr-Flr Height:	14.2 ft
Plenum Height:	5.2 ft	Height Above Flr:	15 ft
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	0 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	0.9 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Rest Room	Rest Room
Vent Value:	12.00 cfm	12.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	165 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 250-WOMENS TOILET **Zone Description: VAV-21** **System Description: VAV-21**

GENERAL INFORMATION

Floor Area: 165 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 5.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: None Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 0 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 0.9 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Rest Room	Rest Room
Vent Value:	12.00 cfm	12.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	165 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 240-CONFERENCE ROOM **Zone Description: VAV-22** **System Description: VAV-22**

GENERAL INFORMATION

Floor Area: 115 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: Room
Room Type: Conditioned

PEOPLE

People Type: Conference Room
# of People: 3 People
People Sensible: 245 Btu/h
People Latent : 155 Btu/h
People Schedule: People - Low Rise Office

Workstation: 0.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.3 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	52.00 cfm	52.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	115 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
E	206 ft²	90	0	90.1-07 Min Wall Nonres	0.0646	0.90											
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Window			90.1 Window Zone 4-6	18	0.46	0.55	Overhang - None	None	0.00				
SPN				Window			90.1 Window Zone 4-6	33	0.46	0.55	Overhang - None	None	0.00				
S	137 ft²	180	0	90.1-07 Min Wall Nonres	0.0646	0.90											
C1				Window			90.1 Window Zone 4-6	68	0.46	0.55	Overhang - None	None	0.00				
SPN-C1				Door			90.1-07 Min Swinging	18	0.00	0.70	Overhang - None	None	0.00				
SPN				Door			90.1-07 Min Swinging	33	0.00	0.70	Overhang - None	None	0.00				
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 226-CCVI OFFICE **Zone Description: VAV-23** **System Description: VAV-23**

GENERAL INFORMATION

Floor Area: 116 ft² Flr-Flr Height: 14.2 ft
Plenum Height: 3.2 ft Height Above Flr: 15 ft
Slab Cnstr Type: 6* AVE CONCRETE
Room Mass: Time delay based on actual mass
Ceiling R-Value: 1.786 hr·ft²·°F/Btu
Is There Carpet?: YES
Design Clg DB / Drift Point: 73.0 °F / 75.0 °F
Design Htg DB / Drift Point: 70.0 °F / 68.0 °F
Design Relative Humidity: 50 %
Moisture Capacitance: None
Clg Tstat: None
Htg Tstat: None

Thermostat Location: Room Floor Multiplier: 1
Humidistat Location: Room Room Multiplier: 1
CO2 Sensor Location: None
Room Type: Conditioned

PEOPLE

People Type: General Office Space
# of People: 1 People
People Sensible: 250 Btu/h
People Latent : 200 Btu/h
People Schedule: People - Low Rise Office

Workstation: 1.0 workstation/person

LIGHTS

Lighting Type: Recessed fluorescent, not vented, 80% load to space
Fixture Type: RECFL-NV
% Load to RA: 20 %
Lighting Schedule: Lights - Low rise office
Lighting Amount: 1.1 W/sq ft
Ballast Factor: 1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	22.00 cfm	22.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass Type / Energy Type	Glass Area ft²	Glass Shade Coef	Glass U Value Btu/h·ft²·°F	Glass External Shading	Glass Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Roof - 1	116 ft²	0	90	90.1-07 Min Roof Nonres	0.0476	0.70		0			Overhang - None	None					
N	185 ft²	0	0	90.1-07 Min Wall Nonres	0.0646	0.90											
B1				Window			90.1 Window Zone 4-6	28	0.46	0.55	Overhang - None	None	0.00				
SPN-B1				Door			90.1-07 Min Swinging	13	0.00	0.70	Overhang - None	None	0.00				
A1				Window			90.1 Window Zone 4-6	24	0.46	0.55	Overhang - None	None	0.00				
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 122-CONFERENCE ROOM | **Zone Description: VAV-24** | **System Description: VAV-24**

GENERAL INFORMATION

Floor Area:	100 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	5.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	Conference Room
# of People:	1 People
People Sensible:	245 Btu/h
People Latent :	155 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	0.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.3 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Conference/ meeting	Conference/ meeting
Vent Value:	9.00 cfm	9.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	0.500 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

Room Description: 123-OFFICE | **Zone Description: VAV-24** | **System Description: VAV-24**

GENERAL INFORMATION

Floor Area:	205 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	Room	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.1 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	19.00 cfm	19.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

ENTERED VALUES

ROOM BY ROOM

By THORNTON TOMASETTI, INC.

Room Description: 124-OFFICE **Zone Description: VAV-24** **System Description: VAV-24**

GENERAL INFORMATION

Floor Area:	158 ft²	Flr-Flr Height:	14.9 ft
Plenum Height:	6.4 ft	Height Above Flr:	
Slab Cnstr Type:	6* AVE CONCRETE		
Room Mass:	Time delay based on actual mass		
Ceiling R-Value:	1.786 hr·ft²·°F/Btu		
Is There Carpet?:	YES		
Design Clg DB / Drift Point:	73.0 °F / 75.0 °F		
Design Htg DB / Drift Point:	70.0 °F / 68.0 °F		
Design Relative Humidity:	50 %		
Moisture Capacitance:	None		
Clg Tstat:	None		
Htg Tstat:	None		
Thermostat Location:	None	Floor Multiplier:	1
Humidistat Location:	Room	Room Multiplier:	1
CO2 Sensor Location:	None		
Room Type:	Conditioned		

PEOPLE

People Type:	General Office Space
# of People:	1 People
People Sensible:	250 Btu/h
People Latent :	200 Btu/h
People Schedule:	People - Low Rise Office
Workstation:	1.0 workstation/person

LIGHTS

Lighting Type:	Recessed fluorescent, not vented, 80% load to space
Fixture Type:	RECFL-NV
% Load to RA:	20 %
Lighting Schedule:	Lights - Low rise office
Lighting Amount:	1.1 W/sq ft
Ballast Factor:	1.0

AIRFLOW INFORMATION

	Cooling	Heating
Vent Type:	Office space	Office space
Vent Value:	15.00 cfm	15.00 cfm
Vent Schedule:	Vent - Low rise office	
Infil Type:	IRS STANDARD	IRS STANDARD
Infil Value:	0.04 cfm/sq ft of wall	0.04 cfm/sq ft of wall
Infil Schedule:	Available (100%)	
Vav Airflow:		
Vav Sched:	Available (100%)	
Supply:	To be calculated	To be calculated
Aux Supply:	To be calculated	To be calculated
Room Exhaust:		
Rm Exh Sched:	Available (100%)	

Description	Area/ Amount	Dir	Tilt	Const Type / Schedule	U Value Btu/h·ft²·°F	Alpha	Glass: Type / Energy Type	Glass: Area ft²	Glass: Shade Coef	Glass: U Value Btu/h·ft²·°F	Glass: External Shading	Glass: Internal Shading	Adj Temp/ Grnd Refl	Pct Sen/ Cool Tmp	Pct Rm/ Heat Tmp	Pct Ret/ Perm Len	Rad Frc/ Loss Coef
Misc Load 1	1.000 W/sq ft			Misc - Low rise office			Electricity							100	100	0	60.00

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

RTU-1 - Variable Volume Reheat (30% Min Flow Default)

Design Air Conditions

	Max	Min				
Cooling supply:			Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	110.0 °F	110.0 °F				

Economizer

Type: Enthalpy	"On" Point:	Btu/lb	Max Percent OA:	100%	Schedule:	Available (100%)	

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Block	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	System	Return fan motor location:	Omit	Optimum start schedule:	Available (100%)
Block cooling airflow:	10,575 cfm	Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Block		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	Single Setpoint
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:	28 %	System ventilation flag:	ASHRAE Std 62.1-2004-2010 w/ Vent Reset

Reset per worst case room schedule:	Available (100%)	Supply air path / duct location:	Return Air
Max reset:	15.0	Space convective gains to occupied layer:	100 %
Use system default outside air reset:	No	Underfloor plenum height:	0.0 ft
Supply air DB cooling low is 60.0 °F at outside air DB of 80.0 °F		Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
Supply air DB cooling high is 65.0 °F at outside air DB of 20.0 °F		Upstream nominal leakage fraction:	0 %
		Downstream constant leakage fraction:	0 %
		Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Follow Outside Air Reset Schedule	Radiant Floor
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	268.0 Mbh	P14009-REHEAT COIL	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	100.0 % of Design minus Aux Capacity	Available (100%)	Misc loads	100%
Aux heating:	100 % of Design Capacity	Available (100%)		
Preheat:	100.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	AF Centrifugal var freq drv	2.8 in. wg	0.0 in. wg	0.00022 kW/Cfm-in wg	Available (100%)	92	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

RTU-2 - Variable Volume Reheat (30% Min Flow Default)

Design Air Conditions

	Max	Min				
Cooling supply:			Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	110.0 °F	110.0 °F				

Economizer

Type: Enthalpy	"On" Point:	Btu/lb	Max Percent OA:	100%	Schedule:	Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Block	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	System	Return fan motor location:	Omit	Optimum start schedule:	Available (100%)
Block cooling airflow:	10,290 cfm	Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Block		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	Single Setpoint
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:	45 %	System ventilation flag:	ASHRAE Std 62.1-2004-2010 w/ Vent Reset

Reset per worst case room schedule:	Available (100%)	Supply air path / duct location:	Return Air
Max reset:	15.0	Space convective gains to occupied layer:	100 %
Use system default outside air reset:	No	Underfloor plenum height:	0.0 ft
Supply air DB cooling low is 60.0 °F at outside air DB of 80.0 °F		Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
Supply air DB cooling high is 65.0 °F at outside air DB of 20.0 °F		Upstream nominal leakage fraction:	0 %
		Downstream constant leakage fraction:	0 %
		Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Follow Outside Air Reset Schedule	Radiant Floor
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	268.0 Mbh	P14009-REHEAT COIL	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	100.0 % of Design minus Aux Capacity	Available (100%)	Misc loads	100%
Aux heating:	100 % of Design Capacity	Available (100%)		
Preheat:	100.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	AF Centrifugal var freq drv	2.8 in. wg	0.0 in. wg	0.00022 kW/Cfm-in wg	Available (100%)	92	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

HP-07 - Water Source Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:			Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:						

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Room	Return fan motor location:	Omit	Optimum start schedule:	Off (0%)
Block cooling airflow:		Supply fan cofiguration:	Blow Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	100 %
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
	Control Method	Control Type	Aux cooling coil losses to plenum:	0 %
Auxiliary cooling coil	Activate After Primary System	None		
Auxiliary heating coil	Activate After Primary System	None		
Auxiliary fan	No Fan			

Coils

	Capacity	Schedule	Diversity	
Main cooling:	23.8 Mbh	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	100.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	100.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	Hydronic in heat pump fan	0.5 in. wg	0.0 in. wg	0.25000 kW	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

SEMI-HEATED - Radiation (Heating Only)

Design Air Conditions

	Max	Min
Cooling supply:		
Leaving cooling coil:		
Heating supply:		

Supply duct temperature diff: 0.0 °F
Reheat Temperature diff: 0.0 °F

Design humidity ratio diff:
Min room relative humidity:

Advanced Options

Cooling coil sizing method: No Coil
Cooling coil location: Room
Block cooling airflow:
Ventilation deck location: Room Direct
Supply duct location: Return Air
Return air path: ROOMDK

Supply fan motor location: Omit
Return fan motor location: Omit
Supply fan cofiguration: Draw Thru
Supply fan sizing: No Fan
Fan mechanical efficiency : 75%
Apply Std62 People Avg: No
Std62 Max Vent (Z) Ratio:

Night purge schedule: Off (0%)
Optimum start schedule: Off (0%)
Optimum stop schedule: Off (0%)

CO2-based DCV: None

System ventilation flag: Sum Room OA Reqs

Reset per worst case room schedule: Off (0%)
Max reset:
Use system default outside air reset: Yes

Supply air path / duct location: Return Air
Space convective gains to occupied layer: 100 %
Underfloor plenum height: 0.0 ft
Conductive resistance of raised floor: 0.8 hr·ft²·°F/Btu
Upstream nominal leakage fraction: 0 %
Downstream constant leakage fraction: 0 %
Aux cooling coil losses to plenum: 0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule
Main cooling:	0.0 % of Design Capacity by adjusting airfl	Available (100%)
Aux cooling:		Available (100%)
Main heating:	100.0 % of Design Capacity	Available (100%)
Aux heating:		Available (100%)
Preheat:	100.0% of Design Capacity	Available (100%)
Reheat:	100.0 % of Design Capacity	Available (100%)
Humidification:	100.0 % of Design Capacity	Available (100%)

Diversity

People	100%
Lights	100%
Misc loads	100%

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

UNCONDITIONED SPACES - Radiation (Heating Only)

Design Air Conditions

	Max	Min				
Cooling supply:			Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:						

Advanced Options

Cooling coil sizing method:	No Coil	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Room	Return fan motor location:	Return	Optimum start schedule:	Off (0%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Room Direct	Supply fan sizing:	No Fan		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	DUCTED	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	100 %
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
	Control Method	Control Type	Aux cooling coil losses to plenum:	0 %
Auxiliary cooling coil	Activate After Primary System	None		
Auxiliary heating coil	Activate After Primary System	None		
Auxiliary fan	No Fan			

Coils

	Capacity	Schedule	Diversity	
Main cooling:	0.0 % of Design Capacity by adjusting airfl	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	100.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	100.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

BASEBOARD - System 10 - 2010 - Heating Only & Ventilation, Electric

Design Air Conditions

	Max	Min				
Cooling supply:			Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	105.0 °F	105.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	No Coil	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Room	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	No Fan		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	ROOMDK	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	None	0.0 in. wg	0.0 in. wg	0.00000 kW/Cfm-in wg	Available (100%)	90	
Secondary	FC Centrifugal Const Vol	0.5 in. wg	NA	0.00032 kW/Cfm-in wg	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

HP-07 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	54.0 °F	54.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-01 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-02 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-03 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-04 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-05 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-06 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-07 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-08 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-09 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-10 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-11 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-12 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb | "On" Point: 70 °F | Max Percent OA: 100% | Schedule: Available (100%)

Evaporative Cooling

Type: None | Direct efficiency: 0% Available (100%) | Indirect efficiency: 0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-13 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-14 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-15 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb | "On" Point: 70 °F | Max Percent OA: 100% | Schedule: Available (100%)

Evaporative Cooling

Type: None | Direct efficiency: 0% Available (100%) | Indirect efficiency: 0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)	Supply air path / duct location: Return Air
Max reset:		Space convective gains to occupied layer:
Use system default outside air reset:	Yes	Underfloor plenum height: 0.0 ft
		Conductive resistance of raised floor: 0.8 hr·ft²·°F/Btu
		Upstream nominal leakage fraction: 0 %
		Downstream constant leakage fraction: 0 %
		Aux cooling coil losses to plenum: 0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-16 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-17 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule		
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-18 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-19 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-20 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-21 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-22 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-23 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

VAV-24 - System 4 - 2007/2010 - Packaged Rooftop Heat Pump

Design Air Conditions

	Max	Min				
Cooling supply:	53.0 °F	53.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	90.0 °F	90.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	Peak	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Zone	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	Peak		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	PLENUM	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)		Supply air path / duct location:	Return Air
Max reset:			Space convective gains to occupied layer:	
Use system default outside air reset:	Yes		Underfloor plenum height:	0.0 ft
			Conductive resistance of raised floor:	0.8 hr·ft²·°F/Btu
			Upstream nominal leakage fraction:	0 %
			Downstream constant leakage fraction:	0 %
			Aux cooling coil losses to plenum:	0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	FC Centrifugal Const Vol	0.5 in. wg	0.0 in. wg	0.00032 kW/Cfm-in wg	Available (100%)	90	
Secondary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

SYSTEM ENTERED VALUES

By THORNTON TOMASETTI, INC.

UNCONDITIONED - System 10 - 2010 - Heating Only & Ventilation, Electric

Design Air Conditions

	Max	Min				
Cooling supply:	55.0 °F	55.0 °F	Supply duct temperature diff:	0.0 °F	Design humidity ratio diff:	
Leaving cooling coil:			Reheat Temperature diff:	0.0 °F	Min room relative humidity:	
Heating supply:	105.0 °F	105.0 °F				

Economizer

Type: Dry Bulb	"On" Point: 70 °F	Max Percent OA: 100%	Schedule: Available (100%)

Evaporative Cooling

Type: None	Direct efficiency:	0%	Available (100%)	Indirect efficiency:	0% Available (100%)

Advanced Options

Cooling coil sizing method:	No Coil	Supply fan motor location:	Supply	Night purge schedule:	Off (0%)
Cooling coil location:	Room	Return fan motor location:	Return	Optimum start schedule:	Available (100%)
Block cooling airflow:		Supply fan cofiguration:	Draw Thru	Optimum stop schedule:	Off (0%)
Ventilation deck location:	Return/Outdoor Deck	Supply fan sizing:	No Fan		
Supply duct location:	Return Air	Fan mechanical efficiency :	75%	CO2-based DCV:	None
Return air path:	ROOMDK	Apply Std62 People Avg:	No		
		Std62 Max Vent (Z) Ratio:		System ventilation flag:	Sum Room OA Reqs

Reset per worst case room schedule:	Off (0%)	Supply air path / duct location: Return Air
Max reset:		Space convective gains to occupied layer: 100 %
Use system default outside air reset:	Yes	Underfloor plenum height: 0.0 ft
		Conductive resistance of raised floor: 0.8 hr·ft²·°F/Btu
		Upstream nominal leakage fraction: 0 %
		Downstream constant leakage fraction: 0 %
		Aux cooling coil losses to plenum: 0 %

	Control Method	Control Type
Auxiliary cooling coil	Activate After Primary System	None
Auxiliary heating coil	Activate After Primary System	None
Auxiliary fan	No Fan	

Coils

	Capacity	Schedule	Diversity	
Main cooling:	115.0 % of Design Cooling Capacity	Available (100%)	People	100%
Aux cooling:		Available (100%)	Lights	100%
Main heating:	125.0 % of Design Capacity	Available (100%)	Misc loads	100%
Aux heating:		Available (100%)		
Preheat:	125.0% of Design Capacity	Available (100%)		
Reheat:	100.0 % of Design Capacity	Available (100%)		
Humidification:	100.0 % of Design Capacity	Available (100%)		

Fans

	Type	Static Press.	90.1 SP Adj	Full Load Energy Rate	Schedule	Efficiency	Priority
Primary	None	0.0 in. wg	0.0 in. wg	0.00000 kW/Cfm-in wg	Available (100%)	90	
Secondary	FC Centrifugal Const Vol	0.0 in. wg	NA	0.00032 kW/Cfm-in wg	Available (100%)	85	
Return	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
System Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	90	
Room Exhaust	None	0.0 in. wg	0.0 in. wg	0.00000 kW	Available (100%)	85	
Optional ventilation	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	90	
Auxiliary	None	0.0 in. wg	NA	0.00000 kW	Available (100%)	85	
Fan Cycling					Cycle with occupancy		

BRUNSWICK (NAS), ME, USA

WMO#: **743920**

Lat: **43.90N** Long: **69.93W** Elev: **75** StdP: **14.66** Time Zone: **-5 (NAE)** Period: **86-10** WBAN: **14611**

Annual Heating and Humidification Design Conditions

	Coldest Month	Heating DB		Humidification DP/MCDB and HR						Coldest month WS/MCDB				MCWS/PCWD to 99.6% DB		
				99.6%			99%			0.4%		1%				
		99.6%	99%	DP	HR	MCDB	DP	HR	MCDB	WS	MCDB	WS	MCDB	MCWS	PCWD	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	
(1)	1	-2.2	2.1	-18.5	2.0	1.3	-13.4	2.7	5.8	26.6	32.2	24.3	26.3	5.1	0	(1)

Annual Cooling, Dehumidification, and Enthalpy Design Conditions

	Hottest Month	Hottest Month DB Range	Cooling DB/MCWB						Evaporation WB/MCDB						MCWS/PCWD to 0.4% DB		
			0.4%		1%		2%		0.4%		1%		2%				
			DB	MCWB	DB	MCWB	DB	MCWB	WB	MCDB	WB	MCDB	WB	MCDB	MCWS	PCWD	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	
(2)	7	18.4	86.3	70.7	82.8	68.9	80.5	67.3	73.5	82.4	71.5	79.8	69.7	76.5	9.2	200	(2)

	Dehumidification DP/MCDB and HR								Enthalpy/MCDB						Hours	
	0.4%			1%			2%		0.4%		1%		2%		8 to 4 &	
	DP	HR	MCDB	DP	HR	MCDB	DP	HR	MCDB	Enth	MCDB	Enth	MCDB	Enth	MCDB	55/69	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	
(3)	70.4	112.4	78.0	69.0	106.7	76.0	66.9	99.3	73.8	37.1	82.6	35.3	79.9	33.8	76.5	774	(3)

Extreme Annual Design Conditions

	Extreme Annual WS			Extreme Max	Extreme Annual DB				n-Year Return Period Values of Extreme DB								
					Mean		Standard deviation		n=5 years		n=10 years		n=20 years		n=50 years		
	1%	2.5%	5%	WB	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	
(4)	23.2	19.5	17.4	84.7	-11.2	93.1	5.5	2.7	-15.1	95.0	-18.4	96.6	-21.4	98.1	-25.4	100.1	(4)

Monthly Climatic Design Conditions

				Annual (d)	Jan (e)	Feb (f)	Mar (g)	Apr (h)	May (i)	Jun (j)	Jul (k)	Aug (l)	Sep (m)	Oct (n)	Nov (o)	Dec (p)	
(5)	Temperatures, Degree-Days and Degree-Hours		Tavg	46.3	21.9	23.7	32.9	43.9	54.2	63.7	69.0	68.5	60.1	48.9	38.8	28.1	(5)
(6)			Sd		10.72	9.55	8.82	6.13	6.42	6.35	5.16	5.16	6.36	6.99	8.17	9.45	(6)
(7)			HDD50	3504	872	736	531	202	26	0	0	0	5	107	346	679	(7)
(8)			HDD65	7202	1337	1156	994	634	341	97	20	24	170	500	785	1144	(8)
(9)			CDD50	2144	0	0	2	18	157	412	589	575	307	73	11	0	(9)
(10)			CDD65	367	0	0	0	0	7	59	144	133	23	1	0	0	(10)
(11)			CDH74	2622	0	0	2	5	102	482	1009	877	140	5	0	0	(11)
(12)			CDH80	676	0	0	1	0	26	122	278	224	25	0	0	0	(12)
(13)	Precipitation		PrecAvg	46.6	3.6	3.6	4.3	3.9	3.8	3.6	2.9	3.4	3.4	3.9	5.0	4.6	(13)
(14)			PrecMax	63.5	10.8	7.3	8.0	5.8	6.5	6.7	5.9	8.1	5.2	8.6	10.3	10.0	(14)
(15)			PrecMin	32.6	0.5	1.4	0.8	1.1	0.6	0.7	0.6	1.1	0.6	0.9	1.2	1.4	(15)
(16)			PrecSD	7.4	2.3	1.6	1.7	1.2	1.6	1.6	1.4	1.8	1.3	2.1	2.2	2.5	(16)
(17)	Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB		50.8	48.3	61.3	70.6	83.8	88.3	90.9	90.2	83.1	73.6	63.5	53.9	(17)
(18)			MCWB		48.7	42.5	48.6	55.5	64.6	71.5	73.6	73.0	69.6	61.0	55.7	48.0	(18)
(19)		2%	DB		45.4	44.8	54.1	63.7	75.5	83.6	86.2	85.6	78.0	67.4	58.5	48.6	(19)
(20)			MCWB		41.5	40.4	45.1	49.9	61.5	67.2	70.7	71.6	65.3	57.6	53.5	44.8	(20)
(21)		5%	DB		40.7	41.3	48.6	59.0	70.5	79.5	82.5	82.0	73.8	63.6	54.9	45.3	(21)
(22)			MCWB		37.2	37.2	41.9	47.7	57.8	65.5	69.0	69.4	63.3	56.2	50.5	41.8	(22)
(23)		10%	DB		36.9	37.9	45.3	54.9	65.8	75.5	79.9	79.2	71.0	60.8	52.2	42.0	(23)
(24)			MCWB		33.9	34.0	39.5	45.4	54.5	63.4	67.7	66.8	62.3	54.4	48.2	37.8	(24)
(25)	Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB		48.7	45.3	51.7	58.7	67.6	74.3	77.0	75.7	71.2	64.2	58.5	51.1	(25)
(26)			MCDB		50.2	46.4	56.7	67.8	77.6	84.2	86.3	85.3	78.8	68.6	61.9	53.0	(26)
(27)		2%	WB		42.7	41.2	46.5	53.1	62.9	70.9	73.8	73.4	68.6	60.6	55.0	46.3	(27)
(28)			MCDB		44.8	44.0	51.3	59.3	73.3	79.7	82.6	82.2	74.3	65.2	57.6	47.5	(28)
(29)		5%	WB		37.7	37.5	43.3	49.9	59.5	68.2	71.5	71.5	66.1	58.1	52.0	42.2	(29)
(30)			MCDB		40.2	40.1	48.1	56.3	68.0	75.9	79.9	79.4	71.3	62.3	54.4	45.1	(30)
(31)		10%	WB		34.3	34.7	40.0	47.1	56.7	65.8	69.6	69.6	64.1	55.4	48.4	38.0	(31)
(32)			MCDB		36.7	37.9	44.4	53.0	63.6	72.7	76.4	75.9	68.1	59.0	51.2	41.3	(32)
(33)	Mean Daily Temperature Range		MDBR		17.5	18.4	17.2	18.3	19.1	18.7	18.4	18.8	18.7	18.4	16.1	16.5	(33)
(34)		5% DB	MCDBR		18.5	18.6	22.1	25.9	27.1	24.4	23.0	22.3	22.1	21.8	18.4	19.3	(34)
(35)			MCWBR		16.8	15.2	15.3	15.2	14.7	12.7	11.3	11.4	12.6	14.8	14.8	16.8	(35)
(36)		5% WB	MCDBR		17.9	17.2	20.0	22.0	23.5	21.5	19.6	19.2	18.1	18.1	16.2	18.6	(36)
(37)			MCWBR		17.1	15.5	15.5	14.7	14.2	13.2	11.5	10.9	12.2	14.3	14.7	17.7	(37)
(38)	Clear Sky Solar Irradiance		taub		0.311	0.321	0.336	0.368	0.379	0.399	0.391	0.396	0.376	0.329	0.324	0.301	(38)
(39)			taud		2.536	2.469	2.448	2.336	2.296	2.238	2.300	2.313	2.385	2.563	2.601	2.641	(39)
(40)			Ebn,noon		261	277	287	284	283	276	277	272	269	272	255	257	(40)
(41)			Edh,noon		21	27	31	38	41	43	40	38	33	24	20	18	(41)

Nomenclature: See separate page

BUILDING U-FACTORS

By THORNTON TOMASETTI, INC.

Description	ROOM U-FACTORS Btu/h·ft²·°F											Room Mass	Room Capacitance
	Partition	Internal Door	Exposed Floor	Summer Skylight	Winter Skylight	Roof	Summer Window	Winter Window	External Door	Wall	Ceiling	lb/ft²	Btu/lb·°F
Alternative 1													
128-A-BOARDROOM	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	89.2	19.7
VAV-01 - Zone	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	89.2	19.7
128-B-BOARDROOM	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	78.7	17.3
VAV-02 - Zone	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	78.7	17.3
112-126 - OPEN OFFICE	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	85.2	18.8
VAV-03 - Zone	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	85.2	18.8
118-CONFERENCE ROOM	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	114.3	25.2
VAV-04 - Zone	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	114.3	25.2
100-VESTIBULE	0.000	0.000	0.550	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	179.7	33.6
101-LOBBY	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.000	0.052	0.317	79.4	17.5
107-SITTING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-05 - Zone	0.000	0.000	0.550	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	80.4	17.3
219-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	158.5	28.9
VAV-11 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	158.5	28.9
220-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	130.0	22.5
VAV-12 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	130.0	22.5
201-LOBBY	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	135.0	23.7
VAV-13 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	135.0	23.7
221-CAP MNGMT OPEN OFFICE	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	143.0	25.4
VAV-14 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	143.0	25.4
210-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	166.7	30.7
VAV-15 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	166.7	30.7
207-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.000	0.052	0.317	185.6	34.9
VAV-16 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.000	0.052	0.317	185.6	34.9
122-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
123-OFFICE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
124-OFFICE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-24 - Zone	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
RTU-1 - System	0.000	0.000	0.550	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	111.6	21.6
223-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.000	0.052	0.317	162.2	29.7
VAV-17 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.000	0.052	0.317	162.2	29.7

BUILDING U-FACTORS

By THORNTON TOMASETTI, INC.

Description	ROOM U-FACTORS Btu/h·ft²·°F											Room Mass	Room Capacitance
	Partition	Internal Door	Exposed Floor	Summer Skylight	Winter Skylight	Roof	Summer Window	Winter Window	External Door	Wall	Ceiling	lb/ft²	Btu/lb·°F
225-CAPITAL VENTURE OPEN OFFICE	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	125.5	21.6
VAV-18 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	125.5	21.6
232-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	164.5	30.2
VAV-19 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	164.5	30.2
237-LENDING OPEN OFFICE	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	148.3	26.6
VAV-20 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	148.3	26.6
249-MENS TOILET	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	125.5	21.6
250-WOMENS TOILET	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	125.5	21.6
248-WORK AREA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
224-KITCHENETTE	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	125.5	21.6
228-CORRIDOR	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	125.5	21.6
VAV-21 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	114.4	20.2
240-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	161.9	29.6
VAV-22 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	161.9	29.6
226-CCVI OFFICE	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	178.3	33.3
VAV-23 - Zone	0.000	0.000	0.000	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	178.3	33.3
130-STAFF LOUNGE	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.000	0.052	0.317	99.0	21.8
VAV-06 - Zone	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.000	0.052	0.317	99.0	21.8
140-WORKROOM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
105-WOMENS TOILET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
106-MENS TOILET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
131-133-CORRIDOR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
136-TECHNICAL SERVICES	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
137-TECH SERVICES OFFICE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-07 - Zone	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
144-CONFERENCE ROOM	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	112.7	24.9
VAV-08 - Zone	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	112.7	24.9
147-LOANS SERV OPEN OFFICE	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	87.7	19.3
103-MAIL	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.000	0.052	0.317	96.9	21.4
VAV-09 - Zone	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	88.1	19.4
149-CONFERENCE ROOM	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	107.8	23.8
VAV-10 - Zone	0.000	0.000	0.550	0.000	0.000	0.000	0.349	0.347	0.200	0.052	0.317	107.8	23.8

BUILDING U-FACTORS

By THORNTON TOMASETTI, INC.

	ROOM U-FACTORS Btu/h·ft²·°F											Room	Room
Description	Partition	Internal Door	Exposed Floor	Summer Skylight	Winter Skylight	Roof	Summer Window	Winter Window	External Door	Wall	Ceiling	Mass lb/ft²	Capacitance Btu/lb·°F
RTU-2 - System	0.000	0.000	0.550	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.317	114.7	22.2
138-SERVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
HP-07 - Zone	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
HP-07 - System	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
001 - STAIR 2	0.096	0.000	0.550	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.000	505.6	100.6
BASEBOARD - Zone	0.096	0.000	0.550	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.000	505.6	100.6
SEMI-HEATED - System	0.096	0.000	0.550	0.000	0.000	0.023	0.349	0.347	0.200	0.052	0.000	505.6	100.6
108-TRASH/RECYCLE (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
109-STORAGE (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
127-STORAGE (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
129-STORAGE (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
222-CLOSET (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	125.5	21.6
247-JANITOR (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	125.5	21.6
002 - MECHANICAL ROOM (UNCOND)	0.096	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	165.8	34.5
UNCONDITIONED - Zone	0.096	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	145.5	30.1
UNCONDITIONED SPACES - System	0.096	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.317	145.5	30.1

Overall U-Factors		Overall Thermal Transfer Values	
Roof	0.023 Btu/h·ft²·°F	**Roof (OTTVr)**	0.35 Btu/hr·ft²
Wall	0.165 Btu/h·ft²·°F	**Wall (OTTVw)**	26.79 Btu/hr·ft²
Building	0.105 Btu/h·ft²·°F		

BUILDING U-FACTORS

By THORNTON TOMASETTI, INC.

Description	ROOM U-FACTORS Btu/h·ft²·°F											Room Mass	Room Capacitance
	Partition	Internal Door	Exposed Floor	Summer Skylight	Winter Skylight	Roof	Summer Window	Winter Window	External Door	Wall	Ceiling	lb/ft²	Btu/lb·°F
Alternative 2													
001 - STAIR 2	0.096	0.000	0.730	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.000	352.5	72.6
BASEBOARD - Zone	0.096	0.000	0.730	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.000	352.5	72.6
BASEBOARD - System	0.096	0.000	0.730	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.000	352.5	72.6
138-SERVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
HP-07 - Zone	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
HP-07 - System	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
128-A-BOARDROOM	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	67.7	14.9
VAV-01 - Zone	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	67.7	14.9
VAV-01 - System	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	67.7	14.9
128-B-BOARDROOM	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	65.6	14.5
VAV-02 - Zone	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	65.6	14.5
VAV-02 - System	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	65.6	14.5
112-126 - OPEN OFFICE	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	66.9	14.8
VAV-03 - Zone	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	66.9	14.8
VAV-03 - System	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	66.9	14.8
118-CONFERENCE ROOM	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	72.5	16.1
VAV-04 - Zone	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	72.5	16.1
VAV-04 - System	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	72.5	16.1
100-VESTIBULE	0.000	0.000	0.730	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	74.0	16.4
101-LOBBY	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.000	0.065	0.317	65.8	14.5
107-SITTING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-05 - Zone	0.000	0.000	0.730	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	65.2	14.4
VAV-05 - System	0.000	0.000	0.730	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	65.2	14.4
130-STAFF LOUNGE	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.000	0.065	0.317	69.5	15.4
VAV-06 - Zone	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.000	0.065	0.317	69.5	15.4
VAV-06 - System	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.000	0.065	0.317	69.5	15.4
131-133-CORRIDOR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
136-TECHNICAL SERVICES	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
137-TECH SERVICES OFFICE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
106-MENS TOILET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
105-WOMENS TOILET	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8

BUILDING U-FACTORS

By THORNTON TOMASETTI, INC.

	ROOM U-FACTORS Btu/h·ft²·°F											Room	Room
Description	Partition	Internal Door	Exposed Floor	Summer Skylight	Winter Skylight	Roof	Summer Window	Winter Window	External Door	Wall	Ceiling	Mass lb/ft²	Capacitance Btu/lb·°F
140-WORKROOM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-07 - Zone	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-07 - System	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
144-CONFERENCE ROOM	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	72.2	16.0
VAV-08 - Zone	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	72.2	16.0
VAV-08 - System	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	72.2	16.0
103-MAIL	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.000	0.065	0.317	69.1	15.3
147-LOANS SERV OPEN OFFICE	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	67.4	14.9
VAV-09 - Zone	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	67.5	14.9
VAV-09 - System	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	67.5	14.9
149-CONFERENCE ROOM	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	71.3	15.8
VAV-10 - Zone	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	71.3	15.8
VAV-10 - System	0.000	0.000	0.730	0.000	0.000	0.000	0.550	0.546	0.700	0.065	0.317	71.3	15.8
219-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	69.9	15.4
VAV-11 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	69.9	15.4
VAV-11 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	69.9	15.4
220-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	64.4	14.1
VAV-12 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	64.4	14.1
VAV-12 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	64.4	14.1
201-LOBBY	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	65.3	14.4
VAV-13 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	65.3	14.4
VAV-13 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	65.3	14.4
221-CAP MNGMT OPEN OFFICE	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	66.9	14.7
VAV-14 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	66.9	14.7
VAV-14 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	66.9	14.7
210-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	71.5	15.8
VAV-15 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	71.5	15.8
VAV-15 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	71.5	15.8
207-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.000	0.065	0.317	75.1	16.6
VAV-16 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.000	0.065	0.317	75.1	16.6
VAV-16 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.000	0.065	0.317	75.1	16.6
223-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.000	0.065	0.317	70.6	15.6

BUILDING U-FACTORS

By THORNTON TOMASETTI, INC.

	ROOM U-FACTORS Btu/h·ft²·°F											Room	Room
Description	Partition	Internal Door	Exposed Floor	Summer Skylight	Winter Skylight	Roof	Summer Window	Winter Window	External Door	Wall	Ceiling	Mass lb/ft²	Capacitance Btu/lb·°F
VAV-17 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.000	0.065	0.317	70.6	15.6
VAV-17 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.000	0.065	0.317	70.6	15.6
225-CAPITAL VENTURE OPEN OFFICE	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0
VAV-18 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0
VAV-18 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0
232-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	71.0	15.7
VAV-19 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	71.0	15.7
VAV-19 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	71.0	15.7
237-LENDING OPEN OFFICE	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	67.9	15.0
VAV-20 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	67.9	15.0
VAV-20 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	67.9	15.0
224-KITCHENETTE	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0
228-CORRIDOR	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0
249-MENS TOILET	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0
250-WOMENS TOILET	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0
248-WORK AREA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-21 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.3	13.9
VAV-21 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.3	13.9
240-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	70.5	15.6
VAV-22 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	70.5	15.6
VAV-22 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	70.5	15.6
226-CCVI OFFICE	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	73.7	16.3
VAV-23 - Zone	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	73.7	16.3
VAV-23 - System	0.000	0.000	0.000	0.000	0.000	0.048	0.550	0.546	0.700	0.065	0.317	73.7	16.3
124-OFFICE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
123-OFFICE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
122-CONFERENCE ROOM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-24 - Zone	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
VAV-24 - System	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
002 - MECHANICAL ROOM (UNCOND)	0.096	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	165.8	34.5
247-JANITOR (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0
222-CLOSET (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	63.5	14.0

BUILDING U-FACTORS

By THORNTON TOMASETTI, INC.

	ROOM U-FACTORS Btu/h·ft²·°F											Room	Room
Description	Partition	Internal Door	Exposed Floor	Summer Skylight	Winter Skylight	Roof	Summer Window	Winter Window	External Door	Wall	Ceiling	Mass lb/ft²	Capacitance Btu/lb·°F
127-STORAGE (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
129-STORAGE (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
109-STORAGE (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
108-TRASH/RECYCLE (UNCOND)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.317	62.5	13.8
UNCONDITIONED - Zone	0.096	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	142.1	29.7
UNCONDITIONED - System	0.096	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.317	142.1	29.7

Overall U-Factors		Overall Thermal Transfer Values	
Roof	0.048 Btu/h·ft²·°F	**Roof (OTTVr)**	4.36 Btu/hr·ft²
Wall	0.289 Btu/h·ft²·°F	**Wall (OTTVw)**	30.34 Btu/hr·ft²
Building	0.186 Btu/h·ft²·°F		

NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at http://sam.nrel.gov) that allow for more precise and complex modeling of PV systems.

RESULTS

77,628 kWh per Year *

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)	Energy Value ($)
January	2.22	3,703	257
February	3.26	4,911	341
March	4.06	6,682	464
April	5.05	7,824	543
May	5.67	8,925	619
June	5.82	8,703	604
July	5.90	9,017	626
August	5.63	8,606	597
September	4.79	7,229	502
October	3.30	5,249	364
November	2.25	3,519	244
December	1.99	3,260	226
Annual	**4.16**	**77,628**	**$ 5,387**

User Comments

97% sun (204) LG 305 watt modules

Location and Station Identification

Requested Location	Brunswick, ME
Weather Data Source	SolarAnywhere® from Clean Power (43.95, -69.95) 2.6 mi
Latitude	43.95° N
Longitude	69.95° W

PV System Specifications *(Residential)*

DC System Size	62.22 kW
Module Type	Premium
Array Type	Fixed (open rack)
Array Tilt	11.8°
Array Azimuth	153.5°
System Losses	14.08%
Inverter Efficiency	97.5%
DC to AC Size Ratio	1.13

Initial Economic Comparison

Average Cost of Electricity Purchased from Utility	0.07 $/kWh
Initial Cost	3.30 $/Wdc

Cost of Electricity Generated by System	**0.22 $/kWh**

These values can be compared to get an idea of the cost-effectiveness of this system. However, system costs, system financing options (including 3rd party ownership) and complex utility rates can significantly change the relative value of the PV system.

SYSTEM SUMMARY

DESIGN AIRFLOW QUANTITIES

By THORNTON TOMASETTI, INC.

System Description	System Type	MAIN SYSTEM Outside Airflow cfm	Cooling Airflow cfm	Heating Airflow cfm	Return Airflow cfm	Exhaust Airflow cfm	Auxiliary System Supply Airflow cfm	Room Exhaust Airflow cfm
Alternative 1								
RTU-1	Variable Volume Reheat (30% Min Flow Default)	1,280	10,575	7,524	10,870	10,575	0	0
RTU-2	Variable Volume Reheat (30% Min Flow Default)	1,380	10,290	6,099	10,532	10,290	0	0
HP-07	Water Source Heat Pump	0	760	760	760	0	0	0
SEMI-HEATED	Radiation (Heating Only)	0	0	0	0	137	0	0
UNCONDITIONED SPACES	Radiation (Heating Only)	0	0	0	0	0	0	0
Totals		**2,660**	**21,625**	**14,383**	**22,162**	**21,002**	**0**	**0**
Alternative 2								
BASEBOARD	System 10 - 2010 - Heating Only & Ventilation, Electric	0	0	421	0	421	0	0
HP-07	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	0	406	406	406	406	0	0
VAV-01	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	204	1,017	1,017	1,045	1,017	0	0
VAV-02	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	204	948	948	969	948	0	0
VAV-03	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	184	1,185	1,185	1,225	1,185	0	0
VAV-04	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	31	610	610	625	610	0	0
VAV-05	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	130	1,522	1,522	1,587	1,522	0	0
VAV-06	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	54	468	468	486	468	0	0
VAV-07	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	174	375	375	375	375	0	0
VAV-08	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	54	604	604	618	604	0	0
VAV-09	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	319	2,186	2,186	2,259	2,186	0	0
VAV-10	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	57	594	594	607	594	0	0
VAV-11	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	20	493	493	504	493	0	0
VAV-12	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	15	544	544	554	544	0	0
VAV-13	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	92	1,139	1,139	1,161	1,139	0	0
VAV-14	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	305	2,163	2,163	2,226	2,163	0	0
VAV-15	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	31	552	552	566	552	0	0
VAV-16	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	20	162	162	167	162	0	0
VAV-17	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	76	568	568	585	568	0	0
VAV-18	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	64	162	162	162	162	0	0
VAV-19	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	35	550	550	564	550	0	0
VAV-20	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	330	2,449	2,449	2,521	2,449	0	0
VAV-21	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	144	333	333	333	333	0	0
VAV-22	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	52	623	623	636	623	0	0
VAV-23	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	22	211	211	218	211	0	0
VAV-24	System 4 - 2007/2010 - Packaged Rooftop Heat Pump	43	157	157	157	157	0	0
UNCONDITIONED	System 10 - 2010 - Heating Only & Ventilation, Electric	0	0	0	0	0	0	0
Totals		**2,660**	**20,020**	**20,441**	**20,556**	**20,441**	**0**	**0**

Note: Airflows on this report are not additive because they are each taken at the time of their respective peaks. To view the balanced system design airflows, see the appropriate Checksums report (Airflows section).

ECONOMIC PARAMETERS

By THORNTON TOMASETTI, INC.

Project Name:
Location:
Building Owner:
Program User:
Company:
Comments: WING_TEMPLATE_PROCESSING

Study Life:	20 Yrs	Income Tax Rate:	0.000 %
Mortgage Life:	20 Yrs	Cost of Capital:	10.000 %
Depreciation Life:	20 Yrs	Property tax rate:	0.000 %
Mortgage Interest Rate:	10.000 %	Insurance Expense rate:	0.000 %
Percent Financed:	0.0 %		
Depreciation Method:	None	Annual Inflation Rate Of	
Declining Balance Taxes:	100.0 %	Maintenance Expense	0.000 %
		Replacement Expense	0.000 %
		Property Taxes	0.000 %
		Insurance Expense	0.000 %

Alt #	First Cost ($/ton)	First Cost ($/ft²)	Additional First Cost	Total First Cost	Maintenance Cost ($/ton)	Maintenance Cost ($/ft²)	Total Maint. Cost	Total Alt. Cost
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Library Members

Exposed Floor - Construction Types

0001 - Default Floor 0

Layer	Code	Description	Thickness	Conductivity	Density	Specific Heat	Resistance
1	A0	Outside Surface Resist.					0.33 ft²·hr·°F/Btu
2	C4	12 in. LW Concrete	12.00 in.	0.10 Btu/hr·ft·°F	40.00 lb/cu ft	0.20 Btu/lb·°F	
3	E0	Inside Surface Resist.					0.69 ft²·hr·°F/Btu

Lamda = 0.28 Weight = 40.00 lb/ft² U-Value = 0.091 Btu/hr·ft²·°F Alpha = 0.90
Delta = 10 hours Heat Capacity = 8.00 Btu/ft²·lb·°F C-Coefficient = 0.0000 Btu/hr·ft²·°F

Floor - Construction Types

6" AVE CONCRETE 0

Layer	Code	Description	Thickness	Conductivity	Density	Specific Heat	Resistance
1	E0	Inside Surface Resist.					0.69 ft²·hr·°F/Btu
2	M302	6 IN. NORMAL AGG CONCRET	6.00 in.	0.81 Btu/hr·ft·°F	125.00 lb/cu ft	0.22 Btu/lb·°F	
3	E0	Inside Surface Resist.					0.69 ft²·hr·°F/Btu

Lamda = 0.56 Weight = 62.50 lb/ft² U-Value = 0.503 Btu/hr·ft²·°F Alpha = 0.90
Delta = 5 hours Heat Capacity = 13.75 Btu/ft²·lb·°F C-Coefficient = 0.0700 Btu/hr·ft²·°F

Partitions - Construction Types

8" HW Conc, 2" EPS 8" poured heavyweight concrete

Layer	Code	Description	Thickness	Conductivity	Density	Specific Heat	Resistance
1	E0	Inside Surface Resist.					0.69 ft²·hr·°F/Btu
2	M317	2 in. Insulation - EPS	2.00 in.	0.02 Btu/hr·ft·°F	2.50 lb/cu ft	0.29 Btu/lb·°F	
3	C8	8 in. HW Concrete	8.00 in.	1.00 Btu/hr·ft·°F	140.00 lb/cu ft	0.20 Btu/lb·°F	
4	E0	Inside Surface Resist.					0.69 ft²·hr·°F/Btu

Lamda = 0.23 Weight = 93.75 lb/ft² U-Value = 0.096 Btu/hr·ft²·°F Alpha = 0.90
Delta = 7 hours Heat Capacity = 18.79 Btu/ft²·lb·°F C-Coefficient = 0.0000 Btu/hr·ft²·°F

Library Members

Roof - Construction Types

P14009-ROOF B

Layer	Code	Description	Thickness	Conductivity	Density	Specific Heat	Resistance
1	A0	Outside Surface Resist.					0.33 ft²·hr·°F/Btu
2	M293	EPDM	0.13 in.	0.10 Btu/hr·ft·°F	70.00 lb/cu ft	0.30 Btu/lb·°F	
3	M399	7" Poli Iso	7.00 in.	0.01 Btu/hr·ft·°F	2.00 lb/cu ft	0.22 Btu/lb·°F	
4	M162	Metal Deck	1.50 in.	26.20 Btu/hr·ft·°F	489.00 lb/cu ft	0.12 Btu/lb·°F	
5	E0	Inside Surface Resist.					0.69 ft²·hr·°F/Btu

Lamda = 0.57 Weight = 63.02 lb/ft² U-Value = 0.023 Btu/hr·ft²·°F Alpha = 0.55

Delta = 5 hours Heat Capacity = 7.81 Btu/ft²·lb·°F C-Coefficient = 0.0000 Btu/hr·ft²·°F

90.1-07 Min Roof Nonres Zor 90.1-07 App A roof with insul above deck, Table A2.2

Layer	Code	Description	Thickness	Conductivity	Density	Specific Heat	Resistance
1	M132	90.1-07 Min ext air film					0.17 ft²·hr·°F/Btu
2	M142	90.1-07 Min roof insul R-20 ci	6.00 in.	0.02 Btu/hr·ft·°F	2.00 lb/cu ft	0.20 Btu/lb·°F	
3	M135	90.1-07 Min Roof metal deck	0.00 in.	0.00 Btu/hr·ft·°F	0.00 lb/cu ft	0.00 Btu/lb·°F	
4	M130	90.1-07 Min Roof int air film					0.61 ft²·hr·°F/Btu

Lamda = 0.98 Weight = 1.00 lb/ft² U-Value = 0.048 Btu/hr·ft²·°F Alpha = 0.70

Delta = 1 hours Heat Capacity = 0.20 Btu/ft²·lb·°F C-Coefficient = 0.0400 Btu/hr·ft²·°F

Library Members

Wall - Construction Types

P14009-WALL

Layer	Code	Description	Thickness	Conductivity	Density	Specific Heat	Resistance
1	A0	Outside Surface Resist.					0.33 ft²·hr·°F/Btu
2	A2	4 in. Face Brick	4.00 in.	0.75 Btu/hr·ft·°F	130.00 lb/cu ft	0.22 Btu/lb·°F	
3	B0	Air Space Resistance					0.91 ft²·hr·°F/Btu
4	M317	2 in. Insulation - EPS	2.00 in.	0.02 Btu/hr·ft·°F	2.50 lb/cu ft	0.29 Btu/lb·°F	
5	M277	5/8 in. Gypsum Board	0.63 in.	0.09 Btu/hr·ft·°F	50.00 lb/cu ft	0.26 Btu/lb·°F	
6	M335	R-21 6" METAL STUD 16"OC	152.39 mm	0.12 W/m·°C	69.52 kb/cu m	0.63 kJ/kg·°C	
7	M277	5/8 in. Gypsum Board	0.63 in.	0.09 Btu/hr·ft·°F	50.00 lb/cu ft	0.26 Btu/lb·°F	
8	E0	Inside Surface Resist.					0.69 ft²·hr·°F/Btu

Lamda = 0.43 Weight = 51.13 lb/ft² U-Value = 0.052 Btu/hr·ft²·°F Alpha = 0.90
Delta = 8 hours Heat Capacity = 11.33 Btu/ft²·lb·°F C-Coefficient = 0.0000 Btu/hr·ft²·°F

90.1-07 Min Wall Nonres Zone 4-8

90.1-07 App A steel-framed wall, standard framing 3.5" depth

Layer	Code	Description	Thickness	Conductivity	Density	Specific Heat	Resistance
1	M132	90.1-07 Min ext air film					0.17 ft²·hr·°F/Btu
2	M134	90.1-07 Min stucco	0.38 in.	0.40 Btu/hr·ft·°F	116.00 lb/cu ft	0.20 Btu/lb·°F	
3	M60	5/8 in. Gypsum Board-horiz	0.63 in.	0.09 Btu/hr·ft·°F	50.00 lb/cu ft	0.26 Btu/lb·°F	
4	M136	90.1-07 Min insulation R-13	3.50 in.	0.05 Btu/hr·ft·°F	2.00 lb/cu ft	0.20 Btu/lb·°F	
5	M137	90.1-07 Min insulation R-7.5 ci	2.25 in.	0.02 Btu/hr·ft·°F	2.00 lb/cu ft	0.20 Btu/lb·°F	
6	M60	5/8 in. Gypsum Board-horiz	0.63 in.	0.09 Btu/hr·ft·°F	50.00 lb/cu ft	0.26 Btu/lb·°F	
7	M131	90.1-07 Min int air film					0.68 ft²·hr·°F/Btu

Lamda = 0.97 Weight = 9.88 lb/ft² U-Value = 0.065 Btu/hr·ft²·°F Alpha = 0.90
Delta = 2 hours Heat Capacity = 2.29 Btu/ft²·lb·°F C-Coefficient = 0.0500 Btu/hr·ft²·°F

Library Members

Glass types

90.1 Window Zone 4-6 Metal All Other

Properties based on Std DS Glass

Number of Panes		2		Visible Transmissivity	0.90	Inside Solar Reflectivity	0.15
Shading Coeff	0.46			Inside Visible Reflectivity	0.15	Outside Long Wave Emissivity	0.90
Glass U-Value	0.55		Btu/hr·ft²·°F	Solar Transmissivity	0.90	Inside Long Wave Emissivity	0.90

Double Clear 1/4"

Properties based on Std DS Glass

Number of Panes		2		Visible Transmissivity	0.68	Inside Solar Reflectivity	0.18
Shading Coeff	0.82			Inside Visible Reflectivity	0.23	Outside Long Wave Emissivity	0.84
Glass U-Value	0.60		Btu/hr·ft²·°F	Solar Transmissivity	0.50	Inside Long Wave Emissivity	0.84

Standard Door

Properties based on Std DS Glass

Number of Panes		1		Visible Transmissivity	0.00	Inside Solar Reflectivity	0.35
Shading Coeff	0.00			Inside Visible Reflectivity	0.50	Outside Long Wave Emissivity	0.90
Glass U-Value	0.20		Btu/hr·ft²·°F	Solar Transmissivity	0.00	Inside Long Wave Emissivity	0.90

P14009-WINDOW

Properties based on Std DS Glass

Number of Panes		2		Visible Transmissivity	0.57	Inside Solar Reflectivity	0.24
Shading Coeff	0.43			Inside Visible Reflectivity	0.20	Outside Long Wave Emissivity	0.84
Glass U-Value	0.35		Btu/hr·ft²·°F	Solar Transmissivity	0.24	Inside Long Wave Emissivity	0.84

90.1 Skylight Zone 4-6 Curb Glass 0-2%

Properties based on Std DS Glass

Number of Panes		2		Visible Transmissivity	0.90	Inside Solar Reflectivity	0.15
Shading Coeff	0.56			Inside Visible Reflectivity	0.15	Outside Long Wave Emissivity	0.90
Glass U-Value	1.17		Btu/hr·ft²·°F	Solar Transmissivity	0.90	Inside Long Wave Emissivity	0.90

90.1-07 Min Swinging Nonres Zone 1-6

Properties based on Std DS Glass

Number of Panes		1		Visible Transmissivity	0.00	Inside Solar Reflectivity	0.35
Shading Coeff	0.00			Inside Visible Reflectivity	0.50	Outside Long Wave Emissivity	0.90
Glass U-Value	0.70		Btu/hr·ft²·°F	Solar Transmissivity	0.00	Inside Long Wave Emissivity	0.90

Library Members

Infiltration

Neutral, Poor Const.

Cooling Design	Heating Design
1.00 air changes/hr	1.00 air changes/hr

Neutral, Loose Const.

Cooling Design	Heating Design
2.50 air changes/hr	2.50 air changes/hr

IRS STANDARD

Cooling Design	Heating Design
0.04 cfm/ft² of wall	0.04 cfm/ft² of wall

Lights

Recessed fluorescent, not vented, 80% load to space

Fixture Type	RECFL-NV	Longwave Radiant Fraction	50 %
Percent Lights to RA	20 %	Shortwave Radiant Fraction	0 %
Ballast Factor	1.00		

Misc. loads

Computer

Energy Consumption	150.00 W	Percent Sensible	100 %	**Radiant Fraction**	60 %
		Percent To Room	100 %	The energy meter is Electricity	
		Percent To RA	0 %	The miscellaneous air path is Same Path As RA	

Std Office Equipment

Energy Consumption	0.50 W/ft²	Percent Sensible	100 %	**Radiant Fraction**	60 %
		Percent To Room	100 %	The energy meter is Electricity	
		Percent To RA	0 %		

People

Member Name	People Density	Sensible Load	Latent Load	Longwave Radiant Fraction
Reception Area	16.70 ft²/person	245.00 Btuh	155.00 Btuh	70 %
Member Name	**People Density**	**Sensible Load**	**Latent Load**	Longwave Radiant Fraction
Conference Room	20.00 ft²/person	245.00 Btuh	155.00 Btuh	70 %
Member Name	**People Density**	**Sensible Load**	**Latent Load**	Longwave Radiant Fraction
General Office Space	143.00 ft²/person	250.00 Btuh	200.00 Btuh	70 %

Library Members

Ventilation

Member Name	People-based Rate (Rp)	Area-based Rate (Ra)
Office space	5.0 cfm/person	0.1 cfm/ft²

Member Name	People-based Rate (Rp)	Area-based Rate (Ra)
Reception areas	5.0 cfm/person	0.1 cfm/ft²

Member Name	Cooling Design	Heating Design
Rest Room	50.0 cfm/person	50.0 cfm/person

Member Name	People-based Rate (Rp)	Area-based Rate (Ra)
Conference/ meeting	5.0 cfm/person	0.1 cfm/ft²

Member Name	People-based Rate (Rp)	Area-based Rate (Ra)
Break Rooms	5.0 cfm/person	0.1 cfm/ft²

Member Name	People-based Rate (Rp)	Area-based Rate (Ra)
Corridors	0.0 cfm/person	0.1 cfm/ft²

Library Members

Schedules

P14009-REHEAT COIL

Simulation type: Reduced year

January - December **Cooling design to Sunday**	**Start time**	**End time**	**Percentage**	Utilization
	Midnight	Midnight	100.0	

Heating Design	**Start time**	**End time**	**Percentage**	Utilization
	Midnight	Midnight	100.0	

Reset / Lockout

0 Outdr DB > 70.00 F

Parking lot lights

Simulation type: Reduced year

January - December **Cooling design to Sunday**	**Start time**	**End time**	**Percentage**	Utilization
	Midnight	7 a.m.	100.0	
	7 a.m.	6 p.m.	0.0	
	6 p.m.	Midnight	100.0	

Heating Design	**Start time**	**End time**	**Percentage**	Utilization
	Midnight	7 a.m.	100.0	
	7 a.m.	6 p.m.	0.0	
	6 p.m.	Midnight	100.0	

Library Members

Schedules

P14009- Elevator

Simulation type: Reduced year

Heating Design	**Start time**	**End time**	**Percentage**	Utilization
	Midnight	Midnight	0.0	

January - December **Weekday**	**Start time**	**End time**	**Percentage**	Utilization
	Midnight	7 a.m.	0.0	
	7 a.m.	8 a.m.	16.0	
	8 a.m.	9 a.m.	14.0	
	9 a.m.	10 a.m.	21.0	
	10 a.m.	11 a.m.	18.0	
	11 a.m.	noon	25.0	
	noon	1 p.m.	21.0	
	1 p.m.	2 p.m.	13.0	
	2 p.m.	3 p.m.	8.0	
	3 p.m.	4 p.m.	4.0	
	4 p.m.	5 p.m.	5.0	
	5 p.m.	8 p.m.	6.0	
	8 p.m.	Midnight	0.0	

January - December **Cooling design**	**Start time**	**End time**	**Percentage**	Utilization
	Midnight	Midnight	100.0	

January - December **Saturday to Sunday**	**Start time**	**End time**	**Percentage**	Utilization
	Midnight	7 a.m.	0.0	
	7 a.m.	8 a.m.	35.0	
	8 a.m.	9 a.m.	69.0	
	9 a.m.	10 a.m.	43.0	
	10 a.m.	11 a.m.	37.0	
	11 a.m.	noon	43.0	
	noon	1 p.m.	58.0	
	1 p.m.	2 p.m.	48.0	

Library Members

Schedules

2 p.m.	4 p.m.	37.0
4 p.m.	5 p.m.	46.0
5 p.m.	6 p.m.	62.0
6 p.m.	7 p.m.	20.0
7 p.m.	8 p.m.	12.0
8 p.m.	10 p.m.	4.0
10 p.m.	Midnight	0.0

Library Members

Schedules

P14009-GRND TEMP PROFILE

Simulation type: Reduced year

	Start time	End time
January - January Cooling design to Sunday		
	Midnight	Midnight
February - February Cooling design to Sunday		
	Midnight	Midnight
March - March Cooling design to Sunday		
	Midnight	Midnight
April - April Cooling design to Sunday		
	Midnight	Midnight
May - May Cooling design to Sunday		
	Midnight	Midnight
June - June Cooling design to Sunday		
	Midnight	Midnight
July - July Cooling design to Sunday		
	Midnight	Midnight
August - August Cooling design to Sunday		
	Midnight	Midnight
September - September Cooling design to Sunday		
	Midnight	Midnight
October - October Cooling design to Sunday		
	Midnight	Midnight
November - November Cooling design to Sunday		
	Midnight	Midnight
December - December Cooling design to Sunday		
	Midnight	Midnight

Library Members

Schedules

Lights - Low rise office

Simulation type: Reduced year

January - December	**Cooling design to Weekday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	7 a.m.	5.0	
		7 a.m.	8 a.m.	80.0	
		8 a.m.	10 a.m.	90.0	
		10 a.m.	noon	95.0	
		noon	2 p.m.	80.0	
		2 p.m.	4 p.m.	90.0	
		4 p.m.	5 p.m.	95.0	
		5 p.m.	6 p.m.	80.0	
		6 p.m.	7 p.m.	70.0	
		7 p.m.	8 p.m.	60.0	
		8 p.m.	9 p.m.	40.0	
		9 p.m.	10 p.m.	30.0	
		10 p.m.	Midnight	20.0	
Heating Design		**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	0.0	
January - December	**Saturday to Sunday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	5.0	

Heatpump

Simulation type: Reduced year

January - December	**Cooling design to Sunday**	**Start time**	**End time**	**Mode**	Thermal storage
		Midnight	Midnight	Satisfy load	

Library Members

Schedules

Hot water - Low rise office

Simulation type: Reduced year

January - December	**Cooling design to Weekday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	8 a.m.	0.0	
		8 a.m.	10 a.m.	55.0	
		10 a.m.	11 a.m.	50.0	
		11 a.m.	noon	55.0	
		noon	1 p.m.	90.0	
		1 p.m.	2 p.m.	60.0	
		2 p.m.	3 p.m.	80.0	
		3 p.m.	4 p.m.	70.0	
		4 p.m.	5 p.m.	75.0	
		5 p.m.	7 p.m.	30.0	
		7 p.m.	8 p.m.	50.0	
		8 p.m.	9 p.m.	5.0	
		9 p.m.	Midnight	0.0	
Heating Design		**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	0.0	
January - December	**Saturday to Sunday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	0.0	

Library Members

Schedules

Misc - Low rise office

Simulation type: Reduced year

January - December	**Cooling design to Weekday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	7 a.m.	5.0	
		7 a.m.	8 a.m.	80.0	
		8 a.m.	10 a.m.	90.0	
		10 a.m.	noon	95.0	
		noon	2 p.m.	80.0	
		2 p.m.	4 p.m.	90.0	
		4 p.m.	5 p.m.	95.0	
		5 p.m.	6 p.m.	80.0	
		6 p.m.	7 p.m.	70.0	
		7 p.m.	8 p.m.	60.0	
		8 p.m.	9 p.m.	40.0	
		9 p.m.	10 p.m.	30.0	
		10 p.m.	Midnight	20.0	
Heating Design		**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	0.0	
January - December	**Saturday to Sunday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	5.0	

Library Members

Schedules

Vent - Low rise office

Simulation type: Reduced year

January - December	**Cooling design to Weekday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	7 a.m.	0.0	
		7 a.m.	Midnight	100.0	
Heating Design		**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	100.0	
January - December	**Saturday to Sunday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	0.0	

People - Low Rise Office

Simulation type: Reduced year

January - December	**Cooling design to Weekday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	7 a.m.	0.0	
		7 a.m.	8 a.m.	30.0	
		8 a.m.	11 a.m.	100.0	
		11 a.m.	noon	80.0	
		noon	1 p.m.	40.0	
		1 p.m.	2 p.m.	80.0	
		2 p.m.	5 p.m.	100.0	
		5 p.m.	6 p.m.	30.0	
		6 p.m.	9 p.m.	10.0	
		9 p.m.	Midnight	5.0	
January - December	**Saturday to Sunday**	**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	0.0	
Heating Design		**Start time**	**End time**	**Percentage**	Utilization
		Midnight	Midnight	0.0	

Library Members

Schedules

On 100%

Simulation type: Reduced year

Heating Design	Start time	End time	Percentage	Utilization
	Midnight	Midnight	0.0	

January - December Cooling design to Sunday	Start time	End time	Percentage	Utilization
	Midnight	6 a.m.	100.0	
	6 a.m.	10 p.m.	100.0	
	10 p.m.	Midnight	100.0	

Available (100%)

Simulation type: Reduced year

January - December Cooling design to Sunday	Start time	End time	Percentage	Utilization
	Midnight	Midnight	100.0	

Heating Design	Start time	End time	Percentage	Utilization
	Midnight	Midnight	100.0	

Off (0%)

Simulation type: Reduced year

January - December Cooling design to Sunday	Start time	End time	Status	Equipment operation
	Midnight	Midnight	Off	

Library Members

Utility Rates

P14009 - EIA MAINE COMM SEPT-2014

Electric consumption	Min Charge	0	Start period:	January		Rate	Cutoff
On peak	Min demand	0	End period:	December	$/kW	0.127	
	Fuel adjustment	0					
	kWh/kW flag	No					
	Customer charge	0					

Library Members

Base Utilities

Exhaust Fan

Comments	
Schedule	MP Time Clock Ventilation
Energy Type	Electricity
Hourly demand	1.00 kW
Entering	°F
Leaving	°F

Parking lot lights

Comments	
Schedule	Parking lot lights
Energy Type	Electricity
Hourly demand	0.10 kW
Entering	°F
Leaving	°F

DHW CIRC PUMP

Comments	
Schedule	On 100%
Energy Type	Electricity
Hourly demand	1.00 kW
Entering	°F
Leaving	°F

P14009-DHW

Comments	55EWT, 135LWT
Schedule	Hot water - Low rise office
Energy Type	Electricity
Hourly demand	1.00 gpm
Entering	55.00 °F
Leaving	135.00 °F

Elevator

Comments	
Schedule	MP Medical Office
Energy Type	Electricity
Hourly demand	18.65 kW
Entering	°F
Leaving	°F

Library Members

Cooling Equipment

TRACE® 700 Cooling Equipment Library

90.1-07 Min ACHP Elec SS/SP 65-135 MBh — **Air-cooled unitary - Air to air heat pump**

Comments: Air Cooled, Electrically Operated HP,CV, Elec Heating SS/SP

Operating Mode	Capacity		Energy Rate
Cooling		tons	11.000 Packaged EER
Heat Recovery	14.40	Mbh/ton	3.300 Packaged COP
Tank Charging			
Tank Chrg. & Heat Rec.			

Pumps	Type	Full Load Consumption	Pump Head
Chilled water	None	0.000000 kW	
Condenser water	None	0.00000 kW	
Ht Rec or aux cond.	None	kW	
Free cooling pump	None		

Unloading Curves	Primary	Secondary
Power consumed	90.1 min Air to Air HP	90_1 AAHP Power Consumed C
Ambient modification	90.1 Min Air-Air HP	90_1 AAHP Ambient Relief Curv
Capacity		90.1 HP Htg Cap Curve

	Reset Based On	Reset Curve	Max Reset TD
Chilled water	None		
Condenser water	None		

Miscellaneous accessories: Cntl panel & interlocks - 0.1 KW

Load Shed Economizer	No
Evap Precooling	No
Fuel Source	Heating plant
Fuel type	Electric
Free cooling type	None
Fluid cooler type	None
Thermal Storage	None
Tower/condenser	90.1 Min Air Cooled Condenser

Chilled water temp Design leaving	44.00°F
Chilled water temp Difference	12.00°F
Condenser temp design temp entering	95.00°F
Condenser temp min. operating	17.00°F
Condenser temp Difference	0.00°F
Reject Cond heat to ref	Heat rejection equipment
Reject Cond heat at water temp	

Package energy breakout	Primary fan	Secondary fan	Exhaust fan	Optional ventilation fan	Condenser fan
Included in full load energy rate	Yes	No	No	No	Yes

Apply same fans for heat recovery energy breakout: Yes

Library Members

Cooling Equipment

TRACE® 700 Cooling Equipment Library

P14009-WSHP-D — **Water-cooled chiller - Helical rotary**

Comments:

Operating Mode	Capacity		Energy Rate
Cooling	10.00	tons	20.860 EER (compressor
Heat Recovery	113.00	Mbh	2.770 COP (compressor
Tank Charging		tons	kW/ton
Tank Chrg. & Heat Rec.		tons	kW/ton

Pumps	Type	Full Load Consumption	Pump Head
Chilled water	Var vol chill water pump	0.000563 kW/ton-ft wg	
Condenser water	None	0.00000 kW	
Ht Rec or aux cond.	None	kW	
Free cooling pump	None		

Unloading Curves	Primary	Secondary
Power consumed	VS WSHP - Clg Mode	VS WSHP - Htg Mode
Ambient modification	WSHPGRND - Amb Mod	WSHPGRND - Amb Mod 2nd
Capacity	VS WSHP Clg Cap Mod	VS WSHP Htg Cap Mod

	Reset Based On	Reset Curve	Max Reset TD
Chilled water	None		
Condenser water	None		

Miscellaneous accessories: Cntl panel & interlocks - 1 KW

Load Shed Economizer	No
Evap Precooling	No
Fuel Source	Utility
Fuel type	Electric
Free cooling type	None
Fluid cooler type	
Thermal Storage	None
Tower/condenser	None

Chilled water temp Design leaving	45.00°F
Chilled water temp Difference	10.00°F
Condenser temp design temp entering	75.00°F
Condenser temp min. operating	35.00°F
Condenser temp Difference	10.00°F
Reject Cond heat to ref	Ground loop
Reject Cond heat at water temp	120.00°F

Library Members

Cooling Equipment

TRACE® 700 Cooling Equipment Library

90.1-07 Min ACHP AllHeat SP < 65 MBh — **Air-cooled unitary - Air to air heat pump**

Comments: Air Cooled, Electrically Operated HP, CV, All Heating SP

Operating Mode	Capacity		Energy Rate
Cooling		tons	11.000 Packaged EER
Heat Recovery	14.40	Mbh/ton	7.700 Packaged EER
Tank Charging			
Tank Chrg. & Heat Rec.			

Pumps	Type	Full Load Consumption	Pump Head
Chilled water	None	0.000000 kW	
Condenser water	None	0.00000 kW	
Ht Rec or aux cond.	None	kW	
Free cooling pump	None		

Unloading Curves	Primary	Secondary
Power consumed	90.1 min Air to Air HP	90_1 AAHP Power Consumed C
Ambient modification	90.1 Min Air-Air HP	90_1 AAHP Ambient Relief Curv
Capacity		90.1 HP Htg Cap Curve

	Reset Based On	Reset Curve	Max Reset TD
Chilled water	None		
Condenser water	None		

Miscellaneous accessories: Cntl panel & interlocks - 0.1 KW

Load Shed Economizer	No	Chilled water temp Design leaving	44.00°F
Evap Precooling	No	Chilled water temp Difference	12.00°F
Fuel Source	Heating plant	Condenser temp design temp entering	95.00°F
Fuel type	Electric	Condenser temp min. operating	17.00°F
Free cooling type	None	Condenser temp Difference	0.00°F
Fluid cooler type	None	Reject Cond heat to ref	Heat rejection equipment
Thermal Storage	None	Reject Cond heat at water temp	
Tower/condenser	90.1 Min Air Cooled Condenser		

Package energy breakout	Primary fan	Secondary fan	Exhaust fan	Optional ventilation fan	Condenser fan
Included in full load energy rate	Yes	No	No	No	Yes

Apply same fans for heat recovery energy breakout: Yes

Fans

AF Centrifugal var freq drv

Fan type Variable volume
Comments Air foil Centrifugal with variable frequency drive
Full load energy 0.00022 kW/Cfm-in wg
Unloading curve Fan Curve 9

Hydronic in heat pump fan

Fan type Constant volume
Comments Hydronic incremental heat pump fan
Full load energy 0.00024 kW/Cfm
Unloading curve Fan Curve Straight Line

FC Centrifugal const vol

Fan type Constant volume
Comments Forward curved Centrifugal fan constant volume
Full load energy 0.00032 kW/Cfm-in wg
Unloading curve Fan Curve Straight Line

Library Members

Heating Equipment

P14009-BACKUP

Comments	ELECTRIC HOT WATER BOILER EQ2051	
Category	Boiler	**Miscellaneous Accessories**
Heat Source	Utility	
Fuel Type	Electric	
Capacity	Mbh	
Energy Rate	100.000 Percent efficient	
Hot Water Pump	VV Hot Water Circ	
Hot Water Pump Full Load	0.00 kW	
Hot Water Leaving temp	120.00 °F	
Storage tank	None	
Unloading Curve	Htg Straight Line	

Default electric resistance

Comments	ROOFTOP ELECTRIC HEAT	
Category	Electric resistance	**Miscellaneous Accessories**
Heat Source	Utility	
Fuel Type	Electric	
Capacity	Mbh	
Energy Rate	100.000 Percent efficient	
Hot Water Pump	None	
Hot Water Pump Full Load	0.00 kW	
Hot Water Leaving temp	°F	
Storage tank	None	
Unloading Curve	Htg Straight Line	

Library Members

Misc. Equipment

VV Hot Water Circ

Comments	Hot water pump - variable volume	
Category	Water pump	
Energy type	1.60000	hp
Control type	Electricity	
Full load energy	With equipment	

Cooling coil assignments	Heating coil assignments
Main	+ Main
Direct evaporative	+ Preheat
Indirect evaporative	+ Reheat
Auxiliary	Mech. humidification
Optional ventilation	+ Auxiliary
System exhaust air	+ Optional ventilation
Room exhaust air	+ Misc heating load
Misc cooling load	+ Base utility htg load
Base utility clg load	Absorption Chiller load

Var vol chill water pump

Comments	Chilled water pump - variable volume	
Category	Water pump	
Energy type	0.00056	kW/ton-ft wg
Control type	Electricity	
Full load energy	With equipment	

Cooling coil assignments	Heating coil assignments
+ Main	+ Main
Direct evaporative	+ Preheat
Indirect evaporative	+ Reheat
+ Auxiliary	+ Mech. humidification
+ Optional ventilation	+ Auxiliary
+ System exhaust air	+ Optional ventilation
+ Room exhaust air	+ Misc heating load
+ Misc cooling load	+ Base utility htg load
+ Base utility clg load	+ Absorption Chiller load

90.1 Pump Riding the Pump Curve

Comments	5/2014 Bell and Gossett 1000gpm, 90ft,1510series	
Category	Water pump	
Energy type	22.00000	Watt/gpm
Control type	Electricity	
Full load energy	With equipment	

Cooling coil assignments	Heating coil assignments
+ Main	+ Main
Direct evaporative	+ Preheat
Indirect evaporative	+ Reheat
+ Auxiliary	+ Mech. humidification
+ Optional ventilation	+ Auxiliary
+ System exhaust air	+ Optional ventilation
+ Room exhaust air	+ Misc heating load
+ Misc cooling load	+ Base utility htg load
+ Base utility clg load	+ Absorption Chiller load

Library Members

Thermal Storage

GLHE designed for 3F (2C) TD wellfield

Comments	Ground loop heat exchanger well field w/ 3F (2C) TD @DsnLoad						
Schedule	Heatpump		**Discharge Strategy**			**SpecificHeat**	
Capacity	479.6	gal/ton	**Control type**	Optimize		1.0	Btu/lb-°F
Storage Type	Heat pump loop		**Limit**	0.0	tons	**Density**	
Losses	0	Percent	**Charging Strategy**			62.3	lb/cu ft
Warning level	0	Percent	**Control type**	Full charge		**DesignDeltaT**	
			Max loss	0.0	kW	3	°F

Heat Rejection

90.1 Min Air Cooled Condenser

Comments	For Air-cooled Centrifugal	
Capacity	100.00	Percent
Energy consumption	0.06	kW/ton
Low speed consumpt	14.30	Percent full load
Fluid type	Water	
Condenser type	Air-cooled condenser	
Number of cells	1	
% Air at low Speed	50.00	
Approach Temp	10.00	°F
Temp Range	10.00	°F
Wet bulb Temp	78.00	°F
Design water flow rate	3.00	gpm/ton
Makeup water flow rate	0.00	gal/ton-hr
Hourly Amb WB Offset		°F
Unloading curve	Cooling Tower with 2-Speed Fan	

Coil load assignmen

+ Main
Direct evaporator
+ Indirect evaporator
+ Auxiliary
+ Optional ventilation
+ Misc cooling load