



People Density	100 ft2/person	Spc:OccDens					
Sensible Heat/person	250 Btu/occupant	Spc:OccSensHRT					
Latent Heat/person	206 Btu/occupant	Spc:OccLatHRT					
Equipment Power Density	1.34 W/ft2	Spc:RecptPwrDens					
Lighting Power Density	0.8 (Int LPD reg.)	Spc:IntLPDReg Spc:IntLgSpecMthd Spc:IntLgSys:TailoredMthdAllowType Spc:TMGenLPD Snr:TMTorAllownt PD Spc:VentRt					
Ventilation Rate	0.15 cfm/ft2	Proposed transform ThrmIZn:DefDsgnVentRt XXX cfm ThrmIZn:FlrArea XXX ft2 Calculated Ventilation Rate XXX cfm/ft2					
Hot-water Load	106 Btu/person						
Infiltration rate (Work in Progress)	0						
Elevator Power	NA						
Occupancy Schedule	Office	Spc:OccSchRef					
Equipment Schedule	Office	Spc:RecptSchRef					
Lighting Schedule	Office	Spc:IntLgRegSchRef					
Infiltration(Work in Progress)	Office	Spc:InfSchRef					
Elevator	Office						
Daylighting	NA						
Illuminance Setpoint	NA						
Daylight Control Type in Primary Daylit Area	NA						
Daylight Control Type in Skylit Area	NA						
Daylight Control Type in Secondary Daylit Area	NA						
Controlled General Lighting Power In Primary Daylit Area	NA						
Controlled General Lighting Power In Secondary Daylit Area	NA						
Controlled General Lighting Power In Skylit Daylit Area	NA						
Reference Position 1	NA						
Reference Position 2	NA						
<b>HVAC Components</b>							
HVAC System Type	Built-up VAV with Reheat						
Heating Type	Fossil Fuel						
Cooling Type	Chilled Water						
Cooling Efficiency	COP-6.2						
Heating Efficiency	85%						
System Oversizing Factor	Heating- 1.25 Cooling- 1.15						
System Capacity	Heating Capacity- Cooling Capacity-						
Supply Air Temperature	Heating- 70F Cooling- 55F						
SAT Reset Control	Heating- Cooling-						
Economizer	integrated						
Economizer Limits	70F high limit						
Fan Brake Horsepower	1600%						
Motor Horsepower	2000%						
Fan Control Method	Variable-flow, VSD						
DX Cooling Efficiency Adjustment Curve	NA						
Cooling Capacity Adjustment Curve	NA						
Heating (Furnace) Part-load Efficiency Curve	NA						
Electric Heat Pump Heating Capacity Adjustment Curve	NA						
Electric Heat Pump Heating Efficiency Adjustment Curve	NA						
Fan Part-load Performance Curve							
HVAC(Availability/Fan) Schedule	Office						
Cooling Schedule	Office						

Heating Schedule	Office					
Terminal Heat Type	Hot Water					
Terminal Heat Capacity						
Terminal Unit Fan Power	NA					
Reheat Delta T						
Boiler Components						
Number of boilers	100%					
Boiler Capacity						
Boiler Efficiency	80%					
Boiler Type	Hot Water Boiler					
Boiler Heat Loss	0%					
Boiler Performance Curve	Default Curve					
Boiler Min. Unloading Ratio	25%					
Hot Water Supply Temperature	165F					
Hot Water Return Temperature	135F					
Pump Control Type	Fixed Speed Variable flow pump (Intermittent/CF)					
Pump Motor Power	CHW: 20 W/gpm CW: 17 W/gpm HHW: 16 W/gpm					
Pump Motor Efficiency	89%					
Pump Part Load Curve	Default Curve					
Chiller Components						
Chiller Type	Centrifugal chiller					
Number of Chillers	2 (for building)					
Chiller Fuel	Electricity					
Chiller Oversizing Factor	115%					
Chiller Capacity (tons)						
Chiller Efficiency	COP=6.6					
Chiller Part-Load Efficiency (IPLV)	IPLV=0.45 kW/ton					
Chiller Min. Unloading Ratio	10%					
Chiller Cooling Capacity Adjustment Curve	Not a User Input					
Chiller Cooling Efficiency Adjustment Curve	Not a User Input					
Chilled Water Supply Temperature	42F					
Chilled Water Return Temperature	54F					
Condensor Type	Water-cooled					
Cooling tower Fan Control Type	two-speed					
Cooling Tower Fan Horse Power	44 gpm/hp					
Cooling Tower Set Point Control	70F					
Chiller, Condenser Pump Control Type	Chilled-water pump- Variable Speed, Variable flow Condenser Water-Fixed Speed					
Chiller, Condenser Pump Motor Power	Chilled-water pump- 22W/gpm Condenser Water-19W/gpm					
Chiller, Condenser Pump Motor Efficiency	90%					
Chiller, Condenser Pump Design Flow	Chiller- 2.0 gpm/ton Condenser- 2.4 eom/ton					
<b>Service Hot Water</b>						
Thermal Efficiency	78%					
Energy Factor	NA					
Hot Water Load/person	106 Btuh/person					
SHW Schedule	Office					
<b>Exterior Load</b>						
Exterior LPD	Driveway- 1115 W Parking Lot- 6566 W Sidewalk- 977 W Building Entrance- 90 W Hardscape Ornamental Light- 2 W Building Façade- 9352.75 W Signage- 80 W Total- 18182.75 W					
Exterior lighting control						
Exterior lighting schedule						







Baseline Model									Run17 - INCOMPLETE		
User Model									Proposed Model	Baseline model	
Large Office CZ-6											
Levels - 1 to 12 East Perimeter Zone - Corridors, Restrooms, Stairs, and Support Areas	Level -1, South Perimeter Zone - Lobby, Main Entry	Level -1, Core and North, West Perimeter Zones - Retail Merchandise Sales, Wholesale Showroom	Levels - 2 to 6 Core and South, West, North Perimeter Zones - Medical and Clinical Care	Levels - 7 to 11 Core and South, West, North Perimeter Zones - Office (Greater than 250 square feet in floor area)	Level - 12 Core and South, West, North Perimeter Zones - Convention, Conference, Multipurpose and Meeting Center Areas	Corridors, Restrooms, Stairs, and Support Areas	Levels - 1 to 12 East Perimeter Zone - Corridors, Restrooms, Stairs, and Support Areas	Level -1, South Perimeter Zone - Lobby, Main Entry			







Built-up VAV with Reheat	Packaged Single Zone	Built-up VAV with Reheat	Packaged Single Zone	VAV with Reheat (System 6) Hot Water boiler with reheat	CRAH Unit (System 10) None
Fossil Fuel	None	Fossil Fuel	None	Chilled Water	Chilled Water
Chilled Water	DX	Chilled Water	Chilled Water	Chilled Water	Chilled Water
COP-6.2	EER-11, SEER-14	COP-6.2	EER-11, SEER-14	Input Based on Proposed System Size-	Input Based on 50% of Proposed System Size-
85%	80%	85%	80%	Input Based on Proposed System Size-	n/a
Heating- 1.25 Cooling- 1.15	Heating- 1.25 Cooling- 1.15	Heating- 1.25 Cooling- 1.15	Heating- 1.25 Cooling- 1.15	Heating- 1.25 Cooling- 1.15	Heating- 1.25 Cooling- 1.15
Heating Capacity- Cooling Capacity-	Cooling Capacity- 650,000 Btuh	Heating Capacity- Cooling Capacity-	Cooling Capacity- 650,000 Btuh	Heating- 1.25 Cooling- 1.15	Cooling- 1.15
Heating- 70F Cooling- 55F	Heating- none Cooling- 55F	Heating- 70F Cooling- 55F	Heating- none Cooling- 55F	Heating- 70F Cooling- 55F	Cooling- 60F
Heating- Cooling-		Heating- Cooling-		Heating- Fixed Cooling- Reset by demand.	Heating- none Cooling- Reset by "Airflow First" reset sequence - reset airflow to min, then reset SAT integrated if load>5 ton; none if not
integrated 70F high limit	none none	integrated 70F high limit	none none	integrated	
16 20	5 10	16 20	5 10	Static pressure = f(cfm, # stories)	0.49 W/cfm N/A
Variable-flow, VSD	Variable-flow, VSD	Variable-flow, VSD	Variable-flow, VSD	Variable-flow, variable speed drive	Variable-flow, variable speed drive
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
				Any Fan with VSD	VSD with Static Pressure Reset
Office	Office	Office	Office	Office	Office
Office	Office	Office	Office	Office	NA

