REPORT- SV-A System Design Parameters for $\,\,$ P1B (B.N11) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	464.0	1.	0.1	102 9.0	176	0.742	-8.168	0.266	0.271	-9.905
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	· I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	n fai	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	303.	1.00	0.091	0.93	0.9	0.34	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
P1B North Perim Zn (B.N11P	303.	0.	0.000	0.739	31.	0.00	0.00	3.78	0.00	-8.54	1.

REPORT- SV-F	System De	sign Pa	arameters	for	P1B	(B.N13)	APT4	PTHP
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REPORT- SV	/-A System D	esign Parame	eters for	P1B (B.N1	3) APT4 PTHE	·		WEATHER FILE- SEATTLE BOEING FI WA			
		FLOOR		OUTSIDE	COOLING		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	AIR	CAPACITY	SENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RATIO	(KBTU/HR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2465.0	3.	0.108	45.685	0.742	-41.117	0.266	0.271	-49.862	

		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH			MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	FAN	RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)
SUPPLY	1524.	1.00	0.457	0.93	1.2	0.48	0.62	DRAW-THRU	CONSTANT	1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
PlB North Perim Zn (B.N13P	1524.	0.	0.000	0.731	165.	0.00	0.00	19.86	0.00	-42.53	1.

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	705.0	1.	0.1	13.7	83	0.742	-12.405	0.266	0.271	-15.043	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	460.	1.00	0.138	0.93	1.0	0.40	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
P1B NE Perim Zn (B NE14) 1	460.	0	0 000	0 739	47.	0 00	0 00	5 97	0 00	-12 97	1

REPORT- SV-A System Design Parameters for L1A (G.E19) APT2 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

REPORT S		Design Para	IOI		APIZ				WEAIRI		AIILE BOEIN	3 FI W.
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1033.8	1.	0.1	16.3	03	0.742	-14.673	0.266	0.271	-17.793	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFE	FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r controi	L (FRAC)	(FRAC)	
SUPPLY	544.	1.00	0.163	0.93	1.0	0.40	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L1A East Perim Zn (G.E19)T	544.	0.	0.000	0.705	69.	0.00	0.00	10.29	0.00	-14.60	1.

DEDODT-	C17_7	System	Decian	Parameters	for	τ.1 λ	(C NNF24)	APT1 PTHP
KEPOKI-	5 V - A	System	Design	Parameters	TOT	TITA	(G.MMEZ4)	APII PINP

REPORT- S	V-A System D	esign Parame	eters for	L1A (G.NN	E24) APT1 P	THP		WEATHER FILE- SEATTLE BOEING FI WA			
		FLOOR		OUTSIDE	COOLING		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	AIR	CAPACITY	SENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RATIO	(KBTU/HR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	749.2	1.	0.156	9.589	0.742	-8.630	0.266	0.271	-10.466	

		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH			MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	FAN	RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)
SUPPLY	320.	1.00	0.096	0.93	1.0	0.37	0.62	DRAW-THRU	CONSTANT	1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L1A NNE Perim Zn (G.NNE24P	320.	0.	0.000	0.665	50.	0.00	0.00	9.70	0.00	-8.09	1.

REPORT- SV-A System Design Parameters for $\,$ L1A (G.WNW27) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

			(
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	493.5	1.	0.1	130 7.6	17	0.742	-6.855	0.266	0.271	-7.030	
			D.011ED		ama m = a			-				
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	i		MAX FAN		
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	254.	1.00	0.076	0.94	0.9	0.34	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	IULT
L1A WNW Perim Zn (G.WNW27P	254.	0.	0.000	0.565	33.	0.00	0.00	7.66	0.00	-5.46	1.

REPORT- SV-A System Design Parameters for $\,$ L1A (G.N28) APT3 PTHP

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1326.0	2.	0.1	185 14.3	13	0.742	-12.882	0.266	0.271	-14.519	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	477.	1.00	0.143	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE :	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L1A North Perim Zn (G.N28P	477.	0.	0.000	0.563	89.	0.00	0.00	12.32	0.00	-10.21	1.

REPORT- SV-A System Design Parameters for L1B (G.N5) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

REPORT - SV-A System Design Farameters for				O DID (0	API4 P				nikaw	SE	AIILE BOEING	, rı w
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2580.0	3.	0.1	.91 27.0	50	0.742	-24.345	0.266	0.271	-20.717	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA1	ı FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	r controi	L (FRAC)	(FRAC)	
SUPPLY	902.	1.00	0.271	0.94	1.2	0.47	0.62	DRAW-THRU	J CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B North Perim Zn (G.N5)T	902.	0.	0.000	0.356	172.	0.00	0.00	23.14	0.00	-12.20	1.

REPORT- SV-A System Design Parameters for $\,$ L1B (G.E6) APT1 PTHP

	SEATTLE		

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	668.0	1.	0.0	13.4	55	0.742	-12.110	0.266	0.271	-8.346	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	449.	1.00	0.135	0.94	1.0	0.40	0.62	DRAW-THR	.U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	NE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	LT
L1B East Perim Zn (G.E6) 1	449.	0.	0.000	0.363	45.	0.00	0.00	13.81	0.00	-6.19	1.

REPORT- SV-A System Design Parameters for $\,$ L1B (G.W7) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	13.3	79	0.742	-12.041	0.266	0.271	-14.602	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	N FAN	RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	446.	1.00	0.134	0.93	1.0	0.40	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B West Perim Zn (G.W7) 1	446.	0.	0.000	0.722	51.	0.00	0.00	8.85	0.00	-12.26	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.1	.04 12.5	99	0.742	-11.339	0.266	0.271	-13.750	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	420.	1.00	0.126	0.93	1.0	0.37	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B West Perim Zn (G.W8) 1	420.	0.	0.000	0.736	44.	0.00	0.00	6.68	0.00	-11.78	1,.

REPORT- SV-A System Design Parameters for $\,$ L1B (G.E9) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

OUTSI	DE COOLING		HEATING	COOLING	HEATING	HEAT PUMP
MAX A	IR CAPACITY	SENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
PEOPLE RAT	IO (KBTU/HR)	(SHR)	(KBTU/HR) (1	BTU/BTU)	(BTU/BTU)	(KBTU/HR)
1. 0.1	11 12.883	0.742	-11.594	0.266	0.271	-14.060
POWER FAN	STATIC TOTA	AI. MECH			MAX FAN	MIN FAN
				FAN		RATIO
(KW) (F)	(IN-WATER) (FRA	C) (FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)
0.129 0.93	1 0 0	40 0.62	DRAW-THRII	CONSTANT	1 00	0.30
	MAX A PEOPLE RAT 1. 0.1 POWER FAN DEMAND DELTA-T (KW) (F)	MAX AIR CAPACITY PEOPLE RATIO (KBTU/HR) 1. 0.111 12.883 POWER FAN STATIC TOT. DEMAND DELTA-T PRESSURE E (KW) (F) (IN-WATER) (FRAME	MAX AIR CAPACITY SENSIBLE PEOPLE RATIO (KBTU/HR) (SHR) 1. 0.111 12.883 0.742 POWER FAN STATIC TOTAL MECH DEMAND DELTA-T PRESSURE EFF EFF (KW) (F) (IN-WATER) (FRAC) (FRAC)	MAX AIR CAPACITY SENSIBLE CAPACITY PEOPLE RATIO (KBTU/HR) (SHR) (KBTU/HR) (1. 0.111 12.883 0.742 -11.594 POWER FAN STATIC TOTAL MECH DEMAND DELTA-T PRESSURE EFF EFF FAN (KW) (F) (IN-WATER) (FRAC) (FRAC) PLACEMENT	MAX AIR CAPACITY SENSIBLE CAPACITY EIR PEOPLE RATIO (KBTU/HR) (SHR) (KBTU/HR) (BTU/BTU) 1. 0.111 12.883 0.742 -11.594 0.266 POWER FAN STATIC TOTAL MECH DEMAND DELTA-T PRESSURE EFF EFF FAN FAN (KW) (F) (IN-WATER) (FRAC) (FRAC) PLACEMENT CONTROL	MAX AIR CAPACITY SENSIBLE CAPACITY EIR EIR PEOPLE RATIO (KBTU/HR) (SHR) (KBTU/HR) (BTU/BTU) (BTU/BTU) 1. 0.111 12.883 0.742 -11.594 0.266 0.271 POWER FAN STATIC TOTAL MECH MAX FAN DEMAND DELTA-T PRESSURE EFF EFF FAN FAN RATIO (KW) (F) (IN-WATER) (FRAC) (FRAC) PLACEMENT CONTROL (FRAC)

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L1B East Perim Zn (G.E9) 1	430.	0.	0.000	0.727	48.	0.00	0.00	10.71	0.00	-11.89	1.

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	519.0	1.	0.0	12.5	26	0.742	-11.273	0.266	0.271	-13.671	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	ı FAi	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	r control	L (FRAC)	(FRAC)	
SUPPLY	418.	1.00	0.125	0.93	1.0	0.37	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L1B East Perim Zn (G.E10)T	418.	0.	0.000	0.764	35.	0.00	0.00	13.44	0.00	-12.15	1.

REPORT- SV-A System Design Parameters for L1B (G.S11) APT5 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1978.0	3.	0.1	104 37.9	83	0.742	-34.184	0.266	0.271	-41.455	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ł		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	(FRAC)	(FRAC)	
SUPPLY	1267.	1.00	0.380	0.93	1.2	0.47	0.62	DRAW-THE	RU CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B South Perim Zn (G.S11P	1267.	0.	0.000	0.736	132.	0.00	0.00	17.07	0.00	-35.52	1.

KEPORI- SV		Design Para		штр (с	APII				wEAIni	SE	AIILE BOEIN	3 FI V
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	429.5	1.	0.0	078 11.0	34	0.742	-9.931	0.266	0.271	-6.805	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	H		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	an fai	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)) PLACEMEN	IT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	368.	1.00	0.110	0.94	1.0	0.37	0.62	2 DRAW-THE	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	G EXTRACTION		HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B East Perim Zn (G.E29)T	368.	0.	0.000	0.389	29.	0.00	0.00	10.56	0.00	-5.44	1.
DID DUDG TOTIM DIT (C.DD)/I	500.	٠.	0.000	0.505	27.	0.00	0.00	10.50	0.00	3.11	

					AL 15							
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1947.8	2.	0.2	201 19.3	96	0.742	-17.456	0.266	0.271	-14.830	
		DIVERSITY	POWER	FAN	STATIC	TOTAI	MECH	H		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)) PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	647.	1.00	0.194	0.94	1.0	0.41	0.62	2 DRAW-THR	U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L2A East Perim Zn (G.E14)T	647.	0.	0.000	0.342	130.	0.00	0.00	17.05	0.00	-8.40	1.

REPORT- SV-A System Design Parameters for L2A (G.WNW18) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

ABLOAT BY A BYSECH BESIGN TATAMETERS TOT BEAT (C.MANTO) ALTER											BOBING	
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1270.5	2.	0.1	132 19.2	07	0.742	-17.286	0.266	0.271	-14.717	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	eff.	FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	641.	1.00	0.192	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L2A WNW Perim Zn (G.WNW18P	641.	0.	0.000	0.436	85.	0.00	0.00	18.38	0.00	-10.59	1.

WEATHER	FILE-	SEATTLE	BOETNG	FT	WΑ

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1039.0	1.	0.1	12.7	87	0.742	-11.509	0.266	0.271	-8.958	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ł		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	427.	1.00	0.128	0.94	1.0	0.40	0.62	2 DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2A North Perim Zn (G.N19P	427.	0.	0.000	0.342	69.	0.00	0.00	11.88	0.00	-5.54	1.

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	170 34.4	61	0.742	-31.015	0.266	0.271	-22.073	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1150.	1.00	0.345	0.94	1.2	0.47	0.62	DRAW-THE	U CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B North Perim Zn (G.N4)T	1150.	0.	0.000	0.284	195.	0.00	0.00	31.92	0.00	-12.39	1.

REPORT- SV-A System Design Parameters for $\,$ L2B (G.E5) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.0	98 20.0	159	0.742	-18.053	0.266	0.271	-11.962	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	n FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	669.	1.00	0.201	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE :	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L2B East Perim Zn (G.E5) 1	669.	0.	0.000	0.346	66.	0.00	0.00	19.63	0.00	-8.77	1.

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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	RATIO (KBTU/F		(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	181 8.4	79	0.742	-7.631	0.266	0.271	-8.473	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	283.	1.00	0.085	0.94	0.9	0.34	0.62	DRAW-TH	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L2B West Perim Zn (G.W6) 1	283.	0.	0.000	0.557	51.	0.00	0.00	7.49	0.00	-5.99	1.

REPORT- SV-A System Design Parameters for $\,$ L2B (G.W7) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	RATIO (KBTU/F		(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	5.633		0.742	-5.070	0.266	0.271	-3.394	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	188.	1.00	0.056	0.94	0.8	0.30	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L2B West Perim Zn (G.W7) 1	188.	0.	0.000	0.232	44.	0.00	0.00	4.54	0.00	-1.22	1.

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	<i>I</i> 2	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.1	147 8.5	68	0.742	-7.711	0.266	0.271	-3.856	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	r		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	I FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	L (FRAC)	(FRAC)	
SUPPLY	286.	1.00	0.086	0.94	0.9	0.34	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30	
SUPPLI	200.	1.00	0.000	0.94	0.9	0.34	0.02	DKAW-IHKU	CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B East Perim Zn (G.E8) 1	286.	0.	0.000	0.147	42.	0.00	0.00	8.36	0.00	-1.39	1.

REPORT- SV-A System Design Parameters for $\,$ L2B (G.E9) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

	,											
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	RATIO (KBTU/HR		(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	558.0	1.	0.0	086 12.9	39	0.742	-11.645	0.266	0.271	-7.842	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	432.	1.00	0.129	0.94	1.0	0.40	0.62	PRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B East Perim Zn (G.E9) 1	432.	0.	0.000	0.369	37.	0.00	0.00	13.11	0.00	-6.05	1.

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	2721.0	3.	0.2	217 25.0	51	0.742	-22.546	0.266	0.271	-19.754
		DIVERSITY	POWER	FAN	STATIC	TOTAI	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	eff.	FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	836.	1.00	0.251	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B South Perim Zn (G.S10P	836.	0.	0.000	0.339	182.	0.00	0.00	20.27	0.00	-10.75	1.

REPORT- SV	v-A System	Design Para	meters for	L2B (G	.E23) APII				WEAIH	ER FILE- SE	AIILE BUEIN	3 F1 W
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	714.0	1.	0.0	0.086 16.645		0.742	-14.981	0.266	0.271	-10.306	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	555.	1.00	0.166	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
L2B East Perim Zn (G.E23)T	555.	0.	0.000	0.381	48.	0.00	0.00	16.76	0.00	-8.02	1.

REPORT- SV-A System Design Parameters for L3A (G.E13) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

KEFORT SV			IOI		AF14				WEATH	SK FIDE SE	ATIDE BOEIN	, ,,
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2229.8	3.	0.2	210 21.2	05	0.742	-19.084	0.266	0.271	-13.088	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	707.	1.00	0.212	0.94	1.0	0.41	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3A East Perim Zn (G.E13)T	707.	0.	0.000	0.211	149.	0.00	0.00	17.14	0.00	-5.66	1.

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	915.5	1.	0.1	126 14.5	62	0.742	-13.106	0.266	0.271	-8.997	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	an fan	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	486.	1.00	0.146	0.94	1.0	0.40	0.62	DRAW-THE	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	ULT
L3A NW Perim Zn (G.NW17) 1	486.	0.	0.000	0.326	61.	0.00	0.00	14.83	0.00	-6.00	1.

REPORT- S	SV-A	System	Design	Parameters	for	L3A	(G.N18)	APT3	PTHP
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WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA	

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM TYPE	ALTITUDE FACTOR	AREA (SQFT)	MAX PEOPLE		IR CAPACI		NSIBLE (SHR)	CAPACITY (KBTU/HR)	EIR (BTU/BTU)	EIR (BTU/BTU)	SUPP-HEAT (KBTU/HR)
PVVT	1.001	1566.5	2.	0.1	.72 18.2	43	0.742	-16.418	0.266	0.271	-11.672
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	,		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF			N FAI		
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	609.	1.00	0.182	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	Γ 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	ULT
L3A North Perim Zn (G.N18P	609.	0.	0.000	0.281	105.	0.00	0.00	15.43	0.00	-6.49	1.

REPORT- SV-A System Design Parameters for L3A (G.W21) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

REPORT S		IOI		WZI) API4				WEAIRI		AIILE BOEIN		
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	IR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2478.2	3.	0.1	.56 31.8	11	0.742	-28.630	0.266	0.271	-17.615	
		DIVERSITY	POWER	FAN	STATIC	TOTAI	L MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	e eff	F FAI	n FAi	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r controi	L (FRAC)	(FRAC)	
SUPPLY	1061.	1.00	0.318	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	IULT
L3A West Perim Zn (G.W21)T	1061.	0.	0.000	0.234	165.	0.00	0.00	30.21	0.00	-9.40	1.

KEFORI S) ACL	AF11					SE	ATIBE BOEING	, r.	
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	944.2	1.	0.1	144 13.1	.60	0.742	-11.844	0.266	0.271	-8.182	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA:	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	r CONTRO	L (FRAC)	(FRAC)	
SUPPLY	439.	1.00	0.132	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	T 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3A SW Perim Zn (G.SW22) 1	439.	0.	0.000	0.305	63.	0.00	0.00	14.17	0.00	-5.07	1.

WEATHER FILE- SEATTLE BOEING FI		. TPP-	SENTIFE	POLING	$\Gamma \perp$	WA
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		FLOOR		OUTSI	DE COOLI	ng		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	1832.5	2.	0.2	16.4	83	0.742	-14.834	0.266	0.271	-11.926
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	<u>l</u>		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	' EFF	' FA	n fai	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	550.	1.00	0.165	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3A South Perim Zn (G.S24P	550.	0.	0.000	0.280	122.	0.00	0.00	13.40	0.00	-5.84	1.

REPORT- SV-A System Design Parameters for $\,$ L3B (G.N4) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	2928.0	4.	0.1	177 33.0	104	0.742	-29.704	0.266	0.271	-20.490
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	1101.	1.00	0.330	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B North Perim Zn (G.N4)T	1101.	0.	0.000	0.258	195.	0.00	0.00	27.75	0.00	-10.78	1.

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.1	18.6	16	0.742	-16.754	0.266	0.271	-10.327	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	621.	1.00	0.186	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B East Perim Zn (G.E5) 1	621.	0.	0.000	0.302	66.	0.00	0.00	17.87	0.00	-7.11	1.

REPORT- SV-A System Design Parameters for $\,$ L3B (G.W6) APT1 PTHP $\,$

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	189 8.1	.13	0.742	-7.302	0.266	0.271	-7.655	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ł		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	an fan	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	271.	1.00	0.081	0.94	0.9	0.34	0.62	2 DRAW-THE	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	IULT
L3B West Perim Zn (G.W6) 1	271.	0.	0.000	0.502	51.	0.00	0.00	6.95	0.00	-5.16	1.

REPORT- SV-A System Design Parameters for $\,$ L3B (G.W7) APT1 PTHP $\,$

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. 1	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RA.	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	232 5.6	554	0.742	-5.089	0.266	0.271	-3.759	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTRO	L (FRAC)	(FRAC)	
SUPPLY	189.	1.00	0.057	0.94	0.8	0.30	0.62	2 DRAW-THR	U CONSTAN	T 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	IULT
L3B West Perim Zn (G.W7) 1	189.	0.	0.000	0.232	44.	0.00	0.00	4.43	0.00	-1.58	1.

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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	628.5	1.	0.1	152 8.2	90	0.742	-7.461	0.266	0.271	-3.731
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	·		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	I FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	r control	(FRAC)	(FRAC)
SUPPLY	277.	1.00	0.083	0.94	0.9	0.34	0.62	2 DRAW-THRU	J CONSTANT	1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B East Perim Zn (G.E8) 1	277.	0.	0.000	0.154	42.	0.00	0.00	7.77	0.00	-1.61	1.

REPORT- SV-A System Design Parameters for $\,$ L3B (G.E9) APT1 PTHP $\,$

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	789.0	1.	0.0	16.9	31	0.742	-15.238	0.266	0.271	-9.348	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	565.	1.00	0.169	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	Γ 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B East Perim Zn (G.E9) 1	565.	0.	0.000	0.317	53.	0.00	0.00	16.65	0.00	-6.78	1.

REPORT- SV-A System Design Parameters for $\,$ L3B (G.S10) APT7 PTHP $\,$

WEATHER FILE- SEATTLE BOEING FI WA

2	J			·						
	FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
FACTOR	(SQFT)	PEOPLE	RAT	IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
1.001	3981.5	5.	0.2	18 36.4	67	0.742	-32.821	0.266	0.271	-26.173
	DILIDDGIMI	DOMED	F13.37	GMA MT G	moma r	мпан	,		M2 17 E221	MAN DAN
	DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	Į.		MAX FAN	MIN FAN
CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FA	N FAI	N RATIO	RATIO
(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
1217.	1.00	0.365	0.94	1 2	0.47	0.62	מעיד_שא מת	II CONGTANT	г 1.00	0.30
	FACTOR 1.001 CAPACITY (CFM)	ALTITUDE AREA (SQFT) 1.001 3981.5 DIVERSITY FACTOR (CFM) (FRAC)	ALTITUDE AREA MAX FACTOR (SQFT) PEOPLE 1.001 3981.5 5. DIVERSITY POWER CAPACITY FACTOR DEMAND (CFM) (FRAC) (KW)	ALTITUDE AREA MAX A FACTOR (SQFT) PEOPLE RAT 1.001 3981.5 5. 0.2 DIVERSITY POWER FAN CAPACITY FACTOR DEMAND DELTA-T (CFM) (FRAC) (KW) (F)	ALTITUDE AREA MAX AIR CAPACI FACTOR (SQFT) PEOPLE RATIO (KBTU/H 1.001 3981.5 5. 0.218 36.4 DIVERSITY POWER FAN STATIC CAPACITY FACTOR DEMAND DELTA-T PRESSURE (CFM) (FRAC) (KW) (F) (IN-WATER)	ALTITUDE AREA MAX AIR CAPACITY SE FACTOR (SQFT) PEOPLE RATIO (KBTU/HR) 1.001 3981.5 5. 0.218 36.467 DIVERSITY POWER FAN STATIC TOTAL CAPACITY FACTOR DEMAND DELTA-T PRESSURE EFF (CFM) (FRAC) (KW) (F) (IN-WATER) (FRAC)	ALTITUDE AREA MAX AIR CAPACITY SENSIBLE FACTOR (SQFT) PEOPLE RATIO (KBTU/HR) (SHR) 1.001 3981.5 5. 0.218 36.467 0.742 DIVERSITY POWER FAN STATIC TOTAL MECH CAPACITY FACTOR DEMAND DELTA-T PRESSURE EFF EFF (CFM) (FRAC) (KW) (F) (IN-WATER) (FRAC) (FRAC)	ALTITUDE AREA MAX AIR CAPACITY SENSIBLE CAPACITY FACTOR (SQFT) PEOPLE RATIO (KBTU/HR) (SHR) (KBTU/HR) 1.001 3981.5 5. 0.218 36.467 0.742 -32.821 DIVERSITY POWER FAN STATIC TOTAL MECH CAPACITY FACTOR DEMAND DELTA-T PRESSURE EFF EFF FACTOR (KW) (F) (IN-WATER) (FRAC) (FRAC) PLACEMEN	ALTITUDE AREA MAX AIR CAPACITY SENSIBLE CAPACITY EIR FACTOR (SQFT) PEOPLE RATIO (KBTU/HR) (SHR) (KBTU/HR) (BTU/BTU) 1.001 3981.5 5. 0.218 36.467 0.742 -32.821 0.266 DIVERSITY POWER FAN STATIC TOTAL MECH CAPACITY FACTOR DEMAND DELTA-T PRESSURE EFF EFF FAN FAL (CFM) (FRAC) (KW) (F) (IN-WATER) (FRAC) (FRAC) PLACEMENT CONTROL	ALTITUDE AREA MAX AIR CAPACITY SENSIBLE CAPACITY EIR ER FACTOR (SQFT) PEOPLE RATIO (KBTU/HR) (SHR) (KBTU/HR) (BTU/BTU) (BTU/BTU) 1.001 3981.5 5. 0.218 36.467 0.742 -32.821 0.266 0.271 DIVERSITY POWER FAN STATIC TOTAL MECH MAX FAN CAPACITY FACTOR DEMAND DELTA-T PRESSURE EFF EFF FAN FAN RATIO (CFM) (FRAC) (KW) (F) (IN-WATER) (FRAC) (FRAC) PLACEMENT CONTROL (FRAC)

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B South Perim Zn (G.S10P	1217.	0.	0.000	0.281	266.	0.00	0.00	30.22	0.00	-12.95	1.

REPORT- SV-A System Design Parameters for L3B (G.E19) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

REFORT BY	, H Dybeck											, , , , , , , , , , , , , , , , , , ,
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	714.0	1.	0.0	19.3	27	0.742	-13.794	0.266	0.271	-8.792	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAN	RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	511.	1.00	0.153	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L3B East Perim Zn (G.E19)T	511.	0.	0.000	0.334	48.	0.00	0.00	15.06	0.00	-6.48	1.

										WEATHER FIDE SEATIBE BOEING FI WA			
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP		
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT		
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)		
PVVT	1.001	2229.8	3.	0.2	200 22.3	43	0.742	-20.108	0.266	0.271	-12.707		
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN		
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FAI	n FAI	N RATIO	RATIO		
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	L (FRAC)	(FRAC)		
SUPPLY	745.	1.00	0.223	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30		

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZON	E
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MULT	Т
I.4A East Perim Zn (G E13)T	745	0	0 000	0 200	149	0 00	0 00	19 02	0 00	-5 28 1	

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	915.5	1.	0.1	126 14.5	13	0.742	-13.062	0.266	0.271	-8.412	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	484.	1.00	0.145	0.94	1.0	0.40	0.62	DRAW-TH	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	ULT
L4A NW Perim Zn (G.NW17) 1	484.	0.	0.000	0.294	61.	0.00	0.00	15.58	0.00	-5.40	1.

REPORT- SV-	A System	Design	Parameters	for	L4A	(G.N18)	APT3	PTHP
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WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA	

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	IO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	1566.5	2.	0.1	.71 18.3	66	0.742	-16.530	0.266	0.271	-11.271
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	n fai	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	613.	1.00	0.184	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L4A North Perim Zn (G.N18P	613.	0.	0.000	0.262	105.	0.00	0.00	15.56	0.00	-6.08	1.

REPORT- SV-A System Design Parameters for L4A (G.W21) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2478.2	3.	0.1	159 31.0	92	0.742	-27.983	0.266	0.271	-15.681	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F.F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1037.	1.00	0.311	0.94	1.2	0.47	0.62	DRAW-THE	RU CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
L4A West Perim Zn (G.W21)T	1037.	0.	0.000	0.189	165.	0.00	0.00	29.77	0.00	-7.43	1.

		5		,						-		
		FLOOR		OUTS	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	<i>I</i>	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	944.2	1.	0.1	143 13.2	202	0.742	-11.882	0.266	0.271	-7.776	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	1		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF			n FAI			
TYPE	(CFM)	(FRAC)	(KW)		(IN-WATER)	(FRAC)	(FRAC)					
SUPPLY	440.	1.00	0.132	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZON	NE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MUI	LT
L4A SW Perim Zn (G.SW22) 1	440.	0.	0.000	0.279	63.	0.00	0.00	12.72	0.00	-4.66 1	1.

WEATHER	RTI.R.	CENTIT.	POPING	RΤ	TaT 7\
WEATHER	L TPF-	SEATILE	BOLING	rт	WA

KEFORI SV) AFU	AF15					SK FIDE SE		
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1832.5	2.	0.2	222 16.5	20	0.742	-14.868	0.266	0.271	-10.564	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	551.	1.00	0.165	0.94	1.0	0.40	0.62	2 DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L4A South Perim Zn (G.S24P	551.	0.	0.000	0.222	122.	0.00	0.00	13.40	0.00	-4.46	1.

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	176 33.2	54	0.742	-29.929	0.266	0.271	-19.829	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	1109.	1.00	0.333	0.94	1.2	0.47	0.62	DRAW-THE	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L4B North Perim Zn (G.N4)T	1109.	0.	0.000	0.240	195.	0.00	0.00	28.03	0.00	-10.11	1.

REPORT- SV-A System Design Parameters for $\,$ L4B (G.E5) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

	1			(-								
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.1	104 18.8	92	0.742	-17.003	0.266	0.271	-9.906	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	630.	1.00	0.189	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L4B East Perim Zn (G.E5) 1	630.	0.	0.000	0.280	66.	0.00	0.00	18.20	0.00	-6.68	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	179 8.5	44	0.742	-7.690	0.266	0.271	-7.309	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	285.	1.00	0.085	0.94	0.9	0.34	0.62	DRAW-THR	.U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L4B West Perim Zn (G.W6) 1	285.	0.	0.000	0.444	51.	0.00	0.00	7.73	0.00	-4.80	1
L4B West Perim Zn (G.W6) I	205.	0.	0.000	0.444	эт.	0.00	0.00	1.13	0.00	-4.60	Ι.

REPORT-	SV-A	System	Design	Parameters	for	L4B	(G.W7)	APT1	PTHP
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WEATHER FILE- SEATTLE BOEING FI WA	W	<i>I</i> EATHER	FILE-	SEATTLE	BOEING	FΙ	WA
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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	228 5.7	54	0.742	-5.179	0.266	0.271	-3.649	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	1		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF			an fai			
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROI	(FRAC)	(FRAC)	
SUPPLY	192.	1.00	0.058	0.94	0.8	0.30	0.62	2 DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L4B West Perim Zn (G.W7) 1	192.	0.	0.000	0.228	44.	0.00	0.00	4.50	0.00	-1.47	1.

REPORT- SV-A System Design Parameters for $\,$ L4B (G.E8) APT1 PTHP

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				(
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.1	150 8.3	93	0.742	-7.553	0.266	0.271	-3.777	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	280.	1.00	0.084	0.94	0.9	0.34	0.62	2 DRAW-THE	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	IULT
L4B East Perim Zn (G.E8) 1	280.	0.	0.000	0.150	42.	0.00	0.00	7.87	0.00	-1.50	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	789.0	1.	0.0	17.0	76	0.742	-15.368	0.266	0.271	-8.591
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	n fai	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	570.	1.00	0.171	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZONE	
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MULT	
I.4B East Perim Zn (G E9) 1	570	0	0 000	0 279	53	0 00	0 00	16 85	0 00	-6 01 1	

REPORT- SV-A System Design Parameters for $\,$ L4B (G.S10) APT7 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.2	219 36.3	88	0.742	-32.749	0.266	0.271	-23.827	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1214.	1.00	0.364	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L4B South Perim Zn (G.S10P	1214.	0.	0.000	0.229	266.	0.00	0.00	29.97	0.00	-10.57	1.

REPORT- SV-A System Design Parameters for $\,$ L4B (G.E19) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	714.0	1.	0.0	91 15.6	41	0.742	-14.077	0.266	0.271	-8.410	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	eff.	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	522.	1.00	0.156	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L4B East Perim Zn (G.E19)T	522.	0.	0.000	0.308	48.	0.00	0.00	15.42	0.00	-6.09	1.

REPORT- SV-A System Design Parameters for $\,$ L5A (G.E13) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

	1											
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2229.8	3.	0.1	189 23.5	88	0.742	-21.229	0.266	0.271	-12.711	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	N FAN	RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	787.	1.00	0.236	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5A East Perim Zn (G.E13)T	787.	0.	0.000	0.189	149.	0.00	0.00	20.04	0.00	-5.28	1.

		5			,					-		
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	915.5	1.	0.1	122 14.9	83	0.742	-13.485	0.266	0.271	-8.795	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ı		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF			N FAI			
TYPE	(CFM)	(FRAC)	(KW)		(IN-WATER)	(FRAC)	(FRAC)				(FRAC)	
SUPPLY	500.	1.00	0.150	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L5A NW Perim Zn (G.NW17) 1	500.	0.	0.000	0.306	61.	0.00	0.00	14.52	0.00	-5.79	1.

REPORT- SV-A System Design Parameters for L5A (G.N18) APT3 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1566.5	2.	0.1	19.8	49	0.742	-17.864	0.266	0.271	-11.622	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	n FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	662.	1.00	0.198	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5A North Perim Zn (G.N18P	662.	0.	0.000	0.256	105.	0.00	0.00	17.45	0.00	-6.43	1.

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WEATHER	L TPF-	SEATILE	BOLING	rт	WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2478.2	3.	0.1	159 31.1	19	0.742	-28.007	0.266	0.271	-15.682	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1038.	1.00	0.311	0.94	1.2	0.47	0.62	DRAW-TH	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
L5A West Perim Zn (G.W21)T	1038.	0.	0.000	0.189	165.	0.00	0.00	29.79	0.00	-7.43	1.

REPORT- SV-A System Design Parameters for $\,$ L5A (G.SW22) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

											2021110	
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	944.2	1.	0.1	.43 13.2	25	0.742	-11.903	0.266	0.271	-7.776	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	an fan	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	441.	1.00	0.132	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE :	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L5A SW Perim Zn (G.SW22) 1	441.	0.	0.000	0.279	63.	0.00	0.00	12.74	0.00	-4.66	1.

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1832.5	2.	0.2	221 16.5	65	0.742	-14.908	0.266	0.271	-10.564	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	553.	1.00	0.166	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	ULT
L5A South Perim Zn (G.S24P	553.	0.	0.000	0.221	122.	0.00	0.00	13.43	0.00	-4.46	1.

REPORT- SV-A System Design Parameters for $\,$ L5B (G.N4) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

	2	5										
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	175 33.4	07	0.742	-30.066	0.266	0.271	-19.830	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1114.	1.00	0.334	0.94	1.2	0.47	0.62	DRAW-THE	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B North Perim Zn (G.N4)T	1114.	0.	0.000	0.239	195.	0.00	0.00	28.15	0.00	-10.11	1.

REPORT- SV-A System Design Parameters for $\,$ L5B (G.E5) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

			101								
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	984.0	1.	0.1	.04 18.9	11	0.742	-17.020	0.266	0.271	-9.907
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	AN FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)
SUPPLY	631.	1.00	0.189	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	ULT
L5B East Perim Zn (G.E5) 1	631.	0.	0.000	0.279	66.	0.00	0.00	18.22	0.00	-6.68	1.

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR) (BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	765.0	1.	0.1	.77 8.6	54	0.742	-7.788	0.266	0.271	-7.313
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	I FAN	RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)
SUPPLY	289.	1.00	0.087	0.94	0.9	0.34	0.62	DRAW-THRU	CONSTANT	1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B West Perim Zn (G.W6) 1	289.	0.	0.000	0.439	51.	0.00	0.00	7.80	0.00	-4.81	1.

	1			(-	,							
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	22 5.9	11	0.742	-5.320	0.266	0.271	-3.649	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FAI	I FAN	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)	
SUPPLY	197.	1.00	0.059	0.94	0.8	0.30	0.62	DRAW-THRU	J CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B West Perim Zn (G.W7) 1	197.	0.	0.000	0.222	44.	0.00	0.00	6.38	0.00	-1.47	1.

REPORT- SV-A System Design Parameters for $\,$ L5B (G.E8) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

			(
		FLOOR		OUTS	DE COOLI	:NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. 1	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.1	148 8.5	522	0.742	-7.669	0.266	0.271	-3.835	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	284.	1.00	0.085	0.94	0.9	0.34	0.62	2 DRAW-THR	U CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L5B East Perim Zn (G.E8) 1	284.	0.	0.000	0.148	42.	0.00	0.00	7.98	0.00	-1.50	1.

REPORT- SV-A System Design Parameters for $\,$ L5B (G.E9) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

				(-	,						
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR) (BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	789.0	1.	0.0)92 17.1	33	0.742	-15.420	0.266	0.271	-8.591
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	I FAN	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	L (FRAC)	(FRAC)
SUPPLY	572.	1.00	0.171	0.94	1.0	0.40	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B East Perim Zn (G.E9) 1	572.	0.	0.000	0.278	53.	0.00	0.00	16.91	0.00	-6.01	1.

REPORT- SV-A System Design Parameters for L5B (G.S10) APT7 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

												- "
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.2	218 36.4	74	0.742	-32.827	0.266	0.271	-23.827	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ŀ		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEME	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1217.	1.00	0.365	0.94	1.2	0.47	0.62	DRAW-THI	RU CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B South Perim Zn (G.S10P	1217.	0.	0.000	0.229	266.	0.00	0.00	30.03	0.00	-10.57	1.

REPORT- SV-A System Design Parameters for $\,$ L5B (G.E19) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

				(-								
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	714.0	1.	0.0	15.9	47	0.742	-14.353	0.266	0.271	-8.532	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	ı FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	r controi	L (FRAC)	(FRAC)	
SUPPLY	532.	1.00	0.159	0.94	1.0	0.40	0.62	DRAW-THRU	J CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
L5B East Perim Zn (G.E19)T	532.	0.	0.000	0.308	48.	0.00	0.00	15.74	0.00	-6.21	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2229.8	3.	0.1	.60 27.9	29	0.742	-25.136	0.266	0.271	-13.479	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F.F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	932.	1.00	0.279	0.94	1.2	0.47	0.62	DRAW-THE	RU CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZONE	
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MULT	
I.6A Fast Derim Zn (G F13)T	932	0	0 000	0 171	149	0 00	0 00	24 91	0 00	-6 05 1	

REPORT- SV-A System Design Parameters for $\,$ L6A (G.NW17) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	731.2	1.	0.1	07 13.6	33	0.742	-12.270	0.266	0.271	-8.208
			D.0111111					-			
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	i		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F F	AN FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	455.	1.00	0.136	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6A NW Perim Zn (G.NW17) 1	455.	0.	0.000	0.338	49.	0.00	0.00	14.24	0.00	-5.83	1.

REPORT- SV-A System Design Parameters for $\,$ L6A (G.N18) APT3 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1404.0	2.	0.1	40 20.0	64	0.742	-18.058	0.266	0.271	-11.571	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	(FRAC)	(FRAC)	
SUPPLY	669.	1.00	0.201	0.94	1.0	0.41	0.62	DRAW-THE	RU CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6A North Perim Zn (G.N18P	669.	0.	0.000	0.273	94.	0.00	0.00	19.19	0.00	-6.94	1.

REPORT- SV-A System Design Parameters for $\,$ L6A (G.W21) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2478.2	3.	0.1	154 32.2	203	0.742	-28.983	0.266	0.271	-17.257	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1074.	1.00	0.322	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	ULT
I.6A West Perim Zn (G W21)T	1074.	0	0 000	0 222	165	0 00	0 00	31 63	0.00	-9 03	1

REPORT- SV-A System Design Parameters for $\,$ L6A (G.SW22) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	944.2	1.	0.1	.41 13.3	60	0.742	-12.024	0.266	0.271	-7.890	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	446.	1.00	0.134	0.94	1.0	0.40	0.62	DRAW-THI	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6A SW Perim Zn (G.SW22) 1	446.	0.	0.000	0.283	63.	0.00	0.00	12.91	0.00	-4.78	1.

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1832.5	2.	0.2	209 17.5	66	0.742	-15.809	0.266	0.271	-11.745	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	586.	1.00	0.176	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6A South Perim Zn (G.S24P	586.	0.	0.000	0.254	122.	0.00	0.00	14.33	0.00	-5.65	1.

REPORT- SV-A System Design Parameters for $\,$ L6B (G.N4) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		5										
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	.65 35.5	39	0.742	-31.985	0.266	0.271	-20.395	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA:	n fai	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1186.	1.00	0.355	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B North Perim Zn (G.N4)T	1186.	0.	0.000	0.238	195.	0.00	0.00	30.72	0.00	-10.68	1.

REPORT- SV-A System Design Parameters for $\,$ L6B (G.E5) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

	,			(-								
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.1	.02 19.2	24	0.742	-17.302	0.266	0.271	-10.048	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	641.	1.00	0.192	0.94	1.0	0.41	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B East Perim Zn (G.E5) 1	641.	0.	0.000	0.281	66.	0.00	0.00	18.54	0.00	-6.83	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	.63 9.3	67	0.742	-8.431	0.266	0.271	-7.323	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA:	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	r control	L (FRAC)	(FRAC)	
SUPPLY	312.	1.00	0.094	0.94	0.9	0.34	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B West Perim Zn (G.W6) 1	312.	0.	0.000	0.406	51.	0.00	0.00	9.75	0.00	-4.82	1.

				(-								
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RA7	CIO (KBTU/H	R)	(SHR)	(KBTU/HR) (BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	213 6.1	46	0.742	-5.531	0.266	0.271	-3.652	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	FAN	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)	
SUPPLY	205.	1.00	0.061	0.94	0.8	0.30	0.62	DRAW-THRU	CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B West Perim Zn (G.W7) 1	205.	0.	0.000	0.213	44.	0.00	0.00	5.84	0.00	-1.47	1.

REPORT- SV-A System Design Parameters for L6B (G.E8) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		J			,							
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.1	L44 8.7	02	0.742	-7.832	0.266	0.271	-3.916	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ı		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	i fai	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	r control	L (FRAC)	(FRAC)	
SUPPLY	290.	1.00	0.087	0.94	0.9	0.34	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B East Perim Zn (G.E8) 1	290.	0.	0.000	0.144	42.	0.00	0.00	8.11	0.00	-1.50	1.

REPORT- SV-A System Design Parameters for $\,$ L6B (G.E9) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

			101									
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	789.0	1.	0.0	17.2	14	0.742	-15.493	0.266	0.271	-8.593	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	an fan	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	L (FRAC)	(FRAC)	
SUPPLY	574.	1.00	0.172	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L6B East Perim Zn (G.E9) 1	574.	0.	0.000	0.276	53.	0.00	0.00	16.99	0.00	-6.02	1.

REPORT- SV-A System Design Parameters for L6B (G.S10) APT7 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

KEFORT SV	A System				AF17				WEATH		BOEIN	, r.
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.2	217 36.6	53	0.742	-32.987	0.266	0.271	-23.828	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1223.	1.00	0.367	0.94	1.2	0.47	0.62	DRAW-THE	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B South Perim Zn (G.S10P	1223.	0.	0.000	0.228	266.	0.00	0.00	30.12	0.00	-10.57	1.

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/E	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	659.0	1.	0.0	081 16.2	51	0.742	-14.626	0.266	0.271	-8.939	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r controi	L (FRAC)	(FRAC)	
SUPPLY	542.	1.00	0.163	0.94	1.0	0.40	0.62	DRAW-THR	J CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B East Perim Zn (G.E19)T	542.	0.	0.000	0.331	44.	0.00	0.00	16.12	0.00	-6.81	1.

REPORT- SV-A System Design Parameters for L7A (G.E13) APT2 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

					MI 12							
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	956.8	1.	0.1	136 14.0	77	0.742	-12.670	0.266	0.271	-6.335	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	L MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	F EFF	F FA	n FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	470.	1.00	0.141	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	T 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L7A East Perim Zn (G.E13)T	470.	0.	0.000	0.177	64.	0.00	0.00	13.56	0.00	-3.14	1.

MEVLHEB	FILE-	SEATTLE	BOETNG	FТ	TAT Z

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	999.0	1.	0.1	14.1	06	0.742	-12.695	0.266	0.271	-7.212
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F	an fai	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	471.	1.00	0.141	0.94	1.0	0.40	0.62	DRAW-THE	U CONSTANT	r 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZOI	NE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MUI	LT
L7A West Perim Zn (G.W18)T	471.	0.	0.000	0.219	67.	0.00	0.00	13.77	0.00	-3.90	1.

REPORT- SV-A System Design Parameters for $\,$ L7A (G.SW19) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	891.8	1.	0.1	13.3	80	0.742	-12.042	0.266	0.271	-7.749	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	ı FAi	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	r control	L (FRAC)	(FRAC)	
SUPPLY	446.	1.00	0.134	0.94	1.0	0.40	0.62	DRAW-THRU	J CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZON	1E
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MUI	ΔT
L7A SW Perim Zn (G.SW19) 1	446.	0.	0.000	0.284	60.	0.00	0.00	13.11	0.00	-4.81 1	ι.

		Design rara						WEATHER FIDE SEATTHE BOEING I				
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1282.5	2.	0.1	142 18.0	08	0.742	-16.207	0.266	0.271	-10.219	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	601.	1.00	0.180	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7A SSE Perim Zn (G.SSE23P	601.	0.	0.000	0.263	86.	0.00	0.00	17.08	0.00	-5.98	1.

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2668.0	3.	0.1	142 37.6	808	0.742	-33.847	0.266	0.271	-22.558	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAN	RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	1255.	1.00	0.376	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B North Perim Zn (G.N4)T	1255.	0.	0.000	0.289	178.	0.00	0.00	33.53	0.00	-13.76	1.

REPORT- SV-A System Design Parameters for L7B (G.E5) AP	THE PERMIT

WEATHER FILE- SEATTLE BOE	ING I	ľΙ	WA
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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	919.0	1.	0.0	90 20.3	867	0.742	-18.331	0.266	0.271	-11.163	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ī		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.A	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	679.	1.00	0.204	0.94	1.0	0.41	0.62	DRAW-THE	RU CONSTANT	1.00	0.30	

^{***} THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	EXTRACTION		HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L7B East Perim Zn (G.E5) 1	679.	0.	0.000	0.318	61.	0.00	0.00	19.99	0.00	-8.18	1.

REPORT- SV-A System Design Parameters for $\,$ L7B (G.W6) APT1 PTHP

	SEATTLE		

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	.27 12.0	162	0.742	-10.856	0.266	0.271	-9.184	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	402.	1.00	0.121	0.94	1.0	0.37	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L7B West Perim Zn (G.W6) 1	402.	0.	0.000	0.439	51.	0.00	0.00	10.86	0.00	-6.71	1.

REPORT- SV-A System Design Parameters for $\,$ L7B (G.W7) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

				(
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.1	156 8.3	69	0.742	-7.532	0.266	0.271	-5.804	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	279.	1.00	0.084	0.94	0.9	0.34	0.62	2 DRAW-TH	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L7B West Perim Zn (G.W7) 1	279.	0.	0.000	0.345	44.	0.00	0.00	6.74	0.00	-3.65	1.

KEFORT DV					AFII F				WEATH	SK FIDE SE	ATIBE BOEING	, r.
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.1	.13 11.1	27	0.742	-10.014	0.266	0.271	-5.677	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	L (FRAC)	(FRAC)	
SUPPLY	371.	1.00	0.111	0.94	1.0	0.37	0.62	DRAW-THR	J CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	G EXTRACTION		HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B East Perim Zn (G.E8) 1	371.	0.	0.000	0.257	42.	0.00	0.00	10.76	0.00	-3.61	1.

REPORT- SV-A System Design Parameters for $\,$ L7B (G.E9) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	789.0	1.	0.0	19.9	52	0.742	-17.957	0.266	0.271	-10.442
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ī		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF			n FAI		
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	666.	1.00	0.200	0.94	1.0	0.41	0.62	PRAW-THR	U CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	EXTRACTION		HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B East Perim Zn (G.E9) 1	666.	0.	0.000	0.313	53.	0.00	0.00	19.88	0.00	-7.89	1.

					AL I							
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.1	164 48.5	91	0.742	-43.732	0.266	0.271	-35.610	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1621.	1.00	0.486	0.94	1.2	0.48	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B SSW Perim Zn (G.SSW10P	1621.	0.	0.000	0.366	266.	0.00	0.00	41.67	0.00	-22.52	1.

REPORT- SV-A System Design Parameters for L8A (G.E3) APT2 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

REFORT BY	, H Dybeck				J.EJ/ MIIZ I							, , , , ,,,,
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	956.8	1.	0.1	111 17.2	85	0.742	-15.556	0.266	0.271	-8.366	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	· I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F.F	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	577.	1.00	0.173	0.94	1.0	0.40	0.62	DRAW-THE	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L8A East Perim Zn (G.E3) 2	577.	0.	0.000	0.239	64.	0.00	0.00	16.87	0.00	-5.21	1.

			101									
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	891.0	1.	0.1	127 14.0	161	0.742	-12.655	0.266	0.271	-8.325	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	469.	1.00	0.141	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	IULT
L8A West Perim Zn (G.W8) 2	469.	0.	0.000	0.304	59.	0.00	0.00	13.90	0.00	-5.40	1.

REPORT- SV-A System Design Parameters for L8A (G.SW9) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

KEFORT SV									WEATH			
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	688.5	1.	0.1	121 11.4	10	0.742	-10.269	0.266	0.271	-7.507	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	381.	1.00	0.114	0.94	1.0	0.37	0.62	2 DRAW-THI	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
L8A SW Perim Zn (G.SW9) A	381.	0.	0.000	0.364	46.	0.00	0.00	11.43	0.00	-5.26	1.

REPORT- SV-A System Design Parameters for L8A (G.NW11) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		J								-	
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	Δ A	IR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	IO (KBTU/H	R)	(SHR)	(KBTU/HR)	BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	776.5	1.	0.0	99 15.6	77	0.742	-14.110	0.266	0.271	-9.384
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FAI	I FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROI	L (FRAC)	(FRAC)
SUPPLY	523.	1.00	0.157	0.94	1.0	0.40	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L8A NW Perim Zn (G.NW11) 1	523.	0.	0.000	0.346	52.	0.00	0.00	14.45	0.00	-6.86	1.

REPORT- S	V-A	System 1	Design	Parameters	for	L8A	(G.NE12)	APT1	PTHP
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WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA	

				(-								
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	948.8	1.	0.1	.03 18.4	78	0.742	-16.631	0.266	0.271	-10.124	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	616.	1.00	0.185	0.94	1.0	0.40	0.62	DRAW-TH	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L8A NE Perim Zn (G.NE12) 1	616.	0.	0.000	0.301	63.	0.00	0.00	17.36	0.00	-7.02	1.

WEATHER	FILE-	SEATTLE	BOETNG	FT	WΑ

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	540.0	1.	0.1	167 6.4	75	0.742	-5.828	0.266	0.271	-4.551	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	216.	1.00	0.065	0.94	0.9	0.34	0.62	2 DRAW-TH	RU CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L8A South Perim Zn (G.S13P	216.	0.	0.000	0.338	36.	0.00	0.00	5.61	0.00	-2.77	1.

REPORT- SV-A System Design Parameters for $\,$ L8A (G.SE14) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

				(-							
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	540.0	1.	0.0	12.1	.55	0.742	-10.939	0.266	0.271	-6.453
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	eff.	, FAI	I FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	L (FRAC)	(FRAC)
SUPPLY	405.	1.00	0.122	0.94	1.0	0.37	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	NE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	LT
L8A SE Perim Zn (G.SE14) 1	405.	0.	0.000	0.306	36.	0.00	0.00	12.14	0.00	-4.70	1.

		FLOOR		OUTSIDE	COOLING		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	AIR	CAPACITY	SENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RATIO	(KBTU/HR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
UHT	1.001	55590.5	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	1	EXTRACTION	HEATING	ADDITION
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)		(KBTU/HR)				(KBTU/HR) MULT
L2B South Perim Zn (G.S27E	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 1.
L6A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) 0.00 1.
PlA West Perim Zn (B.W7) H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) 0.00 1.
L2A Core Zn (G.C16) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) 0.00 1.
L3A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) 0.00 1.
L4A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) 0.00 1.
L5A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) 0.00 1.
L6A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) 0.00 1.
L7A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		(BASEBOARDS) 0.00 1.
									0.00	(BASEBOARDS)
L8A Core Zn (G.C5) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 1. (BASEBOARDS)
P2A NNW Perim Zn (B.NNW13K	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 -15.61	-15.61 1. (BASEBOARDS)
P2B NW Perim Zn (B.NW6) X	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 1. (BASEBOARDS)
P2B South Perim Zn (B.S10K	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 -161.07	-161.07 1. (BASEBOARDS)
P2B NNE Perim Zn (B.NNE12K	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-26.08 1. (BASEBOARDS)
P1B South Perim Zn (B.S6)G	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-55.53 1. (BASEBOARDS)
P1B NNE Perim Zn (B.NNE9)G	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-40.45 1.
L1A East Perim Zn (G.E18)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) -0.80 1.
L1A Core Zn (G.C20) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) -0.43 1.
L2A East Perim Zn (G.E13)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	-0.43	(BASEBOARDS) -0.70 1.
L2A Core Zn (G.C15) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	-0.70 0.00	(BASEBOARDS) -0.16 1.
L3A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	-0.16 0.00	(BASEBOARDS) -0.76 1.
L3A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	-0.76 0.00	(BASEBOARDS) -0.27 1.
L4A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	-0.27 0.00	(BASEBOARDS) -0.74 1.
									-0.74	(BASEBOARDS)
L4A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		-0.27 1. (BASEBOARDS)
L5A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 -0.74	-0.74 1. (BASEBOARDS)
L5A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 -0.27	-0.27 1. (BASEBOARDS)
L6A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 -0.74	-0.74 1. (BASEBOARDS)
L6A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.27 1. (BASEBOARDS)
L7A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.76 1. (BASEBOARDS)
L7A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.26 1. (BASEBOARDS)
L8A East Perim Zn (G.E2) F	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.83 1.
L8A Core Zn (G.C4) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) -0.34 1.
									-0.34	(BASEBOARDS)

P2A Core Zn (B.C1) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P2A Core Zn (B.C2) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P2B Core Zn (B.C4) MECH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P2B Core Zn (B.C5) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P2B SE Perim Zn (B.SE8) M	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
PlA Core Zn (B.C1) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P1A Core Zn (B.C2) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
PlA NNW Perim Zn (B.NNW8)C	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
P1B Core Zn (B.C4) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P1B SE Perim Zn (B.SE5) M	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P1B ENE Perim Zn (B.ENE10E	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
L1A Core Zn (G.C1) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
L1A Core Zn (G.C2) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)

REPORT- SV-A System Design Par	cameters for	Free	ze Protect					FILE- SEA		UED)
L1B Core Zn (G.C3) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
2A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS)
L2A NNW Perim Zn (G.NNW24T	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
22B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
J3A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
JA Core Zn (G.C20) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
L3B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
4A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
4A Core Zn (G.C1) Env	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
.4B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
L5A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
L5A Core Zn (G.C20) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
J5B Core Zn (G.C2) STR	0.	0.	0.000		0.	0.00	0.00	0.00	0.00	0.00
6A Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
G6B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
J7A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
7A Core Zn (G.C17) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
7B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
38A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
J8A Core Zn (G.C7) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
2B NNE Perim Zn (B.NNE11L	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
1A Core Zn (G.C23) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
1A SW Perim Zn (G.SW26) C	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
1B Core Zn (G.C12) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
									0.00	(BASEBOARDS)
2A Core Zn (G.C17) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
OD G 6 (G G11) FLEG	0	0	0.000	0.000	0	0.00	0.00	0.00		(BASEBOARDS)
2B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS)
3A Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
										(BASEBOARDS)
3B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS)
4A Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
									0.00	(BASEBOARDS)
4B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS)
5A Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
									0.00	(BASEBOARDS)
5B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS)
6A Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
, , , , , , , , , , , , , , , , , , , ,										(BASEBOARDS)
6B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
7A Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS)
/A core zn (d.cro, hade	٠.	0.	0.000	0.000	0.	0.00	0.00	0.00		(BASEBOARDS)
7B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
8A Core Zn (G.C6) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS) 0.00
										(BASEBOARDS)
2A Core Zn (B.C7) STO	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
2B NE Perim Zn (B.NE9) S	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS)
ZB NE Perim Zn (B.NE9) S	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		(BASEBOARDS)
1A Core Zn (G.C16) RR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
										(BASEBOARDS)
	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
lA WNW Perim Zn (G.WNW25T	0.	0.	0.000	0.000	٠.	0.00	0.00	0.00		
1A WNW Perim Zn (G.WNW25T 2A West Perim Zn (G.W25)0	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		(BASEBOARDS)

REPORT- SV-A System Design Parameters for L2A (G.SW20) RST PSZHP

WEATHER FILE- SEATTLE BOEING FI WA

REFORT BY	, H Dybeem				J.BW20/ RB1							
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PSZ	1.001	2287.5	76.	0.0	380.4	87	0.742	-342.439	0.251	0.274	-415.269	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ł		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	L (FRAC)	(FRAC)	
SUPPLY	12693.	1.00	9.626	2.36	3.5	0.55	0.62	DRAW-THE	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2A SW Perim Zn (G.SW20)	12693.	12693.	3.722	1.000	572.	0.00	0.00	77.06	0.00	-30.97	1.

REPORT SV	-A System	Design Para			- VAVTPFP L				WEAIRI	SK FILE- SE	AIILE BOEING	, rı
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PIU	1.001	2105.5	17.	0.6	11.0	90	0.742	0.000	0.000	0.000	0.000	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	286.	1.00	0.324	3.53	5.3	0.55	0.72	2 DRAW-THR	U SPEEI	1.10	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	EXTRACTION		HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B SSW Perim Zn (G.SSW130	303.	0.	0.080	0.699	73.	0.00	0.00	2.33	-12.82	-11.41	1.
L1B Core Zn (G.C14) OFF	170.	0.	0.052	0.213	22.	0.00	0.00	2.37	-8.27	-7.82	1.
L1A SSW Perim Zn (G.SSW15I	675.	0.	0.209	1.000	78.	0.00	0.00	1.27	-33.33	-31.65	1.

REPORT- SV-A System Design Parameters for Sys 8 - VAV+PFP Corr (L1-L8)

WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA	

REPORT- SV	/-A System	Design Para	meters for	Sys 8	Sys 8 - VAV+PFP COTT (LI-L8)					WEATHER FILE- SEATTLE BOEING FI WA				
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP			
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT			
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)			
PIU	1.001	20700.8	102.	0.8	310 73.6	08	0.742	0.000	0.000	0.000	0.000			
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN			
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	AN FAN	N RATIO	RATIO			
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	(FRAC)	(FRAC)			
SUPPLY	1898.	0.98	2.145	3.53	6.0	0.62	0.72	DRAW-TH	RU SPEEI	1.10	0.30			

^{***} THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	
L8A Core Zn (G.C10) COR	59.	0.	0.005	0.805	45.	0.00	0.00	1.85	-0.76	-0.21	1.
L1A Core Zn (G.C21) COR	5.	0.	0.001	1.000	3.	0.00	0.00	0.09	-0.12	-0.10	1.
P1B Core Zn (B.C12) COR	72.	0.	0.016	1.000	28.	0.00	0.00	0.54	-2.49	-2.60	1.
L1A Core Zn (G.C22) COR	36.	0.	0.007	1.000	15.	0.00	0.00	0.36	-1.16	-1.19	1.
L1B Core Zn (G.C4) COR	65.	0.	0.005	1.000	52.	0.00	0.00	1.25	-0.70	-0.25	1.
L2A Core Zn (G.C26) COR	77.	0.	0.005	1.000	61.	0.00	0.00	1.48	-0.83	0.00	1.
L2B Core Zn (G.C3) COR	86.	0.	0.006	1.000	69.	0.00	0.00	1.77	-0.93	0.00	1.
L3A Core Zn (G.C23) COR	51.	0.	0.004	1.000	41.	0.00	0.00	1.08	-0.55	0.00	1.
L3B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	2.90	-1.42	0.00	1.
L4A Core Zn (G.C23) COR	51.	0.	0.004	1.000	41.	0.00	0.00	1.08	-0.55	0.00	1.
L4B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	2.94	-1.42	0.00	1.
L5A Core Zn (G.C23) COR	51.	0.	0.004	1.000	41.	0.00	0.00	1.08	-0.55	0.00	1.
L5B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	2.99	-1.42	0.00	1.
L6A Core Zn (G.C23) COR	51.	0.	0.004	1.000	41.	0.00	0.00	1.11	-0.55	0.00	1.
L6B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	3.02	-1.42	0.00	1.
L7A Core Zn (G.C20) COR	47.	0.	0.003	1.000	37.	0.00	0.00	1.12	-0.51	0.00	1.
L7B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	3.24	-1.42	-0.32	1.
P2A Core Zn (B.C3) COR	60.	0.	0.005	0.238	14.	0.00	0.00	0.77	-0.81	-0.81	1.
P1A Core Zn (B.C3) COR	22.	0.	0.003	1.000	14.	0.00	0.00	0.41	-0.45	-0.38	1.
L1A South Perim Zn (G.S170	814.	0.	0.195	1.000	257.	0.00	0.00	5.21	-31.07	-24.65	1.
L2B SSW Perim Zn (G.SSW120	555.	0.	0.106	0.480	252.	0.00	0.00	11.95	-16.84	-11.04	1.
L2A Core Zn (G.C21) MAIL	64.	0.	0.006	0.010	0.	0.00	0.00	1.33	-0.86	-0.81	1.
L2A Core Zn (G.C22) MAIL	14.	0.	0.002	0.010	0.	0.00	0.00	0.30	-0.38	-0.37	1.

REPORT- SV-A System Design Parameters for $\;$ Sys 4 -PSZ-HP Amenities

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTS	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RA	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PIU	1.001	1607.5	0.	0.0	38.4	82	0.742	-34.634	0.360	0.370	-17.317
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	n FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	1254.	1.00	1.016	2.53	4.2	0.60	0.72	DRAW-THR	U CONSTANT	г 1.10	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	EXTRACTION		HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7A NW Perim Zn (G.NW21)	901.	0.	0.124	1.000	47.	0.00	0.00	13.70	-22.16	-10.94	1.
L7A NE Perim Zn (G.NE22)	1113.	0.	0.142	1.000	50.	0.00	0.00	14.83	-25.70	-11.03	1.