

I ot 170

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SITE NAME:									OPT 2										May-21				WINTE	R NAT	URAL	AIR CH	IANGE	RATE	0.352		HEAT	LOSS A	ΛΤ°F.	78			CSA-F2	80-12
BUILDER:		IPARK	HOMES	3				TYPE:	: TERR	ACOTA	3			GFA:	3496			LO#	90750							AIR CH						GAIN Δ				SB-12	PACKAG	
ROOM USE	ŀ			MBR			ENS			WIC			BED-2			BED-3			BED-4			ENS-2/3			BED-5			WIC-3			ENS-4/					1	HOILI	
EXP. WALL				33			28		1	6			31			34			11			0			16	·		10			6	·						
CLG. HT.	l			9			9		1	9			9			9			9			9			9			9			9	ł						
	FACTO	RS							1						İ							•			·			,			3							
GRS.WALL AREA	Loss	GAIN		297			252		ı	54			279		l	306		l	99			0		i	144			90			54							- 1
GLAZING	1			LOSS	GAIN		LOSS	GAIN	1	LOSS	GAIN		LOSS	GAIN	l		GAIN			GAIN		-	GAIN	1												1		- 1
NORTH	21.8	16.0	0	0	0	0	0	0	0	0	0	0	0	0	14	305	224	١,	0	OAIN	i		GAIN	1		GAIN		LOSS			LOSS					1		
EAST	1	41.6	0	0	0	١٠	0	0	0	0	-		-	-					-		0	0	U	0	0	0	0	0	0	0	0	0				1		- 1
SOUTH		24.9	0	0	0	7	-				0	47	1024	1953	64	1394	2659	0	0	0	0	0	0	0	0	0	33		1371	0	0	0						
į į	1		1		-	1	152	174	0	0	0	0	0	0	0	0	0	11	240	274	0	0	0	11	240	274	0	0	0	7	152	174						ı
WEST	1	41.6	32	697	1330	14	305	582	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						- 1
SKYLT.	1	101.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						l
DOORS		4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						1
NET EXPOSED WALL	4.6	0.8	265	1211	199	231	1055	174	54	247	41	232	1060	174	228	1042	171	88	402	66	0	0	0	133	608	100	57	260	43	47	215	35						- 1
NET EXPOSED BSMT WALL ABOVE GR	1	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	اه						I
EXPOSED CLG	1.3	0.6	305	401	179	188	247	110	110	145	65	284	373	167	222	292	130	248	326	146	66	87	39	240	315	141	42	55	25	80	105	47						Ì
NO ATTIC EXPOSED CLG	2.8	1.3	0	0	0	0	0	0	0	0	0	0	0	0	30	84	38	0	0	0	0	0	0	0	0	0	10	28	13	0	0	0						ŀ
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0	0	0	0	284	741	122	35	91	15	0	0	0	66	172	28	o	0	ő	52	136	22	0	0	0				l		l
BASEMENT/CRAWL HEAT LOSS				0			0			0			0			0		^	0	- 1		0		١	n	١ ،		n		, ,	0	١						
SLAB ON GRADE HEAT LOSS				0		1	0		1	0			0			0			n			0			0	1		0			0	- 1				l		
SUBTOTAL HT LOSS				2308		1	1760		1	391			3198		1	3208			967			259			1163			-			470							
SUB TOTAL HT GAIN	1		l		1708			1040	1		105		0.00	2416	1	0200	3238		301	486		203	67		1103	515		1198	,,,,		472							
LEVEL FACTOR / MULTIPLIER			0.20	0.28		0.20	0.28	1040	0.20	0.28	100	0.20	0.28	2410	0.20	0.28	3230		0.28	400			67	١		515			1474			257						
AIR CHANGE HEAT LOSS			0.20	651		0.20	496		0.20			0.20			0.20			0.20			0.20	0.28		0.20			0.20	0.28		0.20	0.28							- 1
AIR CHANGE HEAT GAIN				651	445	İ	490	70	1	110	_		901		l	904			273			73			328			338			133	- 1						
	1			_	115	ľ	_	70	1		7			163			219			33			5	1		35			100			17				1		
DUCT LOSS	1			0			0			0			410			411			0			33		l	0			154	- 1		0					l		
DUCT GAIN	1				0			0	ļ		0			319			407			0			45	l		0			195			0				l		- 1
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240	1		240	0		0	1		240	0		0	0		0				1		- 1
HEAT GAIN APPLIANCES/LIGHTS					375	ŀ		375	l		375			375			375			375			375	ŀ		375			375			375				l		- 1
TOTAL HT LOSS BTU/H	1			2959		ŀ	2256			501			4510			4524	- 1		1240			365			1490			1690	ı		605					1		
																				- 1																		
TOTAL HT GAIN x 1.3 BTU/H					3481			1931			633			4567			5821			1473			638			1514			2785			843						
	<u> </u>							1931			633			4567			5821			1473			638			1514			2785			843				L		
ROOM USE				LV/DN		I	FAM	1931	 	KIT	633		LIB	4567		LAUN	5821		WIC-G	1473		FOY	638		MUD				2785			843		WOD			BAS	
ROOM USE EXP. WALL				50		L	35	1931		KIT 39	633		LIB 11	4567			5821			1473			638		MUD 23				2785			843		WOD 47			BAS 188	
ROOM USE								1931			633			4567		LAUN	5821		WIC-G	1473		FOY	638						2785			843						
ROOM USE EXP. WALL CLG. HT.	FACTO			50			35	1931		39	633		11	4567		LAUN 9	5821		WIC-G 13	1473		FOY 17	638		23				2785			843		47			188	
ROOM USE EXP. WALL				50			35	1931		39	633		11	4567		LAUN 9	5821		WIC-G 13	1473		FOY 17	638		23				2785	:		843		47 8			188 8	
ROOM USE EXP. WALL CLG. HT.				50 10			35 10	1931 GAIN		39 10	633 GAIN		11 10 110	4567 GAIN		LAUN 9 9	5821 GAIN		WIC-G 13 10	1473 GAIN		FOY 17 10			23 11 253				2785			843		47 8 376	GAIN		188 8 1081	SAIN
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA			0	50 10 500		0	35 10 350		0	39 10 390		18	11 10 110		7	LAUN 9 9 81 LOSS	GAIN	0	WIC-G 13 10		14	FOY 17 10 170 LOSS	GAIN	1	23 11 253 LOSS	GAIN			2785			843	0	47 8 376 LOSS		4	188 8 1081 LOSS (
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING	LOSS 21.8	GAIN		50 10 500 LOSS	GAIN	0 0	35 10 350 LOSS	GAIN		39 10 390 LOSS	GAIN 0		11 10 110 LOSS 392	GAIN 288	7 0	B1 LOSS 152	GAIN 112	0	WIC-G 13 10 130 LOSS 0	GAIN 0	14	FOY 17 10 170 LOSS 305	GAIN 224	0	23 11 253 LOSS 0	GAIN 0			2785			843	0	47 8 376 LOSS 0	0	4	188 8 1081 LOSS (87	64
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	21.8 21.8	GAIN 16.0 41.6	0	50 10 500 LOSS 0	GAIN 0		35 10 350 LOSS 0	GAIN 0	0	39 10 390 LOSS 0	GAIN 0 0	18 0	11 10 110 LOSS	GAIN 288 0	0	81 LOSS 152 0	GAIN 112 0	0 15	WIC-G 13 10 130 LOSS 0 327	GAIN 0 623	6	FOY 17 10 170 LOSS 305 131	GAIN 224 249	0	23 11 253 LOSS 0 0	GAIN 0 0			2785			843	0	47 8 376 LOSS 0 0	0 0	4 0	188 8 1081 LOSS C 87 0	64 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH	21.8 21.8 21.8 21.8	16.0 41.6 24.9	0 0 36	50 10 500 LOSS 0	GAIN 0 0 896	0	35 10 350 LOSS 0 0	GAIN 0 0	0 0 9	39 10 390 LOSS 0 0	GAIN 0 0 224	0	11 10 110 LOSS 392 0	GAIN 288 0 0	0	BAUN 9 9 81 LOSS 152 0 0	GAIN 112 0 0	0 15 0	WIC-G 13 10 130 LOSS 0 327 0	GAIN 0 623 0	6 0	FOY 17 10 170 LOSS 305 131 0	GAIN 224 249 0	0 0 0	23 11 253 LOSS 0 0	6 GAIN 0 0			2785			843	0 0 0	47 8 376 LOSS 0 0	0 0 0	4 0 8	188 8 1081 LOSS C 87 0 174	64 0 199
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	21.8 21.8 21.8 21.8 21.8	16.0 41.6 24.9 41.6	0 0 36 0	50 10 500 LOSS 0 0 784	GAIN 0 0 896	0 0 48	35 10 350 LOSS 0 0 0	GAIN 0 0 0	0 0 9 74	39 10 390 LOSS 0 0 196 1612	GAIN 0 0 224 3075	0 0 0	11 10 110 LOSS 392 0	GAIN 288 0 0	0 0 0	B1 LOSS 152 0 0 0	GAIN 112 0	0 15 0	WIC-G 13 10 130 LOSS 0 327 0	GAIN 0 623 0	6 0 0	FOY 17 10 170 LOSS 305 131 0	GAIN 224 249 0	0 0 0	23 11 253 LOSS 0 0 0	6 GAIN 0 0 0			2785			843	0 0 0 7	47 8 376 LOSS 0 0 0	0 0 0 291	4 0 8 0	188 8 1081 LOSS C 87 0 174	64 0 199 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	21.8 21.8 21.8 21.8 21.8 38.1	GAIN 16.0 41.6 24.9 41.6 101.5	0 0 36 0	50 10 500 LOSS 0 0 784 0	GAIN 0 0 896 0	0 0 48 0	35 10 350 LOSS 0 0 0 1046	GAIN 0 0 0 1994	0 0 9 74 0	39 10 390 LOSS 0 0 196 1612 0	GAIN 0 0 224 3075 0	0 0 0	11 10 110 LOSS 392 0 0	GAIN 288 0 0 0	0 0 0	B1 LOSS 152 0 0 0 0	GAIN 112 0 0 0	0 15 0 0	WIC-G 13 10 130 LOSS 0 327 0 0	GAIN 0 623 0 0	6 0 0	FOY 17 10 170 LOSS 305 131 0	GAIN 224 249 0 0	0 0 0 0	23 11 253 LOSS 0 0 0	6 GAIN 0 0 0 0			2785			843	0 0 0 7 0	47 8 376 LOSS 0 0 0 152	0 0 0 291 0	4 0 8 0	188 8 1081 LOSS C 87 0 174 0	64 0 199 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	21.8 21.8 21.8 21.8 21.8 25.8	16.0 41.6 24.9 41.6 101.5 4.3	0 0 36 0 0	50 10 500 LOSS 0 0 784 0 0	GAIN 0 0 896 0 0	0 0 48 0	35 10 350 LOSS 0 0 0 1046 0	GAIN 0 0 0 1994 0	0 0 9 74 0	39 10 390 LOSS 0 0 196 1612 0	GAIN 0 0 224 3075 0	0 0 0 0	11 10 110 LOSS 392 0 0 0	GAIN 288 0 0 0	0 0 0 0	B1 LOSS 152 0 0 0 0 0 0	GAIN 112 0 0 0 0	0 15 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0	GAIN 0 623 0 0 0	6 0 0 0 40	FOY 17 10 170 LOSS 305 131 0 0 0	GAIN 224 249 0 0 0	0 0 0 0 0 20	23 11 253 LOSS 0 0 0 0 0	GAIN 0 0 0 0 0			2785			843	0 0 0 7 0	47 8 376 LOSS 0 0 0	0 0 0 291 0	4 0 8 0 0 20	188 8 1081 LOSS 0 87 0 174 0 0 517	64 0 199 0 0 85
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	21.8 21.8 21.8 21.8 21.8 25.8 4.6	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8	0 0 36 0 0 0	50 10 500 LOSS 0 0 784 0 0 2120	GAIN 0 0 896 0 0 0	0 0 48 0 0 302	35 10 350 LOSS 0 0 0 1046 0 0	GAIN 0 0 0 1994 0 0	0 0 9 74 0 0 307	39 10 390 LOSS 0 0 196 1612 0 0	GAIN 0 0 224 3075 0 0	0 0 0 0 0 0	11 10 110 LOSS 392 0 0 0 0 0	GAIN 288 0 0 0 0	0 0 0 0 0 74	B1 LOSS 152 0 0 0 0 338	GAIN 112 0 0 0 0 0	0 15 0 0 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 0 525	GAIN 0 623 0 0 0	6 0 0 0 40 110	FOY 17 10 170 LOSS 305 131 0 0 1034 503	GAIN 224 249 0 0 0 170 83	0 0 0 0 0 20 233	23 11 253 LOSS 0 0 0 0 0 517 1064	GAIN 0 0 0 0 0 0 85 175			2785				0 0 0 7 0 0	47 8 376 LOSS 0 0 0 152 0 0	0 0 0 291 0 0	4 0 8 0 0 20	188 8 1081 LOSS C 87 0 174 0 0 517	64 0 199 0 0 85
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6	0 0 36 0 0 0 464	50 10 500 LOSS 0 0 784 0 0	GAIN 0 0 896 0 0 0 349	0 0 48 0 0 302 0	35 10 350 LOSS 0 0 0 1046 0	GAIN 0 0 0 1994 0 0 227	0 0 9 74 0 0 307	39 10 390 LOSS 0 0 196 1612 0 0 1403 0	GAIN 0 0 224 3075 0 0 231	0 0 0 0 0 92	11 10 110 LOSS 392 0 0 0 0 420	GAIN 288 0 0 0 0 0 69	0 0 0 0 0 74 0	LAUN 9 9 81 LOSS 1552 0 0 0 0 0 338 0	GAIN 112 0 0 0 0 0 0	0 15 0 0 0 0 115	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0	GAIN 0 623 0 0 0 0 86	6 0 0 40 110	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0	GAIN 224 249 0 0 170 83 0	0 0 0 0 0 20 233	23 11 253 LOSS 0 0 0 0 0 517 1064 0	GAIN 0 0 0 0 0 85 175 0			2785				0 0 0 7 0	47 8 376 LOSS 0 0 0 152	0 0 0 291 0 0 0	4 0 8 0 0 20 0 423	188 8 1081 LOSS C 87 0 174 0 0 517 0	64 0 199 0 0 85 0 256
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6	0 0 36 0 0 464 0	50 10 500 LOSS 0 0 784 0 0 2120 0	GAIN 0 0 896 0 0 349 0	0 0 48 0 0 302 0	35 10 350 LOSS 0 0 0 1046 0 0 1380 0	GAIN 0 0 0 1994 0 0 227 0	0 0 9 74 0 0 307 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0	GAIN 0 0 224 3075 0 0 231 0	0 0 0 0 0 92 0	11 10 110 LOSS 392 0 0 0 0 0 420 0	GAIN 288 0 0 0 0 0 69 0	0 0 0 0 0 74 0	LAUN 9 9 81 LOSS 152 0 0 0 0 0 338 0 197	GAIN 112 0 0 0 0 0 0 56 0	0 15 0 0 0 0 115 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0	GAIN 0 623 0 0 0 86 0	6 0 0 40 110 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0	GAIN 224 249 0 0 170 83 0	0 0 0 0 0 20 233 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0	GAIN 0 0 0 0 0 85 175 0			2785				0 0 7 0 0 0 0 275	47 8 376 LOSS 0 0 0 152 0 0 0 1013	0 0 0 291 0 0 0 167	4 0 8 0 0 20 0 423	188 8 1081 LOSS 6 87 0 174 0 517 0 1558	64 0 199 0 0 85
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0	50 10 500 LOSS 0 0 784 0 0 2120	GAIN 0 0 896 0 0 0 349	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 0 1046 0 0 1380 0	GAIN 0 0 0 1994 0 0 227 0	0 0 9 74 0 0 307 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0	GAIN 0 0 224 3075 0 0 231 0	0 0 0 0 0 92 0	11 10 110 LOSS 392 0 0 0 0 0 420 0	GAIN 288 0 0 0 0 0 69 0	0 0 0 0 0 74 0 150	LAUN 9 81 LOSS 152 0 0 0 0 338 0 197 0	GAIN 112 0 0 0 0 0 0 56 0 88 0	0 15 0 0 0 115 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0	GAIN 0 623 0 0 0 86 0	6 0 0 40 110 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0	GAIN 224 249 0 0 170 83 0	0 0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 517 1064 0	6 GAIN 0 0 0 0 0 85 175 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 0 152 0 0 0 1013 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423	188 8 1081 LOSS 6 87 0 174 0 0 517 0 1558 0	64 0 199 0 0 85 0 256
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6	0 0 36 0 0 464 0	50 10 500 LOSS 0 0 784 0 0 2120 0	GAIN 0 0 896 0 0 349 0	0 0 48 0 0 302 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0	GAIN 0 0 0 1994 0 0 227 0	0 0 9 74 0 0 307 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0	GAIN 0 0 224 3075 0 0 231 0	0 0 0 0 0 92 0	11 10 110 LOSS 392 0 0 0 0 420 0 0	GAIN 288 0 0 0 0 0 69 0	0 0 0 0 0 74 0	LAUN 9 9 81 LOSS 152 0 0 0 0 338 0 197 0 73	GAIN 112 0 0 0 0 0 0 56 0	0 15 0 0 0 0 115 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0	GAIN 0 623 0 0 0 86 0	6 0 0 40 110 0	FOY 17 10 170 LOSS 305 131 0 0 0 1034 503 0 0	GAIN 224 249 0 0 170 83 0	0 0 0 0 0 20 233 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0	GAIN 0 0 0 0 0 85 175 0			2785				0 0 7 0 0 0 0 275	47 8 376 LOSS 0 0 0 152 0 0 0 1013	0 0 0 291 0 0 0 167	4 0 8 0 0 20 0 423	188 8 1081 LOSS 6 87 0 174 0 517 0 1558	64 0 199 0 0 85 0 256
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED LGG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0	50 10 500 LOSS 0 0 784 0 0 2120 0	GAIN 0 0 896 0 0 349 0	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0	GAIN 0 0 0 1994 0 0 227 0	0 0 9 74 0 0 307 0	39 10 390 LOSS 0 0 196 1612 0 1403 0 0	GAIN 0 0 224 3075 0 0 231 0	0 0 0 0 0 92 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0	GAIN 288 0 0 0 0 0 69 0	0 0 0 0 0 74 0 150	LAUN 9 9 81 LOSS 152 0 0 0 0 338 0 197 0 73 0	GAIN 112 0 0 0 0 0 0 56 0 88 0	0 15 0 0 0 115 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0	GAIN 0 623 0 0 0 86 0	6 0 0 40 110 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0	GAIN 224 249 0 0 170 83 0	0 0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 517 1064 0	6 GAIN 0 0 0 0 0 85 175 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 0 152 0 0 0 1013 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0	188 8 1081 LOSS 6 87 0 174 0 0 517 0 1558 0	64 0 199 0 0 85 0 256 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0	50 10 500 LOSS 0 0 784 0 0 2120 0 0 0	GAIN 0 0 896 0 0 349 0	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 1380 0 0 0	GAIN 0 0 0 1994 0 0 227 0	0 0 9 74 0 0 307 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0 0 0	GAIN 0 0 224 3075 0 0 231 0	0 0 0 0 0 92 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 0	GAIN 288 0 0 0 0 0 69 0	0 0 0 0 0 74 0 150	LAUN 9 9 81 LOSS 152 0 0 0 0 338 0 197 0 73 0 0	GAIN 112 0 0 0 0 0 0 56 0 88 0	0 15 0 0 0 115 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0 0	GAIN 0 623 0 0 0 86 0	6 0 0 40 110 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0 0 0	GAIN 224 249 0 0 170 83 0	0 0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0	6 GAIN 0 0 0 0 0 85 175 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 0 152 0 0 0 1013 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0	188 8 1081 LOSS 0 87 0 174 0 0 517 0 1558 0	64 0 199 0 0 85 0 256 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0	50 10 500 LOSS 0 0 784 0 0 2120 0	GAIN 0 0 896 0 0 0 3449 0 0 0 0 0	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0	GAIN 0 0 0 1994 0 0 2227 0 0 0 0	0 0 9 74 0 0 307 0	39 10 390 LOSS 0 0 196 1612 0 1403 0 0	GAIN 0 0 224 3075 0 0 2311 0 0 0 0	0 0 0 0 0 92 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0	GAIN 288 0 0 0 0 0 69 0	0 0 0 0 0 74 0 150	LAUN 9 9 81 LOSS 152 0 0 0 0 338 0 197 0 73 0	GAIN 112 0 0 0 0 0 0 56 0 88 0	0 15 0 0 0 115 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0	GAIN 0 623 0 0 0 86 0	6 0 0 40 110 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0 0	GAIN 224 249 0 0 170 83 0	0 0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0	6 GAIN 0 0 0 0 0 85 175 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 0 152 0 0 0 1013 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0	188 8 1081 LOSS 0 87 0 174 0 0 517 0 1558 0	64 0 199 0 0 85 0 256 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMIT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0 0	50 10 5000 LOSS 0 0 784 0 0 0 2120 0 0 0 0 2200 0	GAIN 0 0 896 0 0 349 0	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 0 2425	GAIN 0 0 0 1994 0 0 227 0	0 0 9 74 0 0 307 0 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0 0 0 0	GAIN 0 0 224 3075 0 0 231 0	0 0 0 0 0 92 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 0	GAIN 288 0 0 0 0 0 69 0	0 0 0 0 0 74 0 150	LAUN 9 9 81 LOSS 152 0 0 0 0 338 0 197 0 73 0 0	GAIN 112 0 0 0 0 0 0 56 0 88 0	0 15 0 0 0 115 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0 0	GAIN 0 623 0 0 0 86 0	6 0 0 40 110 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0 0 0	GAIN 224 249 0 0 170 83 0	0 0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 517 1064 0 0 0	6 GAIN 0 0 0 0 0 85 175 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0	188 8 1081 LOSS 6 87 0 174 0 0 15517 0 1558 0 0 6512	64 0 199 0 0 85 0 256 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0	50 10 500 LOSS 0 0 784 0 0 2120 0 0 0	GAIN 0 0 896 0 0 0 3449 0 0 0 0 0	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 1380 0 0 0	GAIN 0 0 0 1994 0 0 2227 0 0 0 0	0 0 9 74 0 0 307 0 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0 0 0	GAIN 0 0 224 3075 0 0 2311 0 0 0 0	0 0 0 0 0 92 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 0 812	GAIN 288 0 0 0 0 0 69 0 0 0 0	0 0 0 0 0 74 0 150	LAUN 9 81 LOSS 152 0 0 0 338 0 197 0 73 0 761	GAIN 112 0 0 0 0 0 56 0 88 0 12	0 15 0 0 0 115 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0 0	GAIN 0 623 0 0 0 86 0 0	6 0 0 40 110 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0 0 0	GAIN 224 249 0 0 170 83 0 0	0 0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0 0 0	GAIN 0 0 0 0 85 175 0 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0	188 8 1081 LOSS 6 87 0 174 0 0 15517 0 1558 0 0 6512	64 0 199 0 0 85 0 256 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED BANT WALL ABOVE GR EXPOSED CLG EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0 0	50 10 5000 LOSS 0 0 784 0 0 0 2120 0 0 0 0 2200 0	GAIN 0 0 896 0 0 0 3449 0 0 0 0 0	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 0 2425	GAIN 0 0 0 1994 0 0 2227 0 0 0 0	0 0 9 74 0 0 307 0 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0 0 0 0	GAIN 0 0 224 3075 0 0 2311 0 0 0 0	0 0 0 0 0 92 0 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 0 812	GAIN 288 0 0 0 0 0 69 0 0 0 0	0 0 0 0 0 74 0 150 0 28	LAUN 9 81 LOSS 152 0 0 0 338 0 197 0 73 0 761	GAIN 112 0 0 0 0 0 56 0 88 0 12	0 15 0 0 0 115 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 0 0 0 8525	GAIN 0 623 0 0 0 86 0 0	6 0 0 40 110 0 0	FOY 17 10 170 LOSS 305 131 0 0 0 1034 5503 0 0 0 0 0 0	GAIN 224 249 0 0 170 83 0 0	0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0 0 0	GAIN 0 0 0 0 85 175 0 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0 0	188 8 1081 LOSS 6 87 0 174 0 0 517 0 1558 0 0 6512 8849	64 0 199 0 0 85 0 256 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0 0	50 10 500 LOSS 0 0 784 0 0 0 2120 0 0 0 0 2904	GAIN 0 0 896 0 0 0 3449 0 0 0 0 0	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 0 2425	GAIN 0 0 0 1994 0 0 2227 0 0 0 0	0 0 9 74 0 0 307 0 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0 0 0 0 0 0 0	GAIN 0 0 224 3075 0 0 2311 0 0 0 0	0 0 0 0 0 92 0 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 0 0 0	GAIN 288 0 0 0 0 0 69 0 0 0 0	0 0 0 0 0 74 0 150 0 28	LAUN 9 9 81 LOSS 152 0 0 0 0 338 0 197 0 773 0 0 761 0.28	GAIN 112 0 0 0 0 0 56 0 88 0 12	0 15 0 0 0 115 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 852 0 0 0 0 852	GAIN 0 623 0 0 0 86 0 0	6 0 0 40 110 0 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0 0 1972 0.48	GAIN 224 249 0 0 170 83 0 0	0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0 0 0 1581	GAIN 0 0 0 0 85 175 0 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0 0	188 8 1081 LOSS 6 87 0 174 0 0 517 0 1558 0 0 6512 8849 1.10 11053	64 0 199 0 0 85 0 256 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED BANT WALL ABOVE GR EXPOSED CLG EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0 0	50 10 500 LOSS 0 0 784 0 0 0 2120 0 0 0 0 2904	GAIN 0 0 896 0 0 0 349 0 0 0 0 1245	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 0 2425	GAIN 0 0 0 1994 0 0 2227 0 0 0 0 2221	0 0 9 74 0 0 307 0 0	39 10 390 LOSS 0 0 196 1612 0 0 1403 0 0 0 0 0 0 0	GAIN 0 0 224 3075 0 0 2311 0 0 0 3530	0 0 0 0 0 92 0 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 0 0 0	GAIN 288 0 0 0 0 0 69 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 74 0 150 0 28	LAUN 9 9 81 LOSS 152 0 0 0 0 338 0 197 0 773 0 0 761 0.28	GAIN 112 0 0 0 0 0 56 0 0 88 0 12	0 15 0 0 0 115 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 852 0 0 0 0 852	GAIN 0 623 0 0 0 0 86 0 0 0	6 0 0 40 110 0 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0 0 1972 0.48	GAIN 224 249 0 0 0 170 83 0 0 0 726	0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0 0 0 1581	GAIN 0 0 0 0 0 85 1775 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0 0	188 8 1081 LOSS C 87 0 174 0 0 517 0 1558 0 0 6512 8849 1.10 11053	64 0 199 0 0 85 0 256 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SCOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG ON ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0 0	50 10 500 LOSS 0 0 784 0 0 0 2120 0 0 0 0 2994	GAIN 0 0 896 0 0 0 349 0 0 0 0 1245	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 2425 0.48 1169	GAIN 0 0 0 1994 0 0 2227 0 0 0 0 2221	0 0 9 74 0 0 307 0 0	39 10 390 LOSS 0 0 196 1612 0 0 0 1403 0 0 0 0 3211	GAIN 0 0 224 3075 0 0 2311 0 0 0 3530	0 0 0 0 0 92 0 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 812 0.48 392	GAIN 288 0 0 0 0 0 69 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 74 0 150 0 28	LAUN 9 9 9 81 LOSS 152 0 0 0 0 0 338 0 73 0 0 761 0.28 214	GAIN 112 0 0 0 0 0 56 0 0 88 0 12	0 15 0 0 0 115 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0 0 852	GAIN 0 623 0 0 0 0 86 0 0 0	6 0 0 40 110 0 0	FOY 17 10 170 LOSS 305 1311 0 0 0 1034 503 0 0 0 1972 0.48 951	GAIN 224 249 0 0 0 170 83 0 0 0 726	0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0 0 0 1581	GAIN 0 0 0 0 0 85 1775 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0 0	188 8 1081 LOSS 6 87 0 174 0 0 517 0 1558 0 0 6512 8849 1.10 11053	64 0 199 0 0 85 0 256 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT COSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS	21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8 2.6	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 464 0 0	50 10 500 LOSS 0 0 784 0 0 0 2120 0 0 0 0 2994	GAIN 0 0 896 0 0 0 0 0 0 0	0 0 48 0 0 302 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 2425 0.48 1169	GAIN 0 0 0 1994 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 9 74 0 0 307 0 0	39 10 390 LOSS 0 0 196 1612 0 0 0 1403 0 0 0 0 3211	GAIN 0 0 224 3075 0 0 0 0 0	0 0 0 0 0 92 0 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 812 0.48 392	GAIN 288 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 74 0 150 0 28	LAUN 9 9 9 81 LOSS 152 0 0 0 0 0 338 0 73 0 0 761 0.28 214	GAIN 112 0 0 0 0 0 56 0 88 0 12 268	0 15 0 0 0 115 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0 0 852	GAIN 0 623 0 0 0 0 86 0 0 0	6 0 0 40 110 0 0	FOY 17 10 170 LOSS 305 1311 0 0 0 1034 503 0 0 0 1972 0.48 951	GAIN 224 249 0 0 0 170 83 0 0 0 0 726 49	0 0 0 0 20 233 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0 0 0 1581	6 GAIN 0 0 0 0 0 0 85 175 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			2785				0 0 7 0 0 0 275 0 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0 0	4 0 8 0 0 20 0 423 0 0	188 8 1081 LOSS 0 87 0 174 0 0 517 0 1558 0 0 6512 8849 1.10	64 0 199 0 0 85 0 256 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT COSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN	21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8 2.6	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 0 464 0 0	50 10 500 LOSS 0 0 784 0 0 0 2120 0 0 0 0 2994	GAIN 0 0 0 896 0 0 0 349 0 0 0 1245 84	0 0 48 0 0 302 0 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 2425 0.48 1169	GAIN 0 0 0 1994 0 0 2227 0 0 0 2 2221 150 0	0 0 9 74 0 0 307 0 0 0	39 10 390 LOSS 0 0 196 1612 0 0 0 1403 0 0 0 0 3211	GAIN 0 0 224 3075 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 92 0 0 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 812 0.48 392	GAIN 288 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 74 0 150 0 28	LAUN 9 9 9 81 LOSS 152 0 0 0 0 0 338 0 73 0 0 761 0.28 214	GAIN 112 0 0 0 0 0 56 0 88 0 12	0 15 0 0 0 115 0 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0 0 852	GAIN 0 623 0 0 0 0 86 0 0 0 0	6 0 0 40 110 0 0 0	FOY 17 10 170 LOSS 305 1311 0 0 0 1034 503 0 0 0 1972 0.48 951	GAIN 224 249 0 0 0 1770 83 0 0 0 0 726 49 0	0 0 0 0 20 233 0 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0 0 0 1581	6 GAIN 0 0 0 0 0 0 85 1775 0 0 0 0 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0			2785				0 0 7 0 0 0 275 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0	4 0 8 0 0 20 0 423 0 0	188 8 1081 LOSS C 87 0 174 0 0 0 517 0 1558 0 0 0 66512 8849 1.10 11053	64 0 199 0 0 85 0 256 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN HEAT GAIN PEOPLE	21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8 2.6	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 0 464 0 0	50 10 500 LOSS 0 0 784 0 0 0 2120 0 0 0 0 2994	GAIN 0 0 896 0 0 0 0 0 0 1245 84 0 0 0	0 0 48 0 0 302 0 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 2425 0.48 1169	GAIN 0 0 1994 0 2227 0 0 0 22221	0 0 9 74 0 0 307 0 0 0	39 10 390 LOSS 0 0 196 1612 0 0 0 1403 0 0 0 0 3211	GAIN 0 0 224 3075 0 0 2311 0 0 0 0	0 0 0 0 92 0 0 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 812 0.48 392	GAIN 288 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 74 0 150 0 28	LAUN 9 9 9 81 LOSS 152 0 0 0 0 0 338 0 73 0 0 761 0.28 214	GAIN 112 0 0 0 0 0 0 0 88 0 12 268 18 66 0	0 15 0 0 0 115 0 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0 0 852	GAIN 0 623 0 0 0 0 866 0 0 0 0 7110 488 0 0 0	6 0 0 40 110 0 0 0	FOY 17 10 170 LOSS 305 1311 0 0 0 1034 503 0 0 0 1972 0.48 951	GAIN 224 249 0 0 170 83 0 0 0 726 49 0 0	0 0 0 0 20 233 0 0 0 0	23 11 253 LOSS 0 0 0 0 0 517 1064 0 0 0 0 1581	GAIN 0 0 0 0 0 85 175 0 0 0 18			2785				0 0 7 0 0 0 275 0 0	47 8 376 LOSS 0 0 0 152 0 0 0 0 0 0 0 0 0 1013 0 0 0 0 0 1016 0 0 0 0 0 0 0 1016 0 0 0 0	0 0 291 0 0 0 167 0 0	4 0 8 0 0 20 0 423 0 0 0	188 8 1081 LOSS 0 0 1774 0 0 0 1558 0 0 0 6512 8849 1.10 11053 0	64 0 199 0 0 85 0 256 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SCOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8 2.6	GAIN 16.0 41.6 24.9 41.6 101.5 4.3 0.8 0.6 0.6 1.3	0 0 36 0 0 0 464 0 0	50 10 500 LOSS 0 0 0 2120 0 0 0 0 0 2904	GAIN 0 0 896 0 0 0 0 0 0 1245 84 0 0 0	0 0 48 0 0 302 0 0 0	35 10 350 LOSS 0 0 1046 0 0 1380 0 0 0 2425 0.48 1169	GAIN 0 0 1994 0 2227 0 0 0 22221	0 0 9 74 0 0 307 0 0 0	39 10 390 LOSS 0 0 196 1612 0 0 0 0 0 0 0 3211 0.48	GAIN 0 0 224 3075 0 0 2311 0 0 0 0	0 0 0 0 92 0 0 0	11 10 110 LOSS 392 0 0 0 0 420 0 0 0 0 812 0 .48 392 0	GAIN 288 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 74 0 150 0 28	LAUN 9 9 9 81 LOSS 152 0 0 0 0 0 3388 0 73 0 0 761 0.28 214 98	GAIN 112 0 0 0 0 0 0 0 88 0 12 268 18 66 0 0	0 15 0 0 0 115 0 0 0	WIC-G 13 10 130 LOSS 0 327 0 0 0 525 0 0 0 0 852 0.48 4411	GAIN 0 623 0 0 0 0 866 0 0 0 0 7110 488 0 0 0	6 0 0 40 110 0 0 0	FOY 17 10 170 LOSS 305 131 0 0 1034 503 0 0 0 1972 0.48 951 0	GAIN 224 249 0 0 170 83 0 0 0 726 49 0 0	0 0 0 0 20 233 0 0 0 0	23 11 253 LOSS 0 0 0 0 517 1064 0 0 0 0 1581 0.48 762	6 GAIN 0 0 0 0 0 0 85 1775 0 0 0 0 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0			2785				0 0 7 0 0 0 275 0 0	47 8 376 LOSS 0 0 152 0 0 1013 0 0	0 0 291 0 0 0 167 0 0	4 0 8 0 0 20 0 423 0 0 0	188 8 1081 LOSS 0 174 0 0 0 1558 0 0 0 0 6512 8849 1.10 11053 0	64 0 199 0 0 85 0 256 0 0 0

TOTAL HEAT GAIN BTU/H:

41915

TONS: 3.49

LOSS DUE TO VENTILATION LOAD BTU/H: 2004

STRUCTURAL HEAT LOSS: 62670

TOTAL COMBINED HEAT LOSS BTU/H: 64674

Mahal Offmhe.



SITE NAME: ROUNDEL HOMES INC OPT 2ND BUILDER: GREENPARK HOMES TYPE: TERRACOTA 3 DATE: May-21 GFA: 3496 LO# 90750 furnace pressure 0.6 HEATING CFM COOLING CFM 1504 1504 furnace filter 0.05 #*GOODMAN AFUE = 96 % TOTAL HEAT LOSS 62.670 TOTAL HEAT GAIN 41.585 a/c coil pressure 0.2 GMEC960804CNA 80 INPUT (BTU/H) = 80,000 AIR FLOW RATE CFM 24 AIR FLOW RATE CFM 36.17 available pressure FAN SPEED OUTPUT (BTU/H) = 76,800 for s/a & r/a 0.35 LOW **RUN COUNT** 3rd 2nd 1st Bas **MEDLOW** 978 DESIGN CFM = 1504 S/A 0 0 17 10 5 plenum pressure s/a 0.18 r/a pressure 0.17 MEDIUM 1112 CFM @ .6 " E.S.P. R/A 0 0 6 max s/a dif press. loss 0.02 r/a grille press. Loss 0.02 MEDIUM HIGH 1504 All S/A diffusers 4"x10" unless noted otherwise on layout. min adjusted pressure s/a 0.16 adjusted pressure r/a 0.15 HIGH 1615 TEMPERATURE RISE 47 °F All S/A runs 5"Ø unless noted otherwise on layout RUN# 6 5 10 11 13 12 14 15 16 17 18 19 20 21 22 23 24 ROOM NAME MBR BED-2 ENS WIC BED-3 BED-4 ENS-2/3 BED-5 WIC-3 MBR ENS-4/5 LV/DN FAM KIT KIT LIB LAUN WIC-G FOY MUD BAS BAS BAS BAS RM LOSS MRH 1.48 1.13 0.50 2.25 1.51 1.24 0.18 1.49 1.69 1.48 0.61 2.15 1.80 2.38 2.38 1.20 1.07 1.26 2.92 2.34 4.21 4.21 4.21 4.21 CFM PER RUN HEAT 36 27 12 54 36 30 1 36 41 36 15 52 43 57 57 29 26 30 70 56 101 101 101 101 RM GAIN MBH 1.74 0.97 0.63 2.28 1.94 1.47 0.32 1.51 2.79 1.74 0.84 1.11 1.79 2.69 2.69 0.98 0.94 0.98 1.01 0.85 0.39 0.39 0.39 0.39 CEM PER RUN COOLING 63 35 23 83 70 53 12 55 101 63 30 40 65 97 97 36 34 36 36 31 14 14 14 14 ADJUSTED PRESSURE 0.17 0.17 0.170.16 0.17 0.17 0.17 0.17 0.16 0.17 0.17 0.17 0.17 0.16 0.16 0.17 0.17 0.17 0.17 0.17 0.16 0.16 0.16 0.16 ACTUAL DUCT LGH. 29 46 22 65 67 49 44 34 56 36 45 35 26 31 19 49 53 46 23 15 22 33 33 EQUIVALENT LENGTH 190 140 150 160 200 190 170 150 160 120 180 110 120 140 130 100 180 140 130 120 140 120 120 180 TOTAL EFFECTIVE LENGTH 219 186 182 215 267 239 214 184 216 156 225 155 136 171 154 119 229 193 176 143 155 142 153 213 ADJUSTED PRESSURE 0.08 0.09 0.09 0.08 0.06 0.07 0.08 0.09 0.08 0.11 0.08 0.11 0.13 0.09 0.11 0.14 0.08 0.09 0.1 0.12 0.1 0.11 0.11 0.08 ROUND DUCT SIZE 5 4 4 6 6 4 6 6 5 4 4 5 6 6 4 5 6 6 6 HEATING VELOCITY (ft/min) 264 138 310 275 184 153 46 184 209 264 172 597 316 291 291 333 298 344 514 411 515 515 515 515 COOLING VELOCITY (ft/min) 463 402 264 423 357 270 138 280 515 463 344 459 477 495 495 413 390 413 264 228 71 71 71 71 **OUTLET GRILL SIZE** 3X10 3X10 3X10 4X10 4X10 4X10 3X10 4X10 4X10 3X10 3X10 3X10 3X10 4X10 4X10 3X10 3X10 3X10 3X10 3X10 4X10 4X10 4X10 4X10 TRUNK D F С C В C В В D D C Α Α F D Α RUN# 25 26 27 28 29 30 31 32 **ROOM NAME** BED-2 BED-3 ENS ENS-2/3 FAM LV/DN BAS BED-3 RM LOSS MBH. 2.25 1.51 1.13 0.18 1.80 2.15 4.21 1.51 CEM PER RUN HEAT 54 36 27 43 52 101 36 RM GAIN MBH 2.28 1.94 0.97 0.32 1.79 1.11 0.39 1.94 CFM PER RUN COOLING 83 70 35 12 65 40 14 70 ADJUSTED PRESSURE 0.16 0.17 0.17 0.17 0.17 0.17 0.16 0.17 ACTUAL DUCT LGH 60 74 47 40 14 49 46 70 **EQUIVALENT LENGTH** 200 180 200 180 150 170 160 200 TOTAL EFFECTIVE LENGTH 240 274 247 220 164 219 206 270 ADJUSTED PRESSURE 0.07 0.06 0.07 0.08 0.1 0.08 0.08 0.06 ROUND DUCT SIZE 6 5 5 6 6 HEATING VELOCITY (ft/min) 275 184 310 46 316 382 515 184 COOLING VELOCITY (ft/min) 423 357 402 138 477 294 71 357 OUTLET GRILL SIZE 4X10 4X10 3X10 3X10 3X10 3X10 4X10 4X10 TRUNK В F С В SUPPLY AIR TRUNK SIZE RETURN AIR TRUNK SIZE TRUNK STATIC ROUND RECT VELOCITY TRUNK STATIC ROUND RECT VELOCITY TRUNK STATIC ROUND RECT VELOCITY CFM PRESS. DUCT DUC (ft/min) CFM PRESS. DUCT DUCT CFM PRESS. DUCT DUCT (ft/min) TRUNK A 462 0.06 11.3 14 594 TRUNK G 0 0.00 0 n 0 TRUNK O 0 0.05 0 0 8 0 TRUNK B 617 0.06 12.6 18 8 Х 617 TRUNK H 0 0.00 0 TRUNK P 0 O 0.05 0 0 8 0 TRUNK C 906 0.06 14.5 24 Х 8 680 TRUNK I Ω 0.00 O n TRUNK Q 0 0.05 0 0 х 8 0 TRUNK D 242 0.098 8 8 545 х TRUNK J 0 0.00 0 0 8 0 TRUNK R 0 0.05 0 х 0 TRUNK E 1148 0.06 15.9 30 Х 8 689 TRUNK K 0 0.00 0 0 х 8 0 TRUNK S 0 0.05 0 n 8 0 TRUNK F 356 0.08 641 TRUNK L 0 0.00 0 TRUNK T 0 0.05 0 O 8 0 Х TRUNK U n 0.05 Ω 0 8 0 TRUNK V 585 0.05 12.9 20 х 8 527 RETURN AIR # 3 9 BR TRUNK W 150 0.05 7.8 Х 8 338 0 0 0 n 0 n Λ n O 0 0 0 0 n TRUNK X 919 0.05 15.3 28 х 8 591 AIR VOLUME 75 75 135 75 115 75 185 400 135 n n n n O 0 234 TRUNK Y 685 0.05 13.7 22 8 560 х PLENUM PRESSURE 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 TRUNK Z 0.15 535 0.05 12.5 18 8 Х 535 ACTUAL DUCT LGH. 68 68 57 74 67 69 21 23 38 17 DROP 1504 0.05 18 4 24 14 645 EQUIVALENT LENGTH 245 235 215 235 220 215 155 160 285 0 0 0 n n 0 145 TOTAL EFFECTIVE LH 313 303 272 309 287 284 176 183 323 162 ADJUSTED PRESSURE 0.05 0.05 0.05 0.05 0.05 0.05 0.08 0.08 0.05 14.80 14.80 14.80 14.80 14.80 14.80 0.09 ROUND DUCT SIZE 6 6 7.5 6 6 7.5 99 7.5 0 0 0 0 O 0 7.9 INLET GRILL SIZE 8 8 8 8 8 8 8 8 8 0 0 0 0 0 8 Х Х Х Х Х Х Х Х Х Х Χ Х Х Х Х Х INLET GRILL SIZE 14 14 30 14 14 14



TYPE: SITE NAME: TERRACOTA 3

ROUNDEL HOMES INC

LO#

90750 OPT 2ND

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL VENTILATION CAPACITY 9.32	2.3.5.
a)Direct vent (sealed combustion) only		Total Ventilation Capacity 233.2 cfm	
b) Positive venting induced draft (except fireplaces)		Less Principal Ventil. Capacity 95.4 cfm	
c) Natural draft, B-vent or induced draft gas fireplace		Required Supplemental Capacity137.8 cfm	
d) Solid Fuel (including fireplaces)			
e) No Combustion Appliances		PRINCIPAL EXHAUST FAN CAPACITY	
		Model: VANEE V150H Location: BSMT	
HEATING SYSTEM		95.4 cfm 3.0 sones	oved
✓ Forced Air Non Forced Air		PRINCIPAL EXHAUST HEAT LOSS CALCULATION CFM ΔT *F FACTOR % LOSS	
Electric Space Heat		95.4 CFM X 78 F X 1.08 X 0.25	
Licetic Opace Heat		SUPPLEMENTAL FANS PANASONIC	
		Location Model cfm HVI Sones	5
HOUSE TYPE	9.32.1(2)	ENS FV-05-11VK1 50 ✓ 0.3	
Type a) or b) appliance only, no solid fuel		ENS-2/3 FV-05-11VK1 50 ✓ 0.3 ENS-4/5 FV-05-11VK1 50 ✓ 0.3	
Type a) or b) appliance only, no solid fact		ENS-4/5	
II Type I except with solid fuel (including fireplaces)		1 V-03-11VIK1 30 V 0.3	
		HEAT RECOVERY VENTILATOR 9.32.3	3.11.
III Any Type c) appliance	l	Model: VANEE V150H	
IV Type I, or II with electric space heat		150 cfm high35 cfm lov	N
Other: Type I, II or IV no forced air		75 % Sensible Efficiency ✓ HVI Appro @ 32 deg F (0 deg C)	oved
care. Type if it of the release an		@ 02 dog 1 (0 dog 0)	
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	LOCATION OF INSTALLATION	
STOTEM DESIGN OF HONG	O.N.H.W.P.	Lot: Concession	
1 Exhaust only/Forced Air System		Township Plan:	
2 HRV with Ducting/Forced Air System		Address	
HRV Simplified/connected to forced air system			
4 HRV with Ducting/non forced air system		Roll # Building Permit #	
Part 6 Design		BUILDER: GREENPARK HOMES	
		Name:	
TOTAL VENTILATION CAPACITY	9.32.3.3(1)	Address:	
Basement + Master Bedroom _ 2 @ 21.2 cfm _ 42.4	cfm	City:	
Other Bedrooms 4 @ 10.6 cfm 42.4	cfm	Telephone #: Fax #:	
Kitchen & Bathrooms 6 @ 10.6 cfm 63.6	cfm	INSTALLING CONTRACTOR	$\overline{}$
Other Rooms 8 @ 10.6 cfm 84.8	cfm	Name:	
			_
Table 9.32.3.A. TOTAL <u>233.2</u>	cfm	Address:	\dashv
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)	City:	
		Telephone #: Fax #:	
1 Bedroom 31.8	cfm	DESIGNER CERTIFICATION	
2 Bedroom 47.7	cfm	I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
3 Bedroom 63.6	cfm	Name: HVAC Designs Ltd.	_
4 Bedroom 79.5	cfm	Signature: Mahal Offende.	
5 Bedroom 95.4	cfm	HRAI # 001820	
TOTAL 95.4 cfm		Date: May-21	
I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUAL INDIVIDUAL BCIN: 19669 MICHAEL O'RO		PPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.	

Michael Offinde.



				30-12 Residential Hea								
			Form	ula Sheet (For Air Lea	kage / Ventiliation C	alculation)						
LO#:	90750	Model: TERRACOTA	3	Builde	der: GREENPARK HOMES Date: 2021-05-11							
·		Volume Calculatio	n				Air Change & Delt	a T Data				
				1					·	1		
use Volume	Floor Aron (ft2)	Floor Hoight /ft\	\/aluma /ft3\				URAL AIR CHANG		0.352			
Level Bsmt	Floor Area (ft²) 1519	Floor Height (ft) 8	Volume (ft³) 12152			SUIVINIER NA	TURAL AIR CHANG	JE RATE	0.110]		
First	1519	10	15190									
Second	1977	9	17793				Design Te	mperature Diff	erence			
Third	0	9	0				Tin °C	Tout °C	ΔT°C	ΔT °F		
Fourth	0	9	0			Winter DTDh	22	-21	43	78		
······		Total:	45,135.0 ft ³			Summer DTDc	24	31	7	13		
		Total:	1278.1 m³			,						
	5.2.3	3.1 Heat Loss due to Ai	r Leakage			6.2.6 S	ensible Gain due	to Air Leakage				
0.352		$LR_{airh} \times \frac{V_b}{3.6} \times L_b$	H = 0.110	$IG_{salb} = LR_{airc} \times $ \times 355.02	5.0		=	333 W				
				= 6479 W = 22106 Btu/h					=	1135 Btu/h		
	5.2.3.2 He	at Loss due to Mechar	ical Ventilation		6.2.7 Sensible heat Gain due to Ventilation							
	$\mathit{HL}_{vairb} =$	$PVC \times DTD_h \times 1$	$.08 \times (1-E)$		$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$							
95 CFM	x <u>78 °F</u>	x <u>1.08</u>	x <u>0.25</u>	= 2004 Btu/h	95 CFM	x <u>13 °F</u>	x <u>1.08</u>	x <u>0.25</u>	- =	330 Btu/h		
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Floo	or Multiplier Section)						
		HL_{a}	$r_{rr} = Level Factor$	$pr \times HL_{airbv} \times \{(H_{airbv})\}$	$L_{agcr} + HL_{bgcr}) \div ($	$(HL_{agclevel} + HL_{b_i})$	gclevel)}					
		Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{clevel})	Air Leakage Heat Los HLairbv / H						
		1	0.5		10,014	1.104	1					
		2	0.3		13,758	0.482	2					
		3	0.2	22,106	15,686	0.282	2					
		4	0		0	0.000)					
		5	0		0	0.000)					
			-	- ventilation heat loss entilation system HLairve	= 0							



375 Finley Ave. Suite 202 Ajax, ON L1S 2E2 Tel: 905.619.2300 Fax: 905.619.2375

Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL:	TERRACOTA 3		OPT 2ND	BUILDER: GREENPARK HOMES	
SFQT:	3496	LO#	90750	SITE: ROUNDEL HOMES IN	IC
DESIGN A	SSUMPTIONS				
HEATING			°F	COOLING	°F
OUTDOOL	R DESIGN TEMP.		-6	OUTDOOR DESIGN TEMP.	88
INDOOR E	DESIGN TEMP.		72	INDOOR DESIGN TEMP. (MAX 75°F)	75
BUILDING	i DATA	Transition -			
ATTACHM	IENT:		DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FA	CES:		EAST	ASSUMED (Y/N):	Υ
AIR CHANGES PER HOUR:			3.57	ASSUMED (Y/N):	Υ
AIR TIGHT	NESS CATEGORY:		AVERAGE	ASSUMED (Y/N):	Υ
WIND EXP	POSURE:	Ç	SHELTERED	ASSUMED (Y/N):	Υ
HOUSE VC	DLUME (ft³):		45135.0	ASSUMED (Y/N):	Υ
INTERNAL	SHADING:	BLINDS	CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR	LIGHTING LOAD (Btu/	/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Υ
FOUNDAT	ION CONFIGURATION	l	BCIN_1	DEPTH BELOW GRADE:	5.0 ft
LENGTH:	57.0 ft	WIDTH:	37.0 ft	EXPOSED PERIMETER:	188.0 ft

2012 OBC - COMPLIANCE PACKAGE		
	Compliand	e Package
omponent		A1
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-	_
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	0.28	-
Skylights Maximum U-Value	0.49	-
Space Heating Equipment Minimum AFUE	0.96	_
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	_

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE





Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

W	eather Stat	ion Description
Province:	Ontario	-
Region:	Richmond	Hill
	Site De	scription
Soil Conductivity:	Normal co	nductivity: dry sand, loam, clay
Water Table:	Normal (7	-10 m, 23-33 ft)
	Foundation	Dimensions
Floor Length (m):	17.4	
Floor Width (m):	11.3	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.4	
Depth Below Grade (m):	1.52	Insulation Configuration
Window Area (m²):	1.8	TO STATE AND THE PROPERTY OF A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE
Door Area (m²):	1.9	
	Radia	nt Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Design	Months
Heating Month	1	
	Foundati	ion Loads
Heating Load (Watts):		1908

TYPE: TERRACOTA 3

LO# 90750

OPT 2ND



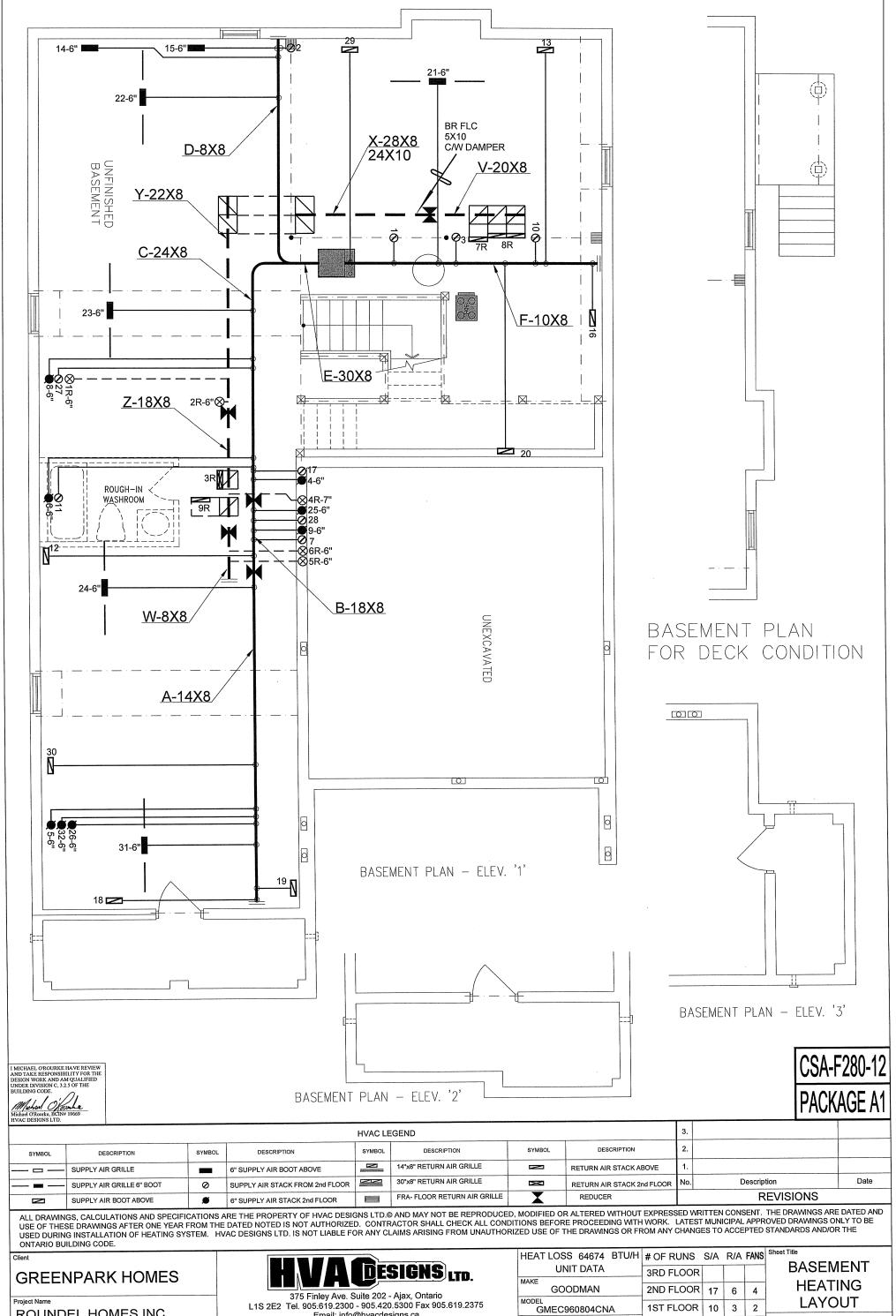
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Stat	ion Des	cript	ion								
Province:	Onta	rio									
Region:	Richn	Richmond Hill									
Weather Station Location:	Open	flat te	errain, g	grass							
Anemometer height (m):	10										
Local Shielding											
Building Site:	Subu	rban, f	orest								
Walls:	Heav	у									
Flue:	Heav	у									
Highest Ceiling Height (m):	7.62										
Building Co	onfigur	ation									
Type:	Detac	ched									
Number of Stories:	Two										
Foundation:	Full										
House Volume (m³):	1278	.1									
Air Leakage	/Venti	latior	1								
Air Tightness Type:	Prese	nt (19	61-) (3.	.57 ACI	⊣)						
Custom BDT Data:	ELA @	9 10 Pa	€.		1703.7 cm²						
	3.57			ACH @ 50 Pa							
Mechanical Ventilation (L/s):	To	tal Sup	ply		Total Exhaust						
		45.0			45.0						
Flue	Size										
Flue #:	#1	#2	#3	#4							
Diameter (mm):	0	0	0	0							
Natural Infil	tration	Rate	!S								
Heating Air Leakage Rate (ACH/H)):	0	.35	2							
Cooling Air Leakage Rate (ACH/H)	:	0	.11	0							

TYPE: TERRACOTA 3
LO# 90750

OPT 2ND



ROUNDEL HOMES INC RICHMOND HILL, ONTARIO

3496 sqft

Lot 170 **OPT 2ND**

TERRACOTA 3

Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services

Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

HEAT	LOSS 64674	BTU/H	# OF RUNS	S/A	R/A	FANS	S		
	UNIT DATA	3RD FLOOR							
MAKE	GOODMAN	2ND FLOOR	17	6	4				
MODEL GN	1EC960804CN	A	1ST FLOOR	10	3	2			
INPUT	80	MBTU/H	BASEMENT	5	1	0	P		
OUTPUT	76.8	мвти/н	MBTU/H ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE						
COOLING	3.5	TONS							

ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A

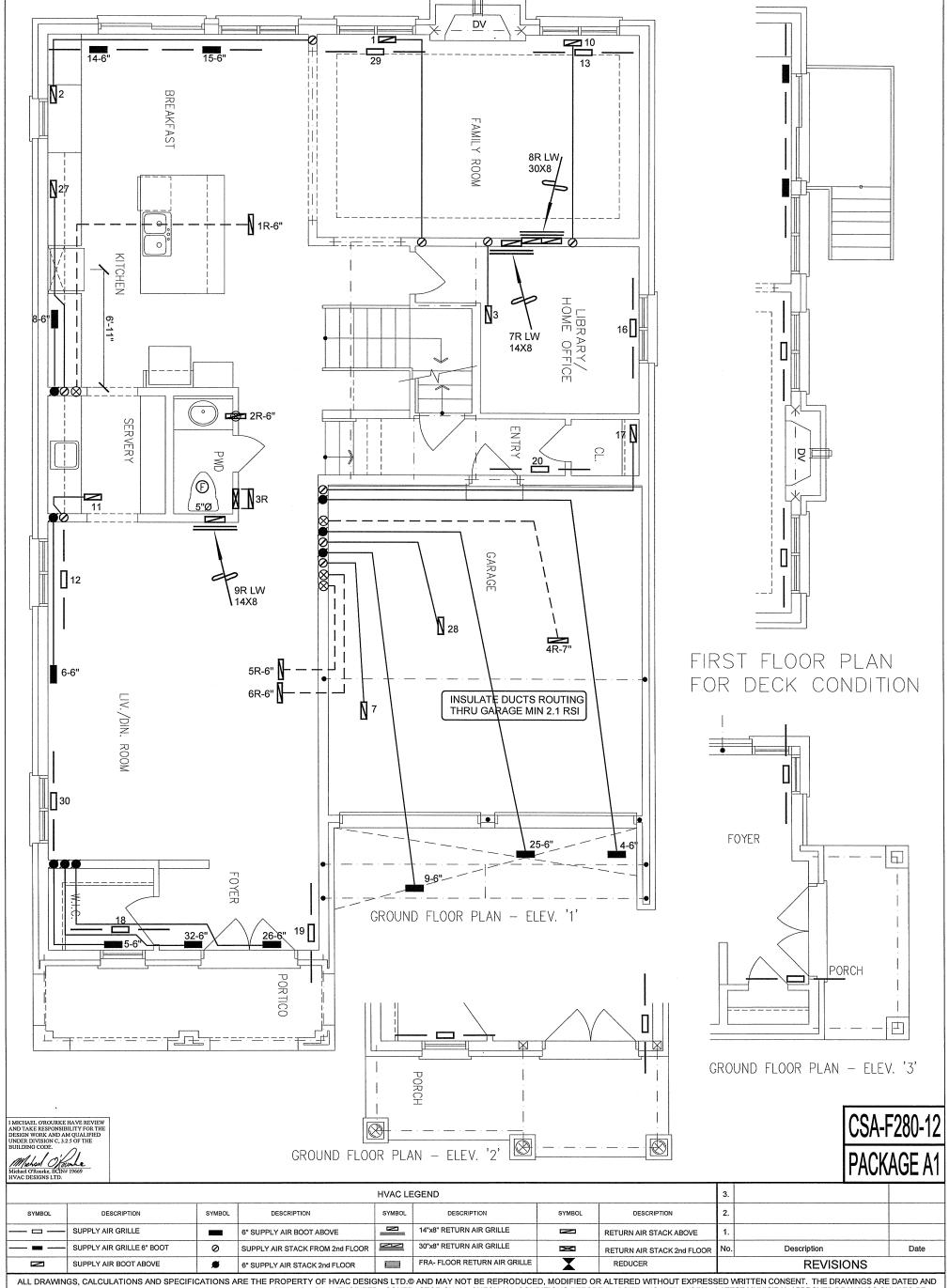
1504

FAN SPEED

MAY/2021 3/16" = 1'-0" Scale BCIN# 19669

90750

LO#



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GREENPARK HOMES

Project Name

ROUNDEL HOMES INC RICHMOND HILL, ONTARIO

OPT 2ND Lot 170

OPT 2ND
TERRACOTA 3 3496 sqft

HVA (DESIGNS LTD.

375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca

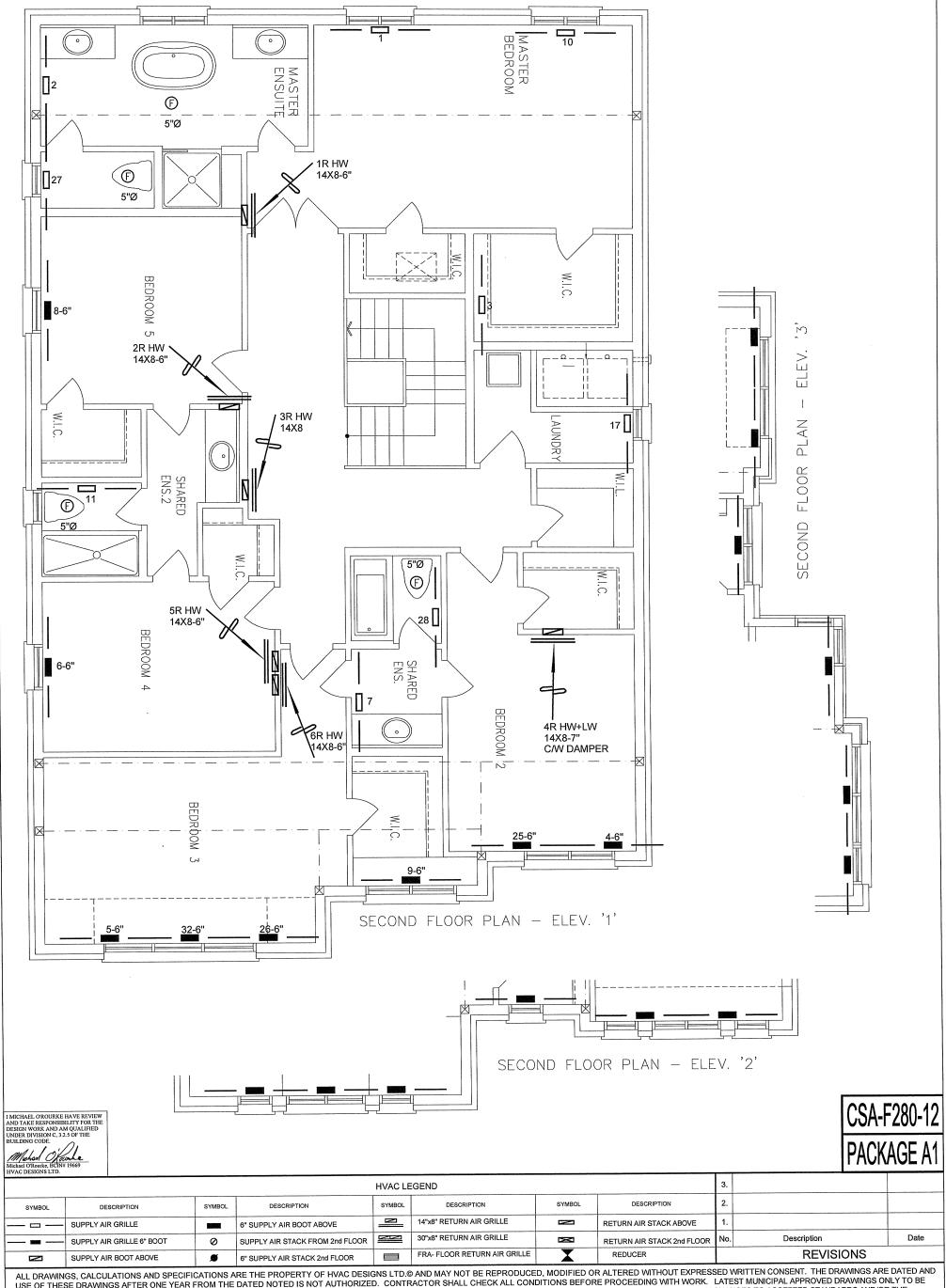
Specializing in Residential Mechanical Design Services

Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

FIRST FLOOR
HEATING
LAYOUT

Date MAY/2021 Scale 3/16" = 1'-0" BCIN# 19669

LO# 90750



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GREENPARK HOMES

ROUNDEL HOMES INC RICHMOND HILL, ONTARIO

Lot 170 OPT 2ND

TERRACOTA 3

375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca

Specializing in Residential Mechanical Design Services

Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be 3496 sqft adequately insulated and be gas-proofed.

SECOND FLOOR **HEATING**

LAYOUT MAY/2021

3/16" = 1'-0" BCIN# 19669

90750 LO#