Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Proi	ect Information				
	number, street name			Unit n	o. Lot/con.
Municipal	ia.	Destal sade	Diam mumahan/ athan da	- aviation	
Municipal	•	Postal code	Plan number/ other des	scription	
	(WOODBRIDGE)				
	idual who reviews and take	es responsibility			
Name	_O'ROURKE		Firm HVAC DESIGNS LTD.		
Street ad			ITVAO DEGIGINO ETD.	Unit no.	Lot/con.
375 FINL				202	N/A
Municipal	ity	Postal code	Province	E-mail	
AJAX		L1S 2E2	ONTARIO	info@hvacdesigns.c	a
Telephon	e number	Fax number		Cell number	
(905) 619	9-2300	(905) 619-2375		()	
C. Desi	gn activities undertaken by	individual identi	fied in Section B. [Bui	Iding Code Table 3.	5.2.1 OF Division C]
☐ Hot	ISE	⊠ HVA	C – House	☐ Buildi	ng Structural
	all Buildings		ng Services		oing – House
	ge Buildings		tion, Lighting and Po		ping – All Buildings
	nplex Buildings on of designer's work	☐ Fire F	Protection Model:		te Sewage Systems
DUCT SIZ RESIDEN RESIDEN	SS / GAIN CALCULATIONS ZING ITIAL MECHANICAL VENTILA ITIAL SYSTEM DESIGN per CS aration of Designer		MARY Project	: PINE VALLEY & TESTC	DN .
1				declare that (abo	acce one or appropriate):
'	MICHAEL O'ROURKE	(print name)		_ ueciale that (chc	oose one as appropriate):
٥	I review and take responsibilit Division C, of the Building Coc classes/categories. Individual BCIN:				3.2.4.of appropriate
	Firm BCIN:			 	
X	I review and take responsibilit designer" under subsection		am qualified in the appropion C, of the Building Cod		her
	Individual BCIN:	19669			
	Basis for exemption	n from registration a	nd qualification:	O.B.C SENTENCE	3.2.4.1 (4)
	The design work is exempt Basis for exemption from regi		ation and qualification requation:	uirements of the Building	g Code.
I certify the	nat:				
	 The information contained I have submitted this app 		dule is true to the best of a wledge and consent of the		0.
	luno 4, 2020			Michael C.	Hounte.
	June 4, 2020 Date				gnature of Designer
	Date			318	gnature of Designer

NOTE

^{1.} For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.

^{2.} Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.



SITE NAME: BUILDER:								TYPE	4004 1	THE DA	LERIDO	E		GFA:	3341			DATE: LO#	Jun-20 77459					NATURAL AIR C							AT°F.		8		CSA-F28	
ROOM USE				MBR			ENS			WIC			BED-2		П	BED-3	4		BED-4		Г	ENS-2	li i		1	LOFT		E	NS-3							
EXP. WALL				33			29		l	10			12		ı	38			13		l	6			1	40			6							
CLG. HT.				10			9		l	9			9		I	9			9		l	9			1	9			9							
	FACTO	RS							l						l																					
GRS.WALL AREA	LOSS	GAIN		330			261		l	90			108		l	342			117			54				360			54							
GLAZING				LOSS	GAIN		LOSS	GAIN		LOSS	GAIN	1	LOSS	GAIN	l	LOSS	GAIN		LOSS	GAIN		LOSS	GAIN			LOSS	GAIN	L	oss o	GAIN						
NORTH	21.3	16.2	0	0	0	0	0	0	0	0	0	18	383	292	0	0	0	0	0	0	8	170	130		0	0	0	0	0	0						
EAST	21.3	39.9	0	0	0	0	0	0	0	0	0	0	0	0	60	1277	2392	0	0	0	0	0	0		55	1170	2192	16	340	638						
SOUTH	21.3	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	383	444	0	0	0		30	638	740	0	0	0						
WEST	21.3	39.9	40	851	1594	25	532	997	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0						
SKYLT.	37.2	103.0	0	0	0	0	0	0	0	0	0	0	0	0	4	149	412	0	0	0	4	149	412		4	149	412	4	149	412						
DOORS	25.2	5.2	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						
NET EXPOSED WALL	4.5	0.9	290	1294	269	236	1053	219	90	402	83	90	402	83	282	1258	262	99	442	92	46	205	43		275	1227	255	38	170	35						
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	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						
EXPOSED CLG	1.3	0.6	270	347	172	210	270	134	160	205	102	192	246	123	198	254	126	208	267	133	80	103	51		232	298	148	104	133	66						
NO ATTIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0	0	0	0	0	0	0	50	137	68	0	0	0	0	0	0		50	137	68	0	0	0						
EXPOSED FLOOR	2.6	0.5	0	0	0	0	0	0	0	0	0	0	0	0	252	643	134	0	0	0	30	77	16		0	0	0		214	45						
BASEMENT/CRAWL HEAT LOSS	2.0	0.0		0		"	0		*	0	ŏ.	, s	0	-		0	,04	· *	0		- 00	0			100	0	•	100	0	30						
SLAB ON GRADE HEAT LOSS				0			0		l	0			0		l	0			0			0				0			0							
SUBTOTAL HT LOSS				2492			1855		l	607			1031		I	3718			1092		l	704			1	3620		39	1007							
SUB TOTAL HT GAIN				2402	2036		1033	1350	l	001	186		1031	498	l	37 10	3394		1002	669		104	651			3020	3816			1196						
LEVEL FACTOR / MULTIPLIER			0.20	0.27	2030	0.20	0.27	1330	0.20	0.27	100	0.20	0.27	490	0.20	0.27	3354	0.20	0.27	005	0.20	0.27	031		0.20	0.27	3010	0.20	0.27	1130						
			0.20			0.20			0.20			0.20			0.20	986		0.20			0.20				0.20											
AIR CHANGE HEAT LOSS				661	470		492		l	161			273		I	900	000		290	-	l	187			1	960	000		267	400						
AIR CHANGE HEAT GAIN					179			119	l		16		-	44	l		299			59			57				336			105						
DUCTLOSS				0			0		l	0	_		0		I	470			0		l	89			1	0			127							
DUCT GAIN					0	١.		0	١.		0	l		0	l		455			0			71		l .		0			130						
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240	1		240	0		0		0		0	0		0						
HEAT GAIN APPLIANCES/LIGHTS					621			0			0			621			621			621			0				621			0						
TOTAL HT LOSS BTU/H				3153			2347		l	768			1305		l	5175			1381			979	0000			4580	1 tours	- 22	1401	5000						
TOTAL HT GAIN x 1.3 BTU/H											263																									- 1
					4311	_		1909	_		203			1823			6512			2065			1013				6205		- 22	1861						
				DIN	4311			1909		VIICI	203	_		1823		LUMB	6512		ENO 4		_	FOV	1013	OTUDY	_		6205		- 52	1861		100	_		210	=
ROOM USE				DIN	4311			1909		KT/GT	203			1823		LN/MD	6512		ENS-4			FOY	1013	STUDY			6205		- 12	1861		LOD			BAS	\exists
ROOM USE EXP. WALL				24	4311			1909		76	203			1823		21	6512		11			50	1013	10			6205			1861		42			180	
ROOM USE EXP. WALL CLG. HT.		240			4311			1909			203			1823			6512						1013				6205		- 22	1861						_
ROOM USE EXP. WALL CLG. HT.	FACTO			24 11	4311			1909		76 11	203			1823		21 13	6512		11 9			50 11	1013	10 11			6205		- 22	1861		42 10			180 10	
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA				24 11 264				1909		76 11 836	VC14 5000 F			1823		21 13 273			11 9 99			50 11 550	(ATRIONIC)	10 11 110			6205		- 22	1861		42 10 420	21000		180 10 1512	
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING	LOSS	GAIN		24 11 264 LOSS	GAIN			1909	20.0	76 11 836 LOSS	GAIN			1823		21 13 273 LOSS	GAIN		11 9 99 LOSS	GAIN	849	50 11 550 LOSS	GAIN	10 11 110 LOSS GAIN			6205		- 22	1861		42 10 420 LOSS	200		180 10 1512 LOSS G	AIN
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH	21.3	GAIN 16.2	0	24 11 264 LOSS 0	GAIN 0			1909	0	76 11 836 LOSS 0	GAIN 0			1823	8	21 13 273 LOSS 170	GAIN 130	0	99 LOSS 0	GAIN 0	0	50 11 550 LOSS 0	GAIN 0	10 11 110 LOSS GAIN 23 489 372			6203		- 22	1861	0	42 10 420 LOSS 0	0	6	180 10 1512 LOSS G 128	97
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	21.3 21.3	GAIN 16.2 39.9	0	24 11 264 LOSS 0	GAIN 0 0			1909	0	76 11 836 LOSS 0	GAIN 0 0			1823	8 0	21 13 273 LOSS	GAIN 130 0	0 0	11 9 99 LOSS 0	GAIN 0 0	45	50 11 550 LOSS 0 958	GAIN 0 1794	10 11 110 LOSS GAIN 23 489 372 0 0 0			6203		- 22	1861	0	42 10 420 LOSS 0	0		180 10 1512 LOSS G 128	97 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH	21.3 21.3 21.3 21.3	GAIN 16.2 39.9 24.7	0 26	24 11 264 LOSS 0 0 553	GAIN 0 0 642			1909	0 0 0	76 11 836 LOSS 0 0	GAIN 0 0			1823	0	21 13 273 LOSS 170 0	GAIN 130 0	0 8	99 LOSS 0 0	GAIN 0	45 0	50 11 550 LOSS 0 958 0	GAIN 0 1794 0	10 11 110 LOSS GAIN 23 489 372 0 0 0 0 0 0			6203		- 22	1861	0 0	42 10 420 LOSS 0 0	0 0	6 0 0	180 10 1512 LOSS G 128	97 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	21.3 21.3 21.3 21.3 21.3	GAIN 16.2 39.9	0 26 0	24 11 264 LOSS 0 0 553	GAIN 0 0			1909	0 0 0 150	76 11 836 LOSS 0	GAIN 0 0			1823	0	21 13 273 LOSS 170 0	GAIN 130 0	0 8 0	99 LOSS 0 0 170	GAIN 0 0	45 0 0	50 11 550 LOSS 0 958	GAIN 0 1794	10 11 110 LOSS GAIN 23 489 372 0 0 0 0 0 0			6203		- 22	1861	0 0 0 30	42 10 420 LOSS 0	0 0 0 1196	6 0 0	180 10 1512 LOSS G 128	97 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	21.3 21.3 21.3 21.3 21.3 37.2	GAIN 16.2 39.9 24.7	0 26	24 11 264 LOSS 0 0 553 0	GAIN 0 0 642			1909	0 0 0 150	76 11 836 LOSS 0 0 0 3192	GAIN 0 0			1823	0 0 0	21 13 273 LOSS 170 0 0	GAIN 130 0 0	0 8 0 0	99 LOSS 0 0 170 0	GAIN 0 0	45 0 0 0	50 11 550 LOSS 0 958 0	GAIN 0 1794 0 0	10 11 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0			6203		- 22	1861	0 0 0 30	42 10 420 LOSS 0 0	0 0 0 1196 0	6 0 0 0	180 10 1512 LOSS G 128 0 0	97 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	21.3 21.3 21.3 21.3 21.3 37.2 25.2	16.2 39.9 24.7 39.9 103.0 5.2	0 26 0 0	24 11 264 LOSS 0 0 553 0 0	GAIN 0 0 642 0 0			1909	0 0 0 150 0	76 11 836 LOSS 0 0 0 3192 0	GAIN 0 0 0 5979 0			1823	0 0 0 0 20	21 13 273 LOSS 170 0 0 0 0 505	GAIN 130 0 0 0 0	0 8 0 0	99 LOSS 0 0 170 0	GAIN 0 0 197 0 0	45 0 0 0 20	50 11 550 LOSS 0 958 0 0 0	GAIN 0 1794 0 0 0	10 11 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0			6203		- 22	1861	0 0 0 30 0	420 100 420 LOSS 0 0 0 638 0	0 0 0 1196 0	6 0 0 0 0 40	180 10 1512 LOSS G 128 0 0	97 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5	16.2 39.9 24.7 39.9 103.0 5.2 0.9	0 26 0 0 0 238	24 11 264 LOSS 0 0 553 0 0 0 1062	GAIN 0 0 642 0 0 0			1909	0 0 0 150 0 0	76 11 836 LOSS 0 0 0 3192 0 0 3061	GAIN 0 0 0 5979			1823	0 0 0 0 20 245	21 13 273 LOSS 170 0 0	GAIN 130 0 0 0 0 105 227	0 8 0 0 0 91	99 LOSS 0 0 170 0 0 0 406	GAIN 0 0 197 0 0 0	45 0 0 0 20 485	50 11 550 LOSS 0 958 0 0 0 505 2164	GAIN 0 1794 0 0 105 450	10 11 110 LOSS GAIN 23 489 372 0			6205		- 22	1861	0 0 0 30 0 0	420 100 420 LOSS 0 0 0 638 0 0	0 0 1196 0 0	6 0 0 0 0 40	180 10 1512 LOSS G 128 0 0 0 0 1010 2	97 0 0 0 0 0 210
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	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5	16.2 39.9 24.7 39.9 103.0 5.2	0 26 0 0	24 11 264 LOSS 0 0 553 0 0	GAIN 0 0 642 0 0			1909	0 0 0 150 0	76 11 836 LOSS 0 0 0 3192 0	GAIN 0 0 0 5979 0			1823	0 0 0 0 20	21 13 273 LOSS 170 0 0 0 0 505	GAIN 130 0 0 0 0	0 8 0 0 0 91	99 LOSS 0 0 170 0	GAIN 0 0 197 0 0	45 0 0 0 20	50 11 550 LOSS 0 958 0 0 0	GAIN 0 1794 0 0 0	10 11 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0			6205		- 22	1861	0 0 0 30 0	420 100 420 LOSS 0 0 0 638 0	0 0 0 1196 0	6 0 0 0 0 40	180 10 1512 LOSS G 128 0 0 0 0 1010 2	97 0 0 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5	16.2 39.9 24.7 39.9 103.0 5.2 0.9	0 26 0 0 0 238	24 11 264 LOSS 0 0 553 0 0 0 1062	GAIN 0 0 642 0 0 0			1909	0 0 0 150 0 0	76 11 836 LOSS 0 0 0 3192 0 0 3061	GAIN 0 0 0 5979 0 0 636			1823	0 0 0 0 20 245	21 13 273 LOSS 170 0 0 0 0 505 1093	GAIN 130 0 0 0 0 105 227	0 8 0 0 0 91	99 LOSS 0 0 170 0 0 0 406	GAIN 0 0 197 0 0 0	45 0 0 0 20 485	50 11 550 LOSS 0 958 0 0 0 505 2164	GAIN 0 1794 0 0 105 450	10 11 110 LOSS GAIN 23 489 372 0			6205		- 22	1861	0 0 0 30 0 0	420 100 420 LOSS 0 0 0 638 0 0	0 0 1196 0 0	6 0 0 0 0 40	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0	97 0 0 0 0 0 210
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	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6	16.2 39.9 24.7 39.9 103.0 5.2 0.9	0 26 0 0 0 238	24 11 264 LOSS 0 0 553 0 0 1062 0	GAIN 0 0 642 0 0 0 221			1909	0 0 0 150 0 0 686	76 11 836 LOSS 0 0 0 3192 0 0 3061 0	GAIN 0 0 0 5979 0 0 636			1823	0 0 0 0 20 245 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	GAIN 130 0 0 0 105 227 0	0 8 0 0 0 91	99 LOSS 0 0 170 0 0 406 0	GAIN 0 0 197 0 0 0 84	45 0 0 0 20 485 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0	GAIN 0 1794 0 0 105 450	10 11 10 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203		- 22	1861	0 0 30 0 0 0 222	420 LOSS 0 0 0 638 0 0 0 799	0 0 1196 0 0 0	6 0 0 0 0 40 0 288	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0	97 0 0 0 0 0 210 0
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	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3	16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6	0 26 0 0 0 238 0	24 11 264 LOSS 0 0 553 0 0 1062 0	GAIN 0 0 642 0 0 221 0			1909	0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0	GAIN 0 0 0 5979 0 0 636 0			1823	0 0 0 0 20 245 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	GAIN 130 0 0 0 105 227 0	0 8 0 0 0 91 0	99 99 LOSS 0 0 170 0 0 406 0 226	GAIN 0 0 197 0 0 0 84	45 0 0 0 20 485 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0	GAIN 0 1794 0 0 105 450 0	10 11 10 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203		- 22	1861	0 0 0 30 0 0 0 2222	42 10 420 LOSS 0 0 0 638 0 0 0 799	0 0 1196 0 0 0 166	6 0 0 0 0 40 0 288	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0	97 0 0 0 0 210 0 215
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	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0	GAIN 0 0 642 0 0 221 0			1909	0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0	GAIN 0 0 5979 0 636 0			1823	0 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	GAIN 130 0 0 0 105 227 0 0	0 8 0 0 0 91 0 176	11 9 99 LOSS 0 0 170 0 0 406 0 226 0	GAIN 0 0 197 0 0 84 0 112	45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0	GAIN 0 1794 0 0 105 450 0	10 11 10 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			5203		22	1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 799 0	0 0 1196 0 0 0 166	6 0 0 0 0 40 0 288 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 1036 2	97 0 0 0 0 210 0 215 0
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 EXPOSED FLOOR	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0	GAIN 0 0 642 0 0 221 0			1909	0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0	GAIN 0 0 5979 0 636 0			1823	0 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	GAIN 130 0 0 0 105 227 0 0	0 8 0 0 0 91 0 176	11 9 99 LOSS 0 0 170 0 0 406 0 226 0 0	GAIN 0 0 197 0 0 84 0 112	45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0	GAIN 0 1794 0 0 105 450 0	10 11 10 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			5203			1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 799 0	0 0 1196 0 0 0 166	6 0 0 0 0 40 0 288 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 1036 2	97 0 0 0 0 210 0 215 0
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 EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0	GAIN 0 0 642 0 0 221 0			1909	0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0	GAIN 0 0 5979 0 636 0			1823	0 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0	GAIN 130 0 0 0 105 227 0 0	0 8 0 0 0 91 0 176	11 9 99 LOSS 0 0 170 0 0 406 0 226 0 0 0	GAIN 0 0 197 0 0 84 0 112	45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0	GAIN 0 1794 0 0 105 450 0	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203		22	1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 799 0	0 0 1196 0 0 0 166	6 0 0 0 0 40 0 288 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 1036 2	97 0 0 0 0 210 0 215 0
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 BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0 0	GAIN 0 0 642 0 0 221 0			1909	0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 3061 0 0	GAIN 0 0 5979 0 636 0			1823	0 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0	GAIN 130 0 0 0 105 227 0 0	0 8 0 0 0 91 0 176	11 9 99 LOSS 0 0 170 0 0 406 0 226 0 0 0 0	GAIN 0 0 197 0 0 84 0 112	45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0	GAIN 0 1794 0 0 105 450 0	10 11 10 LOSS GAIN 123 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203			1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0 0 0	0 0 1196 0 0 0 166	6 0 0 0 0 40 0 288 0	180 10 1512 LOSS G 0 0 0 0 1010 2 0 0 1036 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	97 0 0 0 0 210 0 215 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 LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0 0	GAIN 0 0 0 642 0 0 0 221 0 0 0 0			1909	0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 3061 0 0	GAIN 0 0 0 5979 0 0 636 0 0 0 0			1823	0 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0 0	GAIN 130 0 0 0 105 227 0 0	0 8 0 0 0 91 0 176	11 9 99 LOSS 0 0 170 0 0 406 0 226 0 0 0 0	GAIN 0 0 197 0 0 0 844 0 112 0 0	45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 1794 0 0 105 450 0 0	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203			1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0 0 0	0 0 1196 0 0 166 0	6 0 0 0 0 40 0 288 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 0 0 0 0 0 0 0 0 0 0	97 0 0 0 0 210 0 215 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMI WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG SEXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0 0	GAIN 0 0 0 642 0 0 0 221 0 0 0 0			1909	0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 0	GAIN 0 0 0 5979 0 0 636 0 0 0 0			1823	0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0 0	GAIN 130 0 0 0 105 227 0 0	0 8 0 0 91 0 176 0	99 LOSS 0 0 170 0 0 0 406 0 0 226 0 0 0 802	GAIN 0 0 197 0 0 0 844 0 112 0 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 1794 0 0 105 450 0 0	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203		22	1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0 0 0	0 0 1196 0 0 166 0	6 0 0 0 40 0 288 0 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 0 0 0 0 0 0 0 0 0 0	97 0 0 0 0 210 0 215 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 GAIN LEVEL FACTOR / MULTIPLIER	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 0 0 1062 0 0 0 0 1615	GAIN 0 0 0 642 0 0 0 221 0 0 0 0			1909	0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 6253	GAIN 0 0 0 55979 0 636 0 0			1823	0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0 0 0 1769	GAIN 130 0 0 0 105 227 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 1770 0 0 0 406 0 226 0 0 0 802 0.27	GAIN 0 0 197 0 0 84 0 112 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 1794 0 0 105 450 0 0 0 0 2349	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203			1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0 0 0	0 0 1196 0 0 166 0	6 0 0 0 40 0 288 0 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 1036 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	97 0 0 0 0 210 0 215 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 NO 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	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 0 0 1062 0 0 0 0 1615	GAIN 0 0 642 0 0 0 221 0 0 0 0 0			1909	0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 3061 0 0 0 6253	GAIN 0 0 0 5979 0 0 636 0 0 0 0			1823	0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0 0 0 1769	GAIN 130 0 0 0 105 227 0 0 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 170 0 0 406 0 0 226 0 0 0 802 0.27 213	GAIN 0 0 197 0 0 0 844 0 112 0 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 1794 0 0 105 450 0 0	10 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			6203			1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0 0 0	0 0 1196 0 0 166 0	6 0 0 0 40 0 288 0 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 1036 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	97 0 0 0 0 210 0 215 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 GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 0 0 642 0 0 0 221 0 0 0 0 0			1909	0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 6253	GAIN 0 0 0 55979 0 636 0 0			1823	0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 130 0 0 0 105 227 0 0 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 1770 0 0 0 406 0 226 0 0 0 802 0.27	GAIN 0 0 197 0 0 84 0 112 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 1794 0 0 105 450 0 0 0 2349	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203			1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0 0 0	0 0 1196 0 0 166 0	6 0 0 0 40 0 288 0 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 0 0 0 0 0 0 0 0 0 0	97 0 0 0 0 210 0 215 0 0 0
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 EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 0 0 642 0 0 0 0 0 0 0 0 0 0 0 0 862			1909	0 0 0 150 0 0 686 0 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 3061 0 0 0 6253	GAIN 0 0 0 5979 0 0 636 0 0 0			1823	0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 130 0 0 0 105 227 0 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 170 0 0 406 0 0 226 0 0 0 802 0.27 213	GAIN 0 0 197 0 0 84 0 112 0 0	45 0 0 20 485 0 0 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 1794 0 0 0 105 450 0 0 0 2349	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203			1861	0 0 30 0 0 0 222 0 0	42 10 420 LOSS 0 0 638 0 0 0 799 0 0 0	0 0 1196 0 0 166 0 0	6 0 0 0 40 0 288 0 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 0 0 0 0 0 0 0 0 0 0	97 0 0 0 0 210 0 215 0 0 0
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 EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN DUCT LOSS DUCT GAIN	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 0 0 0 642 0 0 0 0 221 0 0 0 0 0 862 76 0 0 0			1909	0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 3061 0 0 0 6253	GAIN 0 0 0 55979 0 636 0 0 0 6616			1823	0 0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 130 0 0 0 105 227 0 0 0 0 462 41	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 170 0 0 406 0 0 226 0 0 0 802 0.27 213	GAIN 0 0 197 0 0 0 84 0 112 0 0 0 394 35	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 1794 0 0 105 450 0 0 0 2349	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203			1861	0 0 0 30 0 0 0 2222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0 0 0	0 0 1196 0 0 0 166 0 0 0	6 0 0 0 40 0 288 0 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 0 0 1036 2 0 0 0 0 0 0 1036 2 0 0 0 0 1138 128 128 128 128 128 128 128 128 128 12	97 0 0 0 0 0 0 2210 0 0 215 0 0 0
ROOM USE EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SCYLT. 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 OUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0 0	24 11 264 LOSS 0 0 0 0 1062 0 0 0 0 1615	GAIN 0 0 642 0 0 0 0 0 0 0 0 0 0 0 0 862			1909	0 0 0 150 0 0 686 0 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 0 0 0 5979 0 0 636 0 0 0 0 6616 583 0			1823	0 0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 130 0 0 0 105 227 0 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 0 1770 0 0 0 226 0 0 0 802 0.27 213 0	GAIN 0 0 197 0 0 0 84 0 112 0 0 0 394 35	45 0 0 20 485 0 0 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 11794 0 0 0 105 450 0 0 0 2349	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203			1861	0 0 30 0 0 0 222 0 0	42 10 420 LOSS 0 0 0 638 0 0 0 0 0 0 0 0 0 1437	0 0 1196 0 0 166 0 0	6 0 0 0 0 40 0 288 0 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 0 1036 2 0 0 0 8074 1.18 11224 1	97 0 0 0 0 210 0 215 0 0 0
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 EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN DUCT LOSS DUCT GAIN	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 16.2 39.9 24.7 39.9 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 0 0 0 642 0 0 0 0 221 0 0 0 0 0 862 76 0 0 0			1909	0 0 0 150 0 0 686 0 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 3061 0 0 0 6253	GAIN 0 0 0 55979 0 636 0 0 0 6616			1823	0 0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 130 0 0 0 105 227 0 0 0 0 462 41	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 170 0 0 406 0 0 226 0 0 0 802 0.27 213	GAIN 0 0 197 0 0 0 84 0 112 0 0 0 394 35	45 0 0 20 485 0 0 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	GAIN 0 11794 0 0 0 105 450 0 0 0 2349	10 111 110 LOSS GAIN 23 489 372 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6203			1861	0 0 30 0 0 0 222 0 0	42 10 420 LOSS 0 0 0 638 0 0 0 0 0 0 0 1437	0 0 1196 0 0 0 166 0 0 0	6 0 0 0 0 40 0 288 0 0	180 10 1512 LOSS G 128 0 0 0 0 1010 2 0 0 0 0 0 0 0 0 0 0 0 0 0	97 0 0 0 0 0 0 2210 0 0 215 0 0 0

TOTAL HEAT GAIN BTU/H:

49076

TONS: 4.09

LOSS DUE TO VENTILATION LOAD BTU/H: 3181

STRUCTURAL HEAT LOSS: 63716

TOTAL COMBINED HEAT LOSS BTU/H: 66896

Mehant Oxombe.



			ALLEY &					TYPE:	4004 TH	E DALER	RIDGE		DATE:	Jun-20			GFA:	3341	LO#	77459				
HEATING CFM TOTAL HEAT LOSS AIR FLOW RATE CFM	1525 63,716 23.93	,		LING CFM EAT GAIN RATE CFM	48,415		а	furi a/c coil vailable	pressure pressure pressure s/a & r/a	0.6 0.05 0.2 0.35						EL	. 296UH09 FAN		LENNO: 90	x		AFUE = (BTU/H) = (BTU/H) =	88,000	
RUN COUNT S/A R/A All S/A diffusers 4"x10" unl All S/A runs 5"Ø unless not				1st 9 3 out.	Bas 6 1		max	s/a dif p	ssure s/a ress. loss ssure s/a			grille pro	pressure ess. Loss essure r/a	0.02			1	EDLOW MEDIUM IM HIGH HIGH	0 1105 1255 1525	т	DESI		6 " E.S.P.	- - °F
RUN # ROOM NAME RM LOSS MBH. CFM PER RUN HEAT RM GAIN MBH. CFM PER RUN COOLING ADJUSTED PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LENGTH ADJUSTED PRESSURE ROUND DUCT SIZE HEATING VELOCITY (ft/min) COOLING VELOCITY (ft/min) OUTLET GRILL SIZE TRUNK	1 MBR 1.58 38 2.16 68 0.17 71 200 271 0.06 6 194 347 4X10 A	2 ENS 1.17 28 0.95 30 0.17 58 150 208 0.08 4 321 344 3X10 A	3 WIC 0.77 18 0.26 8 0.17 51 150 201 0.09 4 207 92 3X10 B	4 BED-2 1.30 31 1.82 57 0.17 49 180 229 0.08 5 228 419 3X10 B	5 BED-3 2.59 62 3.26 103 0.16 42 190 232 0.07 6 316 525 4X10 D	6 BED-4 1.38 33 2.06 65 0.17 40 150 0.09 5 242 477 3X10 C	7 ENS-2 0.98 23 1.01 32 0.17 37 220 257 0.07 4 264 367 3X10 D	8 ENS-4 1.01 24 0.56 18 0.17 33 200 233 0.07 4 275 207 3X10 C	9 LOFT 2.29 55 3.10 98 0.16 44 140 184 0.09 6 280 500 4X10 D	10 MBR 1.58 38 2.16 68 0.17 63 210 273 0.06 6 194 347 4X10 A	11 ENS-3 1.40 34 1.86 59 0.17 35 180 215 0.08 5 250 433 3X10 D	12 DIN 2.38 57 2.03 64 0.17 18 130 148 0.12 5 419 470 3X10 C	13 KT/GT 2.31 55 2.54 80 0.17 45 140 185 0.09 5 404 587 3X10 A	14 KT/GT 2.31 55 2.54 80 0.17 37 150 187 0.09 5 404 587 3X10 A	15 KT/GT 2.31 55 2.54 80 0.17 39 160 199 0.09 5 404 587 3X10 A	16 KT/GT 2.31 55 2.54 80 0.17 46 150 196 0.09 5 404 587 3X10 A	17 LN/MD 2.61 62 1.46 46 0.17 11 160 171 0.1 5 455 338 3X10 C	18 ENS 1.17 28 0.95 30 0.17 55 140 195 0.09 4 321 344 3X10 C	19 FOY 2.68 64 1.66 52 0.17 16 140 156 0.11 5 470 382 3X10 D	20 STUDY 1.30 31 1.45 46 0.17 27 80 107 0.16 4 356 528 3X10 C	21 BAS 3.46 83 0.58 18 0.16 36 100 136 0.12 5 609 132 3X10 B	22 BAS 3.46 83 0.58 18 0.16 39 90 129 0.13 5 609 132 3X10 B	23 BAS 3.46 83 0.58 18 0.16 28 110 138 0.12 5 609 132 3X10 B	24 BAS 3.46 83 0.58 18 0.16 21 110 131 0.12 5 609 132 3X10 C
RUN # ROOM NAME RM LOSS MBH. CFM PER RUN HEAT RM GAIN MBH. CFM PER RUN COOLING ADJUSTED PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LENGTH ADJUSTED PRESSURE ROUND DUCT SIZE HEATING VELOCITY (ff/min) COOLING VELOCITY (ff/min) OUTLET GRILL SIZE TRUNK	25 BAS 3.46 83 0.58 18 0.16 19 120 139 0.12 5 609 132 3X10 C	26 BAS 3.46 83 0.58 18 0.16 32 120 152 0.11 5 609 132 3X10 D	27 BED-3 2.59 62 3.26 103 0.16 48 200 248 0.07 6 316 525 4X10 D	28 LOFT 2.29 55 3.10 98 0.16 57 200 257 0.06 6 280 500 4X10 D	29 FOY 2.68 64 1.66 52 0.17 25 120 145 0.12 5 470 382 3X10 D																			
SUPPLY AIR TRUNK SIZE	TRUNK	STATIC PRESS.	ROUND	RECT	20	er.	VELOCITY (ft/min)			TRUNK	STATIC PRESS.	ROUND	RECT	5370	0=0	VELOCITY (ft/min)	RETURN A	TRUNK CFM	STATIC PRESS.	ROUND	RECT	27		VELOCITY (ft/min)
TRUNK A TRUNK B TRUNK C TRUNK D TRUNK E TRUNK F	324 622 1023 502 0	0.06 0.06 0.06 0.06 0.00 0.00	9.9 12.6 15.2 11.6 0	12 18 26 16 0	x x x x x	8 8 8 8 8	486 622 708 565 0		TRUNK G TRUNK H TRUNK I TRUNK J TRUNK K TRUNK L	0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00	0 0 0 0	0 0 0 0 0	x x x x x	8 8 8 8 8	0 0 0 0 0	TRUNK O TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK T	0 0 0 0 0	0.06 0.06 0.06 0.06 0.06 0.06	0 0 0 0 0	0 0 0 0 0	x x x x x	8 8 8 8 8	0 0 0 0
AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LH ADJUSTED PRESSURE ROUND DUCT SIZE INLET GRILL SIZE INLET GRILL SIZE	1 0 155 0.15 51 190 241 0.06 7.5 8 X	2 0 185 0.15 36 155 191 0.08 7.5 8 X	3 0 85 0.15 44 205 249 0.06 6 8 X	4 0 95 0.15 37 165 202 0.07 6 8 X	5 0 170 0.15 45 165 210 0.07 7.5 8 X	6 0 145 0.15 28 185 213 0.07 7 8 X 14	7 0 305 0.15 31 145 176 0.08 9 8 X 30	8 0 145 0.15 23 195 218 0.07 7 8 X	0 0 0.15 1 0 1 14.80 0 0 0 X	0 0 0.15 1 0 1 14.80 0 0 X	0 0 0.15 1 0 1 14.80 0 0 0 X	0 0 0.15 1 0 1 14.80 0 0 0 X	0 0 0.15 1 0 1 14.80 0 0 0 X	0 0 0.15 1 0 1 14.80 0 0 0 X	0 0 0.15 1 0 1 14.80 0 0 0 X	240 0.15 16 235 251 0.06 8.8 8 X	TRUNK V TRUNK W TRUNK X TRUNK Y TRUNK Z DROP	0 0 1270 605 0 1525	0.06 0.06 0.06 0.06 0.06 0.06	0 0 16.5 12.5 0 17.7	0 0 28 18 0 24	x x x x	8 8 10 8 8 14	0 0 653 605 0 654





TYPE: 4004 THE DALERIDGE
SITE NAME: PINE VALLEY & TESTON

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

LO#

77459

COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL	VENTILATION CAPACITY			9.32.3.5
a) Direct vent (sealed combustion) only		Total Ventilation C	apacity	201.4	_	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Ven	til. Capacity	155	_	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Supplem	ental Capacity	46.4		cfm
d) Solid Fuel (including fireplaces)				***	. P	
e) No Combustion Appliances		PRINCIPAL EXHA	UST FAN CAPACITY			
		Model:	VANEE 65H	Location:		BSMT
HEATING SYSTEM		155.0	cfm3.0	sones	✓	HVI Approved
Forced Air Non Forced Air		PRINCIPAL EXHA	UST HEAT LOSS CALCUL	ATION FACTOR		% LOSS
Electric Space Heat		155.0 CFM	X 76 F	X 1.08	Х	0.25
		SUPPLEMENTAL Location	FANS Model	NUTONE cfm	HVI	Sones
HOUSE TYPE	9.32.1(2)	ENS	QTXEN050C	50	1	0.3
I Type a) or b) appliance only, no solid fuel		ENS-2 ENS-3	QTXEN050C QTXEN050C	50 50	1	0.3
		ENS-4	QTXEN050C	50	1	0.3
II Type I except with solid fuel (including fireplaces	s)	HEAT RECOVERY	VENTILATOR			9.32.3.11
III Any Type c) appliance		Model:	VANEE 65H			
IV Type I, or II with electric space heat		155	cfm high	64	-	cfm low
Other: Type I, II or IV no forced air		75	% Sensible Efficience @ 32 deg F (0 deg	F 77 C	V	HVI Approved
		LOCATION OF IN	STALLATION			
SYSTEM DESIGN OPTIONS	O.N.H.W.P.					
1 Exhaust only/Forced Air System		Lot:		Concession		
		Township		Plan:		
		Address				
3 HRV Simplified/connected to forced air system		Roll#		Building Perr	mit#	
4 HRV with Ducting/non forced air system		BUILDER:	GOLD PARK HOM	ES		
Part 6 Design		Name:				
TOTAL VENTILATION CAPACITY	9.32.3.3(1)	Address:				
Basement + Master Bedroom	cfm	City:				
Other Bedrooms <u>3</u> @ 10.6 cfm <u>31.8</u>	cfm	Telephone #:		Fax #:		
Kitchen & Bathrooms6@ 10.6 cfm63.6	cfm	INSTALLING CON	TRACTOR			
Other Rooms <u>6</u> @ 10.6 cfm <u>63.6</u>	cfm	Name:				
Table 9.32.3.A. TOTAL <u>201.4</u>	cfm	Address:				
		City:				
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)	Tolophono #:		Eav #:		
1 Bedroom 31.8	cfm	Telephone #:		Fax #:		
2 Bedroom 47.7	cfm		FICATION t this ventilation system has the Ontario Building Code.	been designed		
3 Bedroom 63.6	cfm	Name:	HVAC Designs Ltd	l.		
4 Bedroom 79.5	cfm	Signature:	/A	Mehad Oxfounds	٠.	
5 Bedroom 95.4	cfm	HRAI#		001820		
TOTAL 79.5 cfm		Date:		June-20		



			Form	ula Sheet (For Air Lea	akage / Ventiliation C	alculation)				
LO#: 7	7459	Model: 4004 THE DA	ALERIDGE	Builde	er: GOLD PARK HOMES				Date	e: 6/4/2020
		Volume Calculation	on		1	,	Air Change & Delt	a T Data		35 16
				2)		7.				
use Volume						WINTER NAT	URAL AIR CHANG	E RATE	0.340	
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft ³)			SUMMER NA	TURAL AIR CHANG	SE RATE	0.124	
Bsmt	1518	10	15180							
First	1518	11	16698							
Second	1852	9	16668					mperature Diff		1
Third	0	9	0			WE DTDL	Tin °C	Tout °C	ΔT°C	ΔT°F
Fourth	0	9	0			Winter DTDh	22	-20	42	76
		Total:	48,546.0 ft ³ 1374.7 m ³	-		Summer DTDc	22	31	9	16
		TOTAL:	15/4./ m]						
	5.2.3	.1 Heat Loss due to A	ir Leakage			6.2.6 \$	ensible Gain due	to Air Leakage		
		1981					990			
	ш _	$LR_{airh} \times \frac{V_b}{3.6} \times I$	DTD v 1 2		,	$HG_{salb} = LR_{airc} \times$	V_b	v 1.2		
	$HL_{airb} =$	$LR_{airh} \times \frac{1}{3.6} \times 1$	$D_h \times 1.2$		l n	$G_{salb} = LR_{airc} \times$	$\frac{1}{3.6} \times DID_c$	× 1.2		
0.340	x 381.85	x 42 °C	x 1.2	= 6579 W	= 0.124	x 381.85	x 9°C	x 1.2	=	499 W
		- 10 ° S		th w				S., (F		100
				= 22448 Btu/h] [=	1702 Btu/
				16						
	5.2.3.2 Hea	at Loss due to Mechar	nical Ventilation			6.2.7 Sen	sible heat Gain d	ue to Ventilatio	n	
								2 4		
	$HL_{vairb} =$	$PVC \times DTD_h \times 1$	$1.08 \times (1 - E)$		HL	$_{vairb} = PVC \times DT$	$CD_h \times 1.08 \times$	(1-E)		
155 CFM	x 76 °F	x 1.08	x 0.25	= 3181 Btu/h	155 CFM	x 16 °F	x 1.08	x 0.25	=	661 Btu/h
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Floo	or Multiplier Section)				
		20074 com	15 97300	10000 10000	total or baselia eren	Internal of Service	1.40000			
		HL_a	irr = Level Fact	$or \times HL_{airbv} \times \{(H_{airbv}) \times \{$	$HL_{agcr} + HL_{bgcr}) \div$	$(HL_{agclevel} + HL_{t})$	gclevel)}			
				HLairve Air Leakage +		Parata de a	El Colore por gon			
		Level	Level Factor (LF)	Ventilation Heat Loss	Level Conductive Heat		SECTION OF PROPERTY AND PARTY.			
		Level	Leverractor (Lr)		Loss: (HL _{clevel})	HLairbv / H	Llevel)			
		1	0.5	(Btu/h)	9,511	1.180)			
		2	0.3	1	14,142	0.476				
		3	0.2	22,448	16,928	0.265				
		4	0.2	1 22,7,15	0	0.000				
		5	0		0	0.000				
						0.000				





HEAT LOSS AND GAIN SUMMARY SHEET

		IILAI	LU33 AND GA	AIN SUMMANT SHEET	
MODEL:	4004 THE DALERIDGE			BUILDER: GOLD PARK HOMES	
SFQT:	3341	LO#	77459	SITE: PINE VALLEY & TEST	ΓON
DESIGN A	ASSUMPTIONS				
HEATING			°F	COOLING	°F
OUTDOO	R DESIGN TEMP.		-4	OUTDOOR DESIGN TEMP.	88
INDOOR I	DESIGN TEMP.		72	INDOOR DESIGN TEMP. (MAX 75°F)	72
BUILDING	G DATA				
ATTACHN	ΛΕΝΤ:		DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FA	ACES:		EAST	ASSUMED (Y/N):	Υ
AIR CHAN	IGES PER HOUR:		3.57	ASSUMED (Y/N):	Υ
AIR TIGH	TNESS CATEGORY:		AVERAGE	ASSUMED (Y/N):	Υ
WIND EXI	POSURE:		SHELTERED	ASSUMED (Y/N):	Υ
HOUSE V	OLUME (ft³):		48546.0	ASSUMED (Y/N):	Υ
INTERNA	L SHADING:	BLIND	S/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR	LIGHTING LOAD (Btu/h	n/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Υ
FOUNDA	TION CONFIGURATION		BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH:	58.0 ft	WIDTH:	32.0 ft	EXPOSED PERIMETER:	180.0 ft

2012 OBC - COMPLIANCE PACKAGE		
	Complian	e Package
Component		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

We	eather Sta	tion Description
Province:	Ontario	•
Region:	Vaughan	(Woodbridge)
	Site D	escription
Soil Conductivity:	Normal	conductivity: dry sand, loam, clay
Water Table:	Normal ((7-10 m, 23-33 ft)
I	Foundatio	n Dimensions
Floor Length (m):	17.7	
Floor Width (m):	9.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	Insulation Configuration
Window Area (m²):	3.3	
Door Area (m²):	3.7	
	Radi	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Desig	n Months
Heating Month	1	
	Founda	ntion Loads
Heating Load (Watts):		1729

TYPE: 4004 THE DALERIDGE

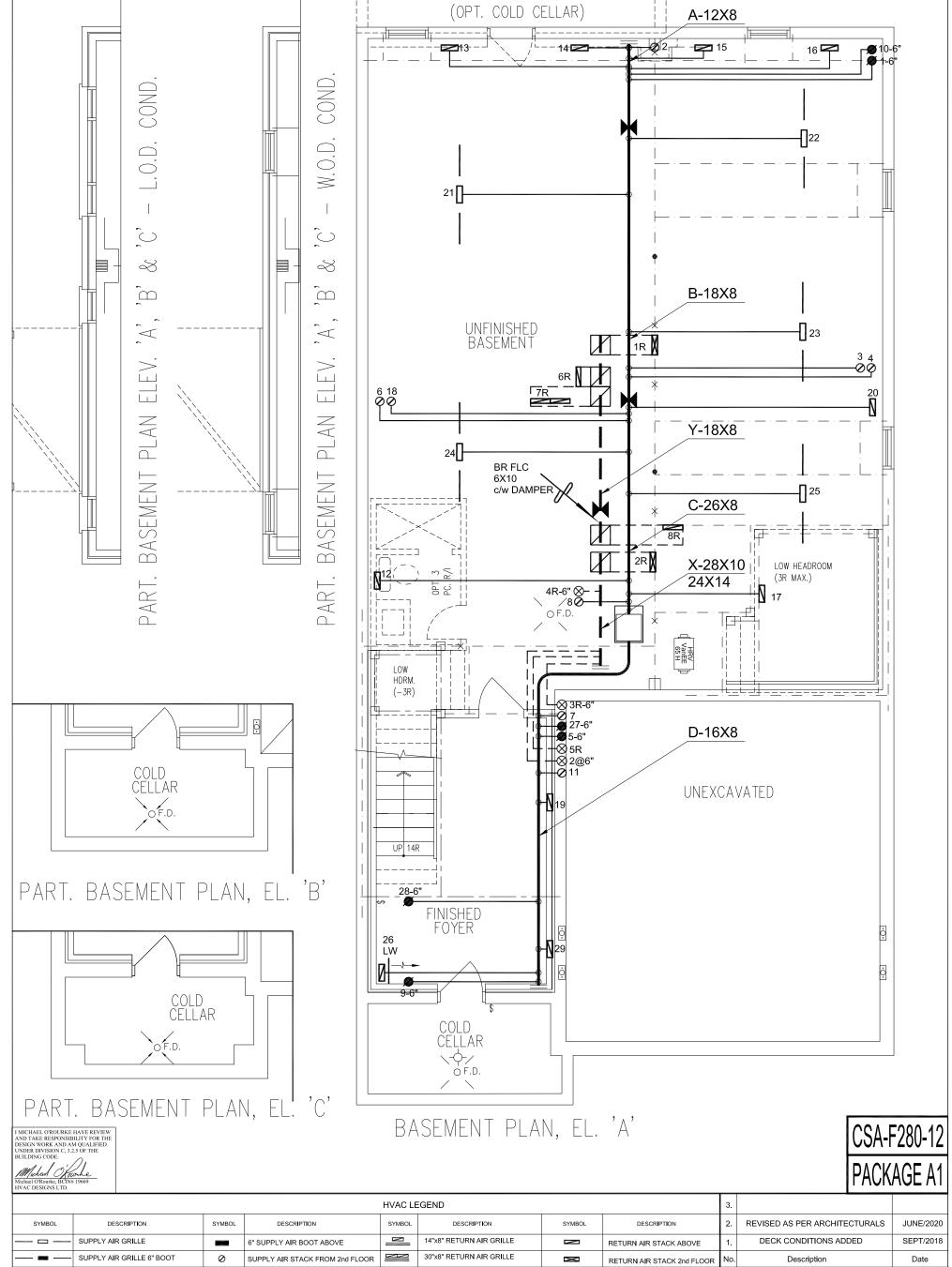


Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Stati	on Des	cript	ion		
Province:	Ontar	io			
Region:	Vaugl	nan (W	oodbr	idge)	
Weather Station Location:	Open	flat te	rrain, g	grass	
Anemometer height (m):	10				
Local S	hieldin	g			
Building Site:	Subui	ban, f	orest		
Walls:	Heavy	/			
Flue:	Heavy	/			
Highest Ceiling Height (m):	7.01				
Building Co	onfigura	ation			
Туре:	Detac	hed			
Number of Stories:	Two				
Foundation:	Full				
House Volume (m³):	1374.	7			
Air Leakage	/Venti	atior	1		
Air Tightness Type:	Prese	nt (196	61-) (3.	57 ACH	⊣)
Custom BDT Data:	ELA @	9 10 Pa	Э.		1832.5 cm ²
	3.57				ACH @ 50 Pa
Mechanical Ventilation (L/s):	To	tal Sup	ply		Total Exhaust
, , ,		73.2			73.2
Flue	Size				
Flue #:	#1	#2	#3	#4	
Diameter (mm):	0	0	0	0	
Natural Infil	tration	Rate	:S		
Heating Air Leakage Rate (ACH/H)):	C	.34	0	
Cooling Air Leakage Rate (ACH/H)	:	C).12	4	

TYPE: 4004 THE DALERIDGE



FRA- FLOOR RETURN AIR GRILLE SUPPLY AIR BOOT ABOVE . **REVISIONS** 6" SUPPLY AIR STACK 2nd FLOOR ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.® AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE

USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

FAN SPEED

1525

GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO

THE DALERIDGE 4004

3341 sqft

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.

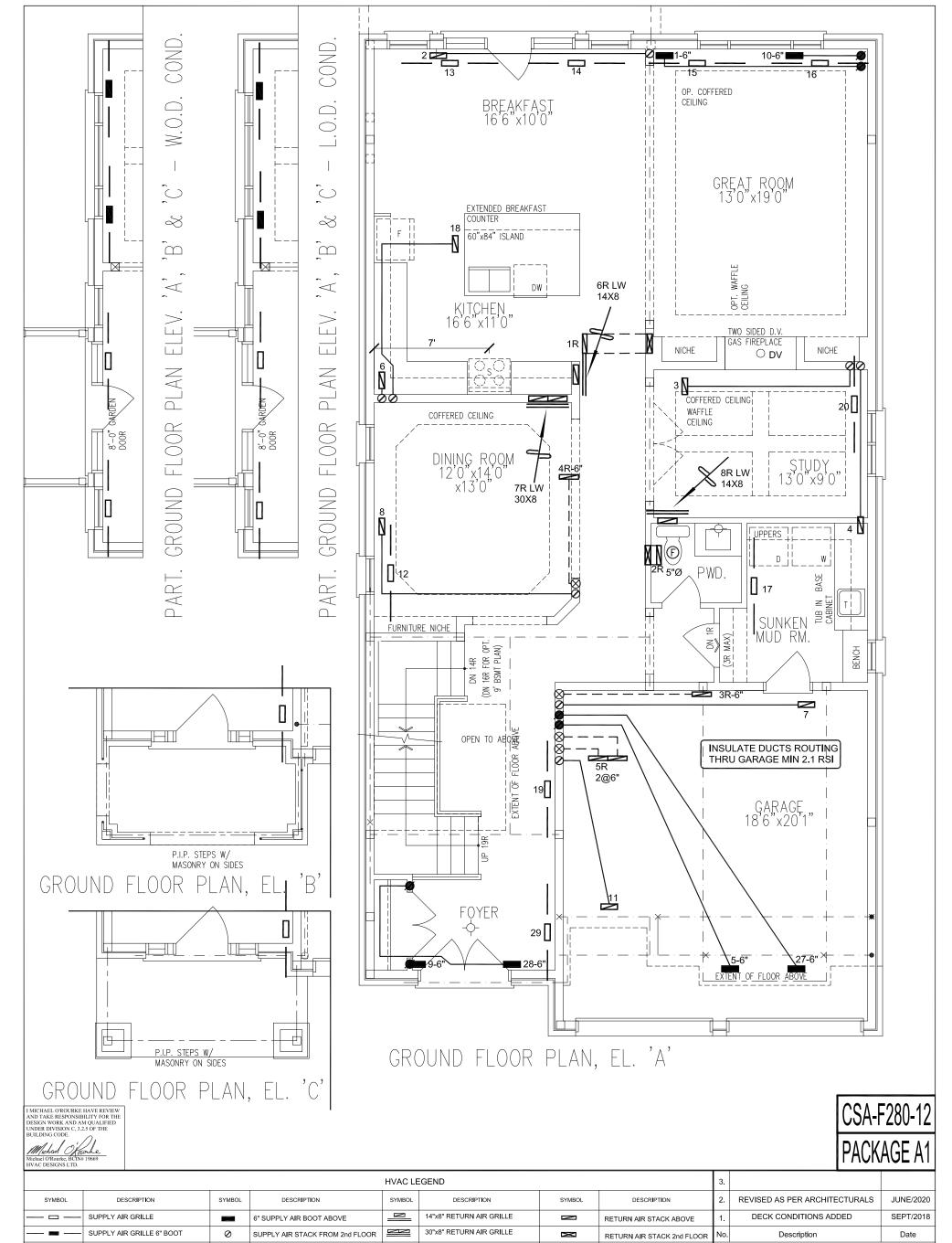
HEAT LOSS 66896	BTU/H	# OF RUNS	S/A	R/A	FANS	S
UNIT DATA		3RD FLOOR				
MAKE LENNOX		2ND FLOOR	14	5	5	
MODEL EL296UH090XE48	вс	1ST FLOOR	9	3	2	
INPUT 88	MBTU/H	BASEMENT	6	1	0	D
оитрит 85	MBTU/H	ALL S/A DIFFU				s
COOLING 4.0	TONS	ON LAYOUT. A UNLESS NOTE	LL S/A	RUN	S 5"Ø	-

ON LAYOUT. UNDERCUT

DOORS 1" min. FOR R/A

cfm @ 0.6" w.c

BASEMENT **HEATING** LAYOUT JAN/2018 3/16" = 1'-0" Scale BCIN# 19669 77459 LO#



FRA- FLOOR RETURN AIR GRILLE SUPPLY AIR BOOT ABOVE **REVISIONS** 9 6" SUPPLY AIR STACK 2nd FLOOR ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.® AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE

GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO

THE DALERIDGE

ONTARIO BUILDING CODE.

4004 3341 sqft

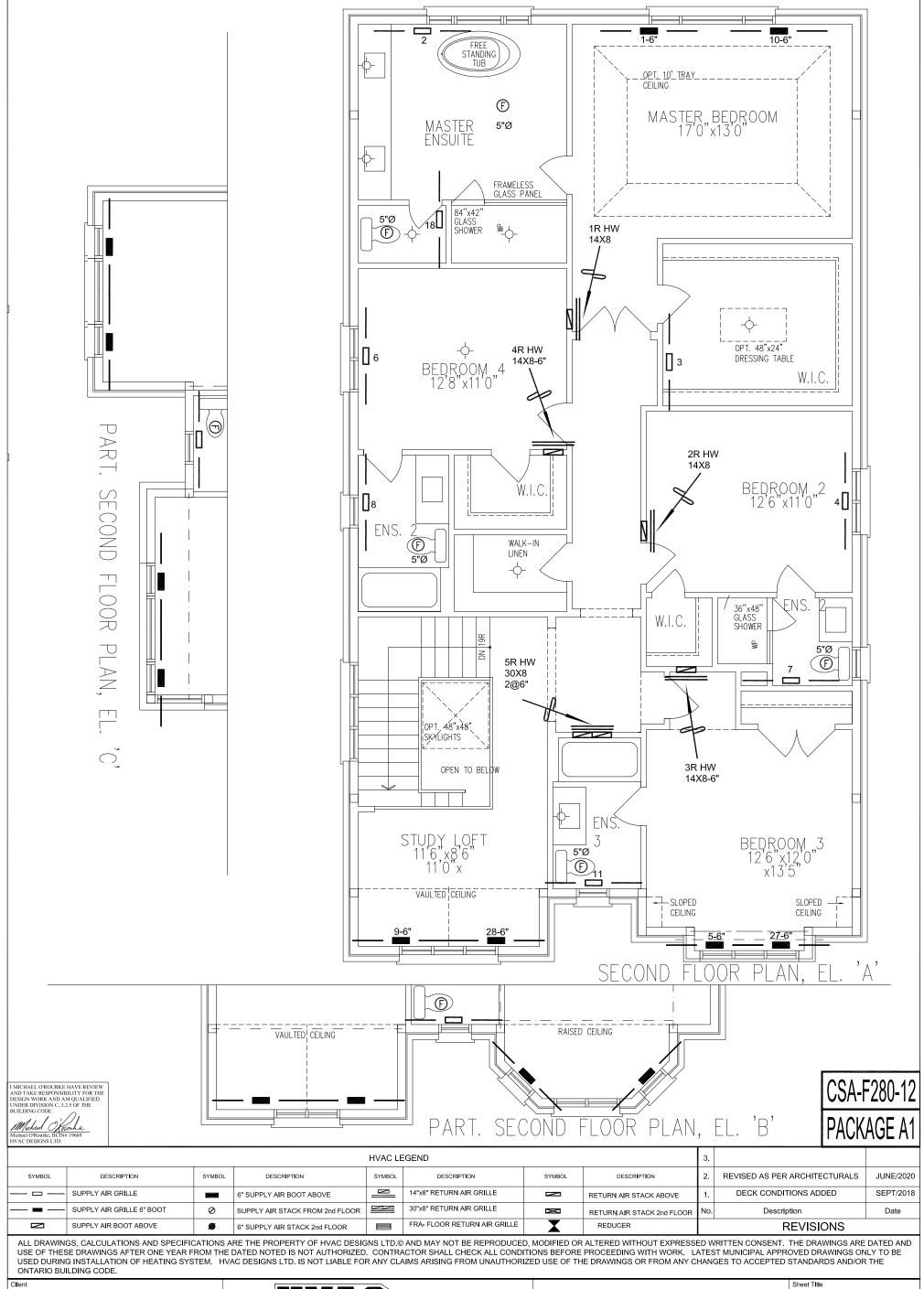
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Specializing in Residential Mechanical Design Services

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

JAN/2018 Date 3/16" = 1'-0" BCIN# 19669



GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO

THE DALERIDGE

4004 3341 sqft

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

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SECOND FLOOR **HEATING LAYOUT**

JAN/2018 3/16" = 1'-0" BCIN# 19669

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information				
Building number, street name			Unit no.	Lot/con.
Municipality	Postal code	Plan number/ other des	cription	<u> </u>
VAUGHAN (WOODBRIDGE)			•	
B. Individual who reviews and	akes responsibility	for design activities		
Name	·	Firm		
MICHAEL O'ROURKE		HVAC DESIGNS LTD.	lu s	li u
Street address 375 FINLEY AVE			Unit no. 202	Lot/con. N/A
Municipality	Postal code	Province	E-mail	INA
AJAX	L1S 2E2	ONTARIO	info@hvacdesigns.ca	
Telephone number	Fax number	•	Cell number	
(905) 619-2300	(905) 619-2375	5	()	
C. Design activities undertaker	by individual ident	ified in Section B. [Buil	ding Code Table 3.5.2.1	OF Division C]
☐ House	⊠ HVA	C – House	☐ Building S	Structural
☐ Small Buildings	Build	ing Services	Plumbing	– House
☐ Large Buildings		ction, Lighting and Pov Protection		 All Buildings ewage Systems
☐ Complex Buildings Description of designer's work	☐ Fire F			ewage Systems
HEAT LOSS / GAIN CALCULATION	s	Model:	4004 THE DALERIDGE	
DUCT SIZING	_		OPT. 5 BEDROOM	
RESIDENTIAL MECHANICAL VENT	ILATION DESIGN SUN	IMARY Project:	PINE VALLEY & TESTON	
RESIDENTIAL SYSTEM DESIGN pe	r CSA-F280-12			
D. Declaration of Designer				
MICHAEL O'ROUR	(print name)		declare that (choose	one as appropriate):
D. Lynyiaus and take recommend	,	de am babalf of a firm variate	and and an autocation 2.2.4	-f
		nd the firm is registered, in	ered under subsection 3.2.4. the appro	opriate
Individual BCII	ı.			
Firm BCIN:	N			
		I am qualified in the approp sion C, of the Building Code		
J G		o.o o, oo Daag ooa.	•	
Individual BCIN Basis for exem		and qualification:	O.B.C SENTENCE	3 2 4 1 (4)
		•		
☐ The design work is exemp Basis for exemption from			irements of the Building Cod	de.
I certify that:				
The information conta I have submitted this		edule is true to the best of n wledge and consent of the		
			mel 1 1 - 2'2	01
June 4, 2020			Michael O'Ko	unhe.
Date			Signatu	ire of Designer

NOTE

^{1.} For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.

^{2.} Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.



	PINE V									BEDRO				12-220	122.22			DATE:										RATE					ΔT°F.				CSA-F280-1
BUILDER: (GOLD	PARK	OMES			_		TYPE:	4004	THE DA	LERIDO	SE .		GFA:	3341			LO# 7			_			RNAT	_	AIR CH	ANGE		0.124		HEAT	_	ΔT°F.			SB-12	ACKAGE A
ROOM USE				MBR			ENS			WIC		1	BED-2		1	BED-3	4	3	BED-4		1	ENS-2/3	1		BED-	5		LOFT		1	ENS-4/5	5		WIC-	3		
EXP. WALL				33			25			10			11		l	34			10		l	6			10			40	- 1		6		1	6			
CLG. HT.				10			9			9			9		l	9			9		l	9			9			9	- 1		9		1	9			
l	FACTO	RS													l						l								- 1				1				
GRS.WALL AREA	LOSS	GAIN		330			225		l	90		l	99		ı	306			90		l	54			90			360	- 1		54			54			
GLAZING				LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN	l	LOSS	GAIN	ı	oss	GAIN	l	LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN	1	LOSS	GAIN		
NORTH	21.3	16.0	0	0	0	0	0	0	6	128	96	18	383	288	0	0	0	0	0	0	8	170	128	0	0	0	0	0	0	0	0	0	0	0	0		
	21.3	39.2	0	0	0	0	0	0	0	0	0	0	0	0	60	1277	2354	0	0	0	0	0	0	0	0	0	55	1170	2158	0	0	0	16	340	628		
	21.3	24.3	0	0	0	8	170	195	0	0	0	0	0	0	0	0	0	18	383	438	0	0	0	18	383	438	30	638	730	0	0	0	0	0	0		
100000000	21.3	39.2	40	851	1569	16	340	628	o	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		
	37.2	103.0	0	0	0	0	0	0	ő	0	0	0	0	0	4	149	412	0	0	0	4	149	412	0	0	0	4	149	412	0	0	0	4	149			
DOORS	25.2	5.2	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	0	0	0		
NET EXPOSED WALL	4.5	0.9	290	1294	269	201	897	186	84	375	78	81	361	75	246	1098	228	72	321	67	46	205	43	72	321	67	275	1227	255	54	241	50	38	170			
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	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	0	0	0		
		2000	193555		1970		50.77				- 53	3.5	11.77	200		3.753				3375.7	45.50		977	235		377/21			10000	11.7	1000		70122	100			
EXPOSED CLG	1.3	0.6	270	347	172	154	198	98	160	205	102	176	226	112	170	218	109	160	205	102	80	103	51	160	205	102	232	298	148	96	123	61	104	133			
NO ATTIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0	0	0	0	0	0	0	50	137	68	0	0	0	0	0	0	0	0	0	50	137	68	0	0	0	0	0	0		
EXPOSED FLOOR	2.6	0.5	0	0	0	0	0	0	0	0	0	0	0	0	224	571	119	0	0	0	30	77	16	0	0	0	0	0	0	84	214	45	72	184	38		
BASEMENT/CRAWL HEAT LOSS				0			0			0			0		1	0			0			0			0			0			0		1	0			
SLAB ON GRADE HEAT LOSS				0			0			0			0		I	0			0			0			0			0			0		1	0			
SUBTOTAL HT LOSS				2492			1605			708			970		l	3450			910		l	704			910			3620	- 1		578		1	976			
SUB TOTAL HT GAIN					2011			1107			276			475	1		3290			607			650			607			3771			156	1		1180		
LEVEL FACTOR / MULTIPLIER			0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27		0.20	0.27	8	0.20	0.27		0.20	0.27		0.20	0.27	9		
AIR CHANGE HEAT LOSS				661			426			188			257			915			241			187			241			960	- 1		153			259			
AIR CHANGE HEAT GAIN					179			98			25			42	l		292			54	l		58			54			335			14	1		105		
DUCTLOSS				0	500		0			0			0		l	437	2,50,30,10		0		l	89	100		0	0.64		0			73		1	124			
DUCT GAIN					0			0			0			0	l		444			0	l		71			0			0			17	1		128		
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240	1		240	0		0	1		240	0		0	0		0	0		0		
HEAT GAIN APPLIANCES/LIGHTS					621	03		0	100		0	100		621			621			621	100		0	2.77		621			621			0	- 55		0		
TOTAL HT LOSS BTU/H				3153	55.5		2031			896			1228		l	4802	294594		1151	35.00	l	979	7.2		1151	1 222		4581	174.000		805			1359)		
TOTAL HT GAIN x 1.3 BTU/H					4277			1567			391			1792	l		6353			1978			1012			1978			6145			243			1837		
															i.					-			-														
ROOM USE				DIN						KT/GT																								LOD)		BAS
EXP. WALL															1	LN/MD						FOY		- 9	STUD	Y			- 1					LOD			540
				24						76						LN/MD 21	5					FOY 50		1	10	Y								42			180
CLG. HT.		rauco.		24 11																				1		Y											
CLG. HT.	FACTO	RS								76						21						50		1	10	Y								42			180
CLG. HT.		19575000								76						21						50			10	Y								42			180
CLG. HT.		19575000		11	GAIN					76 11	GAIN					21 13 273	GAIN					50 11	GAIN		10 11 110	Y S GAIN								42 10 420			180 10
CLG. HT. GRS.WALL AREA		19575000	0	11 264	GAIN 0				0	76 11 836	GAIN 0				8	21 13 273	GAIN 128				0	50 11 550	GAIN 0	23	10 11 110	errau-110							0	42 10 420		6	180 10 1512
CLG. HT. I GRS.WALL AREA GLAZING NORTH	LOSS	GAIN	0	11 264 LOSS	1833.00				0 0	76 11 836 LOSS					8	21 13 273 LOSS					0 45	50 11 550 LOSS	>77	5/1/201	10 11 110 LOSS	S GAIN							0	42 10 420 LOS	S GAIN	6	180 10 1512 LOSS GAI
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	21.3	GAIN 16.0	100000	264 LOSS 0	0				0 0	76 11 836 LOSS 0	0				8 0	21 13 273 LOSS 170	128				83594	50 11 550 LOSS 0	0	23	10 11 110 LOSS 489	6 GAIN 368							0 0	42 10 420 LOS: 0	S GAIN 0	- 3	180 10 1512 LOSS GAI 128 96
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH	21.3 21.3	16.0 39.2	0	264 LOSS 0 0	0				- 50	76 11 836 LOSS 0	0					21 13 273 LOSS 170	128 0				45	50 11 550 LOSS 0 958	0 1765	23 0	10 11 110 LOSS 489 0	6 GAIN 368 0							0 0 0 30	42 10 420 LOS: 0	S GAIN 0 0	0	180 10 1512 LOSS GAI 128 96 0 0
CLG. HT. I GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	21.3 21.3 21.3 21.3	16.0 39.2 24.3	0 26	264 LOSS 0 0 553	0 0 632				0	76 11 836 LOSS 0 0	0 0 0				0	21 13 273 LOSS 170	128 0 0				45 0	50 11 550 LOSS 0 958 0	0 1765 0	23 0 0	10 11 110 LOSS 489 0	6 GAIN 368 0 0							0	42 10 420 LOSS 0 0	S GAIN 0 0	0	180 10 1512 LOSS GAI 128 96 0 0
CLG. HT. I GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	21.3 21.3 21.3 21.3 21.3	16.0 39.2 24.3 39.2	0 26 0	264 LOSS 0 0 553	0 0 632 0				0 150	76 11 836 LOSS 0 0 0 3192	0 0 0 5884				0	21 13 273 LOSS 170 0 0	128 0 0				45 0 0	50 11 550 LOSS 0 958 0	0 1765 0 0	23 0 0	10 11 110 LOSS 489 0 0	368 0 0							0 0 30	42 10 420 LOS: 0 0 0 638	S GAIN 0 0 0 1177	0 0	180 10 1512 LOSS GAI 128 96 0 0 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	21.3 21.3 21.3 21.3 21.3 37.2	16.0 39.2 24.3 39.2 103.0	0 26 0 0	264 LOSS 0 0 553 0	0 0 632 0				0 150 0	76 11 836 LOSS 0 0 0 3192	0 0 0 5884 0				0 0	21 13 273 LOSS 170 0 0	128 0 0 0 0				45 0 0 0	50 11 550 LOSS 0 958 0	0 1765 0 0	23 0 0 0	10 11 110 LOSS 489 0 0	368 0 0 0							0 0 30 0	42 10 420 LOSS 0 0 0 638	S GAIN 0 0 0 1177	0 0 0	180 10 1512 LOSS GAI 128 96 0 0 0 0 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	21.3 21.3 21.3 21.3 21.3 37.2 25.2	16.0 39.2 24.3 39.2 103.0 5.2	0 26 0 0	264 LOSS 0 0 553 0	0 0 632 0 0				0 150 0 0	76 11 836 LOSS 0 0 0 3192 0	0 0 0 5884 0				0 0 0 20	21 13 273 LOSS 170 0 0 0 0 505	128 0 0 0 0 0 105				45 0 0 0 20	50 11 550 LOSS 0 958 0 0 0 505	0 1765 0 0 0 105	23 0 0 0 0	10 11 110 LOSS 489 0 0 0	368 0 0 0 0							0 0 30 0	42 10 420 LOSS 0 0 0 638 0	S GAIN 0 0 0 1177 0 0	0 0 0 0 0	180 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 0 0 1010 210
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5	16.0 39.2 24.3 39.2 103.0 5.2 0.9	0 26 0 0 0 238	264 LOSS 0 0 553 0 0 0	0 0 632 0 0 0 221				0 150 0 0 686	76 11 836 LOSS 0 0 0 3192 0 0 3061	0 0 5884 0 0 636				0 0 0 20 245	21 13 273 LOSS 170 0 0 0 0 505 1093	128 0 0 0 0 105 227				45 0 0 0 20 485	50 11 550 LOSS 0 958 0 0 0 505 2164	0 1765 0 0 0 105 450	23 0 0 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 388	368 0 0 0 0 0							0 0 30 0 0	42 10 420 LOSS 0 0 0 638 0 0	S GAIN 0 0 0 1177 0 0	0 0 0 0 40	180 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 0 0 1010 210 0 0
CLG. HT. I GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3	16.0 39.2 24.3 39.2 103.0 5.2 0.9	0 26 0 0 0 238	264 LOSS 0 0 553 0 0 0 1062	0 0 632 0 0 0 221				0 150 0 0 686 0	76 11 836 LOSS 0 0 0 3192 0 0 3061 0	0 0 5884 0 0 636				0 0 0 20 245 0	21 13 273 LOSS 170 0 0 0 0 505 1093	128 0 0 0 0 105 227 0				45 0 0 0 20 485 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0	0 1765 0 0 0 105 450	23 0 0 0 0 0 87 0	10 11 110 LOSS 489 0 0 0 0 0 388 0	368 0 0 0 0 0 0							0 0 30 0 0 0 222	42 10 420 LOS: 0 0 0 638 0 0 0 799	S GAIN 0 0 0 1177 0 0	0 0 0 0 40 0 288	180 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 0 0 1010 210 0 0 1036 215
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED SEM WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6	16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6	0 26 0 0 0 238 0	11 264 LOSS 0 0 553 0 0 0 1062 0	0 0 632 0 0 0 221 0				0 150 0 0 686 0	76 11 836 LOSS 0 0 0 3192 0 0 3061 0	0 0 5884 0 0 636 0				0 0 0 20 245 0	21 13 273 LOSS 170 0 0 0 0 505 1093	128 0 0 0 0 105 227 0				45 0 0 0 20 485 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0	0 1765 0 0 0 105 450 0	23 0 0 0 0 0 0 87	10 11 110 LOSS 489 0 0 0 0 0 388 0	368 0 0 0 0 0 81							0 0 30 0 0 0 222 0	42 10 420 LOSS 0 0 638 0 0 0 799	S GAIN 0 0 1177 0 0 166	0 0 0 0 40 0 288	180 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 0 0 1010 210 0 0 1036 215 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED FLOOR	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	11 264 LOSS 0 0 553 0 0 0 1062 0	0 0 632 0 0 0 221 0				0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0	0 0 5884 0 0 636 0				0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0	128 0 0 0 0 105 227 0 0				45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0 0	0 1765 0 0 0 105 450 0	23 0 0 0 0 0 87 0 0	10 11 110 LOSS 489 0 0 0 0 0 388 0	368 0 0 0 0 0 81 0							0 0 30 0 0 0 222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 0 40 0 288 0	180 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 1010 210 0 0 1036 215 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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 CLOR BASEMENT/CRAWL HEAT LOSS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	11 264 LOSS 0 0 553 0 0 0 1062 0	0 0 632 0 0 0 221 0				0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0	0 0 5884 0 0 636 0				0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0	128 0 0 0 0 105 227 0 0				45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0 0	0 1765 0 0 0 105 450 0	23 0 0 0 0 0 87 0 0	10 11 110 LOSS 489 0 0 0 0 0 388 0 0 0	368 0 0 0 0 0 81 0							0 0 30 0 0 0 222 0	42 10 420 LOSS 0 0 638 0 0 0 799 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 0 40 0 288 0	180 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 1010 210 0 0 0 1010 215 0 0 0
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 EXPOSED CLO BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	11 264 LOSS 0 0 553 0 0 1062 0 0 0	0 0 632 0 0 0 221 0				0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0	0 0 5884 0 0 636 0				0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0	128 0 0 0 0 105 227 0 0				45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0	0 1765 0 0 0 105 450 0	23 0 0 0 0 0 87 0 0	10 11 110 LOSS 489 0 0 0 0 388 0 0 0	368 0 0 0 0 0 81 0							0 0 30 0 0 0 222 0	420 10 420 0 0 638 0 0 0 799 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 0 40 0 288 0	180 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 1010 210 0 0 1036 218 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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 LOSS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	11 264 LOSS 0 0 553 0 0 0 1062 0 0	0 0 632 0 0 0 221 0 0				0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0	0 0 5884 0 0 636 0 0				0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0 0 0	128 0 0 0 0 105 227 0 0				45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0	0 1765 0 0 0 105 450 0 0	23 0 0 0 0 0 87 0 0	10 11 110 LOSS 489 0 0 0 0 0 388 0 0 0	6 GAIN 368 0 0 0 0 0 81 0 0							0 0 30 0 0 0 222 0	420 10 4200 0 0 638 0 0 0 799 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 0 40 0 288 0	180 10 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 0 1010 211 0 0 0 1036 215 0 0 0 0 0 5900 8074
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSING	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	11 264 LOSS 0 0 553 0 0 1062 0 0 0 0	0 0 632 0 0 0 221 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 0	0 0 5884 0 0 636 0				0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0	128 0 0 0 0 105 227 0 0				45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 0 105 450 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 388 0 0 0 0 0 0 0 0 0 0 0 0 0	368 0 0 0 0 0 81 0							0 0 30 0 0 0 222 0	420 10 420 0 0 638 0 0 0 799 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 40 0 288 0 0	180 10 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 0 1016 210 0 0 0 0 0 1036 215 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG CEXPOSED CLG OATTIC EXPOSED CLG EXPOSED LOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	11 264 LOSS 0 0 553 0 0 1062 0 0 0 1615	0 0 632 0 0 0 221 0 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 0 3192 0 0 3061 0 0 0 0 0 3062 3	0 0 5884 0 0 636 0 0				0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 0	128 0 0 0 0 105 227 0 0				45 0 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 0 105 450 0 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 368 0 0 0 0 0 81 0 0							0 0 30 0 0 0 222 0	420 10 420 0 0 638 0 0 0 799 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 40 0 288 0 0	180 10 10 1512 LOSS GAI 128 96 0 0 0 0 0 1010 210 0 0 0 1036 215 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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 NO ATTIC EXPOSED CLG SEXPOSED LOOR BASEMENT/CRAWL HEAT LOSS SUB TOTAL HT LOSS SUB TOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	11 264 LOSS 0 0 553 0 0 1062 0 0 0 0	0 0 632 0 0 0 221 0 0 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 0	0 0 5884 0 0 636 0 0 0				0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0	128 0 0 0 105 227 0 0 0				45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 105 450 0 0 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 388 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 368 0 0 0 0 81 0 0 0							0 0 30 0 0 0 222 0	420 10 420 0 0 0 638 0 0 0 799 0 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 40 0 288 0 0	180 10 10 1512 LOSS GAIL 128 96 0 0 0 0 0 0 1010 210 0 0 0 0 1036 215 0 0 0 0 5990 8074 521 1.18 11224
GRS.WALL AREA GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL MET EXPOSED BANTWALL ABOVE GR EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	111 264 LOSS 0 0 553 0 0 1062 0 0 0 1615	0 0 632 0 0 0 221 0 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 6253	0 0 5884 0 0 636 0 0				0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 0	128 0 0 0 0 105 227 0 0				45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 0 105 450 0 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 368 0 0 0 0 0 81 0 0							0 0 30 0 0 0 222 0	420 10 420 0 0 0 638 0 0 0 799 0 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 40 0 288 0 0	180 10 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 0 0 1036 215 0 0 0 0 0 5990 8874 521 1.18 11224
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR MUL TIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	11 264 LOSS 0 0 553 0 0 1062 0 0 0 1615	0 0 632 0 0 0 221 0 0 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 0 3192 0 0 3061 0 0 0 0 0 3062 3	0 0 5884 0 0 636 0 0 0				0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 0	128 0 0 0 0 105 227 0 0 0				45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 105 450 0 0 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 368 0 0 0 0 0 0 81 0 0 0 0 448							0 0 30 0 0 0 222 0	420 10 420 0 0 0 638 0 0 0 799 0 0	S GAIN 0 0 1177 0 0 166 0	0 0 0 40 0 288 0 0	180 10 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 0 1036 215 0 0 0 0 0 0 1036 215 0 0 0 0 0 1036 215 1.18 11224 0 166 0
GLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL MET EXPOSED WALL MET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG EXPOSED CLG EXPOSED TOOR BASEMENT/CRAWL HEAT LOSS SUB TOTAL HT COSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0 0	111 264 LOSS 0 0 553 0 0 1062 0 0 0 1615	0 0 632 0 0 0 221 0 0 0 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 6253	0 0 5884 0 0 636 0 0 0				0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 0	128 0 0 0 0 105 227 0 0 0 460				45 0 0 20 485 0 0 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 105 450 0 0 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 368 0 0 0 0 0 81 0 0 0 0 0 448 448 40 0							0 0 30 0 0 0 222 0 0	420 10 420 0 0 0 638 0 0 0 799 0 0	S GAIN 0 0 0 1177 0 0 0 1666 0 0 0 7 1343	0 0 0 40 0 288 0 0	180 10 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 1010 210 0 0 0 0 1036 215 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
GLG. 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 NO ATTIC EXPOSED CLG NO ATTIC EXPOSED LOSS SUBTOTAL HT LOSS SUBTOTAL HT LOSS SUB TOTAL HT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN HEAT GAIN PEOPLE	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0	111 264 LOSS 0 0 553 0 0 1062 0 0 0 1615	0 0 632 0 0 0 221 0 0 0 0 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 6253	0 0 58884 0 0 636 0 0 0 0 0				0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 0	128 0 0 0 105 227 0 0 0 0 460				45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 105 450 0 0 0 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 368 0 0 0 0 0 811 0 0 0 0 4448 440 0 0 0							0 0 30 0 0 0 222 0	420 10 420 0 0 0 638 0 0 0 799 0 0	S GAIN 0 0 0 1177 0 0 0 1666 0 0 0 0 1343	0 0 0 40 0 288 0 0	180 10 10 1512 LOSS GAIL 128 96 0 0 0 0 0 0 0 1010 211 0 0 0 1036 215 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
GLG. 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 SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0 0	111 264 LOSS 0 0 553 0 0 1062 0 0 1615 0.48 769	0 0 632 0 0 0 221 0 0 0 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 0 3061 0 0 0 6253	0 0 5884 0 0 636 0 0 0				0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	128 0 0 0 0 105 227 0 0 0 460				45 0 0 20 485 0 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 105 450 0 0 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 368 0 0 0 0 0 81 0 0 0 0 0 448 448 40 0							0 0 30 0 0 0 222 0 0	420 10 420 10 0 0 0 0 0 0 0 14377	S GAIN 0 0 0 11777 0 0 0 1666 0 0 0 0 1343	0 0 0 0 40 0 288 0 0 0	180 10 10 1512 LOSS GAI 128 96 0 0 0 0 0 0 1036 215 0 0 0 0 0 0 1036 215 1.18 11224 166 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
GLG. 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 NO ATTIC EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT LOSS SUB TOTAL HT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT GAIN HEAT GAIN PEOPLE	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 16.0 39.2 24.3 39.2 103.0 5.2 0.9 0.7 0.6 1.4	0 26 0 0 0 238 0 0 0	111 264 LOSS 0 0 553 0 0 1062 0 0 0 1615	0 0 632 0 0 0 221 0 0 0 0 0				0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 6253	0 0 58884 0 0 636 0 0 0 0 0				0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 0	128 0 0 0 105 227 0 0 0 0 460				45 0 0 20 485 0 0 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0 0 0 0 3627	0 1765 0 0 105 450 0 0 0 0	23 0 0 0 0 0 87 0 0 0	10 11 110 LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 368 0 0 0 0 0 811 0 0 0 0 4448 440 0 0 0							0 0 30 0 0 0 222 0 0	420 10 420 0 0 0 638 0 0 0 799 0 0	S GAIN 0 0 0 11777 0 0 0 1666 0 0 0 0 1343	0 0 0 0 40 0 288 0 0 0	180 10 10 1512 LOSS GAIL 128 96 0 0 0 0 0 0 0 1010 211 0 0 0 1036 215 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

TOTAL HEAT GAIN BTU/H:

49107

TONS: 4.09

LOSS DUE TO VENTILATION LOAD BTU/H: 3181

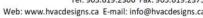
STRUCTURAL HEAT LOSS: 63747

TOTAL COMBINED HEAT LOSS BTU/H: 66928

Mhehad Oxounde.



			ALLEY & PARK HO						OPT. 5 B 4004 THI	E DALE			DATE:	Jun-20			GFA:	3341	LO#	77460				
HEATING CFM TOTAL HEAT LOSS AIR FLOW RATE CFM	63,747	,		OLING CFM HEAT GAIN RATE CFM	48,445		а	fun a/c coil vailable	pressure pressure pressure r s/a & r/a	0.6 0.05 0.2 0.35						EL	.296UH09 FAN		LENNO 90	x		AFUE = (BTU/H) = (BTU/H) =	88,000	
RUN COUNT	4th	3rd	2nd	1st	Bas													EDLOW	0		DESI	GN CFM =		
S/A R/A	0	0	14	3	6	d			essure s/a ress. loss	0.18	r/a		pressure ess. Loss					MEDIUM IM HIGH	1105 1255			CFM @ .6	6 " E.S.P.	
All S/A diffusers 4"x10" unle	ess note	d otherw	ise on lay			ti.			ssure s/a	0.16			ssure r/a					HIGH	1525	Т	EMPERAT	URE RISE	52	°F
All S/A runs 5"Ø unless not	ed other							_		- 10		- 10	- 10		- 15			10	- 10					
RUN # ROOM NAME	1 MBR	2 ENS	3 WIC	4 BED-2	5 BED-3	6 ENS-4/5	7 ENS-2/3	8 BED-5	9 LOFT	10 MBR	11 WIC-3	12 DIN	13 KT/GT	14 KT/GT	15 KT/GT	16 KT/GT	17 LN/MD	18 BED-4	19 FOY	20 STUDY	21 BAS	22 BAS	23 BAS	24 BAS
RM LOSS MBH.	1.58	2.03	0.90	1.23	2.40	0.81	0.98	1.15	2.29	1.58	1.36	2.38	2.31	2.31	2.31	2.31	2.61	1.15	2.68	1.30	3.46	3.46	3.46	3.46
CFM PER RUN HEAT	38	49	21	29	57	19	23	28	55	38	32	57	55	55	55	55	62	28	64	31	83	83	83	83
RM GAIN MBH.	2.14	1.57	0.39	1.79	3.18	0.24	1.01	1.98	3.07	2.14	1.84	2.01	2.51	2.51	2.51	2.51	1.46	1.98	1.64	1.44	0.44	0.44	0.44	0.44
CFM PER RUN COOLING	67	49	12	56	100	8	32	62	97	67	58	63	79	79	79	79	46	62	52	45	14	14	14	14
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	71 200	58	51 150	49	42 190	40 150	37	33	44	63 210	35 180	18	45 140	37	39	46 150	11	55 140	16 140	27	36 100	39 90	28	21 110
EQUIVALENT LENGTH TOTAL EFFECTIVE LENGTH	271	150 208	201	180 229	232	190	220 257	200	140 184	273	215	130 148	185	150 187	160 199	196	160 171	195	156	80 107	136	129	110 138	131
ADJUSTED PRESSURE	0.06	0.08	0.09	0.08	0.07	0.09	0.07	0.07	0.09	0.06	0.08	0.12	0.09	0.09	0.09	0.09	0.1	0.09	0.11	0.16	0.12	0.13	0.12	0.12
ROUND DUCT SIZE	5	5	4	5	6	4	4	5	6	5	5	4	5	5	5	5	5	5	5	4	5	5	5	5
HEATING VELOCITY (ft/min)	279	360	241	213	291	218	264	206	280	279	235	654	404	404	404	404	455	206	470	356	609	609	609	609
COOLING VELOCITY (ft/min)	492	360	138	411	510	92	367	455	495	492	426	723	580	580	580	580	338	455	382	516	103	103	103	103
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	Α	В	В	D	С	D	С	D	A	D	С	A	Α	A	Α	С	С	D	С	В	В	В	С
RUN#	25	26	27	28	29																			
ROOM NAME	BAS	BAS	BED-3	LOFT	FOY																			
RM LOSS MBH.	3.46	3.46	2.40	2.29	2.68																			
CFM PER RUN HEAT	83	83	57	55	64																			
RM GAIN MBH. CFM PER RUN COOLING	0.44	0.44	3.18	3.07 97	1.64 52																			
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.17																			
ACTUAL DUCT LGH.	19	32	48	57	25																			
EQUIVALENT LENGTH	120	120	200	200	120																			
TOTAL EFFECTIVE LENGTH	139	152	248	257	145																			
ADJUSTED PRESSURE	0.12	0.11	0.07	0.06	0.12																			
ROUND DUCT SIZE	5	5	6	6	5																			
HEATING VELOCITY (ft/min)	609	609	291	280	470																			
COOLING VELOCITY (ft/min) OUTLET GRILL SIZE	103 3X10	103 3X10	510 4X10	495 4X10	382 3X10																			
TRUNK	C	D	D	D	D																			
SUPPLY AIR TRUNK SIZE																	DETUDN /	AIR TRUN	(SIZE					
SOFFET AIR TROTTE SIZE	TRUNK	STATIC	ROUND	RECT			VELOCITY			TRUNK	STATIC	ROUND	RECT			VELOCITY	KETOKIT	TRUNK	STATIC	ROUND	RECT			VELOCITY
	CFM	PRESS.	DUCT	DUCT			(ft/min)			CFM	PRESS.	DUCT	DUCT			(ft/min)		CFM	PRESS.	DUCT	DUCT			(ft/min)
TRUNK A	345	0.06	10.1	12	×	8	518		TRUNK G	0	0.00	0	0	x	8	0	TRUNK O		0.06	0	0	×	8	0
TRUNK B	644	0.06	12.8	20	×	8	580		TRUNK H	0	0.00	0	0	×	8	0	TRUNK P	0	0.06	0	0	×	8	0
TRUNK C	1035	0.06	15.3	28	×	8	665		TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.06	0	0	×	8	0
TRUNK D TRUNK E	490	0.06	11.5	16	×	8	551 0		TRUNK J	0	0.00	0	0	×	8	0	TRUNK R	0	0.06	0	0	×	8	0
TRUNK F	ŏ	0.00	ő	0	x	8	o		TRUNK L	ő	0.00	0	o	×	8	ő	TRUNKT	o	0.06	o	ő	x	8	Ö
																	TRUNK U	0	0.06	0	0	×	8	0
RETURN AIR #	1	2	3	4	5	6	7	8	9							BR	TRUNK W	0	0.06	0	0	×	8	0
AIR VOLUME	0 120	0 185	0 85	0 95	0 120	0 145	0 305	0 145	0 85	0	0	0	0	0	0	240	TRUNK X	1320 655	0.06	16.7 12.9	28 20	×	10	679 590
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	0.15	TRUNKZ	0	0.06	0	0	×	8	0
ACTUAL DUCT LGH.	51	36	44	37	45	28	31	23	50	1	1	1	1	1	1	16	DROP	1525	0.06	17.7	24	x	14	654
EQUIVALENT LENGTH	175	155	205	165	165	190	185	195	195	o	ò	o	ò	ò	o	235	2.43420			100000000	1000	70		V5.50
TOTAL EFFECTIVE LH	226	191	249	202	210	218	216	218	245	1	1	1	1	1	1	251								
ADJUSTED PRESSURE	0.07	0.08	0.06	0.07	0.07	0.07	0.07	0.07	0.06	14.80	14.80	14.80	14.80	14.80	14.80	0.06								
ROUND DUCT SIZE	6.6	7.5	6	6	6.6	7	9.3	7	6	0	0	0	0	0	0	8.8								
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0	8								
INLET GRILL SIZE	14	14	X 14	X 14	X 14	X 14	X 30	X 14	X 14	0	0	0	X	0	0	X 30								
HALL I GRILL GIZE	14	14	14	- 17	14	14	30	-14			U	U	- 0	-	U	30	-							





TYPE: 4004 THE DALERIDGE SITE NAME: PINE VALLEY & TESTON

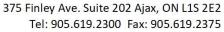
77460 LO# OPT. 5 BEDROOM

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL VENTILATION CAPACITY	9.32.3.5.
a) Direct vent (sealed combustion) only		Total Ventilation Capacity	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Ventil. Capacity155	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Supplemental Capacity 46.4	cfm
d) Solid Fuel (including fireplaces)		DDINGIDAL EVHALICT FAN CADACITY	
e) No Combustion Appliances		PRINCIPAL EXHAUST FAN CAPACITY Model: VANEE 65H Location:	BSMT
HEATING SYSTEM	\equiv	155.0 cfm 3.0 sones	✓ HVI Approved
✓ Forced Air Non Forced Air		PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
		CFM ΔT *F FACTOR 155.0 CFM X 76 F X 1.08	% LOSS X 0.25
Electric Space Heat		SUPPLEMENTAL FANS NUTONE	
		Location Model cfm	HVI Sones
HOUSE TYPE	9.32.1(2)	ENS QTXEN050C 50	✓ 0.3
		ENS-2/3 QTXEN050C 50	✓ 0.3
✓ I Type a) or b) appliance only, no solid fuel		ENS-4/5 QTXEN050C 50	√ 0.3
		PWD QTXEN050C 50	✓ 0.3
II Type I except with solid fuel (including fireplaces	5)	HEAT RECOVERY VENTILATOR	9.32.3.11.
III Any Type c) appliance		Model: VANEE 65H	3.32.3.11.
m yany type oyapphanoo		155 cfm high 64	cfm low
IV Type I, or II with electric space heat			
Other: Type I, II or IV no forced air		75 % Sensible Efficiency @ 32 deg F (0 deg C)	✓ HVI Approved
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	LOCATION OF INSTALLATION	
STSTEM DESIGN OF HONS	O.N.H.W.F.	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		Roll # Building Permit	1#
4 HRV with Ducting/non forced air system		BUILDER: GOLD PARK HOMES	
Part 6 Design		Name:	
TOTAL VENTILATION CAPACITY	9.32.3.3(1)	Address:	
Basement + Master Bedroom 2 @ 21.2 cfm 42.4	cfm	City:	
Other Bedrooms <u>4</u> @ 10.6 cfm <u>42.4</u>	cfm	Telephone #: Fax #:	
Kitchen & Bathrooms5@ 10.6 cfm53	cfm	INSTALLING CONTRACTOR	
Other Rooms <u>6</u> @ 10.6 cfm <u>63.6</u>	cfm	Name:	
Table 9.32.3.A. TOTAL <u>201.4</u>	cfm	Address:	
		City:	
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)		
1 Bedroom 31.8	cfm	Telephone #: Fax #:	
31.0		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: Meber Ofmule	
5 Bedroom 95.4	cfm	HRAI # 001820	
TOTAL 95.4 cfm	IEIED IN THE	Date: June-20 PPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C. 3.2.5 OF THE BUILI	DING CODE
I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUAL	LIFTIELD IN THE AP	PERSONNEL CALEGORIA AS AN OTHER DESIGNER UNDER DIVISION C. 3.2.5 OF THE BUILD	DING CODE.



			Forn	nula Sheet (For Air Lea	ikage / ventiliation C	aiculation)				
LO#: 77	460	Model: 4004 THE DA	ALERIDGE	Builde	r: GOLD PARK HOMES				Date	: 6/4/2020
		Volume Calculatio	n			i	Air Change & Delt	a T Data		77 33
				-						_
ise Volume	mi + (c.2)	T et	1 14 1 (6.2)				TURAL AIR CHANG	T / 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 /	0.340	4,
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	1		SUMMER NA	TURAL AIR CHANG	SE RATE	0.124	
Bsmt	1518	10	15180	4						
First	1518	11	16698				Davies To			
Second	1852	9	16668	-				mperature Diffe		AT OF
Third	0	9	0			Winter DTDh	Tin °C	Tout °C	ΔT°C	ΔT°F
Fourth	0	- 27.3	0			Winter DTDh	22	-20	42 9	76
		Total: Total:	48,546.0 ft ³ 1374.7 m ³	-		Summer DTDc	22	31	9	16
		Total.	13/4./ 111	J						
	5.2.3	3.1 Heat Loss due to Ai	ir Leakage		1	6.2.6 9	ensible Gain due	to Air Leakage		
		1931					830			
	ш _	$LR_{airh} \times \frac{V_b}{3.6} \times I$	OTD V 1 2		1	$HG_{salb} = LR_{airc} \times$	V_b	v 1.2		
	$HL_{airb} =$	$LR_{airh} \times \frac{1}{3.6} \times L$	$D_h \times 1.2$			$iG_{salb} = LR_{airc} \times$	$\frac{1}{3.6} \times DID_c$	× 1.2		
0.340	x 381.85	x 42 °C	x 1.2	= 6579 W	= 0.124	x 381.85	x 9°C	x 1.2	=	499 W
		-11) la	-				
				= 22448 Btu/h					=	1702 Btu
	5.2.3.2 Hea	at Loss due to Mechan	nical Ventilation			6.2.7 Ser	sible heat Gain d	ue to Ventilatio	n	
					110					
	$HL_{vairb} =$	$PVC \times DTD_h \times 1$	$1.08 \times (1 - E)$		HL	$vairb = PVC \times D'$	$TD_h \times 1.08 \times$	(1 - E)		
								5		
155 CFM	x 76 °F	x 1.08	x 0.25	= 3181 Btu/h	155 CFM	x 16 °F	x 1.08	x 0.25	=	661 Btu/
	1	-		-	-	-		el 4 		
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Flo	or Multiplier Section)				
					-					
		HL_a	$_{irr} = Level Fact$	$tor \times HL_{airbv} \times \{(H_{airbv}) \times $	$(L_{agcr} + HL_{bgcr}) \div$	$(HL_{agclevel} + HL_{l}$	ogclevel)}			
			1			1				
		Level	Level Factor (LF)	HLairve Air Leakage +	Level Conductive Heat					
		revei	Level Factor (LF)	Ventilation Heat Loss	Loss: (HL _{clevel})	HLairby / H	ILlevel)			
		1	0.5	(Btu/h)	9,511	1.18	n			
		2	0.3	-	14,142	0.47				
		3	0.3	22,448	16,924	0.47				
		4	0.2	- 22,440	0	0.26				
		5	0	+	0	0.00				
				L	U	0.00	U			







HEAT LOSS AND GAIN SUMMARY SHEET

		HEA	LOSS AND GAIN	SUMMARY SHEET	
MODEL:	4004 THE DALERIDGE		OPT. 5 BEDROOM	BUILDER: GOLD PARK HOMES	
SFQT:	3341	LO#	77460	SITE: PINE VALLEY & TESTON	
DESIGN A	ASSUMPTIONS				
HEATING			°F	COOLING	°F
OUTDOO	R DESIGN TEMP.		-4	OUTDOOR DESIGN TEMP.	88
INDOOR I	DESIGN TEMP.		72	INDOOR DESIGN TEMP. (MAX 75°F)	72
BUILDING	G DATA				
ATTACHN	ΛENT:		DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FA	ACES:		EAST	ASSUMED (Y/N):	Υ
AIR CHAN	IGES PER HOUR:		3.57	ASSUMED (Y/N):	Υ
AIR TIGH	TNESS CATEGORY:		AVERAGE	ASSUMED (Y/N):	Υ
WIND EX	POSURE:		SHELTERED	ASSUMED (Y/N):	Υ
HOUSE V	OLUME (ft³):		48546.0	ASSUMED (Y/N):	Υ
INTERNA	L SHADING:	BLIND	S/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR	LIGHTING LOAD (Btu/h	/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Υ
FOUNDA	TION CONFIGURATION		BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH:	58.0 ft	WIDTH:	32.0 ft	EXPOSED PERIMETER:	180.0 ft

2012 OBC - COMPLIANCE PACKAGE	Committee	o Doolooo
		e Package
Component		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 Sta	tion Description
Province:	Ontario	
Region:	Vaughan	(Woodbridge)
	Site D	escription
Soil Conductivity:	Normal	conductivity: dry sand, loam, clay
Water Table:	Normal (7-10 m, 23-33 ft)
	Foundatio	n Dimensions
Floor Length (m):	17.7	
Floor Width (m):	9.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	Insulation Configuration
Window Area (m²):	3.3	
Door Area (m²):	3.7	
	Radi	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Desig	n Months
Heating Month	1	
	Founda	tion Loads
Heating Load (Watts):		1729

TYPE: 4004 THE DALERIDGE

LO# 77460

OPT. 5 BEDROOM



Air Infiltration Residential Load Calculator

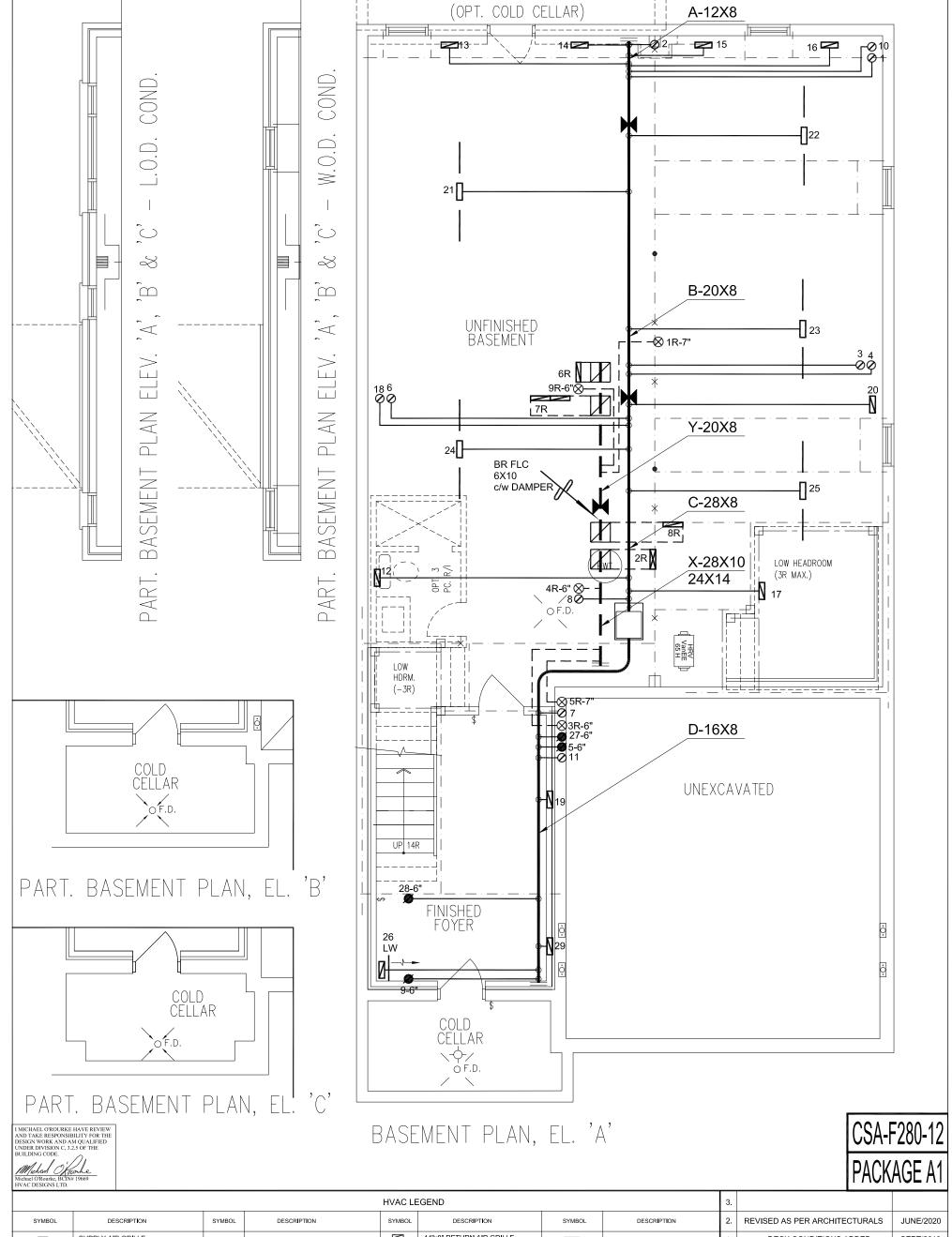
Supplemental tool for CAN/CSA-F280

Weather Stati	on Des	cript	ion		
Province:	Onta	rio			
Region:	Vaug	han (W	/oodbr	idge)	
Weather Station Location:	Oper	flat te	rrain, į	grass	
Anemometer height (m):	10				
Local S	hieldin	g			
Building Site:	Subu	rban, f	orest		
Walls:	Heav	У			
Flue:	Heav	У			
Highest Ceiling Height (m):	7.01				
Building Co	nfigur	ation			
Туре:	Deta	ched			
Number of Stories:	Two				
Foundation:	Full				
House Volume (m³):	1374	.7			
Air Leakage	/Venti	latior	1		
Air Tightness Type:	Prese	nt (19	61-) (3	.57 ACI	H)
Custom BDT Data:	ELA (2 10 Pa	a.		1832.5 cm ²
	3.57				ACH @ 50 Pa
Mechanical Ventilation (L/s):	To	otal Sup	ply		Total Exhaust
, ,		73.2			73.2
Flue	Size				
Flue #:	#1	#2	#3	#4	
Diameter (mm):	0	0	0	0	
Natural Infil	tration	Rate	es .		
Heating Air Leakage Rate (ACH/H)	•	C).34	0	
Cooling Air Leakage Rate (ACH/H)	:	C).12	4	

TYPE: 4004 THE DALERIDGE

LO# 77460

OPT. 5 BEDROOM



14"x8" RETURN AIR GRILLE SUPPLY AIR GRILLE DECK CONDITIONS ADDED SEPT/2018 - 🗆 6" SUPPLY AIR BOOT ABOVE RETURN AIR STACK ABOVE 30"x8" RETURN AIR GRILLE SUPPLY AIR GRILLE 6" BOOT 0 SUPPLY AIR STACK FROM 2nd FLOOR \bowtie Description RETURN AIR STACK 2nd FLOOR FRA- FLOOR RETURN AIR GRILLE SUPPLY AIR BOOT ABOVE REVISIONS 6" SUPPLY AIR STACK 2nd FLOOR 9

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.® AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

1525

GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO THE DALERIDGE OPT. 5 BEDROOM 4004 3341 sqft

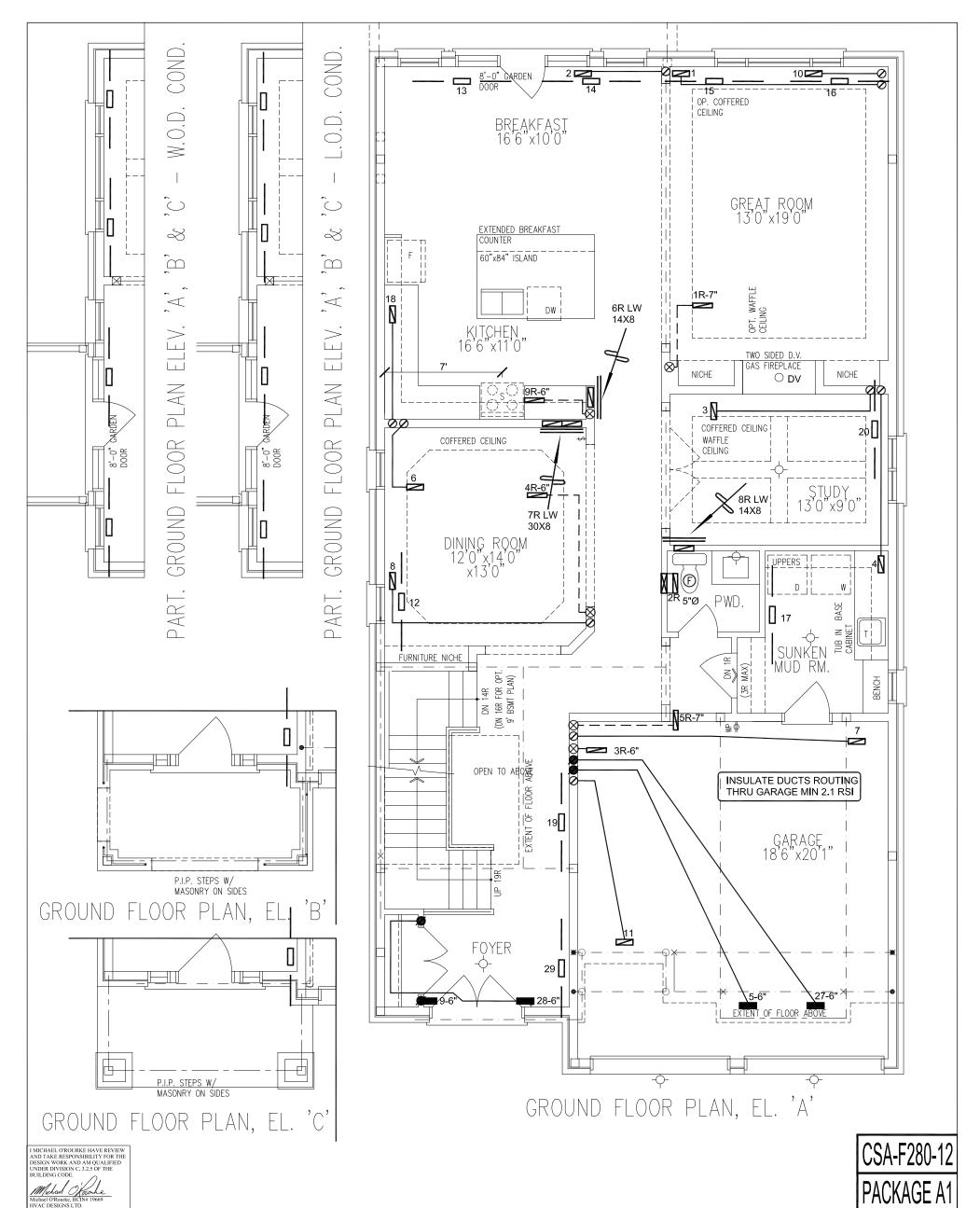
375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca

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.

HEAT LOS		BTU/H	# OF RUNS	S/A	R/A	FANS	She
	IIT DATA		3RD FLOOR				
	NNOX		2ND FLOOR	14	6	3	
MODEL EL296U	H090XE48	3C	1ST FLOOR	9	3	2	
INPUT	88	MBTU/H	BASEMENT	6	1	0	Date
OUTPUT	85	MBTU/H	ALL S/A DIFFU				Sca
COOLING	4.0	TONS	ON LAYOUT. A	LL S/A	RUN	S 5"Ø	
FAN SPEED	4.0	cfm @	ON LAYOUT. U			ISE	L

DOORS 1" min. FOR R/A

;	Sheet Title	
	B₽	SEMENT
	Н	IEATING
	L	.AYOUT
	Date	JAN/2018
	Scale	3/16" = 1'-0"
	В	CIN# 19669
	LO#	77460



HVAC LEGEND 3. DESCRIPTION 2. REVISED AS PER ARCHITECTURALS SYMBOL DESCRIPTION SYMBOL DESCRIPTION SYMBOL DESCRIPTION SYMBOL JUNE/2020 14"x8" RETURN AIR GRILLE SUPPLY AIR GRILLE DECK CONDITIONS ADDED SEPT/2018 - 🗆 6" SUPPLY AIR BOOT ABOVE RETURN AIR STACK ABOVE 30"x8" RETURN AIR GRILLE SUPPLY AIR GRILLE 6" BOOT 0 SUPPLY AIR STACK FROM 2nd FLOOR \bowtie No. Description Date RETURN AIR STACK 2nd FLOOR FRA- FLOOR RETURN AIR GRILLE SUPPLY AIR BOOT ABOVE **REVISIONS** 9 6" SUPPLY AIR STACK 2nd FLOOR

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GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON
VAUGHAN, ONTARIO
THE DALERIDGE
OPT. 5 BEDROOM
4004 3341 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

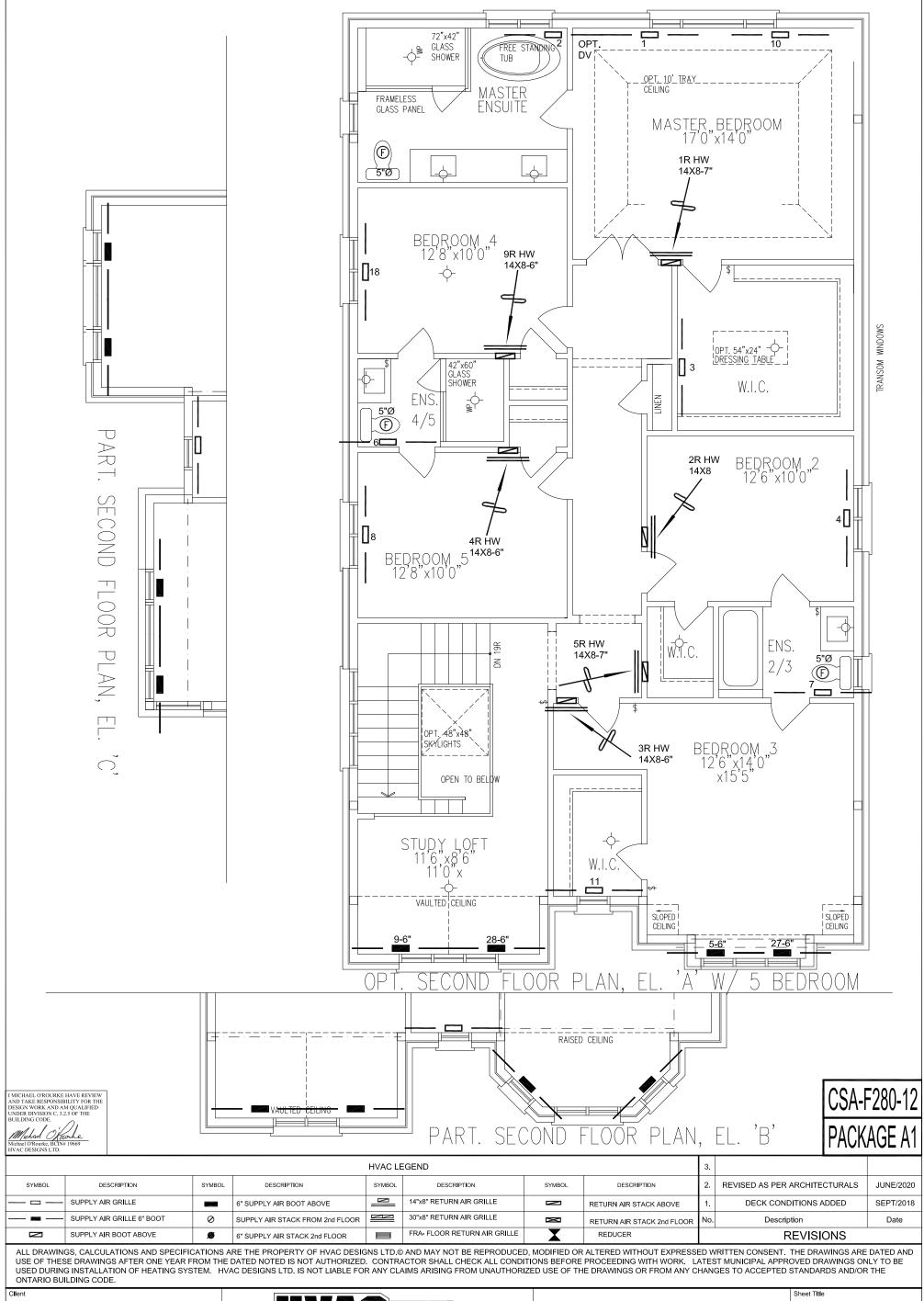
Specializing in Residential Mechanical Design Services

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 JAN/2018
Scale 3/16" = 1'-0"
BCIN# 19669

04 77400



GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON
VAUGHAN, ONTARIO
THE DALERIDGE
OPT. 5 BEDROOM
4004 3341 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.

SECOND FLOOR HEATING LAYOUT

Date JAN/2018 Scale 3/16" = 1'-0" BCIN# 19669

77400

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Pro	ject Information						
Building	number, street name					Unit no.	Lot/con.
Municipa	ality	Postal code	Plan number	/ other des	cription	<u>I</u>	
VAUGHAI	N (WOODBRIDGE)						
B. Indi	vidual who reviews and t	akes responsibility	for design ac	tivities			
Name			Firm				
	L O'ROURKE		HVAC DESI	GNS LTD.	II Init na		II at/aan
Street ac	LEY AVE				Unit no. 202		Lot/con.
Municipa		Postal code	Province		E-mail		
AJAX	•	L1S 2E2	ONTARIO		info@hvacdes	signs.ca	
Telephor	ne number	Fax number	•		Cell number		
(905) 61	9-2300	(905) 619-2375	5		()		
C. Des	ign activities undertaken	by individual ident	ified in Sectio	n B. [Build	ding Code Ta	ble 3.5.2.1 OF	Division C]
□ Но	use	⊠ HVA	C – House			Building Stru	ıctural
	all Buildings	Build	ing Services			Plumbing - H	House
	ge Buildings mplex Buildings		ction, Lighting Protection	g and Pov		Plumbing – A On-site Sewa	
	on of designer's work	<u> </u>	-rotection	Madali			age Systems
•	OSS / GAIN CALCULATIONS	3		Model:	4004 THE DAL	EKIDGE	
DUCT S	IZING				OPT. 5 BEDRO	OM - WOB	
	NTIAL MECHANICAL VENTI		IMARY	Project:	PINE VALLEY 8	k TESTON	
	NTIAL SYSTEM DESIGN per	CSA-F280-12		<u> </u>			
D. Dec	laration of Designer						
I	MICHAEL O'ROUR	(print name)			declare th	nat (choose one	as appropriate):
		,					
	I review and take responsi Division C, of the Building classes/categories.					ection 3.2.4.of appropria	ate
	Individual BCIN Firm BCIN:	:					
\boxtimes	I review and take responsi designer" under subsect		I am qualified in sion C, of the Bu			s an "other	
	Individual BCIN	19669					
	Basis for exem	otion from registration a	and qualification	:	O.B.C SEN	ITENCE 3.2.4	1.1 (4)
	The design work is exemp Basis for exemption from r		ation and qualifi ation:	cation requi	irements of the	Building Code.	
I certify t	that:						
	 The information conta I have submitted this a 	ined in this sche	edule is true to the wledge and con				
	June 4, 2020				Micha	1 Oxfound	Le.
	Date					Signature o	f Designer

NOTE

^{1.} For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.

^{2.} Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.



BUILDER:	PINE V							TVDE.			OM - V			GFA:	2244			DATE:								AIR CH		RATE			HEAT					CD 42	CSA-F280- PACKAGE
ROOM USE	GOLD	ARK	OMES			_	ENS	TYPE:	4004 1	WIC	LEKIDO)E	BED-2	GFA:	3341	DED 3			BED-4	7	- 7	ENS-2/3		RNAI	BED-		ANGE	LOFT	0.137	7	ENS-4/5	_	Δ1°F.	_		SB-12	PACKAGE
(2017) And (2017)				MBR	,				l							BED-3	9				1/4					.5)	l	WIC		1	
EXP. WALL				33	,		25		l	10		l	11			34			10			6			10			40	- 1		6		l	6		1	
CLG. HT.		2249		10	,		9		l	9		l	9			9			9			9			9			9	- 1		9		l	9		1	
	FACTO				,				l			l																	- 1				l			1	
GRS.WALL AREA	LOSS	GAIN		330			225			90			99			306	404000		90			54	Commence.		90			360	0.00000000		54	partie out	l	54			
GLAZING				LOSS	GAIN	1	LOSS	GAIN	1	LOSS	GAIN		LOSS	GAIN		LOSS	GAIN	1	LOSS	GAIN		LOSS	GAIN		LOSS	S GAIN	1	LOSS	GAIN		LOSS	GAIN		LOS	S GAIN	1	
NORTH	21.3	14.8	0	0	0	0	0	0	6	128	89	18	383	267	0	0	0	0	0	0	8	170	119	0	0	0	0	0	0	0	0	0	0	0	0	1	
EAST	21.3	37.4	0	0	0	0	0	0	0	0	0	0	0	0	60	1277	2244	0	0	0	0	0	0	0	0	0	55	1170	2057	0	0	0	16	34	0 598		
SOUTH	21.3	22.9	0	0	0	8	170	183	0	0	0	0	0	0	0	0	0	18	383	412	0	0	0	18	383	412	30	638	687	0	0	0	0	0	0		
WEST	21.3	37.4	40	851	1496	16	340	598	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	
SKYLT.	37.2	101.5	0	0	0	0	0	0	0	0	0	0	0	0	4	149	406	0	0	0	4	149	406	0	0	0	4	149	406	0	0	0	4	14	9 406	1	
DOORS	25.2	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	0	0	0	1	
NET EXPOSED WALL	4.5	0.8	290	1294	218	201	897	151	84	375	63	81	361	61	246	1098	185	72	321	54	46	205	35	72	321	54	275	1227	207	54	241	41	38	17	0 29		
NET EXPOSED BSMT WALL ABOVE GR	5537725 L	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	0	0	0	0	1	
EXPOSED CLG	63933974	0.6	270	347	159	154	198	90	160	205	94	176	226	103	170	218	100	160	205	94	80	103	47	160	205	337/2	232	298	136	96	123	56	104	13		1	
NO ATTIC EXPOSED CLG	77353504	1.3	0	0	0	0	0	0	0	0	0	0	0	0	50	137	63	0	0	0	0	0	0	0	0	0	50	137	63	0	0	0	0	0		1	
EXPOSED FLOOR	207533	0.4	0	0	0	0	0	0	0	0	0	0	0	0	224	571	96	0	0	0	30	77	13	0	0	0	0	0	0	84	214	36	201525	18			
	2.0	0.4	U	0	U	"	1000	U	١٠	3.27	U	"	10.75	U	224		90	U		U	30		13	0	350	U			U	04	214	30	72		4 31		
BASEMENT/CRAWL HEAT LOSS				0	,		0		l	0			0		l	0			0			0			0			0	- 1		Ü		1	0		1	
SLAB ON GRADE HEAT LOSS				0	,		0			0			0		l	0			0			0			0			0			0		1	0	•		
SUBTOTAL HT LOSS	1			2492			1605		l	708			970		l	3450			910			704			910			3620			578		1	97		.[
SUB TOTAL HT GAIN					1872			1023	l		246			431			3094			561			619			561			3556			133			1125	1	
LEVEL FACTOR / MULTIPLIER			0.20		,	0.20			0.20	0.32		0.20			0.20	0.32		0.20	0.32		0.20	0.32		0.20		1	0.20	0.32		0.20	0.32		0.20			1	
AIR CHANGE HEAT LOSS				791	,		510			225			308			1095			289			223			289			1149			184			31		1	
AIR CHANGE HEAT GAIN					142			78	l		19	l		33			235			43			47			43			270			10	l		86	3	
DUCTLOSS				0			0		l	0			0			455			0			93	200.00		0			0			76		l	12	9	1	
DUCT GAIN					0			0	l		0			0			419			0			67			0			0			14	l		121	1	
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	11		240	1		240	1		240	0		0	1		240	0		0	0		0	0		0	1	
HEAT GAIN APPLIANCES/LIGHTS					621	01		0			0			621			621			621	-		0			621	100		621			0	- 51		0	1	
TOTAL HT LOSS BTU/H				3283	0.00		2115		l	933			1278			5000	194594		1198			1020			1198	3		4769	1000		838	- C		141	15	1	
TOTAL HT GAIN x 1.3 BTU/H					4050			1431	l		344			1722			5991			1903			953			1903			5781			205			1731		
ROOM USE				DIN						KT/GT						LN/MD						FOY		1	STUD	Y								WO			BAS
EXP. WALL				24	,				l	76		l				21						50			10				- 1				l	42	2	1	138
CIA UT				11	,	l			l	11					l	13					l	11			11				- 1				l	10)	1	10
CLG. HT.		01.55		31.1												13													- 1				ı			1	
	FACTO	RS		3,11	ı				l							13													- 1								
		SECTION !		264						836						273						550			110									42	0	1	966
200000000000000000000000000000000000000		SECTION !		264	GAIN					836 LOSS	GAIN					273	GAIN					550 LOSS	GAIN			S GAIN									0 SS GAII		966 LOSS GA
GRS.WALL AREA		SECTION !	0	264	GAIN 0				0		GAIN 0				8	273	GAIN 119				0		GAIN 0	23		S GAIN							0			6	
GRS.WALL AREA GLAZING	LOSS	GAIN	0	264 LOSS	(S23, 10				0	LOSS					8	273 LOSS	-				0 45	LOSS	>777	23	LOSS	S GAIN							0	LOS	S GAII	110	LOSS GA
GRS.WALL AREA GLAZING NORTH	21.3 21.3	GAIN 14.8		264 LOSS 0	0				0 0	LOSS	0				8 0 0	273 LOSS 170	119				85554	LOSS 0	0	1000	LOS:	S GAIN 341							0 0	LOS	S GAII	6	LOSS GA 128 8
GRS.WALL AREA GLAZING NORTH EAST	21.3 21.3 21.3 21.3	14.8 37.4	0	264 LOSS 0 0	0				- 50	LOSS 0 0	0					273 LOSS 170	119 0				45	0 958	0 1683	0	489 0	341 0							0	0	SS GAII 0 0 0	6 0 0	LOSS GA 128 89 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH	21.3 21.3 21.3 21.3	14.8 37.4 22.9	0 26	264 LOSS 0 0 553	0 0 596				0	O O O	0 0 0				0	273 LOSS 170	119 0 0				45 0	0 958 0	0 1683 0	0	489 0 0	341 0 0							0	0 0 0	S GAII 0 0 0	6 0 0	LOSS GA 128 89 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	21.3 21.3 21.3 21.3 21.3 37.2	14.8 37.4 22.9 37.4	0 26 0	264 LOSS 0 0 553	0 0 596 0				0 140	0 0 0 0 2979	0 0 0 5235				0	273 LOSS 170 0 0	119 0 0				45 0 0	0 958 0	0 1683 0 0	0 0 0	489 0 0	341 0 0 0							0 0 96	0 0 0 204	0 0 0 0 3 3 3 0	6 0 0	LOSS GA 128 89 0 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	21.3 21.3 21.3 21.3 21.3 37.2	14.8 37.4 22.9 37.4 101.5	0 26 0 0	264 LOSS 0 0 553 0	0 596 0				0 140 0	0 0 0 0 2979 0	0 0 0 5235 0				0 0 0 20	273 LOSS 170 0 0	119 0 0 0				45 0 0 0	0 958 0 0	0 1683 0 0 0 0	0 0 0	489 0 0 0	341 0 0 0 0							0 0 96 0	0 0 0 204	0 0 0 0 3 3590 0 2 43	6 0 0 0	LOSS GA 128 88 0 0 0 0 0 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5	14.8 37.4 22.9 37.4 101.5 4.3	0 26 0 0	264 LOSS 0 0 553 0 0	0 0 596 0 0				0 140 0 10	0 0 0 2979 0 252	0 0 0 5235 0 43				0 0	273 LOSS 170 0 0 0 0	119 0 0 0 0 0				45 0 0 0 20	0 958 0 0 0 0 505	0 1683 0 0	0 0 0 0	489 0 0 0 0	341 0 0 0 0 0							0 0 96 0 10	0 0 0 204 0 25	0 0 0 0 3 3590 0 2 43	6 0 0 0 0 0	LOSS GA 128 88 0 0 0 0 0 0 0 0 505 88
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6	14.8 37.4 22.9 37.4 101.5 4.3 0.8	0 26 0 0 0 238	264 LOSS 0 0 553 0 0 0	0 0 596 0 0 0				0 140 0 10 686	0 0 0 2979 0 252 3061	0 0 5235 0 43 516				0 0 0 20 245	273 LOSS 170 0 0 0 0 505 1093	119 0 0 0 0 85 184				45 0 0 0 20 485	0 958 0 0 0 0 505 2164	0 1683 0 0 0 85 365	0 0 0 0 0 87	489 0 0 0 0 0 0 388	341 0 0 0 0 0 0							0 96 0 10 314	0 0 0 204 0 25 140	0 0 0 3 3 3 5 9 0 2 4 3 1 2 3 6	6 0 0 0 0 0 20	LOSS GA 128 89 0 0 0 0 0 0 0 0 505 89
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMTWALL ABOVE GR	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3	14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6	0 26 0 0 0 238 0	264 LOSS 0 0 553 0 0 0 1062 0	0 0 596 0 0 0 179				0 140 0 10 686 0	0 0 0 2979 0 252 3061 0	0 0 5235 0 43 516				0 0 0 20 245 0	273 LOSS 170 0 0 0 0 505 1093	119 0 0 0 0 85 184				45 0 0 0 20 485 0	UOSS 0 958 0 0 0 505 2164 0 0	0 1683 0 0 0 85 365 0	0 0 0 0 0 87 0	LOSS 489 0 0 0 0 0 388 0	S GAIN 341 0 0 0 0 0 0 65							0 96 0 10 314	0 0 0 204 0 25 140	0 0 0 0 33 3590 0 2 43 01 236 0	6 0 0 0 0 20 0 414	LOSS GA 128 89 0 0 0 0 0 0 505 89 0 0 1490 25 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED SMT WALL ABOVE GR	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.8	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 0 1062	0 0 596 0 0 0 179 0				0 140 0 10 686 0	0 0 0 2979 0 252 3061 0	0 0 5235 0 43 516 0				0 0 0 20 245 0	273 LOSS 170 0 0 0 0 505 1093	119 0 0 0 0 85 184 0				45 0 0 0 20 485 0	0 958 0 0 0 0 505 2164 0	0 1683 0 0 0 85 365	0 0 0 0 0 87 0	489 0 0 0 0 0 388	S GAIN 341 0 0 0 0 0 65 0							0 96 0 10 314 0	0 0 0 204 0 25 140 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414	LOSS GA 128 89 0 0 0 0 0 0 505 89 0 0 1490 25
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	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0	264 LOSS 0 0 553 0 0 0 1062 0	0 0 596 0 0 0 179 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 252 3061 0 0	0 0 5235 0 43 516 0 0				0 0 0 20 245 0 0	273 LOSS 170 0 0 0 505 1093 0	119 0 0 0 0 85 184 0				45 0 0 0 20 485 0 0	LOSS 0 958 0 0 505 2164 0 0	0 1683 0 0 0 85 365 0 0	0 0 0 0 0 87 0	LOSS 489 0 0 0 0 0 388 0 0	S GAIN 341 0 0 0 0 0 65 0							0 96 0 10 314 0	0 0 0 204 0 25 140 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 505 88 0 0 1490 25 0 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED SMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 0 1062 0	0 0 596 0 0 0 179 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 252 3061 0 0	0 0 5235 0 43 516 0 0				0 0 0 20 245 0 0	273 LOSS 170 0 0 0 505 1093 0	119 0 0 0 0 85 184 0				45 0 0 0 20 485 0 0	LOSS 0 958 0 0 505 2164 0 0	0 1683 0 0 0 85 365 0 0	0 0 0 0 0 87 0	489 0 0 0 0 0 388 0 0	S GAIN 341 0 0 0 0 0 65 0							0 96 0 10 314 0	0 0 0 204 0 255 140 0 0	0 0 0 3 3590 0 2 43 01 236 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 81 0 0 0 0 0 0 505 83 0 0 1490 25 0 0
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 RO ATTIC EXPOSED CLG SEXPOSED CLOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 1062 0 0	0 0 596 0 0 0 179 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 252 3061 0 0 0	0 0 5235 0 43 516 0 0				0 0 0 20 245 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0	119 0 0 0 0 85 184 0				45 0 0 0 20 485 0 0	LOSS 0 958 0 0 505 2164 0 0 0 0 0 0 0 0 0	0 1683 0 0 0 85 365 0 0	0 0 0 0 0 87 0	489 0 0 0 0 0 388 0 0 0	S GAIN 341 0 0 0 0 65 0 0							0 96 0 10 314 0	0 0 0 204 0 25 140 0 0	SS GAII 0 0 0 0 13 3590 0 2 43 01 236 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 81 0 0 0 0 0 0 505 81 0 0 1490 25 0 0 0 0 2422
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GE EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HIOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 1062 0 0	0 0 596 0 0 0 179 0 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 252 3061 0 0 0	0 0 5235 0 43 516 0 0				0 0 0 20 245 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0	119 0 0 0 85 184 0 0				45 0 0 0 20 485 0 0	LOSS 0 958 0 0 0 505 2164 0 0 0 0 0 0 0 0 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0	0 0 0 0 0 87 0	489 0 0 0 0 0 388 0 0	S GAIN 341 0 0 0 0 65 0 0 0							0 96 0 10 314 0	0 0 0 204 0 255 140 0 0	SS GAII 0 0 0 0 3 3590 0 2 43 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 20 0 414 0	LOSS GA 128 81 0 0 0 0 0 0 505 81 0 0 1490 25 0 0 0 0 2422
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BANT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 1062 0 0 0 0	0 0 596 0 0 0 179 0				0 140 0 10 686 0 0	LOSS 0 0 0 2979 0 252 3061 0 0 0 0 6293	0 0 5235 0 43 516 0 0				0 0 0 20 245 0 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0 0 0	119 0 0 0 0 85 184 0				45 0 0 20 485 0 0	LOSS 0 958 0 0 0 505 2164 0 0 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0	0 0 0 0 87 0 0 0	489 0 0 0 0 388 0 0 0 0	S GAIN 341 0 0 0 0 65 0 0 0							0 96 0 10 314 0	0 0 0 204 0 25 140 0 0	SS GAII 0 0 0 0 13 3590 0 2 43 01 236 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 505 88 0 0 1490 25 0 0 0 0 2422 4545
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 EXPOSED CLG FXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 252 3061 0 0 0 6293	0 0 5235 0 43 516 0 0				0 0 0 20 245 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0 0 1769	119 0 0 0 85 184 0 0				45 0 0 0 20 485 0 0	LOSS 0 958 0 0 0 505 2164 0 0 0 0 0 0 3627 0.57	0 1683 0 0 0 85 365 0 0	0 0 0 0 87 0 0 0	LOSS 489 0 0 0 0 388 0 0 0 0 878	S GAIN 341 0 0 0 0 65 0 0 0							0 96 0 10 314 0	0 0 0 204 0 25 140 0 0	SS GAII 0 0 0 0 3 3590 0 2 43 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 505 88 0 0 0 1490 25 0 0 0 2422 4545 42
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED SMIT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GSIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 1062 0 0 0 0	0 0 596 0 0 0 179 0 0 0				0 140 0 10 686 0 0	LOSS 0 0 0 2979 0 252 3061 0 0 0 0 6293	0 0 5235 0 43 516 0 0 0				0 0 0 20 245 0 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0 0 0	119 0 0 0 85 184 0 0				45 0 0 20 485 0 0	LOSS 0 958 0 0 0 505 2164 0 0 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0 0	0 0 0 0 87 0 0 0	489 0 0 0 0 388 0 0 0 0	S GAIN 341 0 0 0 0 65 0 0 0							0 96 0 10 314 0	0 0 0 204 0 25 140 0 0	SS GAII 0 0 0 0 3 3590 0 2 43 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 505 88 0 0 0 1490 25 0 0 0 2422 4545 42 1.53 13429
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED SMIT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 2552 3061 0 0 0 6293	0 0 5235 0 43 516 0 0				0 0 0 20 245 0 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0 0 1769	119 0 0 0 85 184 0 0				45 0 0 20 485 0 0	LOSS 0 958 0 0 505 2164 0 0 0 0 0 3627 0.57 2061	0 1683 0 0 0 85 365 0 0	0 0 0 0 87 0 0 0	LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 341 0 0 0 0 65 0 0 0							0 96 0 10 314 0	0 0 0 204 0 25 140 0 0	SS GAII 0 0 0 0 3 3590 0 2 43 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 0 0 10 0 1490 25 0 0 0 0 2422 4545 42 1.53 13429
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED ESMIT 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 AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 252 3061 0 0 0 6293	0 0 5235 0 43 516 0 0 0				0 0 0 20 245 0 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0 0 1769	119 0 0 0 0 85 184 0 0 0				45 0 0 20 485 0 0	LOSS 0 958 0 0 0 505 2164 0 0 0 0 0 0 3627 0.57	0 1683 0 0 0 85 365 0 0 0	0 0 0 0 87 0 0 0	LOSS 489 0 0 0 0 388 0 0 0 0 878	S GAIN 341 0 0 0 0 0 0 65 0 0 0 0 0 406 406							0 96 0 10 314 0	0 0 0 204 0 25 140 0 0	SS GAII 0 0 0 0 3 3590 0 2 43 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 505 88 0 0 0 1490 25 0 0 0 2422 4545 42 1.53 13429 32 0
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 NO ATTIC EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS OUCT GAIN	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0 0	264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 2552 3061 0 0 0 6293	0 0 0 5235 0 43 516 0 0 0				0 0 0 20 245 0 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0 0 1769	1119 0 0 0 0 85 184 0 0 0				45 0 0 20 485 0 0 0	LOSS 0 958 0 0 505 2164 0 0 0 0 0 3627 0.57 2061	0 1683 0 0 0 85 365 0 0 0	0 0 0 0 0 87 0 0 0	LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 341 0 0 0 0 65 0 0 0 406							0 0 96 0 10 314 0 0 0	0 0 0 204 0 25 140 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 0 505 88 0 0 0 1490 25 0 0 0 2422 4545 42 1.53 13429 32 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED CLG EXPOSED CLG SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT GAIN HEAT GAIN PEOPLE	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0	264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0 775				0 140 0 10 686 0 0	LOSS 0 0 2979 0 2552 3061 0 0 0 6293	0 0 5235 0 43 516 0 0 0 0 0				0 0 0 20 245 0 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0 0 1769	1119 0 0 0 0 85 184 0 0 0 0				45 0 0 20 485 0 0	LOSS 0 958 0 0 505 2164 0 0 0 0 0 3627 0.57 2061	0 1683 0 0 0 85 365 0 0 0 0 2132	0 0 0 0 87 0 0 0	LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 341 0 0 0 0 0 65 0 0 0 0 0 0 0 0 0 0 0 0 0							0 96 0 10 314 0	0 0 0 204 0 25 140 0 0	GAI 3 3590 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 0 505 88 0 0 0 1490 25 0 0 0 2422 4545 42 1.53 13429 32 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED SEMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0 0	264 LOSS 0 0 5533 0 0 1062 0 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0				0 140 0 10 686 0 0	LOSS 0 0 2979 0 2552 3061 0 0 0 6293	0 0 0 5235 0 43 516 0 0 0				0 0 0 20 245 0 0 0	273 LOSS 170 0 0 0 0 505 1093 0 0 0 0 0 1769 0.57	1119 0 0 0 0 85 184 0 0 0				45 0 0 20 485 0 0 0	USS 0 958 0 0 0 505 2164 0 0 0 3627 0.57 2061 0	0 1683 0 0 0 85 365 0 0 0	0 0 0 0 0 87 0 0 0	LOS: 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 341 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							0 0 96 0 10 314 0 0 0	LOS 0 0 0 0 2044 0 0 0 0 0 0 0 0 0 0 0 0 0	GAII GAII GAII GAII GAII GAII GAII GAII	6 0 0 0 0 20 0 414 0	LOSS GA 128 88 0 0 0 0 0 0 0 0 0 505 88 0 0 0 0 0 2422 4545 4245 1.53 13429 32 0 0 0
GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMITWALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED CLG EXPOSED THAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT GAIN DUCT GAIN HEAT GAIN PEOPLE	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	GAIN 14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6 0.6 1.3	0 26 0 0 0 238 0 0 0	264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0 775				0 140 0 10 686 0 0	LOSS 0 0 2979 0 2552 3061 0 0 0 6293	0 0 5235 0 43 516 0 0 0 0 0				0 0 0 20 245 0 0 0	273 LOSS 170 0 0 0 505 1093 0 0 0 0 1769	1119 0 0 0 0 85 184 0 0 0 0				45 0 0 20 485 0 0 0	LOSS 0 958 0 0 505 2164 0 0 0 0 0 3627 0.57 2061	0 1683 0 0 0 85 365 0 0 0 0 2132	0 0 0 0 0 87 0 0 0	LOSS 489 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 341 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							0 0 96 0 10 314 0 0 0	0 0 0 204 0 25 140 0 0	GAII GAII GAII GAII GAII GAII GAII GAII	6 0 0 0 0 20 0 414 0 0	LOSS GA 128 88 0 0 0 0 0 0 0 505 88 0 0 0 1490 25 0 0 0 2422 4545 42 1.53 13429 32 0 0

TOTAL HEAT GAIN BTU/H:

49065

TONS: 4.09

LOSS DUE TO VENTILATION LOAD BTU/H: 3181

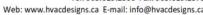
STRUCTURAL HEAT LOSS: 68024

TOTAL COMBINED HEAT LOSS BTU/H: 71204

Mehan Oxambe.



		: PINE VA		TESTON MES					OPT. 5 B 4004 THI	E DALER		3	DATE:	Jun-20			GFA:	3341	LO#	79970				
HEATING CFM TOTAL HEAT LOSS AIR FLOW RATE CFM	68,024		TOTAL H	OLING CFM HEAT GAIN RATE CFM	48,529		а	furr a/c coil vailable		0.05						EL	. 296UH09 FAN	OXE48C SPEED	LENNOX 90			AFUE = 1 (BTU/H) = 1 (BTU/H) = 1	88,000	
RUN COUNT	4th	3rd	2nd	1st	Bas]			s/a & r/a	0.35								LOW	0		DESIG	GN CFM =		-3
S/A R/A	0	0	14	3	6	-			ssure s/a ess. loss	0.18	r/a		pressure ess. Loss	0.17				MEDIUM IM HIGH	1105 1255			CFM @ .6	6 " E.S.P.	
All S/A diffusers 4"x10" unle			ise on lay			•			ssure s/a	0.16			ssure r/a	0.15				HIGH	1525	T	EMPERATI	URE RISE_	52	°F
All S/A runs 5"Ø unless note RUN#	ed othe	rwise on I	ayout. 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2		ENS-4/5	ENS-2/3		LOFT	MBR	WIC-3	DIN	KT/GT	KT/GT	KT/GT	KT/GT	LN/MD	BED-4		STUDY	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.64	2.11	0.93	1.28	2.50	0.84	1.02	1.20	2.38	1.64	1.41	2.53	2.47	2.47	2.47	2.47	2.77	1.20	2.84	1.38	3.79	3.79	3.79	3.79
CFM PER RUN HEAT	37 2.03	47 1.43	21 0.34	29 1.72	56 3.00	19 0.20	23 0.95	27 1.90	53 2.89	37 2.03	32	57 1.89	55 2.23	55	55 2.23	55 2.23	62 1.35	27 1.90	64 1.49	31 1.38	85 1.00	85 1.00	85 1.00	85 1.00
RM GAIN MBH. CFM PER RUN COOLING	64	45	11	54	94	6	30	60	91	64	1.73 54	59	70	2.23	70	70	42	60	47	43	31	31	31	31
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	71	58	51	49	42	40	37	33	44	63	35	18	45	37	39	46	11	55	16	27	56	57	28	21
EQUIVALENT LENGTH	200	150	150	180	190	150	220	200	140	210	180	130	140	150	160	150	160	140	140	80	130	140	110	110
TOTAL EFFECTIVE LENGTH	271 0.06	208 0.08	201	229 0.08	232 0.07	190	257 0.07	233 0.07	184 0.09	273 0.06	215 0.08	148	185 0.09	187 0.09	199	196 0.09	171 0.1	195 0.09	156 0.11	107 0.16	186 0.09	197 0.08	138 0.12	131
ADJUSTED PRESSURE ROUND DUCT SIZE	5	4	4	5	6	4	4	5	6	5	5	0.12	5	5	5	5	5	5	5	4	6	6	5	0.12
HEATING VELOCITY (ft/min)	272	539	241	213	286	218	264	198	270	272	235	654	404	404	404	404	455	198	470	356	433	433	624	624
COOLING VELOCITY (ft/min)	470	516	126	396	479	69	344	441	464	470	396	677	514	514	514	514	308	441	345	493	158	158	228	228
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10
TRUNK	Α	Α	В	В	D	С	D	С	D	Α	D	С	A	A	Α	Α	С	С	D	С	В	В	В	С
RUN#	25	26	27	28	29																			
ROOM NAME	BAS	BAS	BED-3	LOFT	FOY																			
RM LOSS MBH.	3.79 85	3.79 85	2.50	2.38 53	2.84																			
CFM PER RUN HEAT RM GAIN MBH.	1.00	1.00	3.00	2.89	1.49																			
CFM PER RUN COOLING	31	31	94	91	47																			
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.17																			
ACTUAL DUCT LGH.	19	32	48	57	25																			
EQUIVALENT LENGTH	120 139	120 152	200 248	200 257	120 145																			
TOTAL EFFECTIVE LENGTH ADJUSTED PRESSURE	0.12	0.11	0.07	0.06	0.12																			
ROUND DUCT SIZE	5	5	6	6	5																			
HEATING VELOCITY (ft/min)	624	624	286	270	470																			
COOLING VELOCITY (ft/min)	228	228	479	464	345																			
OUTLET GRILL SIZE TRUNK	3X10 C	3X10	4X10 D	4X10 D	3X10 D																			
1																								
SUPPLY AIR TRUNK SIZE	TRUNK	STATIC	ROUND	RECT			VELOCITY			TRUNK	STATIC	ROUND	RECT			VELOCITY	RETURN A	TRUNK	STATIC	ROUND	RECT			VELOCITY
	CFM	PRESS.	DUCT	DUCT			(ft/min)			CFM	PRESS.	DUCT	DUCT			(ft/min)	1	CFM	PRESS.	DUCT	DUCT			(ft/min)
TRUNK A	341	0.06	10.1	12	×	8	512		TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.06	0	0	×	8	0
TRUNK B	646	0.06	12.8	20	×	8	581		TRUNK H	0	0.00	0	0	×	8	0	TRUNK P	0	0.06	0	0	×	8	0
TRUNK C	1039 486	0.06	15.3 11.5	28 16	X	8	668 547		TRUNK J	0	0.00	0	0	X	8	0	TRUNK Q	0	0.06	0	0	×	8	0
TRUNK E	0	0.00	0	0	×	8	0		TRUNK K	0	0.00	0	0	x	8	0	TRUNK S	0	0.06	0	0	×	8	0
TRUNK F	0	0.00	0	0	x	8	0		TRUNK L	0	0.00	0	0	x	8	0	TRUNKT	0	0.06	0	0	×	8	0
																	TRUNK U	0	0.06	0	0	×	8	0
RETURN AIR #	1	2	3	4	5	6	7	8	9		_		-			BR	TRUNK W	0	0.06	0	0	×	8	0
AIR VOLUME	0 120	0 185	0 85	0 95	0 120	0 145	0 305	0 145	0 85	0	0	0	0	0	0	240	TRUNK X	1320 655	0.06	16.7 12.9	28 20	×	10	679 590
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	0.15	TRUNKZ	0	0.06	0	0	×	8	0
ACTUAL DUCT LGH.	51	36	44	37	45	28	31	23	50	1	1	1	1	1	1	16	DROP	1525	0.06	17.7	24	x	14	654
EQUIVALENT LENGTH	175	155	205	165	165	190	185	195	195	0	0	0	o	0	0	235	2000000	Spanish;	007817958	ACCEPTOR(1)	0.556.51	20	2004	V967951C
Edditheritt Frito.	226	191	249	202	210	218	216	218	245	1	1	1	1	1	1	251								
TOTAL EFFECTIVE LH		0.08	0.06	0.07	0.07	0.07	0.07	0.07	0.06	14.80	14.80	14.80	14.80	14.80	14.80	0.06								
TOTAL EFFECTIVE LH ADJUSTED PRESSURE	0.07				00	-	0.0	-	_		^	^	^	^	^	0 0								
TOTAL EFFECTIVE LH ADJUSTED PRESSURE ROUND DUCT SIZE	6.6	7.5	6	6	6.6	7	9.3	7	6	0	0	0	0	0	0	8.8								
TOTAL EFFECTIVE LH ADJUSTED PRESSURE		7.5				7 8 X	9.3 8 X	7 8 X	6 8 X	0 0 X	•	0 0 X	0 0 X	•	0 0 X	8.8 8 X								





TYPE: 4004 THE DALERIDGE

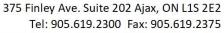
79970 LO# SITE NAME: PINE VALLEY & TESTON OPT. 5 BEDROOM - WOB

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL V	ENTILATION CAPACITY		9.32.3.5.
a) Direct vent (sealed combustion) only		Total Ventilation Ca	pacity	201.4	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Venti	il. Capacity	155	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Suppleme	ental Capacity	46.4	_ cfm
d) Solid Fuel (including fireplaces)					
e) No Combustion Appliances		Model:	VANEE 65H	Location:	BSMT
HEATING SYSTEM		155.0		sones	✓ HVI Approved
✓ Forced Air Non Forced Air		PRINCIPAL EXHAL	IST HEAT LOSS CALCULAT	ION	
		CFM	ΔT *F	FACTOR	% LOSS
Electric Space Heat		155.0 CFM	X 76 F	X 1.08	X 0.25
		SUPPLEMENTAL F		NUTONE	
HOUSE TYPE	9.32.1(2)	Location ENS	Model QTXEN050C	cfm 50	HVI Sones ✓ 0.3
HOUSE TIPE	3.32.1(2)	ENS-2/3	QTXEN050C	50	✓ 0.3
Type a) or b) appliance only, no solid fuel		ENS-4/5	QTXEN050C	50	√ 0.3
		PWD	QTXEN050C	50	✓ 0.3
II Type I except with solid fuel (including fireplace	es)	HEAT RECOVERY	VENTILATOR		9.32.3.11.
III Any Type c) appliance		Model:	VANEE 65H		
		155	cfm high	64	cfm low
IV Type I, or II with electric space heat		75	% Sensible Efficiency		HVI Approved
Other: Type I, II or IV no forced air			@ 32 deg F (0 deg C)		
		LOCATION OF INS	TALLATION		
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	LOCATION OF INS	TALLATION		
		Lot:		Concession	
1 Exhaust only/Forced Air System		Township		Plan:	
2 HRV with Ducting/Forced Air System		5159		T Idil.	
3 HRV Simplified/connected to forced air system	î.	Address		Puilding Dorn	nit #
4 HRV with Ducting/non forced air system		Roll#		Building Pern	TIIL #
Part 6 Design		BUILDER:	GOLD PARK HOMES		
		Name:			
TOTAL VENTILATION CAPACITY	9.32.3.3(1)	Address:			
Basement + Master Bedroom 2 @ 21.2 cfm 42.4	_ cfm	City:			
Other Bedrooms <u>4</u> @ 10.6 cfm <u>42.4</u>	_ cfm	Telephone #:		Fax #:	ļ
Kitchen & Bathrooms5 @ 10.6 cfm53	cfm	INSTALLING CONT	TRACTOR		
Other Rooms	_ cfm	Name:			
Table 9.32.3.A. TOTAL <u>201.4</u>	cfm	Address:			
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)	City:		020 HW	
1 Bedroom 31.8	cfm	Telephone #:		Fax #:	
2 Bedroom 47.7	cfm		this ventilation system has be	en designed	
3 Bedroom 63.6	cfm	in accordance with t Name:	the Ontario Building Code. HVAC Designs Ltd.	-	
4 Bedroom 79.5	cfm	Signature:	MI	charl Oxfounde	
5 Bedroom 95.4	cfm	HRAI#		001820	
TOTAL 95.4 cfm I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QU	ALIFIED IN THE ADD	Date:	TOTHER DESIGNER" LINDER DIVISION	June-20	ILDING CODE



			10.75 (5.00)	80-12 Residential Hea						
10#	79970	Model: 4004 THE DA	COCOMANDA PARA CAL	72.00.00.25.00	er: GOLD PARK HOMES	acculation			Data	: 6/4/2020
LO#.	79970			Builde	T. GOLD PARK HOIVIES		in Change & Delte	T Data	Date	. 6/4/2020
		Volume Calculation	on				Air Change & Delta	a i Data		
ouse Volume				1		WINTER NAT	URAL AIR CHANG	FRATE	0.407	1
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)				TURAL AIR CHANG		0.137	2
Bsmt	1518	10	15180							_
First	1518	11	16698							
Second	1852	9	16668				Design Te	mperature Diffe	erence	
Third	0	9	0				Tin °C	Tout °C	ΔT°C	ΔT°F
Fourth	0	9	0			Winter DTDh	22	-20	42	76
		Total:	48,546.0 ft ³			Summer DTDc	24	31	7	13
		Total:	1374.7 m³							
	E 2 2	3.1 Heat Loss due to A	ir Lookaga			6366	ensible Gain due t	o Air Lookago		
	5.2.3	.1 Heat Loss due to A	ir Leakage			0.2.0 3	ensible Gain due i	to Air Leakage		
	$HL_{airb} =$	$LR_{airh} \times \frac{V_b}{3.6} \times I$	$DTD_h \times 1.2$		Н	$HG_{salb} = LR_{airc} \times$	$\frac{V_b}{2.6} \times DTD_c$	× 1.2		
0.407		x _ 42 °C		= 7872 W		x 381.85			=	445 W
0.407	x	- A	· ^	707211	0.137	- ×	^ <u> </u>	^		413 11
				= 26859 Btu/h]				=	1518 Btu/h
	5.2.3.2 Hea	at Loss due to Mechar	nical Ventilation			6.2.7 Sen	sible heat Gain du	e to Ventilatio	n	
	$HL_{vairb} =$	$PVC \times DTD_h \times$	$1.08 \times (1-E)$		HL	$v_{vairb} = PVC \times DT$	$CD_h \times 1.08 \times 10^{-3}$	(1 - E)		
155 CFM	x <u>76 °F</u>	x <u>1.08</u>	x 0.25	= 3181 Btu/h	155 CFM	x <u>13 °F</u>	x1.08	x0.25	. =	536 Btu/h
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Floo	or Multiplier Section)				
		HL_a	$_{irr} = Level Fact$	$vor \times HL_{airbv} \times \{(H_{airbv}) \times $	$IL_{agcr} + HL_{bgcr}$) ÷	$(HL_{agclevel} + HL_{b})$	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		8,774	1.531				
		2	0.3	2 10000000000	14,182	0.568	3/2			
		3	0.2	26,859	16,924	0.317	<i>V</i> :			
						0.000	\			
		4	0		0	0.000				







HEAT LOSS AND GAIN SUMMARY SHEET

		HEAT	LOSS AND GAI	N SUMMARY SHEET		
MODEL:	4004 THE DALERIDGE		OPT. 5 BEDROOM	- WOB BUILDER :	GOLD PARK HOMES	
SFQT:	3341	LO#	79970	SITE	:: PINE VALLEY & TEST	NC
DESIGN A	ASSUMPTIONS					
HEATING	31		°F	COOLING		°F
	R DESIGN TEMP.		-4	OUTDOOR DESIGN TE	FMP.	88
	DESIGN TEMP.		72	INDOOR DESIGN TEM		75
					•	
BUILDING	G DATA					
ATTACHN	ΛΕΝΤ:		DETACHED	# OF STORIES (+BASE	MENT):	3
FRONT FA	ACES:		EAST	ASSUMED (Y/N):		Υ
AIR CHAN	IGES PER HOUR:		3.57	ASSUMED (Y/N):		Υ
AIR TIGH	TNESS CATEGORY:		AVERAGE	ASSUMED (Y/N):		Υ
WIND EX	POSURE:		SHELTERED	ASSUMED (Y/N):		Υ
HOUSE V	OLUME (ft³):		48546.0	ASSUMED (Y/N):		Υ
INTERNA	L SHADING:	BLIND	S/CURTAINS	ASSUMED OCCUPAN	TS:	6
INTERIOR	LIGHTING LOAD (Btu/h	n/ft²):	1.27	DC BRUSHLESS MOTO	OR (Y/N):	Y
FOUNDA	TION CONFIGURATION		BCIN_1	DEPTH BELOW GRAD	E:	7.0 ft
LENGTH:	58.0 ft	WIDTH:	32.0 ft	EXPOSED PERIMETER	R:	138.0 ft
WOB INS	ULATION CONFIGURATI	ON	SCB_9	WOB EXPOSED PERIN	ИЕТЕR	42.0 ft

2012 OBC - COMPLIANCE PACKAGE		
	Complian	e Package
Component		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

We	eather Sta	tion Description
Province:	Ontario	
Region:	Vaughan	(Woodbridge)
	Site D	escription
Soil Conductivity:	Normal	conductivity: dry sand, loam, clay
Water Table:	Normal (7-10 m, 23-33 ft)
	Foundatio	n Dimensions
Floor Length (m):	4.6	
Floor Width (m):	9.8	
Exposed Perimeter (m):	42.1	
Wall Height (m):	3.0	
Depth Below Grade (m):	1.79	Insulation Configuration
Window Area (m²):	0.6	
Door Area (m²):	1.9	
	Radi	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Desig	n Months
Heating Month	1	
	Founda	tion Loads
Heating Load (Watts):		710

TYPE: 4004 THE DALERIDGE

LO# 79970

OPT. 5 BEDROOM - WOB



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Wea	ther Sta	tion Description
Province:	Ontario	-
Region:	Vaughan	(Woodbridge)
	Site D	escription
Soil Conductivity:	Normal co	onductivity: dry sand, loam, clay
Water Table:	Normal (7	7-10 m, 23-33 ft)
Fo	oundatio	n Dimensions
Length (m):	1.5	
Width (m):	9.8	0.6m ↓
Exposed Perimeter (m):	12.8	0.6m Insulation Configuration
	Radia	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Design	n Months
Heating Month	1	
	Re	esults
Heating Load (Watts):		156

TYPE: 4004 THE DALERIDGE

LO# 79970

OPT. 5 BEDROOM - WOB



Air Infiltration Residential Load Calculator

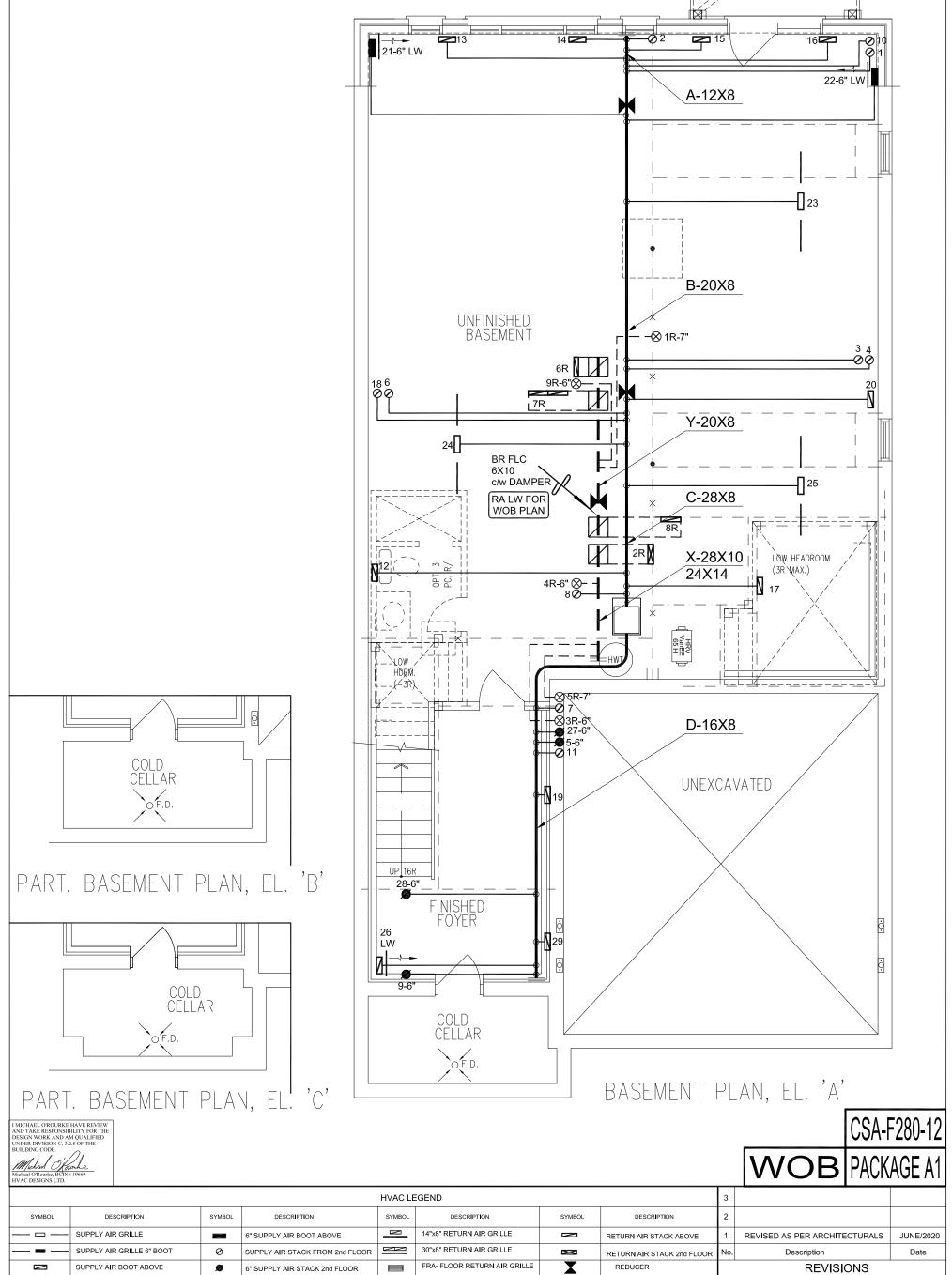
Supplemental tool for CAN/CSA-F280

Weather Statio	on Des	cript	ion		
Province:	Ontai	rio			
Region:	Vaug	han (W	oodbr/	idge)	
Weather Station Location:	Open	flat te	rrain,	grass	
Anemometer height (m):	10				
Local Sh	ieldin	g			
Building Site:	Subu	rban, f	orest		
Walls:	Heav	y			
Flue:	Heav	У			
Highest Ceiling Height (m):	9.14				
Building Co	nfigur	ation			
Туре:	Deta	ched			
Number of Stories:	Two				
Foundation:	Full				
House Volume (m³):	1374	.7			
Air Leakage,	'Venti	latior	1		
Air Tightness Type:	Prese	nt (19	61-) (3	.57 ACI	Н)
Custom BDT Data:	ELA (2 10 Pa	a.		1832.5 cm ²
	3.57				ACH @ 50 Pa
Mechanical Ventilation (L/s):	To	otal Sup	ply		Total Exhaust
\		73.2			73.2
Flue	Size				
Flue #:	#1	#2	#3	#4	
Diameter (mm):	0	0	0	0	
Natural Infilt	ration	Rate	es .		
Heating Air Leakage Rate (ACH/H)		C	.40	7	
Cooling Air Leakage Rate (ACH/H):		C).13	7	

TYPE: 4004 THE DALERIDGE

LO# 79970

OPT. 5 BEDROOM - WOB



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GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO THE DALERIDGE OPT. 5 BEDROOM

4004 - WOB 3341 sqft

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.

HEAT LO	SS 71204	BTU/H	# OF RUNS	S/A	R/A	FANS	Sheet Title	e
ι	JN I T DATA		3RD FLOOR				В	βA
MAKE			OND I LOOK					
L	.ENNOX		2ND FLOOR	14	6	3		Н
MODEL			10T EL 00D	_	_	_		1
EL296	UH090XE4	8C	1ST FLOOR	9	3	2		
INPUT	88	MBTU/H	BASEMENT	6	1	0	Date	5
OUTPUT	- 00		·	_		_	Caala	3
POUTPUT	85	MBTU/H	ALL S/A DIFFU	SERS	4 "x10	"	Scale	
	00		UNLESS NOTE	D OTI	HERW	ISE		В
COOLING	4.0	TONS	ON LAYOUT. A	LL S/A	RUN:	S 5"Ø		D
<u>†</u>	4.0		UNLESS NOTE	D OTH	HERW	ISE		
FAN SPEED		cfm @	ON LAYOUT. U	NDER	CUT		();	#
	1525	0.6" w.c.	DOORS 1" min.	FOR	R/A)	′

BASEMENT

HEATING

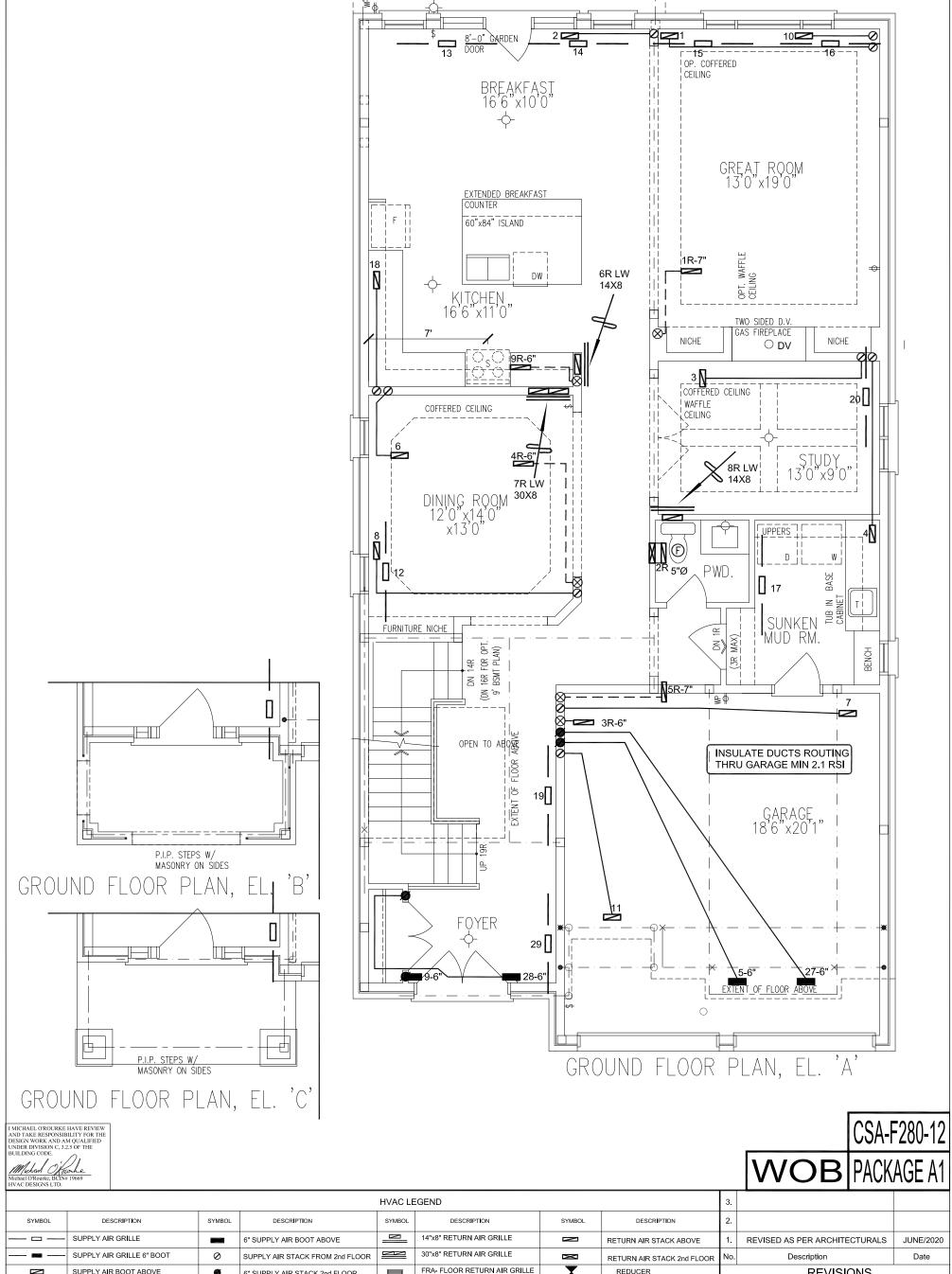
LAYOUT

SEPT/2018

3/16" = 1'-0"

BCIN# 19669

79970



SUPPLY AIR BOOT ABOVE **REVISIONS** . 6" SUPPLY AIR STACK 2nd FLOOR

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GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO THE DALERIDGE OPT. 5 BEDROOM 4004 - WOB 3341 sqft

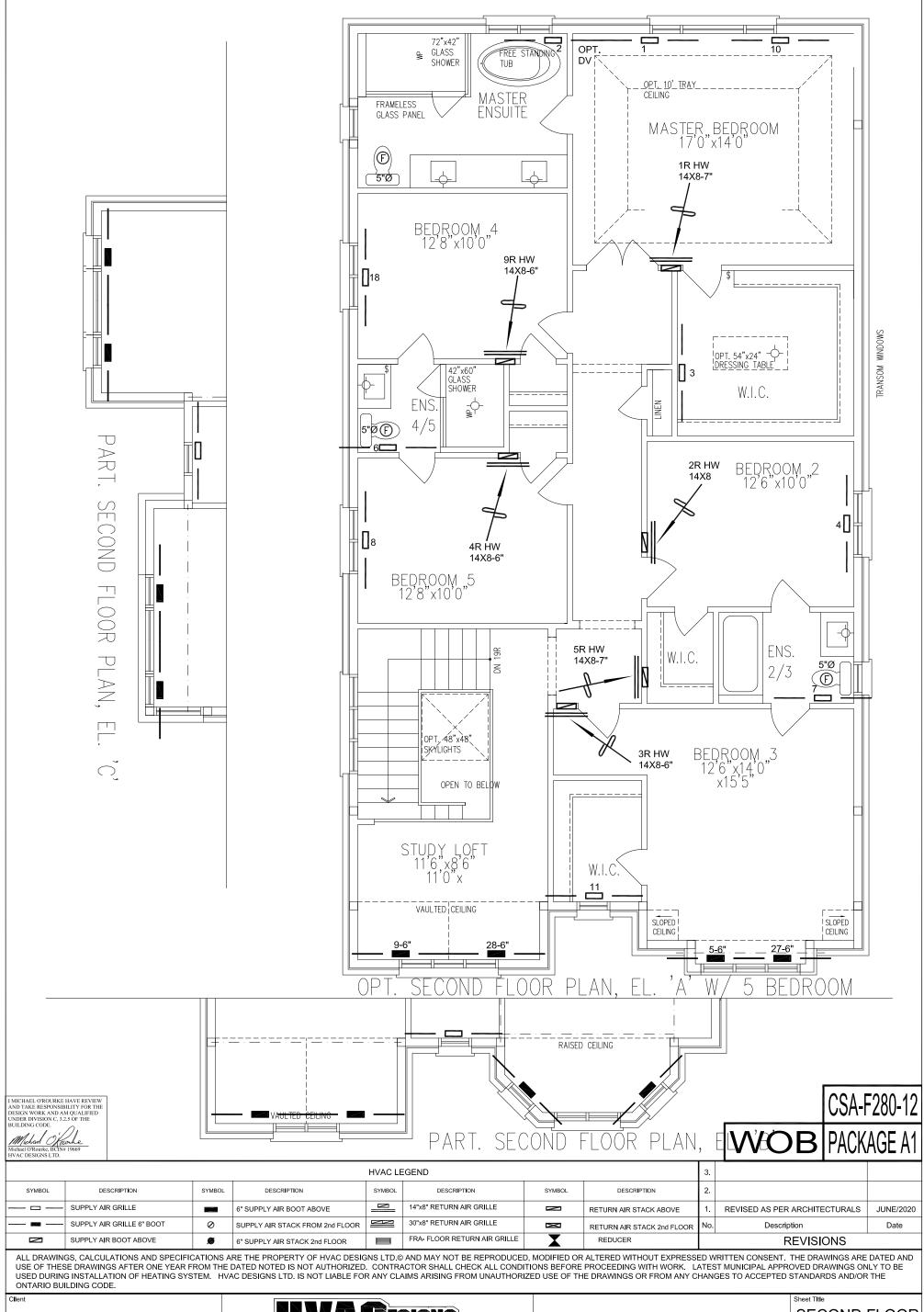
375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca

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 SEPT/2018

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



GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO THE DALERIDGE OPT. 5 BEDROOM 4004 - WOB

3341 sqft

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

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SECOND FLOOR **HEATING LAYOUT**

SEPT/2018 3/16" = 1'-0" BCIN# 19669

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Pro	ject Information						
Building	number, street name					Unit no.	Lot/con.
Municipa	lity	Postal code	Plan numbe	er/ other des	cription		
VAUGHAN	(WOODBRIDGE)						
B. Indi	vidual who reviews and t	akes responsibility	for design a	ctivities			
Name			Firm				
	L O'ROURKE		HVAC DES	IGNS LTD.	I luit no		II at/aan
Street ac 375 FINL					Unit no. 202		Lot/con.
Municipa		Postal code	Province		E-mail		1971
AJAX	··· ·	L1S 2E2	ONTARIO		info@hvac	designs.ca	
Telephor	ne number	Fax number	<u> </u>		Cell number	r	
(905) 61	9-2300	(905) 619-237	5		()		
C. Desi	gn activities undertaker	by individual ident	ified in Secti	on B. [Buile	ding Code	Table 3.5.2.1 O	F Division C]
☐ Ho	ISA	□ H\/A	C – House		Г	☐ Building Str	uctural
	all Buildings		ling Services	;		☐ Plumbing —	
	ge Buildings		ction, Lightir	ng and Pov		☐ Plumbing —	
	mplex Buildings	☐ Fire	Protection	T		☐ On-site Sew	vage Systems
•	on of designer's work DSS / GAIN CALCULATION	e		Model:	4004 THE D	ALERIDGE	
DUCT SI		3			WOB		
	NTIAL MECHANICAL VENT	ILATION DESIGN SU	MMARY	Project:	PINE VALLE	V & TESTON	
	NTIAL SYSTEM DESIGN pe	r CSA-F280-12		i roject.	T IIVE VALLE	T & TESTON	
D. Dec	aration of Designer						
Ι	MICHAEL O'ROUR				declare	e that (choose one	e as appropriate):
		(print name)					
	I review and take respons Division C, of the Building classes/categories.					bsection 3.2.4.of appropri	iate
	Individual BCIN Firm BCIN:	N:				_	
☒	I review and take respons designer" under subsec		d am qualified in ision C, of the E			y as an "other	
	Individual BCII	N: 19669					
	Basis for exem	ption from registration	and qualificatio	n:	O.B.C S	ENTENCE 3.2.	.4.1 (4)
	The design work is exemp Basis for exemption from			fication requi	irements of th	ne Building Code.	
I certify t	hat:						
	 The information conta I have submitted this 	nined in this sch application with the kno	edule is true to owledge and co).	
	June 4, 2020				Much	and Oxfoun	Le.
	Date					Signature of	of Designer

NOTE

^{1.} For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.

^{2.} Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.



Substitution Subs	SITE NAME:	PINE V	ALLEY	& TES	TON					WOB									DATE:	Jun-20				WINTER	R NATURAL AIR	HANGE	RATE	0.407		HEAT LO	OSS AT	°F.	76		CS	A-F280-12
EXP. WALL CHARLES AND ACCORDING ORE WALL AREA (ASCORDA ORE WALLAREA (ASCORDA ORE WALLAR	BUILDER:	GOLD	PARK	HOMES	3				TYPE:	4004 1	THE DA	LERIDO	E		GFA:	3341			LO#	79969			S	UMMER	NATURAL AIR	HANGE	RATE	0.137		HEAT G	SAIN AT	°F.	13	S	B-12 PAC	CKAGE A1
CLO, ST. (A.) TOTAL MATCHER MA	ROOM USE				MBR			ENS			WIC			BED-2	1		BED-3	1		BED-4	â T		ENS-2	ij i		1	LOFT		1	ENS-3						
GREWALL MAY COLOR 10.00 10	EXP. WALL				33			29		l	10			12			38			13			6				40			6						
08.5 MALL MATE 1055 GAMP 1	CLG. HT.				10			9		l	9			9			9			9			9				9			9						
CALATING		FACTO	RS							l																										
MORTH 21,5 14,4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GRS.WALL AREA	LOSS	GAIN		330			261		l	90			108			342			117			54				360			54						
ESST 23 374 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GLAZING				LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN			LOSS	GAIN	3	LOSS G	SAIN					
ESST 213 774 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NORTH	21.3	14.8	0	0	0	0	0	0	0	0	0	18	383	267	0	0	0	0	0	0	8	170	119		0	0	0	0	0	0					
WRST 13, 37, 4	EAST	21.3	37.4	0	0	0	0	0	0	0	0	0	0			60	1277	2244	0	0	0	0	0	7.77		55	1170	2057	16	340	598					
WEST 12, 37.4	SOUTH	21.3	22.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	383	412	0	0	0		30	638	687	0	0	0					
SHIVET 17, 27, 915, 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				40	851	1496	25		935	0	0	0	0	0	0	0	0	0	23153			0	0	0				170,000	0	0	0					
NETENCHIAN 18 18 18 18 18 18 18 1	SKYLT.	37.2	101.5	0	0	0	145 14	0	0	0	0	0	0	0	0	4	149	406	0	0	0	4	149	406		4	149	406	4	149	406					
METERPORTOWNALL AS 0.8 200 734 276 281 281 281 7	V/07/20 04/20	2000 755		0	0	0	0	0	0	0	0	0	0		0	0			0	0	0	0		41400000		0		0	17.585		0					
EXPRESION CALL ALL PACKED CLA 3.5 0.6 0 0 0 0 0 0 0 0 0	NET EXPOSED WALL	100 100 100	0.8	290	1294	218	236	1053	177	90	402	68	90	402	68	282	1258	212	99	442	74	46	205	35		275	1227	207	38	170	29					
EXPOSED CLG 13 0.0		3.6		2000			46550			100000			0		133300	A 4500 (6.7)			5,565,00			385.55		21027		10000000		10375	34.500		0000					
MO ATTIC EXPOSED CLG 2.7 1.3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		00000000		9550		159	557		123	575		94	192	246	113	198	254	116	55500		122			47		232	298	136	104	133	61					
EXPOSED FLOOR 2.5 0.4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		.0000000	1.3	- 2000						D-55 C.			2000		1000	992265			4-5-2-03/3			155 6557		5007		0.0000000		100000	1775500		58/35					
BASEMENTCHANN MEAT LOSS UNDITOTAL HT LOSS UNDITOT		20293		9.50	17.0	333	30	507.00	170	800	77.0	55	32	10.00	350	35550			55505	(333)	127	9720	7.0	0.77		3955		100	3392	1070	36					
SLAB ON GRADE HEAT LOSS SUBTOTAL HT CARN SUBT		-		1770	0		S .		- 20	, T		70	15	10.53	100	10000	0	70.00	860	200	875	17.75		370		870	0	350	3123		955					
SUBTOTAL HT LOSS SUBTOTAL HT					0			1000		l	100						0						70				0			125.0						
SUBTOTAL INT CALL SUBT					70			0.00		l	557												77						3	7.7						
LEVEL PACTORN MULTIPLIER 0,00 0.32 0						1872			1236			162		1	447			3149			609			619				3556			1130					
ARICHANGE HEAT COSS 791 5599 193 327 1180 346 223 1140 319 55 1140 315 315				0.20	0.32	1012	0.20	0.32	1230	0.20	0.33	102	0.20	0.33	177	0.20	0.33	3143	0.20	0.32	005	0.20	0.32	0.0		0.20	0.32	3330	0.20		1130					
AIR CHANGE HEAT CAIN UDUT CLAIN DUCT CAIN HEAT GAIN PEOPLE 2400 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0.20			0.20			0.20			0.20			0.20			0.20			0.20				0.20			0.20							
DUCT LOSS HAT COLOR HAT CAIN PEOPLE 240 2					191	444		309	02	l	155	42		321	24		1100	227		340	46		223	47			1149	200		319	0.5					
DUCT GAIN HEAT CAIN PEOPLE 400						141			93	l	•	12			34		400	231			40		0.2	41			0	200		422	65					
HEAT CARM PERFORMED TAIL 10					U			U		l	0			U			490	400		0			93	0.7			U				400					
REAT ORDING 1/20 2/21 2/24 2/24 2/25		240				400	١,		0	١,		0	١.,		- 5						240	١.						0								
TOTAL HT GAIN £1.3 BTUM 2283 2443 800 1358 5388 1438 1920 4769 4579 1459		240		2			0			١ ٥		-	31			3			1			0		3.7		0			U							
TOTAL HT GAIN x 1.3 BTUM 4048 1777 226 1744 6074 1970 952 5778 1738					2002	621			U	l	000	U		4050	621		5000	621		****	621		4000	0			4700	621		****	0					
ROOM USE EXP.WALL 24					3283			2443	4707	l	800	222		1358			5388			1438	4070		1020				4/69									
EXP. WALL CLG. HT FACTORS GRS.WALL AREA GRS.	TOTAL HT GAIN X 1.3 BTU/H					4048			1/2/			226			1/44			60/4			19/0			952				5//8		- 3	1/38					
CLG. HT. FACTORS GRSWALL AREA LOSS GAIN OLOSS GAIN OLOS																																				
FACTORS GRS.WALL AREA LOSS GAIN LOSS	ROOM USE				DIN	_					KT/GT	_			_		LN/MD	8		ENS-4			FOY		STUDY						_		WOB		BA	AS
GR.ZMILL AREA LOSS GAIN GLAIN																		8			ń.										T	,				999
GLAZING NORTH 1.3 14.8 0 0 0 0 0 0 0 0 8 170 119 0 0 0 0 0 0 0 23 489 341 EAST 21.3 13.4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL				24						76						21	8		11	0		50		10							•	42		13	38
NORTH 1.13 14.8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT.	FACTO)RS		24						76						21	8 "		11			50		10							,	42		13	38
NORTH	EXP. WALL CLG. HT.				24 11						76 11						21 13	8 1		11 9			50 11		10 11								42 10		13 1	0
EAST 21.3 37.4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA				24 11 264	GAIN					76 11 836						21 13 273	GAIN		11 9 99			50 11 550	GAIN	10 11 110	N							42 10 420	AIN	13 1 96	38 0 66
WEST 21.3 37.4 0 0 0 0 150 3192 5609 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING	LOSS	GAIN	0	24 11 264 LOSS					200	76 11 836 LOSS	GAIN				8	21 13 273 LOSS		0	11 9 99 LOSS	GAIN	0	50 11 550 LOSS	7/7	10 11 110 LOSS GA	971						ı	42 10 420 LOSS G	200	13 1 96 LO	38 0 66 SS GAIN
WEST 213 37.4 0 0 0 0 0 150 3192 5699 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH	LOSS 21.3	GAIN 14.8	10000	24 11 264 LOSS 0	0				0	76 11 836 LOSS 0	GAIN 0				8	21 13 273 LOSS 170	119	3738	99 LOSS 0	GAIN 0	80000	50 11 550 LOSS 0	0	10 11 110 LOSS GA 23 489 34	971					- 2	L O	42 10 420 LOSS G	0	13 1 96 LO 6 12	38 0 56 SS GAIN 28 89
DOORS 25.2 4.3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	21.3 21.3	14.8 37.4	0	24 11 264 LOSS 0	0				0	76 11 836 LOSS 0	GAIN 0 0				8	21 13 273 LOSS 170 0	119 0	0	99 LOSS 0	GAIN 0 0	45	50 11 550 LOSS 0 958	0 1683	10 11 110 LOSS GA 23 489 34 0 0 0	971						0 0	42 10 420 LOSS G/ 0	0	13 1 96 LO 6 12	38 0 56 SS GAIN 28 89 0 0
DOORS 25.2 4.3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH	21.3 21.3 21.3 21.3	14.8 37.4 22.9	0 26	24 11 264 LOSS 0 0 553	0 0 596				0 0	76 11 836 LOSS 0 0	GAIN 0 0				8 0 0	21 13 273 LOSS 170 0	119 0 0	0	99 LOSS 0 0	GAIN 0 0 183	45 0	50 11 550 LOSS 0 958 0	0 1683 0	10 11 110 LOSS GA 23 489 34 0 0 0	971						L 0 0	42 10 420 LOSS G/ 0 0	0	13 1 96 LO 6 12 0 (0	38 0 66 SS GAIN 28 89 0 0
NET EXPOSED WALL 4.5 0.8 238 1062 179 686 3061 516 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	21.3 21.3 21.3 21.3 21.3	14.8 37.4 22.9 37.4	0 26 0	24 11 264 LOSS 0 0 553 0	0 0 596 0				0 0 0 150	76 11 836 LOSS 0 0 0 3192	GAIN 0 0 0 5609				8 0 0	21 13 273 LOSS 170 0 0	119 0 0	0 8 0	99 LOSS 0 0 170	GAIN 0 0 183	45 0 0	50 11 550 LOSS 0 958 0	0 1683 0 0	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0	971						0 0 0 0	420 420 LOSS G 0 0 0 2043 35	0 0 0 590	13 1 96 LO 6 12 0 (0	38 0 66 SS GAIN 28 89 0 0
NO ATTICE PLOSED CLIG 1.3 0.6 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	21.3 21.3 21.3 21.3 21.3 37.2	14.8 37.4 22.9 37.4 101.5	0 26 0	24 11 264 LOSS 0 0 553 0	0 0 596 0				0 0 0 150	76 11 836 LOSS 0 0 0 3192 0	GAIN 0 0 0 5609				8 0 0 0	21 13 273 LOSS 170 0 0	119 0 0 0	0 8 0	99 99 LOSS 0 0 170 0	GAIN 0 0 183 0	45 0 0 0	50 11 550 LOSS 0 958 0	0 1683 0 0	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0	971						0 0 0 96	420 420 LOSS G/ 0 0 0 2043 35	0 0 0 590	13 1 96 LO 6 12 0 0 0 0	38 0 66 SS GAIN 28 89 0 0 0 0
EXPOSED CLG 1.3 0.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	21.3 21.3 21.3 21.3 21.3 37.2 25.2	14.8 37.4 22.9 37.4 101.5 4.3	0 26 0 0	24 11 264 LOSS 0 0 553 0 0	0 0 596 0 0				0 0 0 150 0	76 11 836 LOSS 0 0 0 3192 0	GAIN 0 0 0 5609 0			122	8 0 0 0	21 13 273 LOSS 170 0 0 0 0	119 0 0 0 0 85	0 8 0 0	99 LOSS 0 0 170 0	GAIN 0 0 183 0 0	45 0 0 0 20	50 11 550 LOSS 0 958 0 0 0 505	0 1683 0 0 0 85	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0							0 0 0 96 0	420 420 LOSS G/ 0 0 0 2043 35 0 252 4	0 0 0 590 0 43	13 1 96 LO 6 12 0 0 0 0 0 0 20 50	38 0 66 SS GAIN 28 89 0 0 0 0 0 0
NO ATTIC EXPOSED CLG	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5	14.8 37.4 22.9 37.4 101.5 4.3	0 26 0 0 0 238	24 11 264 LOSS 0 0 553 0 0 0 1062	0 596 0 0 0 179				0 0 0 150 0 0	76 11 836 LOSS 0 0 0 3192 0 0 3061	GAIN 0 0 5609 0 516			122	8 0 0 0 0 20 245	21 13 273 LOSS 170 0 0 0 0 505 1093	119 0 0 0 0 85 184	0 8 0 0 0	99 LOSS 0 0 170 0 0 0 406	GAIN 0 0 183 0 0	45 0 0 0 20 485	50 11 550 LOSS 0 958 0 0 0 505 2164	0 1683 0 0 0 0 85 365	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 96 0	420 420 LOSS G/ 0 0 2043 35 0 252 4 1401 2	0 0 0 590 0 43	13 1 96 LO 6 12 0 0 0 0 0 0 20 50	38 0 0 66 6 88 69 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXPOSED FLOOR 2.6 0.4 0 0 0 0 0 0 0 0 0	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6	14.8 37.4 22.9 37.4 101.5 4.3 0.8 0.6	0 26 0 0 0 238	24 11 264 LOSS 0 0 553 0 0 1062	0 596 0 0 0 179				0 0 0 150 0 0 686	76 11 836 LOSS 0 0 0 3192 0 0 3061	GAIN 0 0 5609 0 516				8 0 0 0 0 20 245 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	119 0 0 0 0 85 184	0 8 0 0 0 91	99 LOSS 0 0 170 0 0 406 0	GAIN 0 0 183 0 0 0 68	45 0 0 0 20 485 0	50 11 550 LOSS 0 958 0 0 0 505 2164 0	0 1683 0 0 0 85 365	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 96 0 10 314	42 10 420 LOSS G 0 0 0 22043 35 0 252 4 1401 2	0 0 0 590 0 43 36	13 1 96 LO 6 12 0 0 0 0 0 0 20 50 0 0 414	38 0 0 66 8S GAIN 28 89 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN TOTAL HT GAIN TOTAL HT LOSS SUBTOTAL HT LOSS SUBTOTAL HT GAIN TOTAL HT LOSS SUBTOTAL HT L	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BBMT WALL ABOVE GR	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6	0 26 0 0 0 238 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0	0 596 0 0 0 179 0				0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0	GAIN 0 0 5609 0 516 0				8 0 0 0 20 245 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	119 0 0 0 0 85 184 0	0 8 0 0 0 91 0	99 LOSS 0 0 170 0 0 406 0 226	GAIN 0 0 183 0 0 0 68 0 103	45 0 0 0 20 485 0	50 11 550 LOSS 0 958 0 0 505 2164 0	0 1683 0 0 0 85 365 0	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 96 0 10 314 0	420 420 LOSS G/ 0 0 0 2043 35 0 252 4 1401 2	0 0 0 590 0 43 36 0	13 1 96 LO 6 12 0 (0 0 (0 20 50 0 (414	38 0 66 SS GAIN 28 89 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS 1615 6253 1769 802 3627 878 4230 4545 4230 4545 425	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	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0	0 0 596 0 0 0 179 0				0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0	GAIN 0 0 5609 0 516 0				8 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	119 0 0 0 0 85 184 0	0 8 0 0 0 91 0	11 9 99 LOSS 0 0 170 0 0 406 0 226 0	GAIN 0 0 183 0 0 68 0 103	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0	0 1683 0 0 0 85 365 0	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 96 0 10 314 0	420 420 LOSS G/ 0 0 2043 35 0 252 4 1401 2 0 0	0 0 0 5590 0 43 36 0	13 1 96 LO 6 12 0 (0 0 (0 20 5(0 0 (414 14	38 0 0 56 6 SSS GAIN 28 89 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
SUBTOTAL HT LOSS SUB TOTAL HT GAIN 775 6625 1769 802 3627 878 4230 4250 4250 4250 4250 4250 4250 4250 425	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BBMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0	0 0 596 0 0 0 179 0				0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0	GAIN 0 0 5609 0 516 0				8 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	119 0 0 0 0 85 184 0	0 8 0 0 0 91 0	99 LOSS 0 0 170 0 0 406 0 226 0 0	GAIN 0 0 183 0 0 68 0 103	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0	0 1683 0 0 0 85 365 0	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 96 0 10 314 0	420 420 LOSS G/ 0 0 2043 35 0 252 4 1401 2 0 0	0 0 0 5590 0 43 36 0	13 1 96 LO 6 12 0 (0 0 (0 20 5(0 0 (414 14 14 14 14 14 14 14 14 14 14 14 14	38 0 0 56 6 SS GAIN 28 89 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
SUB TOTAL HT GAIN	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 LG SEXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0	0 0 596 0 0 0 179 0				0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0	GAIN 0 0 5609 0 516 0				8 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 0 505 1093 0	119 0 0 0 0 85 184 0	0 8 0 0 0 91 0	99 LOSS 0 0 170 0 0 406 0 226 0 0 0	GAIN 0 0 183 0 0 68 0 103	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0	0 1683 0 0 0 85 365 0	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 996 0 10 114 0 0 0	420 LOSS G 0 0 0 22043 35 0 252 4 1401 2 0 0	0 0 0 5590 0 43 36 0	13 1 96 LO 6 12 0 (0 0 (0 20 5(0 0 (414 14 14 14 14 14 14 14 14 14 14 14 14	38 0 0 56 6 SS GAIN 28 89 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
LEVEL FACTOR / MULTIPLIER 0.30 0.57 500 0 0.30 0.57 0.30 0.57 500 0 0.30 0.57 500 0 0.30 0.57 0.30 0.57 500 0 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30 0.57 0.30	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 BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0 0	0 0 596 0 0 0 179 0				0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 3061 0 0 0	GAIN 0 0 5609 0 516 0				8 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0	119 0 0 0 0 85 184 0	0 8 0 0 0 91 0	99 LOSS 0 0 1770 0 0 4066 0 226 0 0 0 0	GAIN 0 0 183 0 0 68 0 103	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0	0 1683 0 0 0 85 365 0	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 996 0 10 10 0 0 0	420 LOSS G 0 0 0 22043 35 0 2552 4 1401 2 0 0 0	0 0 0 5590 0 43 36 0	13 1 1 96 LO 6 12 0 (0 0 (0 20 5(0 0 (414 14 0 (0 0 (24	38 0 0 36 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
AIR CHANGE HEAT LOSS 920 3563 1008 255 2067 500 13429 AIR CHANGE HEAT GAIN 58 461 29 27 161 31 32 323 DUCT LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	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 BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0 0	0 0 596 0 0 179 0 0				0 0 0 150 0 0 686 0	76 11 836 LOSS 0 0 3192 0 3061 0 0 0	GAIN 0 0 5609 0 516 0 0				8 0 0 0 20 245 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0	119 0 0 0 0 85 184 0 0	0 8 0 0 0 91 0	99 LOSS 0 0 1770 0 0 4066 0 226 0 0 0 0	GAIN 0 0 183 0 0 0 68 0 103 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0	0 1683 0 0 0 85 365 0 0	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 996 0 10 10 0 0 0	420 LOSS G 0 0 0 2043 35 0 252 4 1401 2 0 0 0 0 533 4230	0 0 0 5590 0 43 36 0 0	13 1 1 96 LO 6 12 0 (0 0 (0 20 5(0 0 (414 14 0 (0 0 (24	38 0 0 56 SS GAIN 88 89 0 0 0 0 0 0 0 0 0 0 0 0 55 85 0 0 0 90 251 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
AIR CHANGE HEAT GAIN DUCT LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	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	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0 0	0 0 596 0 0 179 0 0				0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 3192 0 0 3061 0 0 0 0 6253	GAIN 0 0 5609 0 516 0 0				8 0 0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0	119 0 0 0 0 85 184 0 0	0 8 0 0 0 91 0 176 0	99 LOSS 0 0 170 0 0 406 0 226 0 0 0 802	GAIN 0 0 183 0 0 0 68 0 103 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0	10 11 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 996 0 10 10 0 0 0	420 LOSS G 0 0 0 2043 35 0 252 4 1401 2 0 0 0 0 533 4230	0 0 0 5590 0 43 336 0 0 0	13 1 96 LO 6 13 0 (0 0 (0 20 50 0 (414 14 0 (0 0 (24	38 0 0 8 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
DUCT LOSS 0 0 0 0 0 0 0 0 0	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	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615	0 0 596 0 0 179 0 0				0 0 150 0 0 686 0 0	76 11 836 0 0 0 3192 0 0 3061 0 0 0 0 6253	GAIN 0 0 5609 0 516 0 0				8 0 0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769	119 0 0 0 0 85 184 0 0	0 8 0 0 0 91 0 176 0	111 9 99 LOSS 0 0 0 1770 0 0 0 406 0 226 0 0 0 802 0.32	GAIN 0 0 183 0 0 0 68 0 103 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0	10 11 11 11 11 11 11 11 11 11 11 11 11 1						3	0 0 0 996 0 10 10 0 0 0	420 LOSS G 0 0 0 2043 35 0 252 4 1401 2 0 0 0 0 533 4230	0 0 0 5590 0 43 336 0 0 0	13 1 96 LO 6 12 0 0 0 0 0 20 50 0 0 0 414 14 0 0 0 24 45	38 0 0 56 56 58 S GAIN 28 89 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
DUCT GAIN 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 621 0 0 621 0 0 621 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <td>EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED USALL NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULT IPILER AIR CHANGE HEAT LOSS</td> <td>21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7</td> <td>14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3</td> <td>0 26 0 0 0 238 0 0</td> <td>24 11 264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615</td> <td>0 0 596 0 0 0 179 0 0 0</td> <td></td> <td></td> <td></td> <td>0 0 150 0 0 686 0 0</td> <td>76 11 836 0 0 0 3192 0 0 3061 0 0 0 0 6253</td> <td>GAIN 0 0 0 5609 0 0 516 0 0 0 0 6125</td> <td></td> <td></td> <td></td> <td>8 0 0 0 20 245 0 0 0</td> <td>21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769</td> <td>119 0 0 0 0 85 184 0 0 0</td> <td>0 8 0 0 0 91 0 176 0</td> <td>111 9 99 LOSS 0 0 0 1770 0 0 0 406 0 226 0 0 0 802 0.32</td> <td>GAIN 0 0 0 183 0 0 0 68 0 103 0 0</td> <td>45 0 0 20 485 0 0</td> <td>50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627</td> <td>0 1683 0 0 0 85 365 0 0 0</td> <td>10 11 11 11 11 11 11 11 11 11 11 11 11 1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td>0 0 0 996 0 10 10 0 0 0</td> <td>420 LOSS G 0 0 0 2043 35 0 252 4 1401 2 0 0 0 0 533 4230</td> <td>0 0 0 5590 0 43 336 0 0 0</td> <td>13 1 96 LO 6 12 0 0 0 0 0 20 50 0 0 0 414 14 0 0 0 24 45</td> <td>38 0 0 56 58 58 58 58 58 58 58 58 58 58 58 58 58</td>	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED USALL NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULT IPILER AIR CHANGE HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0				0 0 150 0 0 686 0 0	76 11 836 0 0 0 3192 0 0 3061 0 0 0 0 6253	GAIN 0 0 0 5609 0 0 516 0 0 0 0 6125				8 0 0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769	119 0 0 0 0 85 184 0 0 0	0 8 0 0 0 91 0 176 0	111 9 99 LOSS 0 0 0 1770 0 0 0 406 0 226 0 0 0 802 0.32	GAIN 0 0 0 183 0 0 0 68 0 103 0 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0 0	10 11 11 11 11 11 11 11 11 11 11 11 11 1						3	0 0 0 996 0 10 10 0 0 0	420 LOSS G 0 0 0 2043 35 0 252 4 1401 2 0 0 0 0 533 4230	0 0 0 5590 0 43 336 0 0 0	13 1 96 LO 6 12 0 0 0 0 0 20 50 0 0 0 414 14 0 0 0 24 45	38 0 0 56 58 58 58 58 58 58 58 58 58 58 58 58 58
HEAT GAIN PEOPLE 240 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	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 BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0				0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 3061 0 0 0 6253	GAIN 0 0 0 5609 0 0 516 0 0 0 0 6125				8 0 0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769	119 0 0 0 0 85 184 0 0 0	0 8 0 0 0 91 0 176 0	111 9 99 LOSS 0 0 170 0 0 406 0 226 0 0 0 802 0.32 255	GAIN 0 0 0 183 0 0 0 68 0 103 0 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0 0	10 11 11 11 11 11 11 11 11 11 11 11 11 1						3	0 0 0 996 0 10 10 0 0 0	420 LOSS G 0 0 0 2043 35 0 252 4 1401 2 0 0 0 0 533 4230	0 0 0 5590 0 43 336 0 0 0	13 1 96 LO 6 12 0 0 0 0 0 20 50 0 0 0 414 14 0 0 0 24 45	38 0 0 56 58 58 58 58 58 58 58 58 58 58 58 58 58
HEAT GAIN APPLIANCES/LIGHTS 621 621 621 0 0 621 0 621 0 621 1070 107	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 LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT GAIN DUCT LOSS	21.3 21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0				0 0 150 0 0 686 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 3061 0 0 0 6253	GAIN 0 0 0 5609 0 0 516 0 0 0 0 6125				8 0 0 0 20 245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769	119 0 0 0 85 184 0 0 0	0 8 0 0 0 91 0 176 0	111 9 99 LOSS 0 0 170 0 0 406 0 226 0 0 0 802 0.32 255	GAIN 0 0 0 183 0 0 0 68 0 103 0 0	45 0 0 20 485 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0 0	10 11 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						3	0 0 0 996 0 10 10 0 0 0	420 LOSS G 0 0 0 2043 35 0 252 4 1401 2 0 0 0 0 533 4230	0 0 0 5590 0 43 336 0 0 0	13 1 96 LO 6 12 0 0 0 0 0 20 50 0 0 0 414 14 0 0 0 24 45	38 0 0 56 58 58 58 58 58 58 58 58 58 58 58 58 58
TOTAL HT LOSS BTU/H 2536 9816 2776 1057 5694 1378 4762 17974	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 SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT GAIN	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0				0 0 0 150 0 0 686 0 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 3061 0 0 0 6253	GAIN 0 0 0 5609 0 0 516 0 0 0 0 6125				8 0 0 0 20 2245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769	119 0 0 0 0 85 184 0 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 170 0 0 406 0 226 0 0 0 802 0.32 255	GAIN 0 0 0 183 0 0 0 68 0 103 0 0 0 3555	45 0 0 0 20 485 0 0 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0 0 0	10 11 11 11 11 11 11 11 11 11 11 11 11 1						3	0 0 0 996 0 10 814 0 0 0	42 10 420 COSS GI 0 0 0 0 0 2043 31 400 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 5590 0 0 443 336 0 0 0 0 0	13 1 96 LO 6 12 0 0 0 0 0 20 50 0 0 0 414 14 0 0 0 24 45	38 0 0 56 58 58 58 58 58 58 58 58 58 58 58 58 58
	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED USALL NET 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 AIR CHANGE HEAT LOSS DUCT GAIN HEAT GAIN PEOPLE	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0 0	24 11 264 LOSS 0 0 553 0 0 0 1062 0 0 0 0 1615	0 0 596 0 0 0 179 0 0 0 0 775				0 0 0 150 0 0 686 0 0 0	76 11 836 LOSS 0 0 0 3192 0 0 0 3061 0 0 0 6253	GAIN 0 0 0 5609 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				8 0 0 0 20 2245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769	119 0 0 0 85 184 0 0 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 170 0 0 406 0 226 0 0 0 802 0.32 255	GAIN 0 0 183 0 0 0 688 0 103 0 0 0 3555 27 0 0 0	45 0 0 0 20 485 0 0 0 0	50 11 550 LOSS 0 958 0 0 505 2164 0 0 0 0 3627	0 1683 0 0 0 85 365 0 0 0 2132	10 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	• 100 mm m m m m m m m m m m m m m m m m					3	0 0 0 996 0 10 814 0 0 0	42 10 420 COSS GO 0 0 0 0 252 4 1401 2 0 0 0 0 0 5533 4230 34	0 0 0 0 590 0 0 43 336 0 0 0 0	13 1 96 LO 6 12 0 0 0 0 0 20 50 0 0 0 414 14 0 0 0 24 45	38 0 0 56 SS GAIN 88 89 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
101AL H1 GAIN X 1.3 B 10/H	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR EXPOSED LG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENTICRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0 0	24 11 264 LOSS 0 0 0 0 1062 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 596 0 0 0 179 0 0 0 0 775				0 0 0 150 0 0 686 0 0 0	76 11 836 COSS 0 0 0 3192 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 0 0 0 5609 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				8 0 0 0 20 2245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769 0.57 1008	119 0 0 0 85 184 0 0 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 0 1770 0 0 0 406 0 0 226 0 0 0 0 802 0.32 2555 0	GAIN 0 0 183 0 0 0 688 0 103 0 0 0 3555 27 0 0 0	45 0 0 0 20 485 0 0 0 0	50 11 550 0 958 0 0 505 2164 0 0 0 0 3627 0.57 2067	0 1683 0 0 0 85 365 0 0 0 2132	10 11 11 110 LOSS GA 23 489 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	• 100 mm m m m m m m m m m m m m m m m m					3	0 0 0 996 0 110 114 0 0 0 0	42 10 420 COSS GI 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 590 0 0 43 336 0 0 0 0	133 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	38 0 0 621 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
	EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN APPLIANCES/LIGHTS TOTAL HT LOSS BTU/H	21.3 21.3 21.3 21.3 37.2 25.2 4.5 3.6 1.3 2.7 2.6	14.8 37.4 22.9 37.4 101.5 4.3 0.6 0.6 1.3	0 26 0 0 0 238 0 0 0	24 11 264 LOSS 0 0 0 0 1062 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 596 0 0 0 179 0 0 0 0 775				0 0 0 150 0 0 686 0 0 0	76 11 836 COSS 0 0 0 3192 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GAIN 0 0 0 5609 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				8 0 0 0 20 2245 0 0 0	21 13 273 LOSS 170 0 0 0 505 1093 0 0 0 0 0 1769 0.57 1008	119 0 0 0 0 85 184 0 0 0 0	0 8 0 0 91 0 176 0	111 9 99 LOSS 0 0 0 1770 0 0 0 406 0 0 226 0 0 0 0 802 0.32 2555 0	GAIN 0 0 0 183 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	45 0 0 0 20 485 0 0 0 0	50 11 550 0 958 0 0 505 2164 0 0 0 0 3627 0.57 2067	0 1683 0 0 0 85 365 0 0 0 2132	10 11 11 11 11 11 11 11 11 11 11 11 11 1						3	0 0 0 996 0 110 114 0 0 0 0	42 10 420 COSS GI 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 590 0 0 143 336 0 0 0 0	133 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	38 0 0 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

TOTAL HEAT GAIN BTU/H: 49063 TONS: 4.09 LOSS DUE TO VENTILATION LOAD BTU/H: 3181 STRUCTURAL HEAT LOSS: 67951

Mehant Oxombe.

TOTAL COMBINED HEAT LOSS BTU/H: 71132



			ALLEY &						WOB 4004 THI		RIDGE		DATE:	Jun-20			GFA:	3341	LO#	79969				
HEATING CFM TOTAL HEAT LOSS AIR FLOW RATE CFM	67,951	,		LING CFM EAT GAIN RATE CFM	48,527		а	fur a/c coil vailable	pressure pressure pressure r s/a & r/a	0.6 0.05 0.2 0.35						EL	.296UH09 FAN			x		AFUE = (BTU/H) = (BTU/H) =	88,000	
RUN COUNT S/A	4th 0	3rd 0	2nd 14	1st 9	Bas 6		nle		ssure s/a	0.18		-/-	pressure	0.17				EDLOW	0 1105		DESI	GN CFM = CFM @ .6		g
R/A	0	0	5	3	1				ress. loss	0.02	r/a		ess. Loss					M HIGH	1255			CFM @ .	E.S.P.	
All S/A diffusers 4"x10" unl				out.	n	24	min adju	usted pre	ssure s/a	0.16	adj	usted pre	ssure r/a	0.15				HIGH	1525	T	EMPERAT	URE RISE	52	°F
All S/A runs 5"Ø unless not	ed othe	rwise on 2	ayout.	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	ENS-2	ENS-4	LOFT	MBR	ENS-3	DIN	KT/GT	KT/GT	KT/GT	KT/GT	LN/MD	ENS	FOY	STUDY	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.64	1.22	0.80	1.36	2.69	1.44	1.02	1.06	2.38	1.64	1.46	2.54	2.45	2.45	2.45	2.45	2.78	1.22	2.85	1.38	3.79	3.79	3.79	3.79
CFM PER RUN HEAT	37	27	18	30	60	32	23	24	54	37	33	57	55	55	55	55	62	27	64	31	85	85	85	85
RM GAIN MBH. CFM PER RUN COOLING	2.02 64	0.86	0.23 7	1.74 55	3.04 95	1.97 62	0.95	0.50	2.89 91	2.02	1.74 55	1.89 59	2.34 74	2.34 74	2.34	2.34 74	1.35 42	0.86	1.49 47	1.37	1.13	1.13	1.13	1.13
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	71	58	51	49	42	40	37	33	44	63	35	18	45	37	39	46	11	55	16	27	56	57	28	21
EQUIVALENT LENGTH	200	150	150	180	190	150	220	200	140	210	180	130	140	150	160	150	160	140	140	80	140	130	110	110
TOTAL EFFECTIVE LENGTH	271	208	201	229	232	190	257	233	184	273	215	148	185	187	199	196	171	195	156	107	196	187	138	131
ADJUSTED PRESSURE ROUND DUCT SIZE	0.06	0.08	0.09	0.08	0.07	0.09	0.07	0.07	0.09	0.06	0.08	0.12	0.09	0.09	0.09	0.09	0.1	0.09	0.11 5	0.16	0.08 6	0.09	0.12	0.12
HEATING VELOCITY (ft/min)	272	310	207	220	306	235	264	275	275	272	242	654	404	404	404	404	455	310	470	356	433	433	624	624
COOLING VELOCITY (ft/min)	470	310	80	404	484	455	344	184	464	470	404	677	543	543	543	543	308	310	345	493	184	184	264	264
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10
TRUNK	Α	Α	В	В	D	С	D	С	D	Α	D	С	Α	A	Α	Α	С	С	D	С	В	В	В	С
RUN#	25	26	27	28	29																			
ROOM NAME	BAS	BAS	BED-3	LOFT	FOY																			
RM LOSS MBH.	3.79	3.79	2.69	2.38	2.85																			
CFM PER RUN HEAT	85 1.13	85 1.13	60 3.04	54 2.89	64 1.49																			
RM GAIN MBH. CFM PER RUN COOLING	36	36	95	91	47																			
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.17																			
ACTUAL DUCT LGH.	19	32	48	57	25																			
EQUIVALENT LENGTH	120	120	200	200	120																			
TOTAL EFFECTIVE LENGTH ADJUSTED PRESSURE	139 0.12	152 0.11	248 0.07	257 0.06	145 0.12																			
ROUND DUCT SIZE	5	5	6	6	5																			
HEATING VELOCITY (ft/min)	624	624	306	275	470																			
COOLING VELOCITY (ft/min)	264	264	484	464	345																			
OUTLET GRILL SIZE TRUNK	3X10 C	3X10	4X10 D	4X10 D	3X10 D																			
IRUNK	C	D	- D	D	ь																			
SUPPLY AIR TRUNK SIZE		120,000	Dermos	0000000						- ALL CONTROL	/ secretor		112222			Name of the	RETURN A			Demois	ranguar.			. Annual Control
	TRUNK	STATIC	ROUND	RECT			VELOCITY (ft/min)			TRUNK	STATIC PRESS	ROUND	RECT			VELOCITY (ft/min)		TRUNK	STATIC PRESS	ROUND	RECT			VELOCITY (ft/min)
TRUNK A	321	0.06	9.8	12	×	8	482		TRUNK G	0	0.00	0	0	y	8	(π/min)	TRUNK O	0	0.06	0	0	×	8	(tvmin)
TRUNK B	624	0.06	12.6	18	x	8	624		TRUNK H	0	0.00	o	ő	x	8	o	TRUNK P	Ö	0.06	ő	Ö	x	8	Ö
TRUNK C	1027	0.06	15.2	26	×	8	711		TRUNK I	0	0.00	0	0	×	8	0	TRUNK Q	0	0.06	0	0	×	8	0
TRUNK D	497	0.06	11.6	16	×	8	559		TRUNK J	0	0.00	0	0	x	8	0	TRUNK R	0	0.06	0	0	x	8	0
TRUNK E	0	0.00	0	0	×	8	0		TRUNK K	0	0.00	0	0	×	8	0	TRUNK S	0	0.06	0	0	×	8	0
		0.00				-	-						-				TRUNK U	0	0.06	Ö	ŏ	×	8	0
RETURN AIR #	1	2	3	4	5	6	7	8								BR	TRUNK V	0	0.06	0	0	×	8	0
NE : OKH PIK II	0	0	0	0	0	Ö	ó	ô	0	0	0	0	0	0	0	ы	TRUNK X	1270	0.06	16.5	28	×	10	653
AIR VOLUME	155	185	85	95	170	145	305	145	o	o	o	0	Ö	o	o	240	TRUNK Y	605	0.06	12.5	18	×	8	605
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	0.15	TRUNK Z	0	0.06	0_	0	×	8	0
ACTUAL DUCT LGH.	51	36	44	37	45	28	31	23	1	1	1	1	1	1	1	16	DROP	1525	0.06	17.7	24	x	14	654
TOTAL EFFECTIVE LH	190 241	155 191	205 249	165 202	165 210	185 213	145 176	195 218	0	0	0	0	0	0	0	235 251								
ADJUSTED PRESSURE	0.06	0.08	0.06	0.07	0.07	0.07	0.08	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.06								
ROUND DUCT SIZE	7.5	7.5	6	6	7.5	7	9	7	0	0	0	0	0	0	0	8.8								
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	8								
INI ET COIL I SIZE	X 14	X 14	X 14	X 14	X 14	14	X 30	X 14	X	0	0	X	X	0	0	X 30								
INLET GRILL SIZE	14	14	14	14	14	14	30	14	U	U	U	U	U	U	U	30								



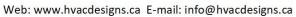
TYPE: 4004 THE DALERIDGE 79969 LO# SITE NAME: PINE VALLEY & TESTON WOB

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL VENTILATION CAPACITY	9.32.3.5.
a) Direct vent (sealed combustion) only		Total Ventilation Capacity	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Ventil. Capacity155	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Supplemental Capacity 46.4	cfm
d) Solid Fuel (including fireplaces)		DDINGIDAL EXHAUGT FAN CADACITY	
e) No Combustion Appliances		PRINCIPAL EXHAUST FAN CAPACITY Model: VANEE 65H Location:	BSMT
HEATING SYSTEM		155.0 cfm 3.0 sones	_
✓ Forced Air Non Forced Air		PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
		CFM ΔΤ *F FACTOR 155.0 CFM X 76 F X 1.08 X	% LOSS 0.25
Electric Space Heat			0.25
		SUPPLEMENTAL FANS NUTONE	
HOUSE TYPE	9.32.1(2)	Location Model cfm HV ENS QTXEN050C 50 ✓	
	0.02(2)	ENS-2 QTXEN050C 50 ✓	
✓ I Type a) or b) appliance only, no solid fuel		ENS-3 QTXEN050C 50 ✓	0.3
		ENS-4 QTXEN050C 50 ✓	0.3
II Type I except with solid fuel (including fireplaces)	LIFAT DECOVEDY VENTUATOR	0.20.2.44
III Any Type c) appliance		HEAT RECOVERY VENTILATOR Model: VANEE 65H	9.32.3.11.
III		155 cfm high 64	cfm low
IV Type I, or II with electric space heat		80.895	
Other: Type I, II or IV no forced air		75 % Sensible Efficiency ✓ @ 32 deg F (0 deg C)	HVI Approved
		LOCATION OF MOTAL LATION	
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	LOCATION OF INSTALLATION	
		Lot: Concession	
1 Exhaust only/Forced Air System			
2 LIDV with Dusting/Forced Air System		Township Plan:	
2 HRV with Ducting/Forced Air System		Address	
3 HRV Simplified/connected to forced air system		Roll # Building Permit #	
4 HRV with Ducting/non forced air system		BUILDER: GOLD PARK HOMES	
Part 6 Design		Name:	
TOTAL VENTILATION CAPACITY	9.32.3.3(1)	Address:	
Basement + Master Bedroom 2 @ 21.2 cfm 42.4	cfm	City:	
Other Bedrooms <u>3</u> @ 10.6 cfm <u>31.8</u>	cfm	Telephone #: Fax #:	
Kitchen & Bathrooms6 @ 10.6 cfm63.6	cfm	INSTALLING CONTRACTOR	
Other Rooms <u>6</u> @ 10.6 cfm <u>63.6</u>	cfm	Name:	
Table 9.32.3.A. TOTAL <u>201.4</u>	cfm	Address:	
		City:	
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)		
1 Bedroom 31.8	cfm	Telephone #: Fax #:	
51.0		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: Mahar Ofambe.	
5 Bedroom 95.4	cfm	HRAI# 001820	
TOTAL 79.5 cfm		Date: June-20	
	IFIED IN THE AP	PPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C. 3.2.5 OF THE BUILDING	G CODE.



			(Control Control	80-12 Residential Hea						
10#	79969	Model: 4004 THE DA	COCONAGE 24 20 CO.	Participal Control	er: GOLD PARK HOMES	acculation			Data	: 6/4/2020
LO#:	79909			builde	T. GOLD PARK HOIVIES		in Change & Delte	a T Data	Date	. 6/4/2020
		Volume Calculation	on		-		Air Change & Delta	a i Data		
ouse Volume				1		WINTER NAT	URAL AIR CHANG	FRATE	0.407	1
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	1			TURAL AIR CHANG	E/200100.00	0.137	1
Bsmt	1518	10	15180	1						-
First	1518	11	16698	1						
Second	1852	9	16668				Design Te	mperature Diff	erence	
Third	0	9	0				Tin °C	Tout °C	ΔT °C	ΔT °F
Fourth	0	9	0			Winter DTDh	22	-20	42	76
		Total:	48,546.0 ft ³			Summer DTDc	24	31	7	13
		Total:	1374.7 m³]						
	5 2 2	3.1 Heat Loss due to A	ir Leakage			6265	ensible Gain due t	to Air Leakage		
	3.2.3	Heat Loss due to A	ii Leakage			0.2.03	ensible dalli dde i	to All Leakage		
	***	V_b					V_h	2000		
	$HL_{airb} =$	$LR_{airh} \times \frac{V_b}{3.6} \times I$	$DTD_h \times 1.2$		H	$HG_{salb} = LR_{airc} \times$	$\frac{s}{3.6} \times DTD_c$	× 1.2		
0.407	x 381.85	x _ 42 °C	x 1.2	= 7872 W		x 381.85			=	445 W
					8 3337					
				= 26859 Btu/h	1				=	1518 Btu/h
					·					
5.2.3.2 Heat Loss due to Mechanical Ventilation					6.2.7 Sen	sible heat Gain du	ue to Ventilatio	n		
					7.72					
	$HL_{vairb} =$	$PVC \times DTD_h \times 1$	$1.08 \times (1 - E)$		HL	$vairb = PVC \times D7$	$D_h \times 1.08 \times 1$	(1-E)		
155 CFM	x 76 °F	x 1.08	x 0.25	= 3181 Btu/h	155 CFM	x 13 °F	x 1.08	x 0.25	=	536 Btu/h
								S - 1.		72 02
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Flo	or Multiplier Section)				
		HL.	= Level Fact	$or \times HL_{airbv} \times \{(H_{airbv}) \times \{$	IL + HL) ÷	(HLandons) + HLb				
					-ager byer /	(agcieveib	getevetji			
				HLairve Air Leakage +	Level Conductive Heat	Air Leakage Heat Los	s Multiplier (LF x			
		Level	Level Factor (LF)	Ventilation Heat Loss	Loss: (HL _{clevel})	HLairby / H	Llevel)			
		-	0.5	(Btu/h)		8	i i			
		1	0.5	-	8,774	1.531				
		2	0.3	26.850	14,142	0.570				
		3 4	0.2	26,859	16,928	0.317				
			0	4	0	0.000				
		5	0							





Web. WWW.iiVacaesigns.ca E mail. iiio@iiVacaesigi

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: SFQT:	4004 THE DALERIDGE 3341	WOB LO# 79969	BUILDER: GOLD PARK HOMES SITE: PINE VALLEY & TEST	
DESIGN A	SSUMPTIONS			
	R DESIGN TEMP. DESIGN TEMP.	°F -4 72	COOLING OUTDOOR DESIGN TEMP. INDOOR DESIGN TEMP. (MAX 75°F)	°F 88 75
ATTACHM	1ENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FA	CES:	EAST	ASSUMED (Y/N):	Υ
AIR CHANGES PER HOUR:		3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:		AVERAGE	ASSUMED (Y/N):	Υ
WIND EXPOSURE:		SHELTERED	ASSUMED (Y/N):	Υ
HOUSE VOLUME (ft³):		48546.0	ASSUMED (Y/N):	Υ
INTERNAL SHADING: B		BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR	LIGHTING LOAD (Btu/h/f	(t²): 1.27	DC BRUSHLESS MOTOR (Y/N):	Υ
FOUNDAT	TION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 f
LENGTH:	58.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	138.0 f
WOB INS	JLATION CONFIGURATION	N SCB_9	WOB EXPOSED PERIMETER	42.0 f

2012 OBC - COMPLIANCE PACKAGE		
	Compliance	Package
Component	A	1
	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

We	eather Sta	tion Description	
Province:	Ontario		
Region:	Vaughan (Woodbridge)		
	Site D	escription	
Soil Conductivity:	Normal	conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
	Foundatio	n Dimensions	
Floor Length (m):	4.6		
Floor Width (m):	9.8		
Exposed Perimeter (m):	42.1		
Wall Height (m):	3.0		
Depth Below Grade (m):	1.79	Insulation Configuration	
Window Area (m²):	0.6		
Door Area (m²):	1.9		
	Radi	ant Slab	
Heated Fraction of the Slab:	0		
Fluid Temperature (°C):	33		
	Desig	n Months	
Heating Month	1		
	Founda	ition Loads	
Heating Load (Watts):		710	

TYPE: 4004 THE DALERIDGE

LO# 79969

WOB



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

W	eather Sta	tion Description		
Province:	Ontario			
Region:	Vaughan	(Woodbridge)		
	Site D	escription		
Soil Conductivity:	Normal co	onductivity: dry sand, loam, clay		
Water Table:	Normal (7	7-10 m, 23-33 ft)		
	Foundatio	n Dimensions		
Length (m):	1.5			
Width (m):	9.8	0.6m +		
Exposed Perimeter (m):	12.8	0.6m Insulation Configuration		
	Radi	ant Slab		
Heated Fraction of the Slab:	0			
Fluid Temperature (°C):	33			
	Design	n Months		
Heating Month	1			
	Re	esults		
Heating Load (Watts):		156		

TYPE: 4004 THE DALERIDGE WOB



Air Infiltration Residential Load Calculator

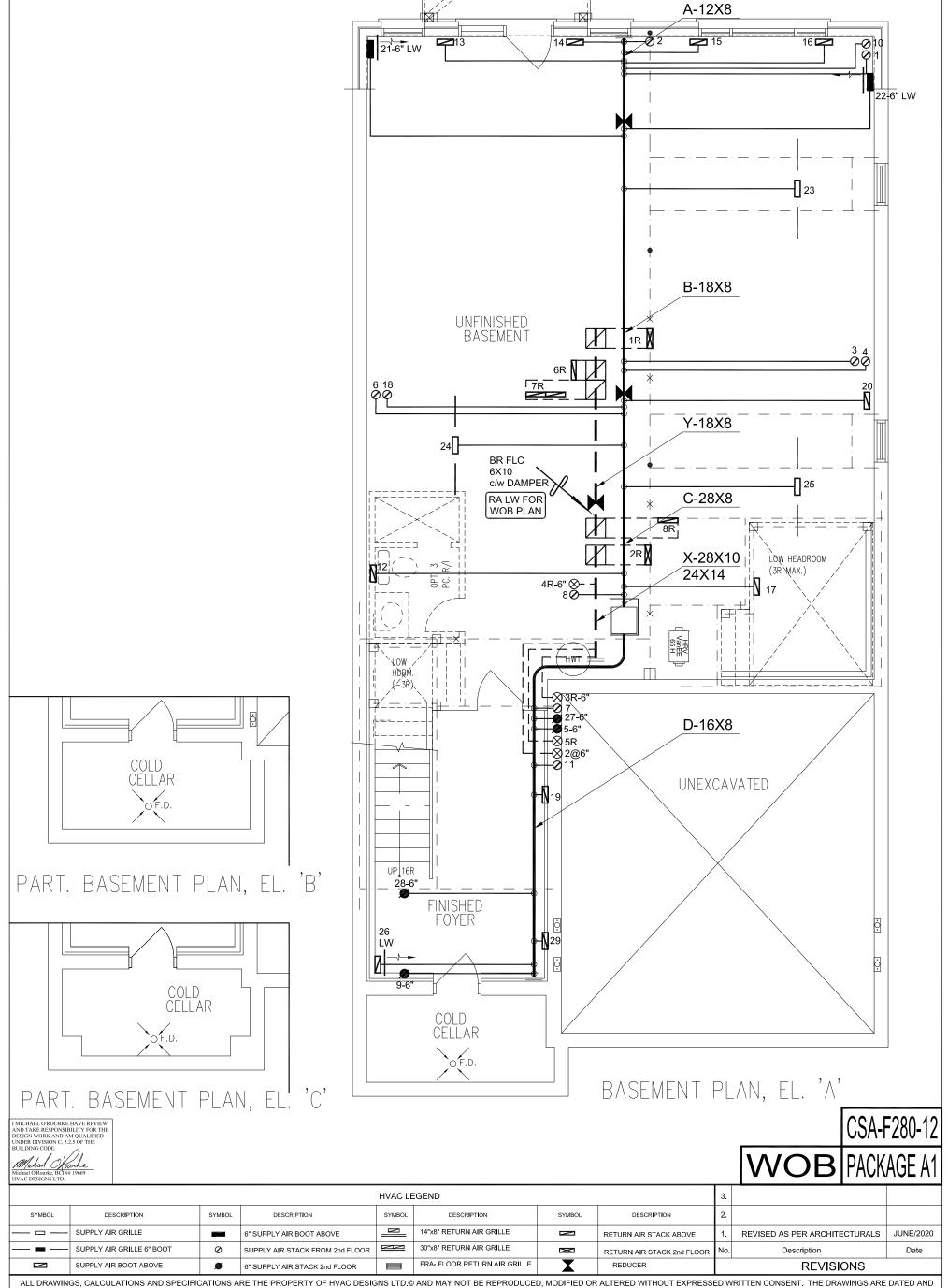
Supplemental tool for CAN/CSA-F280

Weather Statio	on Des	cript	ion		
Province:	Ontai	rio			
Region:	Vaughan (Woodbridge)				
Weather Station Location:	Open	flat te	rrain,	grass	
Anemometer height (m):	10				
Local Sh	ieldin	g			
Building Site:	Subu	rban, f	orest		
Walls:	Heav	y			
Flue:	Heav	У			
Highest Ceiling Height (m):	9.14				
Building Co	nfigur	ation			
Туре:	Detac	ched			
Number of Stories:	Two				
Foundation:	Full	Full			
House Volume (m³):	1374.7				
Air Leakage,	'Venti	latior	1		
Air Tightness Type:	Prese	nt (19	61-) (3	.57 ACI	Н)
Custom BDT Data:	ELA @	2 10 Pa	a.		1832.5 cm ²
	3.57				ACH @ 50 Pa
Mechanical Ventilation (L/s):	To	otal Sup	ply		Total Exhaust
\		73.2			73.2
Flue	Size				
Flue #:	#1	#2	#3	#4	
Diameter (mm):	0	0	0	0	
Natural Infilt	ration	Rate	es .		
Heating Air Leakage Rate (ACH/H):		C	.40	7	
Cooling Air Leakage Rate (ACH/H):		C).13	7	

TYPE: 4004 THE DALERIDGE

LO# 79969

WOB



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GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO

THE DALERIDGE 4004 - WOB

3341 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

Specializing in Residential Mechanical Design Services			
Specializing in residential Weshanisal Besign Cervices			
Installation to comply with the latest Ontario Building Code. All supply	OUTPUT		
branch outlets shall be equipped with a manual balancing damper.	COOLING		
Ductwork which passes through the garage or unheated spaces shall be	ŧ		
adequately insulated and be gas-proofed.	FAN SPEED		

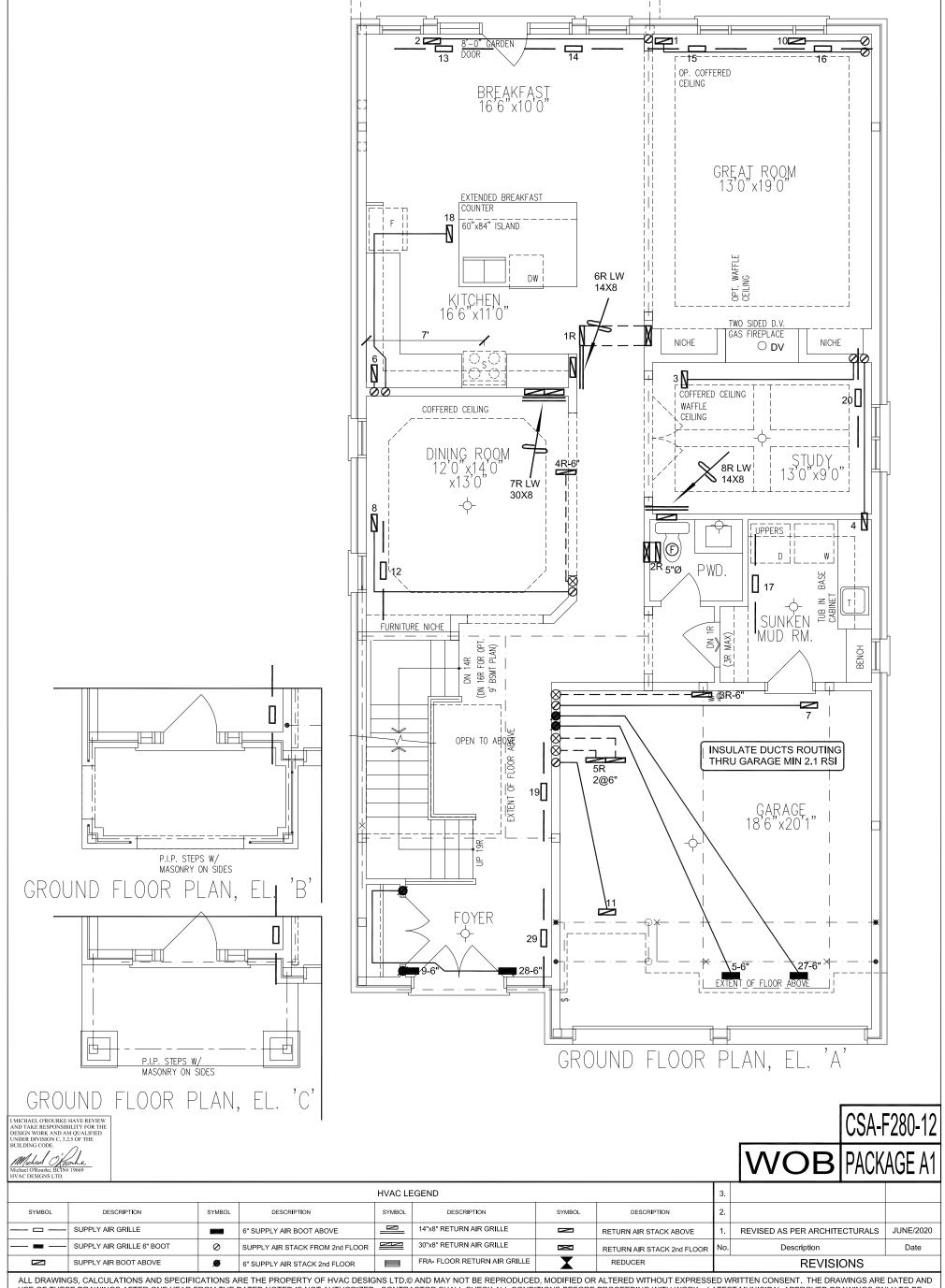
	OSS 71132	BTU/H	# OF RUNS	S/A	R/A	FANS	She
	UN I T DATA		3RD FLOOR				
MAKE	LENNOX		2ND FLOOR	14	5	5	
MODEL EL29	6UH090XE48	3C	1ST FLOOR	9	3	2	
INPUT	88	MBTU/H	BASEMENT	6	1	0	Dat
-OUTPUT	MRTII/H I		ALL S/A DIFFU	SERS	4 "x10)"	Sca
	85		UNLESS NOTED OTHERWISE				
COOLING	4.0	ON LAYOUT. ALL S/A RUNS 5"Ø					

1525

ON LAYOUT. UNDERCUT

DOORS 1" min. FOR R/A

S	Sheet Title				
	BASEMENT				
_	HEATING				
	LAYOUT				
	Date	SEPT/2018			
	Scale	3/16" = 1'-0"			
Ø	BCIN# 19669				
	LO#	79969			



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Cllent

GOLD PARK HOMES

Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO

THE DALERIDGE 4004 - WOB

3341 sqft

HVA DESIGNS LTD.

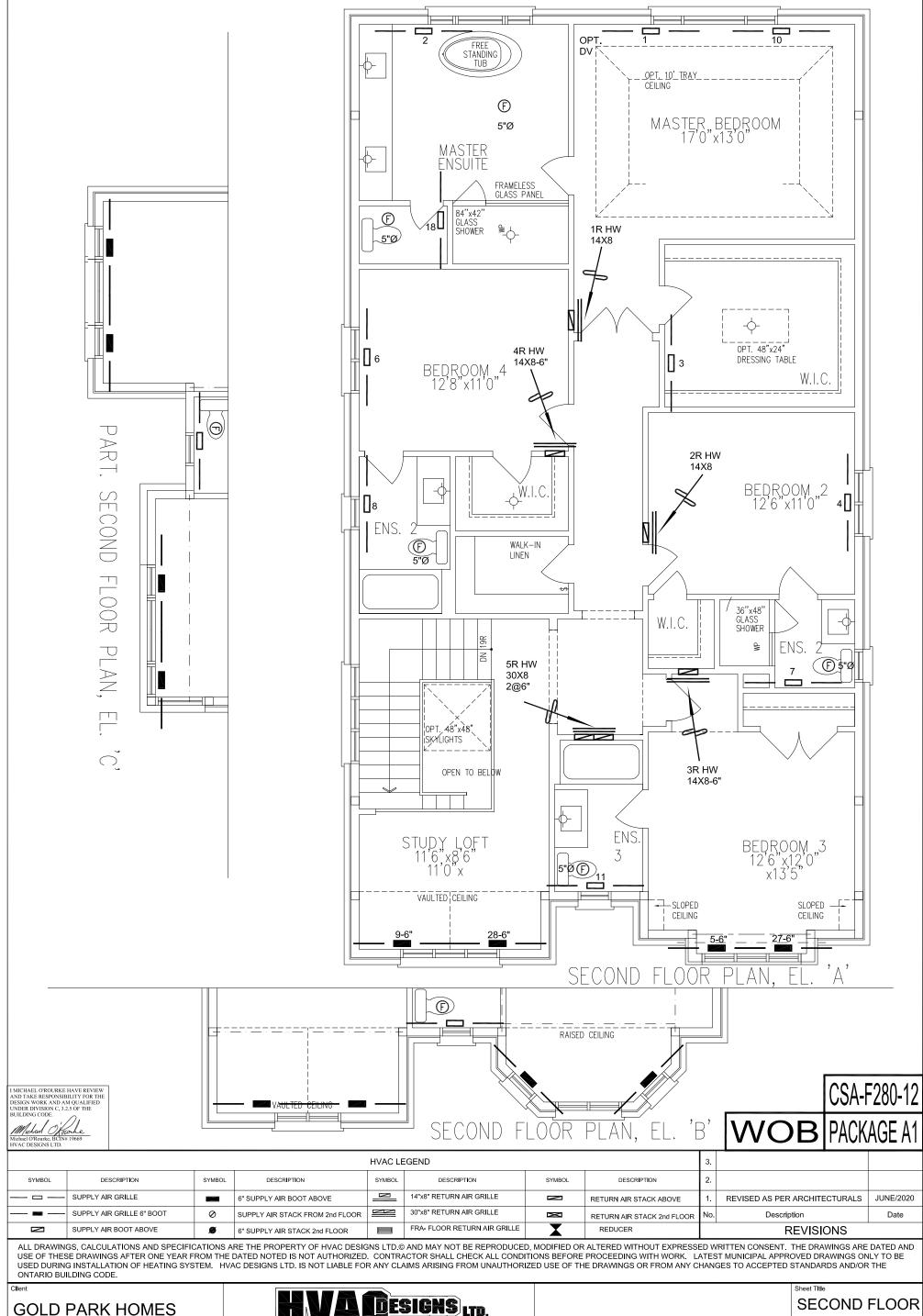
375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca

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 SEPT/2018
Scale 3/16" = 1'-0"
BCIN# 19669



Project Name

PINE VALLEY & TESTON VAUGHAN, ONTARIO

THE DALERIDGE

4004 - WOB 3341 sqft

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