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 Informa	ation					
Building number, stree					Unit no.	Lot/con.
N.A		In-4-14-	Di			
Municipality		Postal code	Plan number/ other des	cription		
RICHMOND HILL			1 1 4 14			
B. Individual who	reviews and takes	responsibility fo	, 			
Name MICHAEL O'ROURK	=		Firm HVAC DESIGNS LTD.			
Street address	_		ITVAO DEGIGITO ETD.	Unit no.		Lot/con.
375 FINLEY AVE				202		N/A
Municipality		Postal code	Province	E-mail		<u>I</u>
AJAX		L1S 2E2	ONTARIO	info@hvacdes	signs.ca	
Telephone number		Fax number		Cell number		
(905) 619-2300		(905) 619-2375		()		
C. Design activitie	s undertaken by in	dividual identific	ed in Section B. [Buil	ding Code Ta	ble 3.5.2.1 OF Div	rision C]
☐ House		⊠ HVAC	– House		Building Structur	ral
☐ Small Building	js		g Services		Plumbing – Hou	
Large Building	•		ion, Lighting and Pov		Plumbing – All E	
Description of designe		☐ Fire Pr	Model:		On-site Sewage	Systems
HEAT LOSS / GAIN OF DUCT SIZING RESIDENTIAL MECH RESIDENTIAL SYSTIP D. Declaration of I	ANICAL VENTILATIO		IARY Project:	CENTREFIELD (WEST GORMLEY)	
				de elene th		nnunuiata).
IMICHA		int name)		. ueciaie ii	nat (choose one as a	рргорпате).
	of the Building Code. tegories. Individual BCIN:		on behalf of a firm registe I the firm is registered, in		ection 3.2.4.of appropriate	
	Firm BCIN:					
☑ I review ar designer"	nd take responsibility fo under subsection 3.3		m qualified in the appropon C, of the Building Code		s an "other	
	Individual BCIN:	19669				
	Basis for exemption f	rom registration an	d qualification:	O.B.C SEN	TENCE 3.2.4.1	(4)
	n work is exempt exemption from registra		ion and qualification requon:	irements of the	Building Code.	
I certify that:						
	formation contained submitted this applica		ule is true to the best of n edge and consent of the		0.	
April 2	1 2021			Micha	1 Ofounde	• •
Date		•		and the second of	Signature of De	signer
Date	,				Signature of De	oignoi

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:					MLEY)		_										DATE: A						ANGE RATE 0.236	HEAT LOSS			CSA-F280-1
BUILDER: ROOM USE	KUYAL	PINE H	OMES		-		ENS	YPE: 20	710		1	BED-2	GFA:	1/42	DED 6		LO# 87	J4U	_			R NATUKAL AIR CH	IANGE RATE 0.072	HEAT GAIN	Δι 7. 13	3B-12 PE	RFORMANC
				MBR											BED-3					BATH	1						
EXP. WALL CLG. HT.				14 9			22 9					10 9			42 11					9							
CLG. HI.	FACTO			9			9					9			11					9							
CDC WALL ADEA				400			400					••			400												
GRS.WALL AREA	LOSS	GAIN		126			198					90			462					0							
GLAZING				LOSS			.oss g					LOSS			LOSS						GAIN						
NORTH		16.0	0	0	0	0	0	0			0	0	0	0	0	0			0	0	0						
EAST	21.8	41.6	0	0	0	0	0	0			28	610	1163	36	784	1496			0	0	0						
SOUTH		24.9	0	0	0			573			0	0	0	55	1198	1369			0	0	0						
WEST	21.8	41.6	32	697	1330	9	196	374			0	0	0	0	0	0			0	0	0						
SKYLT.	35.8	101.2	0	0	0	0	0	0			0	0	0	0	0	0			0	0	0						
DOORS	25.8	4.3	0	0	0	0	0	0			0	0	0	0	0	0			0	0	0						
NET EXPOSED WALL	4.2	0.7	94	395	65	166	698	115			62	261	43	371	1560	257			0	0	0						
NET EXPOSED BSMT WALL ABOVE GR	3.7	0.6	0	0	0	0	0	0			0	0	0	0	0	0			0	0	0						
EXPOSED CLG	1.3	0.6	298	392	175	105	138	62			176	231	103	253	332	149			70	92	41						
NO ATTIC EXPOSED CLG	2.8	1.3	0	0	0	0	0	0			0	0	0	20	56	25			0	0	0						
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0			176	459	76	21	55	9			51	133	22						
BASEMENT/CRAWL HEAT LOSS				0			0				1	0			0					0		I					
SLAB ON GRADE HEAT LOSS				0			0				1	0			0					0		I					
SUBTOTAL HT LOSS				1484			1533				1	1561			3986					225		I					
SUB TOTAL HT GAIN					1570			123					1385			3305					63	1					
LEVEL FACTOR / MULTIPLIER			0.20	0.17		0.20					0.20	0.17		0.20	0.17				0.20	0.17		1					
AIR CHANGE HEAT LOSS			0.20	246			254				0.20	258		0.20	660				0.2	37							
AIR CHANGE HEAT GAIN				240	57			44				230	50		000	120				31	•						
DUCT LOSS				•	57			41				400	50		465	120				26	2						
				0			0	_				182			465	404				26	_						
DUCT GAIN			_		0	_		0			١.		232	١.		431			١.		7						
HEAT GAIN PEOPLE	240		2		480	0		0			1		240	1		240			0		0						
HEAT GAIN APPLIANCES/LIGHTS					643			0					643			643					0						
TOTAL HT LOSS BTU/H				1730			1787					2002			5110					289							
TOTAL HT GAIN x 1.3 BTU/H					3575			513					3316			6160					93						
ROOM USE									K/E						LAUND)		PWD		FOY							BAS
EXP. WALL									4						7			12		36							120
CLG. HT.									1)					9			10		11							10
	FACTO																										
GRS.WALL AREA	LOSS	GAIN							49	5					63			121		382							1200
GLAZING									LO	SS GAIN	ı				LOSS	GAIN	L	OSS GA	IN	LOSS	GAIN						LOSS GAIN
NORTH	21.8	16.0							0 (0				0		_										0	0 0
EAST	21.8	41.6												U	0	0	0	0 0	0	0	0						
SOUTH	24.0								0 (0				0	0	0	0	0 0	_		0 831					0	0 0
	21.8	24.9							0 (71 15	-				_					20	436	831					0	0 0 65 75
WEST		24.9 41.6						7	-	1768				0	0	0	0	0 0	20	436	831					1 -	
WEST SKYLT.	21.8							7	71 15	1768				0 33	0 719	0 822	0	0 0	20 65 0	436 1416	831 1618					3	65 75
	21.8 35.8	41.6 101.2						8	71 15 80 17	17 1768 13 3324 0				0 33 0	0 719 0 0	0 822 0 0	0 0 0	0 0 0 0 0 0 0 0 0	20 65 0	436 1416 0 0	831 1618 0 0					3 7 0	65 75 152 291 0 0
SKYLT. DOORS	21.8 35.8 25.8	41.6 101.2 4.3						8	71 15 80 17 0 (17 1768 13 3324 0				0 33 0 0	0 719 0 0	0 822 0 0	0 0 0 0 20	0 0 0 0 0 0 0 0 517 8	20 65 0 0 5 5	436 1416 0 0 1292	831 1618 0 0 213					3 7	65 75 152 291
SKYLT. DOORS NET EXPOSED WALL	21.8 35.8 25.8 4.2	41.6 101.2 4.3 0.7						3	71 15 80 17 0 (17 1768 13 3324 0 0 0 46 238				0 33 0 0 0 30	0 719 0 0 0 126	0 822 0 0 0 21	0 0 0 0 20 101	0 0 0 0 0 0 0 0 0	20 65 0 0 0 5 50 0 247	436 1416 0 0 1292	831 1618 0 0 213 171					3 7 0 20	65 75 152 291 0 0 517 85 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR	21.8 35.8 25.8 4.2 3.7	41.6 101.2 4.3 0.7 0.6						3	71 15 80 17 0 0 0 0	17 1768 13 3324 0 0 0 46 238				0 33 0 0 0 30	0 719 0 0 0 126	0 822 0 0 0 21	0 0 0 0 20 101	0 0 0 0 0 0 0 0 0 0 517 85 426 76	20 65 0 0 0 5 5 50 0 247 0	436 1416 0 0 1292 1037 0	831 1618 0 0 213 171					3 7 0 20	65 75 152 291 0 0 517 85 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG	21.8 35.8 25.8 4.2 3.7 1.3	41.6 101.2 4.3 0.7 0.6 0.6						3	71 15 80 17 0 (0 (344 14 0 (17 1768 13 3324 0 0 46 238 0 0				0 33 0 0 0 30 0 56	0 719 0 0 0 126 0 74	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0	0 0 0 0 0 0 0 0 517 8426 70 0 0	20 65 0 0 5 5 5 0 247 0 0	436 1416 0 0 1292 1037 0	831 1618 0 0 213 171 0					3 7 0 20 0 0	65 75 152 291 0 0 517 85 0 0 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 (344 14 0 (0 (31 8	17 1768 13 3324 0 0 0 46 238 0 0 7 39				0 33 0 0 0 30 0 56	0 719 0 0 0 126 0 74	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 5 5 5 0 247 0 0 0	436 1416 0 0 1292 1037 0 0	831 1618 0 0 213 171 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GE EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR	21.8 35.8 25.8 4.2 3.7 1.3	41.6 101.2 4.3 0.7 0.6 0.6						3	71 15 80 17 0 (344 14 0 (31 8 0 (17 1768 13 3324 0 0 0 46 238 0 0 7 39				0 33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 5 5 5 0 247 0 0 0	436 1416 0 0 1292 1037 0 0 0	831 1618 0 0 213 171 0					3 7 0 20 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	771 15 80 17 0 (0 0 (1 344 14 0 (1 0 (1 31 8 0 (1	17 1768 13 3324 0 0 0 46 238 0 0 7 39				0 33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 5 5 5 0 247 0 0 0	436 1416 0 0 1292 1037 0 0 0	831 1618 0 0 213 171 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMIT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	771 15 880 17 0 (0 844 14 0 (0 0 (0 331 8 0 (0	17 1768 13 3324 0 0 146 238 0 0 7 39				0 33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0 0	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 5 5 5 0 247 0 0 0	436 1416 0 0 1292 1037 0 0 0	831 1618 0 0 213 171 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944
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 SUBTOTAL HT LOSS	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	771 15 80 17 0 (0 0 (1 344 14 0 (1 0 (1 31 8 0 (1	47 1768 43 3324 0 0 46 238 0 0 7 39 0				0 33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0	0 822 0 0 0 21 0 33 0	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 0 5 5 5 0 0 247 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	436 1416 0 0 1292 1037 0 0 0	831 1618 0 0 213 171 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED SMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSI	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 344 14 0 (0 31 8 0 (0 48	47 1768 43 3324 0 0 46 238 0 0 7 39 0				0 33 0 0 0 30 0 56 0	0 719 0 0 0 126 0 74 0 0 0	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 0 0 55 50 247 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181	831 1618 0 0 213 171 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944 4679
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 SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 344 14 0 (0 31 8 0 (0 48	47 1768 43 3324 0 0 46 238 0 0 7 39 0				0 33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0 0 0 0 919	0 822 0 0 0 21 0 33 0	0 0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 0 0 55 50 247 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181	831 1618 0 0 213 171 0 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944 4679 451
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 SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 344 14 0 (0 31 8 0 (0 48	47 1768 43 3324 0 0 46 238 0 0 7 39 0 0				0 33 0 0 0 30 0 56 0	0 719 0 0 0 126 0 74 0 0 0	0 822 0 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 0 0 55 50 247 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181	831 1618 0 0 213 171 0 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944 4679
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 GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 344 14 0 (0 31 8 0 (0 48	47 1768 43 3324 0 0 46 238 0 0 7 39 0				0 33 0 0 0 30 0 56 0	0 719 0 0 0 126 0 74 0 0 0 0 919	0 822 0 0 0 21 0 33 0	0 0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 65 0 0 0 5 5 0 0 0 0 0 0 0 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181	831 1618 0 0 213 171 0 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944 4679 451
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 SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 344 14 0 (0 31 8 0 (0 48	47 1768 43 3324 0 0 46 238 0 0 7 39 0 0				0 33 0 0 0 30 0 56 0	0 719 0 0 0 126 0 74 0 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 65 0 0 0 5 5 0 0 0 0 0 0 0 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181	831 1618 0 0 213 171 0 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944 4679 451 0.86 4016
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 GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 0 (0 344 14 0 (0 0 (0 331 8 0 (0 48 0 (1 11	47 1768 43 3324 0 0 46 238 0 0 7 39 0 0				0 33 0 0 0 30 0 56 0	0 719 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 0 5 5 0 0 247 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181 0 0.24	831 1618 0 0 213 171 0 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944 4679 451 0.86 4016
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 SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS	21.8 35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 0 (0 344 14 0 (0 0 (0 331 8 0 (0 48 0 (1 11	47 1768 43 3324 0 0 46 238 0 0 7 39 0 0 7 39 0 0 23 5369 24 58 194				0 33 0 0 0 30 0 56 0	0 719 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	200 65 65 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181 0 0.24	831 1618 0 0 213 171 0 0 0					3 7 0 20 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 3944 4679 4579 451 0.86 4016
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 SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN	21.8 35.8 25.8 4.2 3.7 1.3 2.8 2.6	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 844 14 0 (0 31 8 0 (0 48 1.30 0.3	47 1768 43 3324 0 0 46 238 0 0 7 39 0 0 23 5369 44 0 194				0 33 0 0 0 30 0 56 0 0	0 719 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	200 65 65 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181 0 0.24	831 1618 0 0 213 171 0 0 0 0					3 7 0 20 0 0 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 0 3944 4679 451 0.86 4016 16 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BANT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG NO ATTIC EXPOSED CLG SEXPOSED 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 GAIN HEAT GAIN PEOPLE	21.8 35.8 25.8 4.2 3.7 1.3 2.8 2.6	41.6 101.2 4.3 0.7 0.6 0.6 1.3						3	71 15 80 17 0 (0 844 14 0 (0 31 8 0 (0 48 1.30 0.3	47 1768 43 3324 0 0 46 238 0 0 7 39 0 0 23 5369 24 58 194 0 0 643				0 33 0 0 0 30 0 56 0 0	0 719 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 0 220 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	200 65 65 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181 0 0.24	831 1618 0 0 213 171 0 0 0 2833					3 7 0 20 0 0 0 0 0	65 75 152 291 0 0 517 85 0 0 0 0 0 0 0 0 0 3944 4679 451 0.86 4016 16 0 0

STRUCTURAL HEAT LOSS: 33038 TOTAL HEAT GAIN BTU/H: 29592 TONS: 2.47 LOSS DUE TO VENTILATION LOAD BTU/H: 1336

Michael Oxounde.

TOTAL COMBINED HEAT LOSS BTU/H: 34374



			EFIELD (V		ORMLEY)			TYPE: 20	010				DATE:	Apr-21			GFA:	1742	LO#	87540				
HEATING CFM TOTAL HEAT LOSS AIR FLOW RATE CFM	875 33,038 26.48	Α	COO TOTAL H	LING CFM IEAT GAIN RATE CFM	29,372 29.79		а	furnace pre furnace a/c coil pre vailable pre	essure e filter essure	0.6 0.05 0.2 0.35			5,	- -			59TN6A- I	** 0 60-14V SPEED LOW	CARRIE 60 820		OUTPUT	AFUE = ((BTU/H) = ((BTU/H) = (50,000 58,000	
RUN COUNT S/A R/A	4th 0 0	3rd 0 0	2nd 8 4	1st 6 2	3 1			enum pressu s/a dif press		0.18 0.02	r/a		pressure ess. Loss	0.17 0.02			N	EDLOW MEDIUM M HIGH	875 0 0		DESI	GN CFM = _ CFM @ .6	875 " E.S.P.	
All S/A diffusers 4"x10" unle All S/A runs 5"Ø unless not				out.			min adju	isted pressu	ure s/a	0.16	adj	usted pre	ssure r/a	0.15				HIGH	1520	Т	EMPERAT	URE RISE _	61	°F
RUN #	1	2	ayout.	4	5	6	7			10			13	14	15		17	18	19	20	21	22		
ROOM NAME RM LOSS MBH. CFM PER RUN HEAT RM GAIN MBH.	MBR 0.86 23 1.79	ENS 1.79 47 1.51		BED-2 2.00 53 3.32	BED-3 2.56 68 3.08	BED-3 2.56 68 3.08	BATH 0.29 8 0.09			MBR 0.86 23 1.79			K/B/G 2.00 53 2.69	K/B/G 2.00 53 2.69	K/B/G 2.00 53 2.69		1.07 28 2.02	PWD 1.17 31 0.21	FOY 2.60 69 1.91	FOY 2.60 69 1.91	BAS 2.90 77 0.20	BAS 2.90 77 0.20		
CFM PER RUN COOLING ADJUSTED PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH	53 0.17 40 110	45 0.17 25		99 0.16 48 130	92 0.16 55 190	92 0.16 46 170	3 0.17 29			53 0.17 33 110			80 0.17 4 150	80 0.17 19	80 0.17 24 170		60 0.17 41 190	6 0.17 22 160	57 0.17 34 110	57 0.17 36 130	6 0.17 24 160	6 0.17 13 160		
TOTAL EFFECTIVE LENGTH ADJUSTED PRESSURE ROUND DUCT SIZE	150 0.11 5	130 155 0.11 4		178 0.09 6	245 0.07 6	216 0.08 6	150 179 0.1 4			143 0.12 5			154 0.11 5	150 169 0.1 5	194 0.09 5		231 0.07 5	182 0.09 4	144 0.12 5	166 0.1 5	184 0.09 5	173 0.1 5		
HEATING VELOCITY (ft/min) COOLING VELOCITY (ft/min) OUTLET GRILL SIZE TRUNK	169 389 3X10 C	539 516 3X10 C		270 505 4X10 B	347 469 4X10 A	347 469 4X10 A	92 34 3X10 B			169 389 3X10 C			389 587 3X10 B	389 587 3X10 C	389 587 3X10 C		206 441 3X10 B	356 69 3X10 B	507 419 3X10 A	507 419 3X10 A	565 44 3X10 C	565 44 3X10 C		
		U		ь	Α	A	Ь			C			ь	U	C		В	Ь	Α	A	C	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 (ft/min) COOLING VELOCITY (ft/min) OUTLET GRILL SIZE TRUNK	25 BAS 2.90 77 0.20 6 0.17 35 120 155 0.11 5 565 44 3X10 A																							
SUPPLY AIR TRUNK SIZE	TOUNK	STATIC	ROUND	RECT			VELOCITY			TDUNK	STATIC	ROUND	RECT			VELOCITY	RETURN A	IR TRUNK	STATIC	ROUND	RECT			VELOOTE/
TRUNK A TRUNK B TRUNK C TRUNK D TRUNK E TRUNK F	TRUNK CFM 351 524 353 0 0	STATIC PRESS. 0.07 0.07 0.09 0.00 0.00 0.00	9.8 11.4 9.2 0 0	12 16 10 0 0	x x x x x	8 8 8 8	(ft/min) 527 590 635 0 0	TR TI TF	RUNK G RUNK H TRUNK I RUNK J RUNK K RUNK L	TRUNK CFM 0 0 0 0 0 0 0	PRESS. 0.00 0.00 0.00 0.00 0.00 0.00 0.00	DUCT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DUCT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	x x x x x	8 8 8 8 8	VELOCITY (ft/min) 0 0 0 0 0 0	TRUNK O TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U	TRUNK CFM 0 0 0 0 0 0 0	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05	DUCT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DUCT 0 0 0 0 0 0 0 0 0 0	x x x x x x	8 8 8 8 8	VELOCITY (ft/min) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
RETURN AIR # AIR VOLUME PLENUM PRESSURE	1 0 95 0.15	2 0 85 0.15	3 0 85 0.15	4 0 75 0.15	5 0 330 0.15	6 0 105 0.15	0 0 0.15	0 0 0.15	0 0 0.15	0 0 0.15	0 0 0.15	0 0 0.15	0 0 0.15	0 0 0.15	0 0 0.15	BR 100 0.15	TRUNK V TRUNK W TRUNK X TRUNK Y TRUNK Z	0 0 770 490 0	0.05 0.05 0.05 0.05 0.05	0 0 14.3 12.1 0	0 0 24 18 0	x x x x	8 8 8 8	0 0 578 490 0
ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LH ADJUSTED PRESSURE ROUND DUCT SIZE	57 165 222 0.07 6	46 205 251 0.06 6	56 175 231 0.06 6	55 215 270 0.05 6	18 190 208 0.07 9.6	35 155 190 0.08 6	1 0 1 14.80 0	1 0 1 14.80 1	1 0 1 14.80 0	1 0 1 14.80 0	1 0 1 14.80 0	1 0 1 14.80 0	1 0 1 14.80 0	1 0 1 14.80 0	1 0 1 14.80 0	14 150 164 0.09 5.7	DROP	875	0.05	15	24	x	10	525
INLET GRILL SIZE INLET GRILL SIZE	8 X 14	8 X 14	8 X 14	8 X 14	6 X 24	6 X 10	0 X 0	0 X 0	0 X 0	0 X 0	0 X 0	0 X 0	0 X 0	0 X 0	0 X 0	8 X 14								



TYPE: 2010 LO#

CENTREFIELD (WEST GORMLEY) SITE NAME:

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

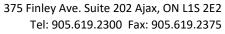
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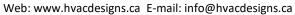
COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL VE	NTILATION CAPACITY			9.32.3.5.
a)		Total Ventilation Capa	ncity	116.6	_	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Ventil.	Capacity	63.6	_	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Supplement	al Capacity	53.0	_	cfm
d) Solid Fuel (including fireplaces)						
e) No Combustion Appliances		PRINCIPAL EXHAUS	VANEE 65H	Location:	D	SMT
HEATING SYSTEM			cfm	Location.		IVI Approved
Forced Air Non Forced Air			T HEAT LOSS CALCULATION		' <u>ٺ</u>	TVI Approved
Total Total Till Total Till Till Till Till Till Till Till Ti		CFM	ΔT °F	FACTOR		% LOSS
Electric Space Heat		63.6 CFM	X 78 F X	1.08	Х	0.25
·		SUPPLEMENTAL FA Location	NS BY INS [*] Model	TALLING CON cfm	TRACTO HVI	R Sones
HOUSE TYPE	9.32.1(2)	ENS	BY INSTALLING CONTRACTOR	50	✓	3.5
✓ I Type a) or b) appliance only, no solid fuel		BATH	BY INSTALLING CONTRACTOR	50	~	3.5
	,	PWD	BY INSTALLING CONTRACTOR	50	✓	3.5
II Type I except with solid fuel (including fireplaces))	HEAT RECOVERY VE	ENTILATOR			9.32.3.11.
III Any Type c) appliance		Model: 155	VANEE 65H 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)		✓ F	IVI Approved
		LOCATION OF INSTA	ALLATION			
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	Lot:		Concession		
1 Exhaust only/Forced Air System		Lot.		Concession		
2 HRV with Ducting/Forced Air System		Township		Plan:		
		Address				
3 HRV Simplified/connected to forced air system		Roll #		Building Pern	nit#	
4 HRV with Ducting/non forced air system		BUILDER:	ROYAL PINE 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 2 @ 10.6 cfm 21.2	cfm	Telephone #:		Fax#:		
Kitchen & Bathrooms <u>4</u> @ 10.6 cfm <u>42.4</u>	cfm	INSTALLING CONTR	ACTOR			
Other Rooms <u>1</u> @ 10.6 cfm <u>10.6</u>	cfm	Name:				
Table 9.32.3.A. TOTAL <u>116.6</u>	cfm	Address:				
		City:				
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)	Telephone #:		Fax#:		
1 Bedroom 31.8	cfm	DEGIGNED GEDTIES	ATION			
2 Bedroom 47.7	cfm		SATION is ventilation system has been of Ontario Building Code.	designed		
3 Bedroom 63.6	cfm	Name:	HVAC Designs Ltd.			
4 Bedroom 79.5	cfm	Signature:	Micho	al Ofounde	٠.	
5 Bedroom 95.4	cfm	HRAI#		001820		
TOTAL 63.6 cfm I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUAL	IEIED IN THE AD	Date:	THED DESIGNED! LINDED DIVISION O	April-21	II DING CO	DE .
INEVIEW AND TAKE RESPONDILITY FOR THE DESIGN WORK AND AM QUAL	ILU IN THE AP	I NOTINATE CATEGORY AS AN "C	A NOIGINER OWNER DIVISION C	,, J.Z.J OF THE BU	יבטוועט לטו	J.





			Form	nula Sheet (For Air Lea	akage / Ventiliation C	alculation)				
LO#: 875	40	Model: 2010		Builde	er: ROYAL PINE HOMES				Date:	4/21/2021
		Volume Calculati	on				Air Change & Delt	a T Data		
				7						7
se Volume	FI A (f+2)	Flacultaint (ft)	\(\(-1\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \				TURAL AIR CHANG		0.236	4
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)			SUMMER NA	TURAL AIR CHANG	jE RATE	0.072	1
Bsmt First	777 777	10 10	7770 7847.7							
Second	978	9	8802	+			Design Te	mperature Diffe	erence	
Third	0	9	0	1			Tin °C	Tout °C	ΔT °C	ΔT °F
Fourth	0	9	0	1		Winter DTDh	22	-21	43	78
		Total:	24,419.7 ft ³	†		Summer DTDc	24	31	7	13
		Total:	691.5 m ³	1						
		•	•	_						
	5.2.3	3.1 Heat Loss due to A	ir Leakage			6.2.6	Sensible Gain due	to Air Leakage		
		V_{L}					V.			
	$HL_{airb} =$	$LR_{airh} \times \frac{V_b}{3.6} \times$	$DTD_h \times 1.2$		H	$IG_{salb} = LR_{airc} >$	$\langle \frac{r_b}{2.6} \times DTD_c \rangle$	× 1.2		
0.236		_ x _ 43 °C		= 2354 W	= 0.072	x 192.08	0.0		=	117 W
0.230	X 192.06	x 43 C	_ XX	= 2334 W	= 0.072	X 192.06	- x <u> </u>	X 1.2		117 VV
				= 8032 Btu/h	τ Ι				=	401 Btu/h
				- 8032 Btu/II	<u> </u>				-	401 Btu/1
	5.2.3.2 He	at Loss due to Mecha	nical Ventilation			6.2.7 Sei	nsible heat Gain d	ue to Ventilatio	n	
	$HL_{vairb} =$	$PVC \times DTD_h \times$	$1.08 \times (1 - E)$		HL	$_{vairb} = PVC \times D$	$TD_h \times 1.08 \times$	(1 - E)		
64 CFM	x 78 °F	x 1.08	x 0.25	= 1336 Btu/h	64 CFM	x 13 °F	x 1.08	x 0.25	=	220 Btu/h
		<u> </u>			•				•	
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Flo	or Multiplier Section)				
					`	,	\.			
		HL_{c}	_{airr} = Level Fact	$or \times HL_{airbv} \times \{(H_{airbv}) \times \{$	$(L_{agcr} + HL_{bgcr}) \div$	$(HL_{agclevel} + HL)$	bgclevel)}			
				HLairve Air Leakage +	Laural Carrell and San Hand					
		Level	Level Factor (LF)	Ventilation Heat Loss	Level Conductive Heat	-	• •			
			, ,	(Btu/h)	Loss: (HL _{clevel})	HLairbv / I	HLIevel)			
		1	0.5	15.50/10	4,679	0.85	8			
		2	0.3	1	9,946	0.24	2			
		3	0.2	8,032	9,708	0.16	5			
		4	0	1	0	0.00	0			
		5	0	1	0	0.00	0			
				+ ventilation heat loss						







HEAT LOSS AND GAIN SUMMARY SHEET

		ПЕАТ	LU33 AND GA	AIN SUIVIIVIANT SHEET	
MODEL:	2010			BUILDER: ROYAL PINE HOME	S
SFQT:	1742	LO#	87540	SITE: CENTREFIELD (WES	T GORMLEY)
DESIGN AS	SSUMPTIONS				
HEATING			°F	COOLING	°F
	DESIGN TEMP.		-6	OUTDOOR DESIGN TEMP.	88
INDOOR D	ESIGN TEMP.		72	INDOOR DESIGN TEMP. (MAX 75°F)	75
BUILDING	DATA				
ATTACHMI	ENT:		ATTACHED	# OF STORIES (+BASEMENT):	3
FRONT FAC	CES:		EAST	ASSUMED (Y/N):	Υ
AIR CHANG	GES PER HOUR:		2.50	ASSUMED (Y/N):	Υ
AIR TIGHT	NESS CATEGORY:		TIGHT	ASSUMED (Y/N):	Υ
WIND EXP	OSURE:		SHELTERED	ASSUMED (Y/N):	Υ
HOUSE VO	LUME (ft³):		24419.7	ASSUMED (Y/N):	Υ
INTERNAL	SHADING:	BLINDS	/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR I	LIGHTING LOAD (Btu/h	n/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Υ
FOUNDATI	ON CONFIGURATION		BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH:	52.0 ft	WIDTH:	22.0 ft	EXPOSED PERIMETER:	120.0 ft

2012 OBC - COMPLIANCE PACKAGE		
	Complianc	e Package
Component	SB-12 PER	FORMANCE
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.20
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.70
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22+1.5	18.50
Basement Walls Minimum RSI (R)-Value	20	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	1.6	-
Skylights Maximum U-Value	2.6	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	TE=94%	-

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE





Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

W	eather Stati	on Description
Province:	Ontario	-
Region:	Richmond	Hill
	Site Des	scription
Soil Conductivity:	Normal co	nductivity: dry sand, loam, clay
Water Table:	Normal (7-	10 m, 23-33 ft)
	Foundation	Dimensions
Floor Length (m):	15.8	
Floor Width (m):	6.7	
Exposed Perimeter (m):	36.6	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	Insulation Configuration
Window Area (m²):	0.9	
Door Area (m²):	1.9	
	Radiaı	nt Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Design	Months
Heating Month	1	
	Foundati	on Loads
Heating Load (Watts):		1156

TYPE: 2010 **LO#** 87540

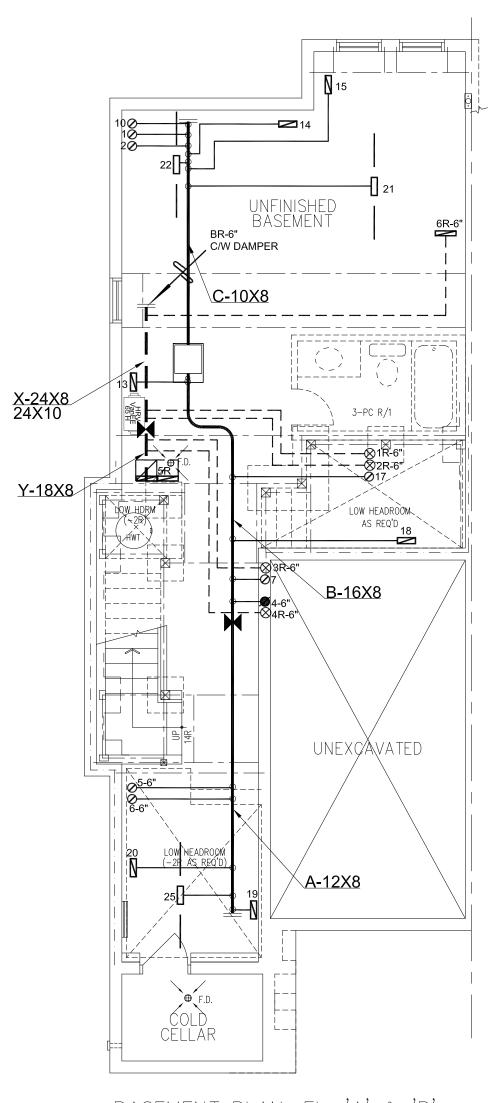


Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Sta	tion Des	cripti	ion		
Province:	Ontar	io			
Region:	Richm	ond H	ill		
Weather Station Location:	Open	flat te	rrain, g	rass	
Anemometer height (m):	10				
	Shieldin	5			
Building Site:	Subur	ban, fo	orest		
Walls:	Heavy	,			
Flue:	Heavy	,			
Highest Ceiling Height (m):	6.74				
Building C	Configura	ition			
Type:	Semi				
Number of Stories:	Two				
Foundation:	Full				
House Volume (m³):	691.5				
Air Leakag	e/Ventil	ation	1		
Air Tightness Type:	Energ	y Star	Detach	ed (2.5	5 ACH)
Custom BDT Data:	ELA @	10 Pa).		645.5 cm ²
	2.50				ACH @ 50 Pa
Mechanical Ventilation (L/s):	To	tal Sup	ply		Total Exhaust
		30.0			30.0
Flu	ıe Size				
Flue #:	#1	#2	#3	#4	
Diameter (mm):	0	0	0	0	
Natural Inf	iltration	Rate	S		
Heating Air Leakage Rate (ACH/H	1):	0	.23	6	
Cooling Air Leakage Rate (ACH/H	I):	0	.07	2	

TYPE: 2010 **LO#** 87540



BASEMENT PLAN, EL. 'A' & 'B'

I MICHAEL O'ROURKE HAVE REVIEW
AND TAKE RESPONSIBILITY FOR THE
DESIGN WORK AND AM QUALIFIED
UNDER DIVISION C, 3.2.5 OF THE
BUILDING CODE.

MACHON OF JUNE
Method (November 20 November 20

CSA-F280-12

SB-12 PERFORMANCE

HVAC DESIGNS LTD.										
				HVAC LE	EGEND			3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	REVISED TO PERFORMANCE	SEPT/2020
	SUPPLY AIR GRILLE 6" BOOT	0	SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE	\boxtimes	RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE	Ø	6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE	X	REDUCER		REVISIONS	

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Cllent

ROYAL PINE HOMES

Project Name

CENTREFIELD (WEST GORMLEY) RICHMOND HILL, ONTARIO

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

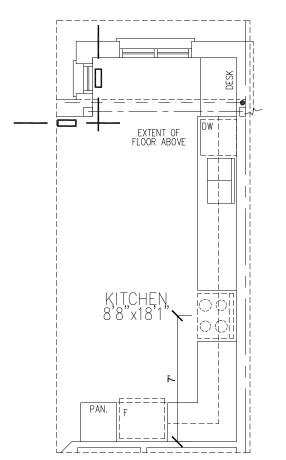
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

	HEAT L	OSS 34374	BTU/H	# OF RUNS	S/A	R/A	FANS	Sheet 7
		UN I T DATA		3RD FLOOR				
	MAKE	CARRIER		2ND FLOOR	8	4	2	
	MODEL 597	ΓN6A-060-14\	/	1ST FLOOR	6	2	2	
	INPUT	60	МВТИ/Н	BASEMENT	3	1	0	Date
	OUTPUT	50	MBTU/H	ALL S/A DIFFU	SERS	4 "x10		Scale
	COOLING	58		UNLESS NOTE				
Э	COOLING	2.5	TONS	ON LAYOUT. A UNLESS NOTE				
	FAN SPEEI	875	cfm @ 0.6" w.c.	ON LAYOUT. U DOORS 1" min.	NDER	CUT		LC

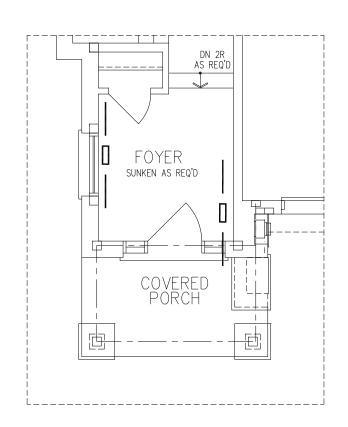
BASEMENT
HEATING
LAYOUT
Date SEPT/2020
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 87540

2010

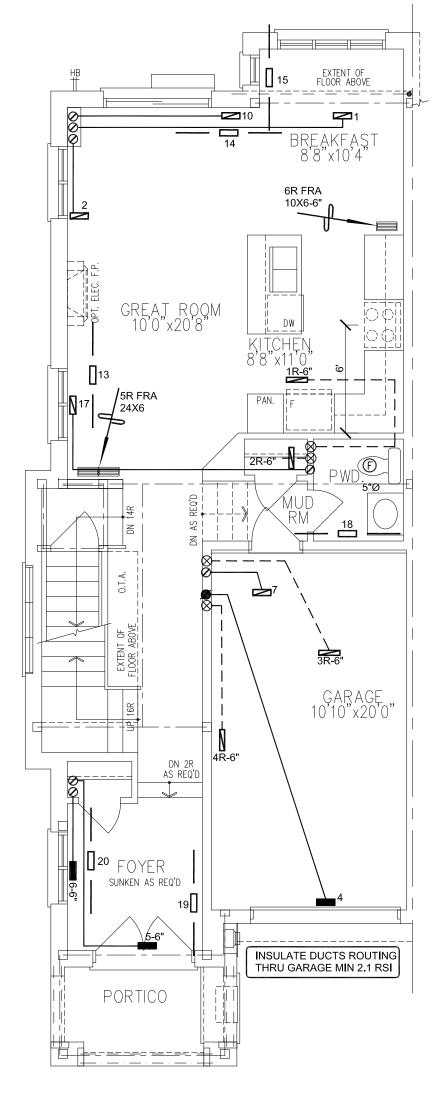
1742 sqft







GROUND FLOOR PLAN, EL. 'B'



GROUND FLOOR PLAN, EL. 'A'

REVIEW FOR THE LIFIED THE

DESIGN WORK AND AM QUALIFIED INDER DIVISION C, 3.2.5 OF THE SUILDING CODE.

Michael Standard Standard

CSA-F280-12

SB-12 PERFORMANCE

HVAC DESIGNS ETD:										
			3.							
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE	N	RETURN AIR STACK ABOVE	1.	REVISED TO PERFORMANCE	SEPT/2020
	SUPPLY AIR GRILLE 6" BOOT	0	SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE	×	RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE	REDUCER		REVISIONS						

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Cllent

ROYAL PINE HOMES

Project Name

CENTREFIELD (WEST GORMLEY)
RICHMOND HILL, ONTARIO

HVA DESIGNS LTD.

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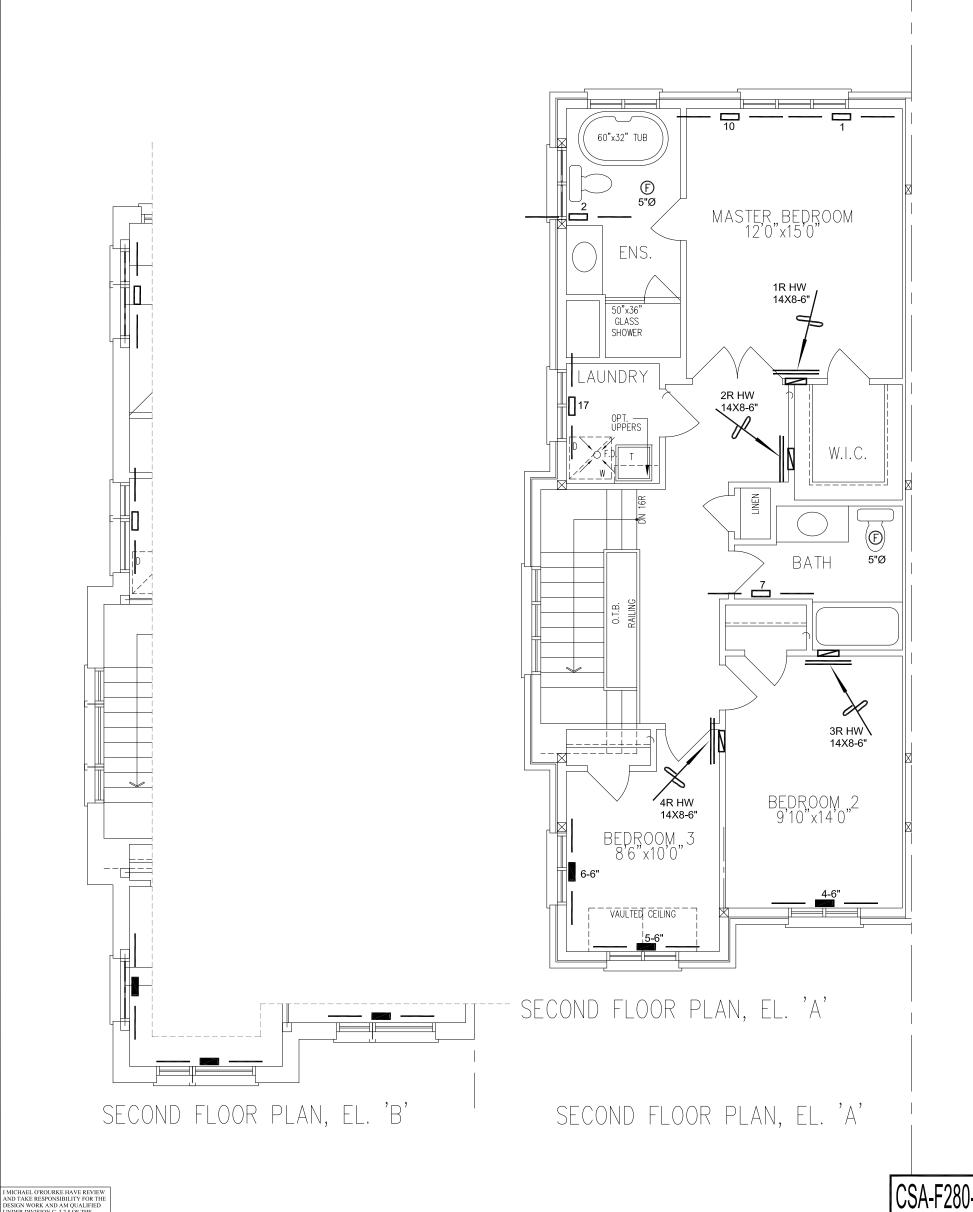
Specializing in Residential Mechanical Design Services

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.

LO# 87540

BCIN# 19669

2010 1742 sqft



SB-12 PERFORMANCE

								_		
		3.								
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE	N	RETURN AIR STACK ABOVE	1.	REVISED TO PERFORMANCE	SEPT/2020
	SUPPLY AIR GRILLE 6" BOOT	0	SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE	×	RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE 6" SUPPLY AIR STACK 2nd FLOOR				FRA- FLOOR RETURN AIR GRILLE	X	REDUCER		REVISIONS	

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ROYAL PINE HOMES

Proiect Name

CENTREFIELD (WEST GORMLEY) RICHMOND HILL, ONTARIO

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

SEPT/2020 3/16" = 1'-0" BCIN# 19669

87540 LO#

2010

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 number	other desc	cription		
RICHMON	ID HILL						
B. Indi	vidual who reviews and t	akes responsibility	for design act	ivities			
Name			Firm				
	L O'ROURKE		HVAC DESIG	SNS LTD.	li i i i		Ir a
Street ac	iaress .EY AVE				Unit no. 202		Lot/con. N/A
Municipa		Postal code	Province		E-mail		IWA
AJAX	,	L1S 2E2	ONTARIO		info@hvaco	designs.ca	
Telephor	ne number	Fax number	L		Cell number		
(905) 61	9-2300	(905) 619-2375	5		()		
C. Des	gn activities undertaken	by individual identi	fied in Section	ո B. [Build	ding Code	Table 3.5.2.1 OI	F Division C]
☐ Ho	ISE	⊠ HVA	C – House			☐ Building Stru	ıctural
	all Buildings	🖵 Buildi	ing Services			☐ Plumbing –	House
	ge Buildings		ction, Lighting	and Pov		☐ Plumbing –	
	mplex Buildings	☐ Fire F	Protection	Ina		☐ On-site Sew	age Systems
•	on of designer's work DSS / GAIN CALCULATION	2		Model:	2010		
DUCT SI		•			FIN BSMT		
RESIDE	NTIAL MECHANICAL VENT	LATION DESIGN SUM	IMARY	Project:	CENTREFIEL	D (WEST GORMLE	-Y)
	NTIAL SYSTEM DESIGN pe	r CSA-F280-12		i roject.	CENTILE	D (WEST GOTTIVIED	
D. Dec	aration of Designer						
I	MICHAEL O'ROUR				declare	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	ate
	Individual BCIN Firm BCIN:	l:					
X	I review and take respons designer" under subsec		am qualified in tailsion C, of the Bu			as an "other	
	Individual BCIN						
	Basis for exem	ption from registration a	and qualification:		O.B.C SE	ENTENCE 3.2.	4.1 (4)
	The design work is exemp Basis for exemption from I			cation requi	irements of th	ne Building Code.	
I certify t	hat:						
	 The information conta I have submitted this 	ined in this sche application with the kno	edule is true to th wledge and cons				
	April 21, 2021				Mak	al Offour	Le.
	Date						of Designer
						<u> </u>	<u> </u>

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:					MLEY)				FIN BSN	1T							DATE: A						IANGE RATE 0.236	HEAT LOSS		78 13			A-F280-12
BUILDER:		PINE H	OMES			_		TYPE:	2010				_	1742			LO# 87	541	_		UMME	R NATURAL AIR CH	IANGE RATE 0.072	HEAT GAIN				12 PERF	ORMANCE
ROOM USE				MBR			ENS					BED-2	!		BED-3	;				BATH					В	-BATH			
EXP. WALL			ı	14			22					10			42					0						0			
CLG. HT.				9			9					9			11					9						10			
I	FACTO																												
GRS.WALL AREA	LOSS	GAIN		126			198					90			462					0						0			
GLAZING				LOSS	GAIN	1	LOSS	GAIN				LOSS	GAIN		LOSS	GAIN				LOSS	GAIN				L	Loss	GAIN		
NORTH	21.8	16.0	0	0	0	0	0	0			0	0	0	0	0	0			0	0	0				0	0	0		
EAST	21.8	41.6	0	0	0	0	0	0			28	610	1163	36	784	1496			0	0	0				0	0	0		
SOUTH	21.8	24.9	0	0	0	23	501	573			0	0	0	55	1198	1369			0	0	0				0	0	0		
WEST		41.6	32	697	1330	9	196	374			0	0	0	0	0	0			0	0	0				0	0	0		
SKYLT.	35.8	101.2	0	0	0	0	0	0			0	0	0	0	0	0			0	0	0				0	0	0		
DOORS		4.3	0	0	0	0	0	0			0		0	0	0	0			o	0	0				0	0	0		
NET EXPOSED WALL	4.2	0.7	94	395	65	166	698	115			62		43	371	1560	257			0	0	0				0	0	0		
NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR	3.7	0.7	0	0	0	0	090	0			0		0	0	0	0			0	0	0				0	0	0		
			-		-		-	-								-										-	0		
EXPOSED CLG	1.3	0.6	298	392	175	105	138	62			17		103	253	332	149			70	92	41				0	0	- 1		
NO ATTIC EXPOSED CLG		1.3	0	0	0	0	0	0			0		0	20	56	25			0	0	0				0	0	0		
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0			17	6 459	76	21	55	9			51	133	22				0	0	0		
BASEMENT/CRAWL HEAT LOSS	l		ı	0			0					0			0		1			0					1	305			
SLAB ON GRADE HEAT LOSS	l		ı	0			0					0			0		l			0						0			
SUBTOTAL HT LOSS	l		ı	1484			1533					1561			3986		l			225						305			
SUB TOTAL HT GAIN	l		ı		1570			1123					1385			3305	l				63						0		
LEVEL FACTOR / MULTIPLIER			0.20	0.17		0.20	0.17				0.2	0 0.17		0.20	0.17				0.20	0.17					0.50	0.86			
AIR CHANGE HEAT LOSS				246			254					258			660					37						261			
AIR CHANGE HEAT GAIN					57			41					50			120					2						0		
DUCT LOSS				0			0					182			465					26						0			
DUCT GAIN					0			0					232			431					7						0		
HEAT GAIN PEOPLE	240		2		480	0		0			1		240	1		240			0		0				0		0		
HEAT GAIN APPLIANCES/LIGHTS					643			0					643			643					0						0		
TOTAL HT LOSS BTU/H				1730			1787					2002			5110					289						566			
TOTAL HT GAIN x 1.3 BTU/H			1		3575			1513					3316			6160					93						0		
																			-			I	l l						
ROOM USE										K/B/G					LAUNE)	F	PWD		FOY								В	AS
EXP. WALL										49					7			12		36								1	20
CLG. HT.										10					9			10		11								1	0
	FACTO	RS																											
GRS.WALL AREA	LOSS	GAIN								495					63			121		382								17	200
GLAZING										OSS G	AIN				LOSS	GAIN	L	OSS GAI	N	LOSS	GAIN							LC	SS GAIN
NORTH	21.8	16.0	1						0		0			0	0	0													0 0
EAST	21.8	41.6							0								0	0 0	0	0	0							0	
		24.9									0			0			-	-	0 20	0 436	0 831								
WEST			,						-	-	0 '68			0 33	0	0	0	0 0	20	436	831							3 6	5 75
	21.8		1						71	1547 17	68			33	0 719	0 822	0	0 0	20 65	436 1416	831 1618								55 75 52 291
	21.8 35.8	41.6							71 80	1547 17 1743 33	68			33 0	0 719 0	0 822 0	0 0 0	0 0 0 0 0 0	20 65 0	436 1416 0	831 1618 0							7 1	52 291
SKYLT.	35.8	41.6 101.2							71 80 0	1547 17 1743 33 0	68 624 0			33 0 0	0 719 0 0	0 822 0 0	0 0 0	0 0 0 0 0 0 0 0	20 65 0 0	436 1416 0 0	831 1618 0 0							7 1	52 291 0 0
SKYLT. DOORS	35.8 25.8	41.6 101.2 4.3							71 80 0	1547 17 1743 33 0	68 624 0			33 0 0	0 719 0 0	0 822 0 0	0 0 0 0 20	0 0 0 0 0 0 0 0 517 85	20 65 0 0 50	436 1416 0 0 1292	831 1618 0 0 213							7 1: 0 0 20 5:	52 291 0 0 17 85
SKYLT. DOORS NET EXPOSED WALL	35.8 25.8 4.2	41.6 101.2 4.3 0.7							71 80 0 0 344	1547 17 1743 33 0 0 1446 2	768 524 0 0 0 38			33 0 0 0 0 30	0 719 0 0 0 126	0 822 0 0 0 21	0 0 0 0 20	0 0 0 0 0 0 0 0 0 517 85 426 70	20 65 0 0 50 247	436 1416 0 0 1292 1037	831 1618 0 0 213 171							7 15 0 0 20 5 0	52 291 0 0 17 85 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR	35.8 25.8 4.2 3.7	41.6 101.2 4.3 0.7 0.6							71 80 0 0 344 0	1547 17 1743 33 0 0 1446 2	668 624 0 0 0 38			33 0 0 0 0 30	0 719 0 0 0 126	0 822 0 0 0 21	0 0 0 0 20 101	0 0 0 0 0 0 0 0 0 517 85 426 70 0 0	20 65 0 0 50 247	436 1416 0 0 1292 1037 0	831 1618 0 0 213 171 0							7 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	52 291 0 0 17 85 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG	35.8 25.8 4.2 3.7 1.3	41.6 101.2 4.3 0.7 0.6 0.6							71 80 0 0 344 0	1547 17 1743 33 0 0 1446 2 0 0	668 624 0 0 0 38 0			33 0 0 0 30 0 56	0 719 0 0 0 126 0 74	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0	0 0 0 0 0 0 0 0 517 85 426 70 0 0 0	20 65 0 0 50 247 0	436 1416 0 0 1292 1037 0	831 1618 0 0 213 171 0							7 15 0 0 20 5 0 0	52 291 0 0 17 85 0 0 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0	1547 17 1743 33 0 0 1446 2 0 0 87 3	668 624 00 00 338 00 00			33 0 0 0 30 0 56	0 719 0 0 0 126 0 74	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 517 85 426 70 0 0 0 0 0	20 65 0 0 50 247 0 0	436 1416 0 0 1292 1037 0 0	831 1618 0 0 213 171 0 0							7 1: 0 (20 5: 0 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	52 291 0 0 17 85 0 0 0 0 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GE EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6							71 80 0 0 344 0	1547 17 1743 33 0 0 1446 2 0 0 87 3	668 624 0 0 0 38 0			33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0	436 1416 0 0 1292 1037 0 0 0	831 1618 0 0 213 171 0							7 15 0 (20 5 0 (0 0 0 (0 0 0 (0 0	52 291 0 0 17 85 0 0 0 0 0 0
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BIMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0	1547 17 1743 33 0 0 1446 2 0 0 87 3 0	668 624 00 00 338 00 00			33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0 0	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 517 85 426 70 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0	436 1416 0 0 1292 1037 0 0 0	831 1618 0 0 213 171 0 0							7 1: 0 (20 5: 0 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	52 291 0 0 17 85 0 0 0 0 0 0
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	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31	1547 17 1743 33 0 0 1446 2 0 0 87 3 0 0	668 624 00 00 338 00 00			33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0 0	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0 0	0 0 0 0 0 0 517 85426 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0	436 1416 0 0 1292 1037 0 0 0 0	831 1618 0 0 213 171 0 0							7 1: 0 (20 5: 0 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	52 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0
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 SUBTOTAL HT LOSS	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31	1547 17 1743 33 0 0 1446 2 0 0 87 3 0 0	668 6224 0 0 0 0 338 0 0 0 0 9 0			33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0 0	0 822 0 0 0 21 0 33 0	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 517 85 426 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0	436 1416 0 0 1292 1037 0 0 0	831 1618 0 0 213 171 0 0							7 15 0 (20 5 0 (0 0 0 (0 0 0 (0 0	52 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 0 0
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 SUBTOTAL HT LOSS SUB TOTAL HT GAIN	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31	1547 17 1743 33 0 0 1446 2 0 0 87 3 0 0 4823	668 624 00 00 338 00 00			33 0 0 0 30 0 56 0	0 719 0 0 0 126 0 74 0 0 0	0 822 0 0 0 21 0 33	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 0	831 1618 0 0 213 171 0 0							7 1! 0 (20 5: 0 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	52 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 640
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 SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31 0	1547 17 1743 33 0 0 0 1446 2 0 0 87 3 0 0 0 4823	668 6224 0 0 0 0 338 0 0 0 0 9 0			33 0 0 0 30 0 56	0 719 0 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 0 4181	831 1618 0 0 213 171 0 0							7 1:0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	552 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 0 0 640
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 SUBTOTAL HT LOSS SUB TOTAL HT GAIN	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31 0	1547 17 1743 33 0 0 1446 2 0 0 87 3 0 0 4823	668 6224 0 0 0 0 338 0 0 0 0 9 0			33 0 0 0 30 0 56 0	0 719 0 0 0 126 0 74 0 0 0	0 822 0 0 0 21 0 33 0	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 0	831 1618 0 0 213 171 0 0							7 1! 0 (20 5: 0 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	552 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 0 0 640
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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 SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31 0	1547 17 1743 33 0 0 0 1446 2 0 0 87 3 0 0 0 4823 53 0.24	68 224 0 0 0 0 0 338 0 0 0 9 0			33 0 0 0 30 0 56 0	0 719 0 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0	0 0 0 0 0 0 517 85 426 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 0 4181	831 1618 0 0 213 171 0 0 0							7 1: 0 0 0 20 5: 0 0 0 0 0 0 0 0 0 36 43	552 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 0 0 574 451 86 54
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 GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN	35.8 25.8 4.2 3.7 1.3 2.8	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31 0	1547 17 1743 33 0 0 1446 2 0 0 87 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	68 224 0 0 0 0 0 338 0 0 0 9 0			33 0 0 0 30 0 56 0	0 719 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0	0 0 0 0 0 0 517 85 426 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181 0.24 1013	831 1618 0 0 213 171 0 0 0							7 1: 0 0 0 20 5: 0 0 0 0 0 0 0 0 0 36 43	552 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 0 0 574 451 86 754
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BIMT 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 LOSS	35.8 25.8 4.2 3.7 1.3 2.8 2.6	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31 0	1547 17 1743 33 0 0 1446 2 0 0 87 3 0 0 0 4823 53 0.24 1168 1	68 224 0 0 0 338 0 0 0 99 0			33 0 0 0 30 0 56 0	0 719 0 0 126 0 74 0 0 0 919	0 822 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181 0.24 1013	831 1618 0 0 213 171 0 0 0 2833							7 1: 0 0 0 20 5: 0 0 0 0 0 0 0 0 0 36 43	552 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 0 0 574 451 86 554
SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG NO ATTIC 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 LOSS DUCT GAIN	35.8 25.8 4.2 3.7 1.3 2.8 2.6	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31 0	1547 17 1743 33 0 0 1446 2 0 0 87 3 0 0 0 4823 53 0.24 1168 1	668 1224 100 100 138 100 100 100 100 100 100 100 10			33 0 0 0 30 0 56 0 0	0 719 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181 0.24 1013	831 1618 0 0 213 171 0 0 0 2833							7 1: 0 0 20 5: 0 0 0 0 0 0 0 36 43 0.50 0.	552 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 640 451 86 554 16
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 SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT GAIN HEAT GAIN PEOPLE	35.8 25.8 4.2 3.7 1.3 2.8 2.6	41.6 101.2 4.3 0.7 0.6 0.6 1.3							71 80 0 0 344 0 0 31 0	1547 17 1743 33 0 0 0 1446 2 0 0 87 3 0 0 0 4823 53 0.24 1168 1	668 1224 100 100 138 100 100 100 100 100 100 100 10			33 0 0 0 30 0 56 0 0	0 719 0 0 126 0 74 0 0 0 919	0 822 0 0 0 21 0 33 0 0	0 0 0 0 20 101 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 65 0 0 50 247 0 0 0 0	436 1416 0 0 1292 1037 0 0 0 0 4181 0.24 1013	831 1618 0 0 213 171 0 0 0 2833 103							7 1: 0 0 20 5: 0 0 0 0 0 0 0 36 43 0.50 0.	552 291 0 0 117 85 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

STRUCTURAL HEAT LOSS: 33038 TOTAL HEAT GAIN BTU/H: 29592 TONS: 2.47 LOSS DUE TO VENTILATION LOAD BTU/H: 1336

Michael Oxounde.



			EFIELD (\ PINE HO		ORMLEY)			IN BSM 2010				DATE:	Apr-21			GFA:	1742	LO#	87541				
HEATING CFM TOTAL HEAT LOSS AIR FLOW RATE CFM RUN COUNT	875 33,038 26.48	A 3rd		LING CFM EAT GAIN RATE CFM	29,372	1	а	a/c coil p vailable pr	ice filter ressure	0.6 0.05 0.2 0.35									*CARRIE 60 820 875	R	OUTPUT	AFUE = (BTU/H) = (BTU/H) =	60,000 58,000 875	
S/A R/A All S/A diffusers 4"x10" unle				6 2 out.	1		max	enum press s/a dif pres usted press	ss. loss	0.18 0.02 0.16		grille pro	pressure ess. Loss essure r/a	0.02				MEDIUM M HIGH HIGH	0 0 1520	Т	EMPERAT		6 " E.S.P. 61	°F
All S/A runs 5"Ø unless not	ed other 1	wise on la 2	ayout.	4	5	6	7			10			13	14	15		17	18	19	20	21	22	23	
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	MBR 0.86 23 1.79 53 0.17 40 110 150 0.11 5 169 389 3X10 C	ENS 1.79 47 1.51 45 0.17 25 130 155 0.11 4 539 516 3X10 C		BED-2 2.00 53 3.32 99 0.16 48 130 178 0.09 6 270 505 4X10 B	BED-3 2.56 68 3.08 92 0.16 55 190 245 0.07 6 347 469 4X10 A	BED-3 2.56 68 3.08 92 0.16 46 170 216 0.08 6 347 469 4X10 A	BATH 0.29 8 0.09 3 0.17 29 150 179 0.1 4 92 34 3X10 B			MBR 0.86 23 1.79 53 0.17 33 110 143 0.12 5 169 389 3X10 C			K/B/G 2.00 53 2.69 0.17 4 150 154 0.11 5 389 587 3X10 B	K/B/G 2.00 53 2.69 80 0.17 19 150 169 0.1 5 389 587 3X10 C	K/B//G 2.00 53 2.69 80 0.17 24 170 194 0.09 5 389 587 3X10 C		LAUND 1.07 28 2.02 60 0.17 41 190 231 0.07 5 206 441 3X10 B	PWD 1.17 31 0.21 6 0.17 22 160 182 0.09 4 356 69 3X10 B	FOY 2.60 69 1.91 57 0.17 34 110 1444 0.12 5 507 419 3X10 A	2.60 69 1.91 57 0.17 36 130 166 0.1 5 507 419 3X10 A	BAS 2.71 72 0.20 6 0.17 39 160 199 0.09 5 529 44 3X10 C	BAS 2.71 72 0.20 6 0.17 22 160 182 0.09 5 5 529 44 3X10 C	B-BATH 0.57 15 0.00 0 0.17 9 140 149 0.12 4 172 0 3X10 B	
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 2.71 72 0.20 6 0.17 35 120 155 0.11 5 529 44 3X10 A																							
SUPPLY AIR TRUNK SIZE																	RETURN A	NR TRUNK	(SIZE					
TRUNK A TRUNK B TRUNK C TRUNK D TRUNK B TRUNK F	TRUNK CFM 346 534 343 0 0	STATIC PRESS. 0.07 0.07 0.09 0.00 0.00 0.00	9.7 11.5 9.1 0 0	12 16 10 0 0	x x x x x	8 8 8 8	VELOCITY (ft/min) 519 601 617 0 0		TRUNK G FRUNK H TRUNK I TRUNK J TRUNK K TRUNK K	TRUNK CFM 0 0 0 0 0 0	STATIC PRESS. 0.00 0.00 0.00 0.00 0.00 0.00 0.00	ROUND DUCT 0 0 0 0 0 0	RECT DUCT 0 0 0 0 0 0	x x x x x	8 8 8 8 8	VELOCITY (ft/min) 0 0 0 0 0	TRUNK O TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V	TRUNK CFM 0 0 0 0 0 0 0 0 0	9TATIC PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	ROUND DUCT 0 0 0 0 0 0 0 0 0 0	DUCT 0 0 0 0 0 0 0 0 0 0 0	x x x x x x	8 8 8 8 8 8	VELOCITY (ft/min) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
RETURN AIR #	1	2	3	4	5	6										BR	TRUNK W	0	0.05	0	Ō	х	8	0
AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LH ADJUSTED PRESSURE ROUND DUCT SIZE INLET GRILL SIZE	0 95 0.15 57 165 222 0.07 6	0 85 0.15 46 205 251 0.06 6 8	0 85 0.15 56 175 231 0.06 6	75 0.15 55 215 270 0.05 6	0 330 0.15 18 190 208 0.07 9.6 6	0 105 0.15 35 160 195 0.08 6 4	0 0 0.15 1 0 1 14.80 0	0 0 0.15 1 0 1 14.80 0	0 0 0.15 1 0 1 14.80 0	0 0 0.15 1 0 1 14.80 0	0 0 0.15 1 0 1 14.80 0	0 0 0.15 1 0 1 14.80 0	0 0 0.15 1 0 1 14.80 0	0 0 0.15 1 0 1 14.80 0	0 0 0.15 1 0 1 14.80 0	100 0.15 30 145 175 0.08 5.9 8	TRUNK X TRUNK Y TRUNK Z DROP	770 490 0 875	0.05 0.05 0.05 0.05 0.05	14.3 12.1 0 15	24 18 0 24	x x x x	8 8 8 10	578 490 0 525
INLET GRILL SIZE	X 14	X 14	X 14	X 14	X 24	X 12	X 0	X 0	X 0	X 0	X 0	X 0	X 0	X 0	X 0	X 14								



TYPE: 2010 SITE NAME: CENT

CENTREFIELD (WEST GORMLEY)

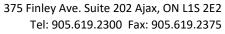
LO# 87541 FIN BSMT

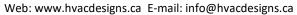
RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES	9.32.3.1(1)	SUPPLEMENTAL V	ENTILATION CAPACIT	ГҮ	9.32.3.5.
a)		Total Ventilation Ca	pacity	127.2	cfm
b) Positive venting induced draft (except fireplaces)		Less Principal Venti	I. Capacity	63.6	cfm
c) Natural draft, B-vent or induced draft gas fireplace		Required Suppleme	ntal Capacity	63.6	cfm
d) Solid Fuel (including fireplaces)					
e) No Combustion Appliances			IST FAN CAPACITY		
		Model:	VANEE 65H	Location:	BSMT
HEATING SYSTEM		63.6	cfm	_	✓ HVI Approved
Forced Air Non Forced Air		PRINCIPAL EXHAL	IST HEAT LOSS CALC		% LOSS
		63.6 CFM	X 78 F	X 1.08	X 0.25
Electric Space Heat		SUPPLEMENTAL F	ANS	BY INSTALLING CON	TRACTOR
		Location	Model	cfm	HVI Sones
HOUSE TYPE	9.32.1(2)	ENS BATH	BY INSTALLING CONT BY INSTALLING CONT		✓ 3.5 ✓ 3.5
✓ I Type a) or b) appliance only, no solid fuel					
II Type I except with solid fuel (including fireplace	s)	PWD	BY INSTALLING CONT	RACTOR 50	✓ 3.5
III Any Type c) appliance		HEAT RECOVERY Model:	VENTILATOR VANEE 65H	I	9.32.3.11.
		155	cfm high	64	cfm low
IV Type I, or II with electric space heat		75	% Sensible Effic		✓ HVI Approved
Other: Type I, II or IV no forced air			@ 32 deg F (0 d	eg C)	
OVOTEN DEGICAL OPTIONS		LOCATION OF INS	TALLATION		
SYSTEM DESIGN OPTIONS	O.N.H.W.P.	Lot:		Concession	
1 Exhaust only/Forced Air System		Township		Plan:	
2 HRV with Ducting/Forced Air System		Township		Plan.	
✓ 3 HRV Simplified/connected to forced air system		Address			
4 HRV with Ducting/non forced air system		Roll #		Building Perr	mit#
Part 6 Design		BUILDER:	ROYAL PINE H	OMES	
Tart o Besign		Name:			
TOTAL VENTILATION CAPACITY	9.32.3.3(1)	Address:			
Basement + Master Bedroom 2 @ 21.2 cfm 42.4	cfm	City:			
Other Bedrooms 2 @ 10.6 cfm 21.2	cfm	Telephone #:		Fax#:	
Kitchen & Bathrooms 5 @ 10.6 cfm 53	cfm	INSTALLING CONT	TRACTOR		
Other Rooms <u>1</u> @ 10.6 cfm <u>10.6</u>	cfm	Name:			
Table 9.32.3.A. TOTAL <u>127.2</u>	cfm	Address:			
		City:			
PRINCIPAL VENTILATION CAPACITY REQUIRED	9.32.3.4.(1)	Telephone #:		Fax#:	
1 Bedroom 31.8	cfm	•			
2 Bedroom 47.7	cfm		this ventilation system h	-	
3 Bedroom 63.6	cfm	in accordance with t Name:	the Ontario Building Coo HVAC Designs		
4 Bedroom 79.5	cfm	Signature:		Michael Offmh	٤.
5 Bedroom 95.4	cfm	HRAI#		001820	
TOTAL 63.6 cfm		Date:		April-21	
I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUA	LIFIED IN THE AP	PPROPRIATE CATEGORY AS AN	I "OTHER DESIGNER" UNDER	DIVISION C, 3.2.5 OF THE BU	JILDING CODE.



			Form	nula Sheet (For Air Lea	kage / Ventiliation C	alculation)				
LO#: 875	41	Model: 2010		Builde	r: ROYAL PINE HOMES				Date:	4/21/2021
		Volume Calculation	on				Air Change & Delt	a T Data		
				1					ı	1
ise Volume	51 4 (6.2)		(6.3)				TURAL AIR CHANG		0.236	
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)			SUMMER NA	TURAL AIR CHANG	GE RATE	0.072]
Bsmt	777 777	10	7770 7847.7							
First Second	978	10 9	8802				Design Te	mperature Diff	aranca	
Third	0	9	0	1			Tin °C	Tout °C	ΔT °C	ΔT°F
Fourth	0	9	0			Winter DTDh	22	-21	43	78
Tourth		Total:	24,419.7 ft ³			Summer DTDc	24	31	7	13
		Total:	691.5 m ³	1		Sammer Bibe			,	13
		•	•	-						
	5.2.3	3.1 Heat Loss due to A	ir Leakage			6.2.6	Sensible Gain due	to Air Leakage		
		V_{h}					V.			
	$HL_{airb} =$	$LR_{airh} \times \frac{V_b}{3.6} \times$	$DTD_h \times 1.2$		H	$IG_{salb} = LR_{airc} >$	$\times \frac{\partial}{\partial C} \times DTD_c$	× 1.2		
0.236		_ x <u>43 °C</u>		= 2354 W	= 0.072	x 192.08	0.0		=	117 W
0.230	x <u>132.08</u>	_	_ ^	- 2334 VV	- 0.072	_ X <u>192.08</u>	_ ^	^	-	117 00
				= 8032 Btu/h	i I				=	401 Btu/h
				- 0032 Btu/11	l l					401 Btu/1
	5.2.3.2 He	at Loss due to Mecha	nical Ventilation			6.2.7 Sei	nsible heat Gain d	ue to Ventilatio	n	
	$HL_{vairb} =$	$PVC \times DTD_h \times$	$1.08 \times (1-E)$		HL	$_{vairb} = PVC \times D$	$TD_h \times 1.08 \times$	(1 - E)		
64 CFM	x <u>78</u> °F	x 1.08	x 0.25	= 1336 Btu/h	64 CFM	x <u>13 °F</u>	x <u>1.08</u>	x 0.25	=	220 Btu/h
			5.2.3.3 Calcula	tion of Air Change Heat	Loss for Each Room (Flo	or Multiplier Section)				
		111	- Lonal Egat	om v III - v ((II	u , u).	(111 + 111)2			
		пь,	_{iirr} – Level Fact	$or \times HL_{airbv} \times \{(H_{airbv}) \times \{$	$L_{agcr} + HL_{bgcr}$) \div	$(\Pi L_{agclevel} + \Pi L_{agclevel})$	bgclevel)}			
				HLairve Air Leakage +	Level Conductive Heat	Air Leakage Heat Lo	ss Multiplier (I F v			
		Level	Level Factor (LF)	Ventilation Heat Loss	Loss: (HL _{clevel})	HLairby / I	• •			
				(Btu/h)			,			
		1	0.5		4,679	0.85				
		2	0.3		9,946	0.24	2			
		3	0.2	8,032	9,708	0.16				
		4	0		0	0.00	0			
		5	0		0	0.00	0			
				+ ventilation heat loss						







HEAT LOSS AND GAIN SUMMARY SHEET

		ПЕА	LU33 AND GA	AIN SUMMART SHEET	
MODEL:	2010		FIN BSMT	BUILDER: ROYAL PINE HOME	S
SFQT:	1742	LO#	87541	SITE: CENTREFIELD (WES	T GORMLEY)
DESIGN AS	SUMPTIONS				
HEATING			°F	COOLING	°F
OUTDOOR	DESIGN TEMP.		-6	OUTDOOR DESIGN TEMP.	88
INDOOR DI	ESIGN TEMP.		72	INDOOR DESIGN TEMP. (MAX 75°F)	75
BUILDING	DATA				
ATTACHME	ENT:		ATTACHED	# OF STORIES (+BASEMENT):	3
FRONT FAC	CES:		EAST	ASSUMED (Y/N):	Υ
AIR CHANG	GES PER HOUR:		2.50	ASSUMED (Y/N):	Υ
AIR TIGHT	NESS CATEGORY:		TIGHT	ASSUMED (Y/N):	Υ
WIND EXPO	OSURE:		SHELTERED	ASSUMED (Y/N):	Υ
HOUSE VO	LUME (ft³):		24419.7	ASSUMED (Y/N):	Υ
INTERNAL	SHADING:	BLIND	S/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR L	LIGHTING LOAD (Btu/	h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Υ
FOUNDATI	ON CONFIGURATION		BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH:	52.0 ft	WIDTH:	22.0 ft	EXPOSED PERIMETER:	120.0 ft

2012 OBC - COMPLIANCE PACKAGE		
	Compliance	Package
Component	SB-12 PERI	ORMANCE
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.20
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.70
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22+1.5	18.50
Basement Walls Minimum RSI (R)-Value	20	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	1.6	-
Skylights Maximum U-Value	2.6	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	TE=94%	-

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE





Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

W	eather Stati	on Description
Province:	Ontario	•
Region:	Richmond	Hill
	Site De	scription
Soil Conductivity:	Normal co	nductivity: dry sand, loam, clay
Water Table:	Normal (7-	-10 m, 23-33 ft)
	Foundation	Dimensions
Floor Length (m):	15.8	
Floor Width (m):	6.7	
Exposed Perimeter (m):	36.6	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	Insulation Configuration
Window Area (m²):	0.9	
Door Area (m²):	1.9	
	Radia	nt Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Design	Months
Heating Month	1	
	Foundat	ion Loads
Heating Load (Watts):		1156

TYPE: 2010 **LO#** 87541

FIN BSMT



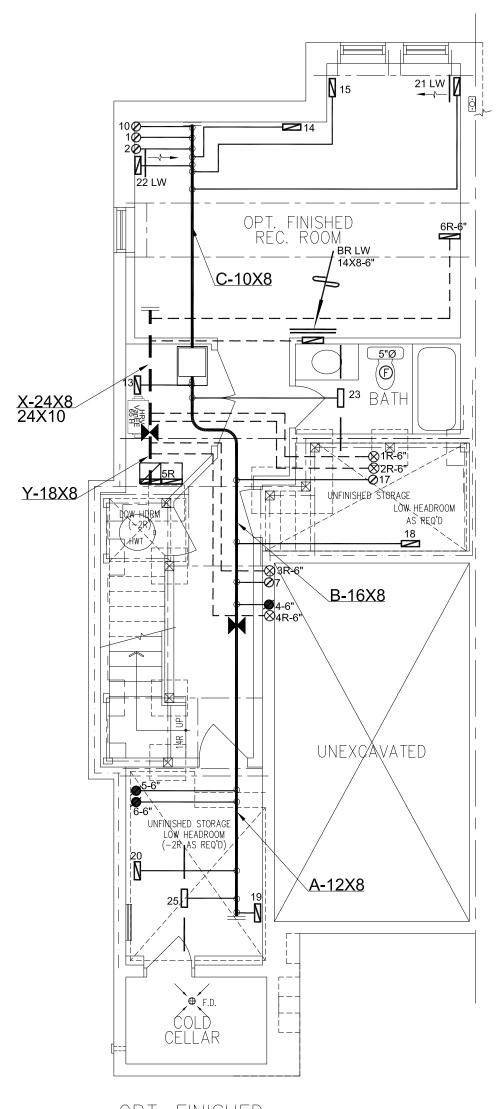
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Sta	tion Des	cripti	ion		
Province:	Ontar	io			
Region:	Richm	ond H	ill		
Weather Station Location:	Open	flat te	rrain, g	rass	
Anemometer height (m):	10				
	Shieldin	5			
Building Site:	Subur	ban, fo	orest		
Walls:	Heavy	,			
Flue:	Heavy	,			
Highest Ceiling Height (m):	6.74				
Building C	Configura	ition			
Type:	Semi				
Number of Stories:	Two				
Foundation:	Full				
House Volume (m³):	691.5				
Air Leakag	e/Ventil	ation	1		
Air Tightness Type:	Energ	y Star	Detach	ed (2.5	5 ACH)
Custom BDT Data:	ELA @	10 Pa).		645.5 cm ²
	2.50				ACH @ 50 Pa
Mechanical Ventilation (L/s):	To	tal Sup	ply		Total Exhaust
		30.0			30.0
Flu	ıe Size				
Flue #:	#1	#2	#3	#4	
Diameter (mm):	0	0	0	0	
Natural Inf	iltration	Rate	S		
Heating Air Leakage Rate (ACH/H	1):	0	.23	6	
Cooling Air Leakage Rate (ACH/H	I):	0	.07	2	

TYPE: 2010 **LO#** 87541

FIN BSMT



OPT. FINISHED
BASEMENT PLAN, EL. 'A' & 'B'

SB-12 PERFORMANCE

HVAC DESIGNS ETD:										
		3.								
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	REVISED TO PERFORMANCE	SEPT/2020
	SUPPLY AIR GRILLE 6" BOOT	0	SUPPLY AIR STACK FROM 2nd FLOOR	<u></u>	30"x8" RETURN AIR GRILLE	×	RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE	Ø	6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE	X	REDUCER		REVISIONS	

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Cllent

ROYAL PINE HOMES

Project Name

CENTREFIELD (WEST GORMLEY) RICHMOND HILL, ONTARIO

FIN BSMT 2010

1742 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.

OUTPUT

COOLING

	HEAT LOSS		BTU/H	# OF	RUNS	S/A	R/A	FANS	SI
	UNI	T DATA		3RD	FLOOR				
	MAKE								
	CAF	RIER		2ND	FLOOR	8	4	2	
	MODEL 59TN6A	-060-14\	/	1ST	FLOOR	6	2	2	
	INPUT (60	мвти/н	BAS	EMENT	4	1	1	D
_	OUTPUT		MBTU/H	ALL C	A DIFFU	CEDE	4 ">40	\"	S
	!	58	MB10/H	_	SS NOTE				
	COOLING								
		2.5	TONS		AYOUT. A				
•				UNLE	SS NOTE	D OTH	HERW	SE	١.

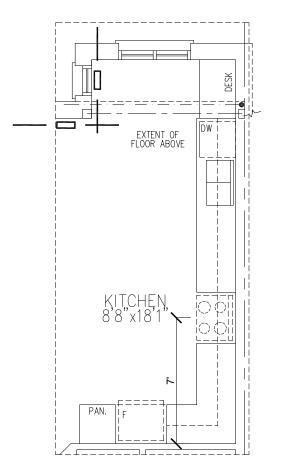
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875

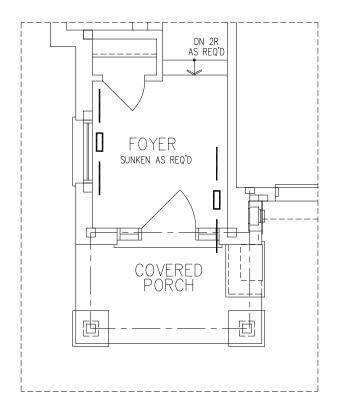
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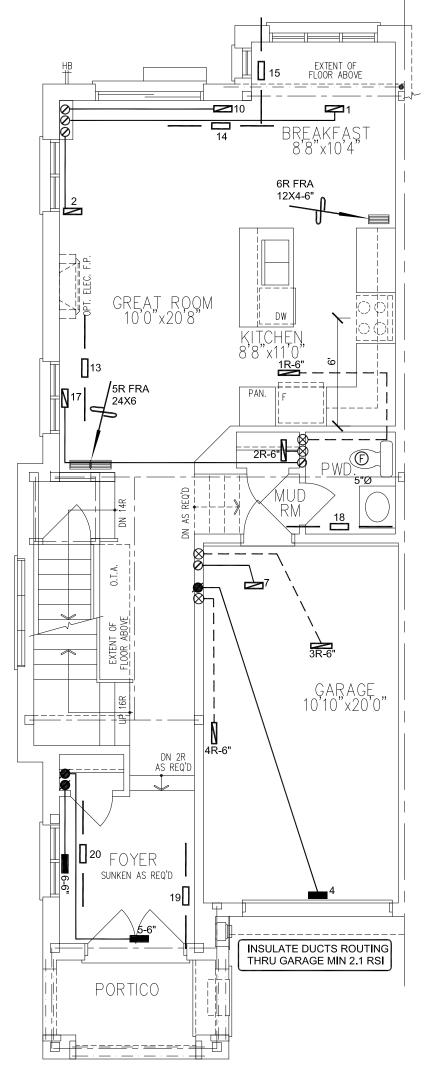
DOORS 1" min. FOR R/A

IS	Sheet Title									
_	BA	SEMENT								
	HEATING LAYOUT									
	Date	SEPT/2020								
Ø	Scale	3/16" = 1'-0"								
	BCIN# 19669									
	LO#	87541								



PART. GROUND FLOOR PLAN - OPT. KITCHEN LAYOUT





GROUND FLOOR PLAN, EL. 'A'

GROUND FLOOR PLAN, EL.

SB-12 PERFORMANCE

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	REVISED TO PERFORMANCE	SEPT/2020
	SUPPLY AIR GRILLE 6" BOOT	0	SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE	\boxtimes	RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE	Ø	6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE	X	REDUCER		REVISIONS	

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ROYAL PINE HOMES

Proiect Name

CENTREFIELD (WEST GORMLEY) RICHMOND HILL, ONTARIO

FIN BSMT 2010

1742 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

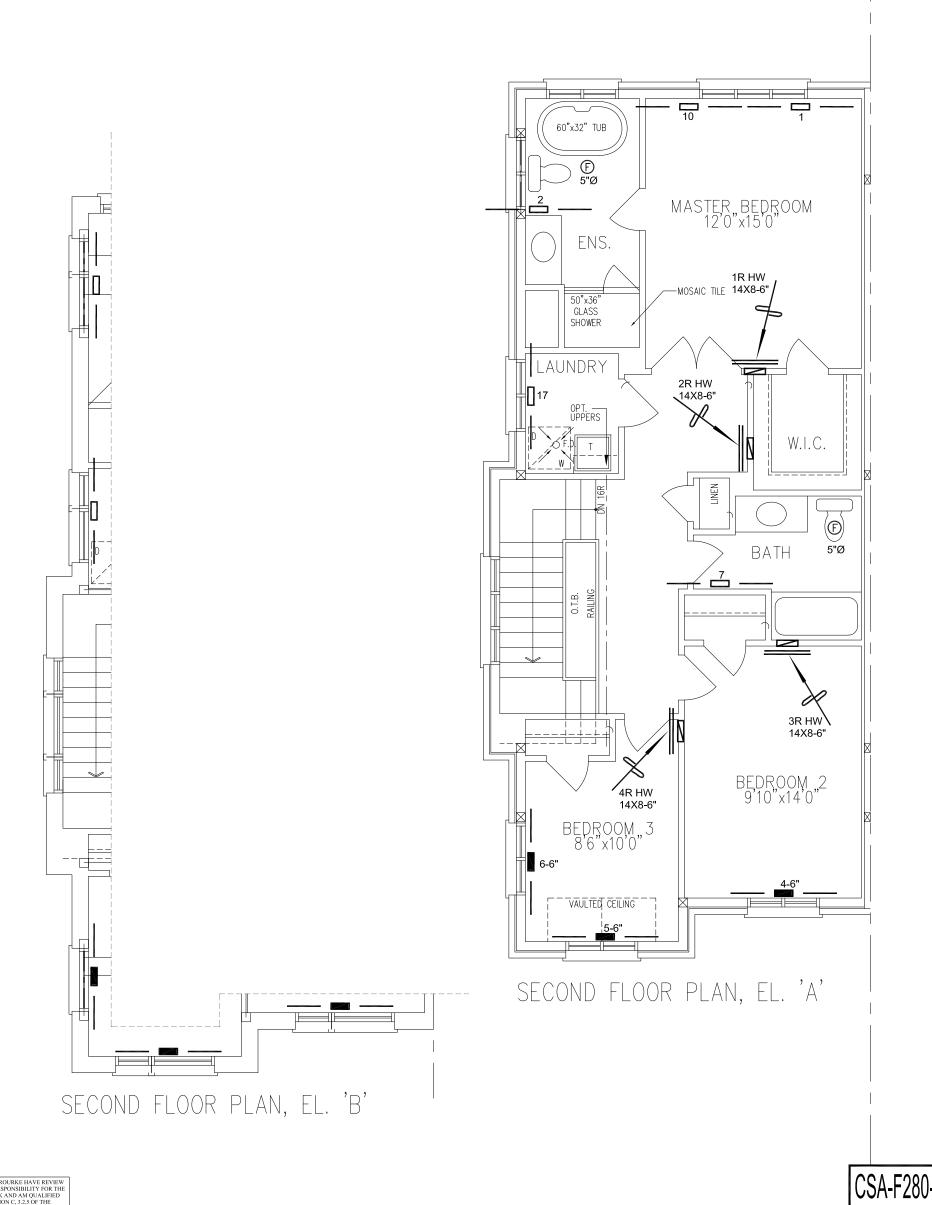
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

FIRST FLOOR **HEATING LAYOUT** SEPT/2020 Date 3/16" = 1'-0"

BCIN# 19669

LO#

87541



SB-12 PERFORMANCE

THE DESIGNATION										
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE	N	RETURN AIR STACK ABOVE	1.	REVISED TO PERFORMANCE	SEPT/2020
	SUPPLY AIR GRILLE 6" BOOT	0	SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE	M	RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE	%	6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE	X	REDUCER		REVISIONS	

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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**

SEPT/2020 Date 3/16" = 1'-0"

BCIN# 19669

87541 LO#