

### **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 Baross	sa 3		Lot:	147
\$38-3 Lo	ot 147		Lot/con.	
Municipality Bradford	Postal code	Plan number/ other description		
B. Individual who reviews and takes responsibility for design	gn activities			
Name David DaCosta		Firm	gtaDesigns Inc.	
Street address 2985 Drew Roa	d, Suite 202		Unit no.	Lot/con.
Municipality	Postal code	Province	E-mail hvac@gtadesi	ano oo
Mississauga Telephone number	L4T 0A4 Fax number	Ontario	Cell number	<u>gris.ca</u>
(905) 671-9800				
C. Design activities undertaken by individual identified in S	ection B. [Bu	ilding Code Table 3	3.5.2.1 of Division C]	
☐ House ☑ HVAC – H	louse		☐ Building Structural	
☐ Small Buildings ☐ Building Se	ervices		☐ Plumbing – House	
☐ Large Buildings ☐ Detection,	Lighting and Pov	wer	☐ Plumbing – All Buildings	<b>;</b>
☐ Complex Buildings ☐ Fire Protect	ction		☐ On-site Sewage System	S
Description of designer's work Mod	del Certification	1	Project #:	PJ-00041
W			Layout #:	JB-07273
Heating and Cooling Load Calculations Main Air System Design Alternate	Х	Builder Project	Bayview Wellingto Green Valley Eas	
Residential mechanical ventilation Design Summary Area Sq ft:	2593		Barossa 3	
Residential System Design per CAN/CSA-F280-12		Model	S38-3 Lot 147	
Residential New Construction - Forced Air		SB-12	Package A1	
D. Declaration of Designer				
l David DaCosta	declare that (c	choose one as appro	priate):	
(print name)				
I review and take responsibility for t				
3.2.4 Division C of the Building Coc classes/categories.	de. I am qualified	d, and the firm is registe	ered, in the appropriate	
Individual BCIN:				
			Ī	
Firm BCIN:			ı	
	•			
"other designer" under subsection	3.2.5 of Division	C, of the Building Cod	€.	
Individual BCIN:	3296	64		
Basis for exemp	tion from registra	ation: D	Division C 3.2.4.1. (4)	
☐ The design work is exempt from the	e registration and	d qualification requirem	ents of the Building Code.	
Basis for exemp	tion from registra	ation and qualification:		
I certify that:				
The information contained in this schedule is true to the best of m	ny knowledge.			
I have submitted this application with the knowledge and consent	-			
lune 25, 2024		Mane Ho	- Color	
June 25, 2021		Signature of De	signer	
Date		Signature of Des	nighter	

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 qualifications under Subsections 3.2.4. and 3.2.5.of Division C.

2. Schedule 1 does not require to be completed a holder of a license, temporay license, or a certificate of authorization, issed 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 licence to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.



2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

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These documents issued for the use of and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red.    Building Location	Heat loss and gain calcul	ation summary sheet CSA-F280-M12 Standard
Building Location	These documents issued for the use of Box	
Address (Model): \$38-3 Lot 147	and may not be used by any other persons without authorization. Documents	for permit and/or construction are signed in red.  JB-07273
Address (Model): \$38-3 Lot 147	Building	Location
Postal code:   Post		
Calculations based on  Dimensional information based on:  VA3 Design11/May/2012  Attechment: Detached   Front facing: EastWest   Assumed? Yes   No. of Levels: 3 Ventilated? Included   Air tightness: 1961-Present (ACH=3.57)   Assumed? Yes   Wind exposure: Sheltered   Wind exposure: Sheltered   HRV? VanEE   65H HRV   Internal shading: Light-translucent   Occupants: 5   Sensible Eff. at -25C   60%   Apparent Effect. at -0C   83%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%     Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%     Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%     Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%     Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Sensible Eff. at -0C   75%   Units:   Imperial   Area Sq ft: 2593   Style B:   Style A:   As per OBC SB12   Package A1   R 2.0   Style B:   Style C:   Style B:	Model: Barossa 3	Lot: 147
Dimensional information based on:   VA3 Design11/May/2012   Attachment:   Detached   Front facing:   EastWest   Assumed?   Yes	City and Province: Bradford	Postal code:
Attachment:   Detached   Front facing:   EastWest   Assumed?   Yes	Calculation	s based on
No. of Levels: 3   Ventilated? Included   Alir tightness: 1961-Present (ACH=3.57)   Assumed?   Yes	Dimensional information based on:	VA3 Design11/May/2012
Weather location:   Bradford   Wind exposure:   Sheltered	Attachment: Detached	Front facing: East/West Assumed? Yes
HRV?   VanEE	No. of Levels: 3 Ventilated? Included	Air tightness: 1961-Present (ACH=3.57) Assumed? Yes
Sensible Eff. at -25C	Weather location: Bradford	Wind exposure: Sheltered
Sensible Eff. at -0C	HRV? VanEE 65H HRV	Internal shading: Light-translucent Occupants: 5
Heating design conditions  Cutdoor temp	Sensible Eff. at -25C 60% Apparent Effect. at -0C 83%	Units: Imperial Area Sq ft: 2593
Outdoor temp	Sensible Eff. at -0C 75%	
Above grade walls   Below grade walls	Heating design conditions	Cooling design conditions
Style A:	Outdoor temp -9.4 Indoor temp: 72 Mean soil temp: 48	Outdoor temp 86 Indoor temp: 75 Latitude: 44
Style B: Style C: Style C: Style C: Style D:  Floors on soil Style A: As per Selected OBC SB12 Package A1 Style B: Style B: Style B: As per Selected OBC SB12 Package A1 R 6 Style B: Style B: As per Selected OBC SB12 Package A1 R 31  Exposed floors Style C: Style A: As per Selected OBC SB12 Package A1 R 31  Doors Style B: Style C: Style B: Style B: Style C: Style B: Style B: Style C: Style B: Style C: Style B: Style B: Style C: Style B: Style B: Style C: Style B: Style B: Attached documents: As per Shedule 1 Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values Notes: Residential New Construction - Forced Air Calculations performed by Name: David DaCosta Postal code: L4T 0A4 Company: gtaDesigns Inc.	Above grade walls	Below grade walls
Style C:   Style D:   Style D:   Style D:   Style D:   Style D:   Style A:   As per Selected OBC SB12   Package A1   R   6   Style B:   Style B:   Style B:   Style A:   As per Selected OBC SB12   Package A1   R   3.   As per Selected OBC SB12   Package A1   R   3.   As per Selected OBC SB12   Package A1   R   3.   As per Selected OBC SB12   Package A1   R   3.   As per Selected OBC SB12   Package A1   R   4.0	Style A: As per OBC SB12 Package A1 R 22	Style A: As per OBC SB12 Package A1 R 20ci
Style D:  Floors on soil  Style A: As per Selected OBC SB12  Package A1  Style B:  Style B:  Style C:  Style A: As per Selected OBC SB12  Package A1  R  31	Style B:	Style B:
Style A: As per Selected OBC SB12 Package A1 Style A: As per Selected OBC SB12 Package A1 R 6 Style B: Style B: As per Selected OBC SB12 Package A1 R 3  Exposed floors Style C: Style A: As per Selected OBC SB12 Package A1 R 31  Doors Style B: Style A: As per Selected OBC SB12 Package A1 R 4.0  Windows Style B: Style B: Style B: Style C: Style B: Style C: Style B: Style B: Style B: Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C: Style B: Style C: Style B: Style B: Style B: Style B: Style B: Style C: Style B:	Style C:	Style C:
Style A: As per Selected OBC SB12 Package A1 Style A: As per Selected OBC SB12 Package A1 R 6 Style B: Style B: As per Selected OBC SB12 Package A1 R 3  Exposed floors Style C: Style C:  Style A: As per Selected OBC SB12 Package A1 R 31 Doors  Style B: Style C: Style B: St	Style D:	Style D:
Style B: Style B: As per Selected OBC SB12 Package A1 R 3  Exposed floors Style C: Style C: Style A: As per Selected OBC SB12 Package A1 R 31 Doors  Style B: Style A: As per Selected OBC SB12 Package A1 R 4.0  Windows Style B: Style B: Style B: Skylights  Style B: Skylights Style C: Style C: Style C: Style C: Style B: Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style D: Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style D: Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style D: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style D: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style D: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style B: Style A: As per Selected OBC SB12 Package A1 R 2.0  Style B: Style B: Style B: As per Selected OBC SB12 Package A1 R 2.0  Style B:	Floors on soil	Ceilings
Exposed floors  Style A: As per Selected OBC SB12  Package A1  R  31  Doors  Style B: Style A: As per Selected OBC SB12  Package A1  R  4.0  Windows Style B: Style B:  Style A: As per Selected OBC SB12  Package A1  R  3.55  Style C:  Style B: Skylights  Style B: Skylights  Style C: Style A: As per Selected OBC SB12  Package A1  R  2.0  Style B: Style B: Style B:  Attached documents: As per Shedule 1  Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values  Notes: Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta  Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Style A: As per Selected OBC SB12 Package A1	Style A: As per Selected OBC SB12 Package A1 R 60
Style A: As per Selected OBC SB12 Package A1 R 31 Doors  Style B: Style A: As per Selected OBC SB12 Package A1 R 4.0  Windows Style B: Style B: Style C: Style B: Skylights  Style B: Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C: Style B: Skylights  Style C: Style A: As per Selected OBC SB12 Package A1 R 2.0  Style D: Style B: Style B: Attached documents: As per Shedule 1 Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values  Notes: Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Style B:	Style B: As per Selected OBC SB12 Package A1 R 31
Style B:  Style A: As per Selected OBC SB12 Package A1 R 4.0  Windows  Style B:  Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C:  Style B:  Style B:  Style B:  Style A: As per Selected OBC SB12 Package A1 R 2.0  Style C:  Style A: As per Selected OBC SB12 Package A1 R 2.0  Style B:  Attached documents: As per Shedule 1 Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values  Notes:  Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc.  Telephone: (905) 671-9800	Exposed floors	Style C:
Style A:   As per Selected OBC SB12   Package A1   R   3.55   Style C:   Style B:   Skylights	Style A: As per Selected OBC SB12 Package A1 R 3	Doors
Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C:  Style B: Style C: Style A: As per Selected OBC SB12 Package A1 R 2.0  Style D: Style B:  Attached documents: As per Shedule 1 Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values  Notes: Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Style B:	Style A: As per Selected OBC SB12 Package A1 R 4.00
Style B:  Style C:  Style A: As per Selected OBC SB12 Package A1 R 2.0  Style D:  Attached documents: As per Shedule 1 Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values  Notes: Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Windows	Style B:
Style C: Style D: Attached documents: As per Shedule 1 Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values  Notes: Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Style A: As per Selected OBC SB12 Package A1 R 3.5	5 Style C:
Style D:  Attached documents: As per Shedule 1 Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values  Notes: Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Style B:	Skylights
Attached documents: As per Shedule 1 Heat Loss/Gain Caculations based on CSA-F280-12 Effective R-Values  Notes: Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Style C:	Style A: As per Selected OBC SB12 Package A1 R 2.03
Notes: Residential New Construction - Forced Air  Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Style D:	Style B:
Calculations performed by  Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Attached documents: As per Shedule 1 Heat Loss/	Gain Caculations based on CSA-F280-12 Effective R-Values
Name: David DaCosta Postal code: L4T 0A4  Company: gtaDesigns Inc. Telephone: (905) 671-9800	Notes: Residential New	Construction - Forced Air
Company: gtaDesigns Inc. Telephone: (905) 671-9800	Calculations	performed by
	Name: David DaCosta	Postal code: L4T 0A4
Address: 2985 Drew Road, Suite 202 Fax:	Company: gtaDesigns Inc.	Telephone: (905) 671-9800
	Address: 2985 Drew Road, Suite 202	Fax:
City: Mississauga E-mail hvac@gtadesigns.ca	City: Mississauga	E-mail hvac@gtadesigns.ca



Builder:

Bayview Wellington

## Air System Design

Package A1

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

SB-12

Date: June 25, 2021 I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under Division C subsection 3.2.5. of the Building Code.

P.I-00041

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Project: Green V	/alley Eas	st	ı	Model:			Baros S38-3 L					Sy	stem 1			uilding Co ndividual E		32964	Mar	ne 140	A	C	David DaCo	ısta		oject # yout #		-00041 -07273
DESIGN LOAD SPECIFICATION	S		A	AIR DISTR	IBUTION	& PRESSU	IRE				FU	JRNACE/A	IR HAND	LER DAT	A:			BOILER/W/	ATER HEA	TER DAT	<b>A</b> :			F	A/C UNIT D	ATA:		
Level 1 Net Load Level 2 Net Load Level 3 Net Load	21,829 k 18,914 k 16.576 k	otu/h	A	Additional	Equipme	Static Pre			0.5 "\ 0.225 "\ 0.275 "\	w.c.	M	ake odel put Btu/h	ı	Amai AMEC9608	03BNA			Make Model			Ту	/pe		C	Amana Cond		2.5 T 2.5 2.5	on
Level 4 Net Load	.,	otu/n otu/h			Design Pro	essure Jest Effecti	ivo Longt	h	0.275 "\ 300 ft			put Btu/n utput Btu/	h	7680				Input Btu/h Output Btu						·	,011		2.5	
Total Heat Loss	57,319 b				m Pressur		ive Lengt		0.138 "\			игриг Бти/ .s.p.		0.50		w.c.		Min.Output			Δ١	WH						
Total Heat Gain	28,688 b				m Pressur				0.14 "\			ater Temp		0.00		eg. F.		iiiii.Output	Dtu/ii				wer DATA:					
Total Heat Gam	20,000 1	, cu, ii				oportioning	n Factor		0.0204 cf			FUE		96%		cg. i .		Blower Spe	ed Selecti	ed.	W2	Dio	WCI DATA.		Blower Typ	- F	СМ	
Building Volume Vb	31807 f	t³		•		portionin	-		0.0409 cf			ux. Heat		307	•			Diower ope	cu ocicon	cu.				_			3C 12.3.1.5	5.(2))
Ventilation Load	1,188 E					-	R/A Temp		70 d			B-12 Pack	age	Packag	e A1			Heating Ch	eck	1172 cf	m			c	Cooling Ch		1172 c	
Ventilation PVC	79.5 c	fm				s	A Temp		131 d																			
Supply Branch and Grill Sizing				Diffuser lo	ss _	0.01 "	w.c.				Te	emp. Rise:	···	<u>61</u> d	eg. F.			Selected cf	m>	1172 cf	m		C.	ooling Ai	ir Flow Rate	e _	1172 c	fm
[	_	_	_	_	_		Leve	el 1							_	_		_			Level	2						
S/A Outlet No.	1	2	3	4	5										6	7	8	9	10	11								
Room Use	BASE	BASE	BASE	BASE	BASE										KIT	KIT	GRT	LAUND	FOY	DIN								
Btu/Outlet	4366	4366	4366 89	4366 89	4366										2232	2232 46	3858 79	2470	3832	4291 88								
Heating Airflow Rate CFM	89	89		89 41	89										46			51	78									
Cooling Airflow Rate CFM Duct Design Pressure	41 0.13	41 0.13	41 0.13	0.13	41 0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	107 0.13	107 0.13	92 0.13	44 0.13	68 0.13	108 0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Actual Duct Length	53	40	24	29	20	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	34	31	46	24	27	6	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Equivalent Length	110	140	90	70	130	70	70	70	70	70	70	70	70	70	80	130	120	170	120	130	70	70	70	70	70	70	70	70
Total Effective Length	163	180	114	99	150	70	70	70	70	70	70	70	70	70	114	161	166	170	147	136	70	70	70	70	70 70	70	70	70
Adjusted Pressure	0.08	0.07	0.11	0.13	0.09	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.11	0.08	0.08	0.07	0.09	0.10	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Duct Size Round	6	6	6	6.13	6	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	6	6	6	5	6	6	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Outlet Size	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	3x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10	4x10
Trunk	В	В	A	A	С										A	В	В	C	C	A		12.10						
							Leve	el 3													Level	4						
S/A Outlet No.	12	13	14	15	16	17	18	19	20	21																		
Room Use	MAST	MAST	BED 2	BATH	BED 3	BED 3	LOFT	BED 4	ENS 2	ENS																		
Btu/Outlet	1653	1653	1682	1533	1734	1734	2964	1322	617	1684																		
Heating Airflow Rate CFM	34	34	34	31	35	35	61	27	13	34																		
Cooling Airflow Rate CFM	51	51	35	24	47	47	96	42	13	33																		
Duct Design Pressure	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Actual Duct Length	49	62	54	41	42	38	47	34	24	30																		
Equivalent Length	150	140	180	160	140																							70
Total Effective Length	199					130	140	150	120	140	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
		202	234	201	182	168	187	184	120 144	140 170	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Adjusted Pressure	0.07	0.06	234 0.06	201 0.06	182 0.07	168 0.08	187 0.07	184 0.07	120 144 0.09	140 170 0.08																		0.19
Duct Size Round	0.07 5	0.06 5	234 0.06 5	201 0.06 4	182 0.07 5	168 0.08 5	187 0.07 6	184 0.07 5	120 144 0.09 3	140 170 0.08 4	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	0.19
Duct Size Round Outlet Size	0.07 5 3x10	0.06 5 3x10	234 0.06 5 3x10	201 0.06 4 3x10	182 0.07 5 3x10	168 0.08 5 3x10	187 0.07 6 4x10	184 0.07 5 3x10	120 144 0.09 3 3x10	140 170 0.08	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
Duct Size Round	0.07 5	0.06 5	234 0.06 5	201 0.06 4	182 0.07 5	168 0.08 5	187 0.07 6	184 0.07 5	120 144 0.09 3	140 170 0.08 4	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19	0.19
Duct Size Round Outlet Size	0.07 5 3x10	0.06 5 3x10 B	234 0.06 5 3x10	201 0.06 4 3x10 C	182 0.07 5 3x10	168 0.08 5 3x10	187 0.07 6 4x10 C	184 0.07 5 3x10	120 144 0.09 3 3x10	140 170 0.08 4	70 0.19	70 0.19 4x10	70 0.19 4x10	70 0.19	70 0.19 4x10	70 0.19	70 0.19	70 0.19	70 0.19	70 0.19 4x10	70 0.19	70 0.19 4x10	70 0.19 4x10	70 0.19	70 0.19	70 0.19	70 0.19	0.19
Duct Size Round Outlet Size Trunk	0.07 5 3x10	0.06 5 3x10 B	234 0.06 5 3x10 B	201 0.06 4 3x10 C	182 0.07 5 3x10	168 0.08 5 3x10 C	187 0.07 6 4x10 C	184 0.07 5 3x10	120 144 0.09 3 3x10	140 170 0.08 4	70 0.19	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing	70 0.19 4x10	70 0.19	70 0.19	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing	70 0.19 4x10	70 0.19	70 0.19	70 0.19 4x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing	0.07 5 3x10 B	0.06 5 3x10 B	234 0.06 5 3x10 B	201 0.06 4 3x10 C	182 0.07 5 3x10 C	168 0.08 5 3x10 C	187 0.07 6 4x10 C	184 0.07 5 3x10 A	120 144 0.09 3 3x10 A	140 170 0.08 4 3x10 A	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10 upply Trur	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No.	0.07 5 3x10 B	0.06 5 3x10 B	234 0.06 5 3x10 B Grill Press	201 0.06 4 3x10 C ure Loss 4R	182 0.07 5 3x10 C	168 0.08 5 3x10 C	187 0.07 6 4x10 C	184 0.07 5 3x10 A	120 144 0.09 3 3x10 A	140 170 0.08 4 3x10 A	70 0.19 4x10	70 0.19 4x10 Re Tr	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10 upply Trur unk	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	70 0.19 4x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM	0.07 5 3x10 B	0.06 5 3x10 B 2R 384	234 0.06 5 3x10 B Grill Press 3R 160	201 0.06 4 3x10 C ure Loss 4R 105	182 0.07 5 3x10 C	168 0.08 5 3x10 C 0.02 "	187 0.07 6 4x10 C w.c	184 0.07 5 3x10 A	120 144 0.09 3 3x10 A	140 170 0.08 4 3x10 A	70 0.19 4x10	70 0.19 4x10 Re Tr	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing FM P	70 0.19 4x10 ress. R	70 0.19 4x10	70 0.19 4x10 Rect. S	70 0.19 4x10	70 0.19 4x10 <u>Si</u> Tr	70 0.19 4x10 upply Trur unk	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing	70 0.19 4x10 ress. R	70 0.19 4x10 Round	70 0.19 4x10 Rect. S	70 0.19 4x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure	0.07 5 3x10 B 1R 223 0.12	0.06 5 3x10 B 2R 384 0.12	234 0.06 5 3x10 B Grill Press 3R 160 0.12	201 0.06 4 3x10 C ure Loss 4R 105 0.12	182 0.07 5 3x10 C	168 0.08 5 3x10 C 0.02 " 6R 150 0.12	187 0.07 6 4x10 C w.c	184 0.07 5 3x10 A	120 144 0.09 3 3x10 A	140 170 0.08 4 3x10 A	70 0.19 4x10	70 0.19 4x10 <u>Rt</u> Tr	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zzing FM P	70 0.19 4x10 ress. R	70 0.19 4x10 ound	70 0.19 4x10 Rect. \$	70 0.19 4x10	70 0.19 4x10 <u>Si</u> Ti	70 0.19 4x10 upply Trur	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing CFM Pr	70 0.19 4x10 ress. R	70 0.19 4x10 Round	70 0.19 4x10 Rect. S	70 0.19 4x10 Size 18x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length	0.07 5 3x10 B 1R 223 0.12	0.06 5 3x10 B 2R 384 0.12	234 0.06 5 3x10 B Grill Press 3R 160 0.12 34	201 0.06 4 3x10 C ure Loss 4R 105 0.12	182 0.07 5 3x10 C	168 0.08 5 3x10 C 0.02 " 6R 150 0.12 41	187 0.07 6 4x10 C w.c	184 0.07 5 3x10 A 8R 0.12	120 144 0.09 3 3x10 A 9R	140 170 0.08 4 3x10 A	70 0.19 4x10 11R 0.12	70 0.19 4x10 <u>Re</u> Tr	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing FM P	70 0.19 4x10 ress. R 0.05 0.05	70 0.19 4x10 ound 17.0 17.0	70 0.19 4x10 Rect. \$ 24x12 26x10	70 0.19 4x10	70 0.19 4x10 <u>Si</u> Tr	70 0.19 4x10 upply Trur	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing CFM Pr 791 405	70 0.19 4x10 ress. R 0.06 0.06	70 0.19 4x10 Round 14.5 11.0	70 0.19 4x10 Rect. S 24x8 14x8	70 0.19 4x10 Size 18x10 10x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length	0.07 5 3x10 B 1R 223 0.12 25 110	0.06 5 3x10 B 2R 384 0.12 21	234 0.06 5 3x10 B Grill Press 3R 160 0.12 34 150	201 0.06 4 3x10 C ure Loss 4R 105 0.12 35 105	182 0.07 5 3x10 C 5R 150 0.12 55 200	168 0.08 5 3x10 C 0.02 " 6R 150 0.12 41 140	187 0.07 6 4x10 C w.c 7R 0.12	184 0.07 5 3x10 A 8R 0.12	120 144 0.09 3 3x10 A 9R 0.12	140 170 0.08 4 3x10 A 10R 0.12	70 0.19 4x10 11R 0.12	70 0.19 4x10 Re Tr Dr Z	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing FM P 1172 1172 1067	70 0.19 4x10 ress. R 0.05 0.05	70 0.19 4x10 ound 17.0 16.5	70 0.19 4x10 Rect. S 24x12 26x10 32x8	70 0.19 4x10 Size 22x12 24x10	70 0.19 4x10 Si Tr A B C	70 0.19 4x10 upply Trur	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing CFM Pr 791 405	70 0.19 4x10 ress. R 0.06 0.06	70 0.19 4x10 Round 14.5 11.0	70 0.19 4x10 Rect. S 24x8 14x8	70 0.19 4x10 Size 18x10 10x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length	0.07 5 3x10 B 1R 223 0.12 25 110 135	0.06 5 3x10 B 2R 384 0.12 21 165 186	234 0.06 5 3x10 B Grill Press 3R 160 0.12 34 150 184	201 0.06 4 3x10 C ure Loss 4R 105 0.12 35 105 140	182 0.07 5 3x10 C 5R 150 0.12 55 200 255	168 0.08 5 3x10 C 0.02 " 6R 150 0.12 41 140 181	187 0.07 6 4x10 C w.c 7R 0.12 50	184 0.07 5 3x10 A 8R 0.12 50 50	120 144 0.09 3 3x10 A 9R 0.12 50	140 170 0.08 4 3x10 A 10R 0.12 50	70 0.19 4x10 11R 0.12 50 50	70 0.19 4x10 Re Tr Dr Z Y	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing FM P 1172 1172 1067	70 0.19 4x10 ress. R 0.05 0.05	70 0.19 4x10 ound 17.0 16.5	70 0.19 4x10 Rect. S 24x12 26x10 32x8	70 0.19 4x10 Size 22x12 24x10	70 0.19 4x10 Si Ti A B C	70 0.19 4x10 upply Trur	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing CFM Pr 791 405	70 0.19 4x10 ress. R 0.06 0.06	70 0.19 4x10 Round 14.5 11.0	70 0.19 4x10 Rect. S 24x8 14x8	70 0.19 4x10 Size 18x10 10x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure	0.07 5 3x10 B 1R 223 0.12 25 110 135 0.09	0.06 5 3x10 B 2R 384 0.12 21 165 186 0.06	234 0.06 5 3x10 8 Grill Press 3R 160 0.12 34 150 184 0.06	201 0.06 4 3x10 C ure Loss 4R 105 0.12 35 105 140 0.08	182 0.07 5 3x10 C 5R 150 0.12 55 200 255 0.05	168 0.08 5 3x10 C 0.02 " 6R 150 0.12 41 140 181 0.06	187 0.07 6 4x10 C w.c 7R 0.12 50	184 0.07 5 3x10 A 8R 0.12 50 50	120 144 0.09 3 3x10 A 9R 0.12 50	140 170 0.08 4 3x10 A 10R 0.12 50	70 0.19 4x10 11R 0.12 50 50	70 0.19 4x10 Re Tr Dr Z Y X	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing FM P 1172 1172 1067	70 0.19 4x10 ress. R 0.05 0.05	70 0.19 4x10 ound 17.0 16.5	70 0.19 4x10 Rect. S 24x12 26x10 32x8	70 0.19 4x10 Size 22x12 24x10	70 0.19 4x10 SI TI A B C D E	70 0.19 4x10 upply Trur	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing CFM Pr 791 405	70 0.19 4x10 ress. R 0.06 0.06	70 0.19 4x10 Round 14.5 11.0	70 0.19 4x10 Rect. S 24x8 14x8	70 0.19 4x10 Size 18x10 10x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round	0.07 5 3x10 B 1R 223 0.12 25 110 135 0.09 8.0	0.06 5 3x10 B 2R 384 0.12 21 165 186 0.06 11.0	234 0.06 5 3x10 B Grill Press: 3R 160 0.12 34 150 184 0.06 8.0	201 0.06 4 3x10 C ure Loss 4R 105 0.12 35 105 140 0.08 6.0	182 0.07 5 3x10 C 5R 150 0.12 55 200 255 0.05 8.0	168 0.08 5 3x10 C 0.02 " 6R 150 0.12 41 140 181 0.06 8.0	187 0.07 6 4x10 C w.c 7R 0.12 50	184 0.07 5 3x10 A 8R 0.12 50 50	120 144 0.09 3 3x10 A 9R 0.12 50	140 170 0.08 4 3x10 A 10R 0.12 50	70 0.19 4x10 11R 0.12 50 50	70 0.19 4x10 Re Tr Dr Z Y X W	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing FM P 1172 1172 1067	70 0.19 4x10 ress. R 0.05 0.05	70 0.19 4x10 ound 17.0 16.5	70 0.19 4x10 Rect. S 24x12 26x10 32x8	70 0.19 4x10 Size 22x12 24x10	70 0.19 4x10 Si Ti A B C D E F	70 0.19 4x10 upply Trur	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing CFM Pr 791 405	70 0.19 4x10 ress. R 0.06 0.06	70 0.19 4x10 Round 14.5 11.0	70 0.19 4x10 Rect. S 24x8 14x8	70 0.19 4x10 Size 18x10 10x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round	0.07 5 3x10 B 1R 223 0.12 25 110 135 0.09 8.0 FLC	0.06 5 3x10 B 2R 384 0.12 21 165 186 0.06 11.0 8	234 0.06 5 3x10 B Grill Press: 3R 160 0.12 34 150 184 0.06 8.0 8	201 0.06 4 3x10 C ure Loss 4R 105 0.12 35 105 140 0.08 6.0 8	182 0.07 5 3x10 C 5R 150 0.12 55 200 255 0.05 8.0 8	168 0.08 5 3x10 C 0.02 " 6R 150 0.12 41 140 181 0.06 8.0 8	187 0.07 6 4x10 C 7R 0.12 50 50 0.24	184 0.07 5 3x10 A 8R 0.12 50 50 0.24	120 144 0.09 3 3x10 A 9R 0.12 50	140 170 0.08 4 3x10 A 10R 0.12 50 50 0.24	70 0.19 4x10 11R 0.12 50 50 0.24	70 0.19 4x10 Rr Tr Dr Z Y X W V	70 0.19 4x10 eturn Tru	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing FM P 1172 1172 1067	70 0.19 4x10 ress. R 0.05 0.05	70 0.19 4x10 ound 17.0 16.5	70 0.19 4x10 Rect. S 24x12 26x10 32x8	70 0.19 4x10 Size 22x12 24x10	70 0.19 4x10  Si Ti A B C D E F G	70 0.19 4x10 upply Trur	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing CFM Pr 791 405	70 0.19 4x10 ress. R 0.06 0.06	70 0.19 4x10 Round 14.5 11.0	70 0.19 4x10 Rect. S 24x8 14x8	70 0.19 4x10 Size 18x10 10x10	0.19
Duct Size Round Outlet Size Trunk  Return Branch And Grill Sizing R/A Inlet No. Inlet Air Volume CFM Duct Design Pressure Actual Duct Length Equivalent Length Total Effective Length Adjusted Pressure Duct Size Round Inlet Size " "	0.07 5 3x10 B 1R 223 0.12 25 110 135 0.09 8.0 FLC x	0.06 5 3x10 B 2R 384 0.12 21 165 186 0.06 11.0 8	234 0.06 5 3x10 B Grill Press: 3R 160 0.12 34 150 184 0.06 8.0 8	201 0.06 4 3x10 C ure Loss 4R 105 0.12 35 105 140 0.08 6.0 8 x	182 0.07 5 3x10 C 5R 150 0.12 55 200 255 0.05 8.0 8	168 0.08 5 3x10 C 0.02 " 6R 150 0.12 41 140 181 0.06 8.0 8	187 0.07 6 4x10 C 7R 0.12 50 50 0.24	184 0.07 5 3x10 A 8R 0.12 50 50 0.24	120 144 0.09 3 3x10 A 9R 0.12 50	140 170 0.08 4 3x10 A 10R 0.12 50 50 0.24	70 0.19 4x10 11R 0.12 50 50 0.24	70 0.19 4x10 Rt Tr Di Z Y X W V U T	70 0.19 4x10 eturn Tru unk	70 0.19 4x10 nk Duct S	70 0.19 4x10 zing FM P 1172 1172 1067	70 0.19 4x10 ress. R 0.05 0.05	70 0.19 4x10 ound 17.0 16.5	70 0.19 4x10 Rect. S 24x12 26x10 32x8	70 0.19 4x10 Size 22x12 24x10	70 0.19 4x10  Si Ti A B C D E F G	70 0.19 4x10 upply Trur unk	70 0.19 4x10 nk Duct S	70 0.19 4x10 Sizing CFM Pr 791 405	70 0.19 4x10 ress. R 0.06 0.06	70 0.19 4x10 Round 14.5 11.0	70 0.19 4x10 Rect. S 24x8 14x8	70 0.19 4x10 Size 18x10 10x10	0.19



Total Heat Loss

Total Heat Gain

57,319 btu/h

28,688 btu/h

#### Heatloss/Gain Calculations CSA-F280-12

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800

e-mail hvac@gtadesigns.ca

		Builder:	Bayv	view Well	ington			Date:			June 25,	2021					Weath	her Data	Bra	dford	44	-9.4	86 22	48.2					Page 4
2012 OBC		Project:		en Valley			M	lodel:			Baross S38-3 Lo				System '	I	Heat	t Loss ^T	81.4 deg. F		Ht gain ^T	11	deg. F	GTA:	2593			ect # out #	PJ-00041 JB-07273
	Level 1					BASE																							
	ft. exposed wall A				103 /			A			A		A		A		A		A		A		A			A		A	
Run ft	ft. exposed wall B				51 E			В			В		В		В		В		В		В		В			В		В	
	Ceiling height				7.0			7.0 A			7.0 AG		7.0 AG		7.0 AG	7.0	0 AG		7.0 AG		7.0 AG		7.0 AG			AG		7.0 AG	
Eve	Floor area				714			A	Area		Area A		Area A		Area A		Area A		Area A		Area A		Area A			Area A		Area A	
	cposed Ceilings A cposed Ceilings B					В		В			В		В		В		В		В		В		В			В		В	
	Exposed Floors					Flr		F			Flr		Flr		Fir		Flr		Fir		Fir		Flr			Flr		Fir	
	Gross Exp Wall A				721						• • • •		• • • • • • • • • • • • • • • • • • • •		•••				• • •		• • •		• • •			• • •		• • •	
	Gross Exp Wall B				510																								
	Components	R-Values I	Loss G	ain		Loss	Gain	L	oss (	Gain	Loss	Gain	Loss	Gain	Loss G	ain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain		Loss	Gain	Loss	Gain
	North Shaded	3.55	22.93	11.62																									
	East/West	3.55	22.93	29.56																									
	South	3.55	22.93	22.50	5	115																							
	WOB Windows	3.55	22.93	27.86	81	1857	2257																						
	Skylight	2.03	40.10	88.23																									
	Doors	4.00	20.35	2.75		427																							
	t exposed walls A t exposed walls B	21.12 17.03	3.85 4.78	0.52 0.65	695 429	2051	362 277																						
	cposed Ceilings A	59.22	1.37	0.65	429	2051	211																						
	cposed Ceilings A	27.65	2.94	1.37																									
	Exposed Floors	29.80	2.73	0.17																									
Foundation Conduc		20.00	20	0		7162																							
	Heat Loss					11612																							
Total Conductive	Heat Gain						3066																						
Air Leakage	Heat Loss/Gain		0.8469	0.0428		9834	131																						
	Case 1		0.05	0.06																									
Ventilation	Case 2		14.95	11.88																									
	Case 3	X	0.03	0.06		383	190																						
	Heat Gain People			239																									
	Appliances Loads	1 =.25 p	ercent	3842	0.5		480																						
	uct and Pipe loss			10%		04000																							
Level HL Total Level HG Total	21,829 5,028		tal HL for p			21829	5028																						
Level 110 Iolai	3,020	iotai	no per roo	III X 1.3	L		3020	<u> </u>				_						1	1 —	1	1 —	1	1 1			l	1 1		
	11 0																												
	Level 2					кіт			GRT		LAUI	ND	FOY		DIN														
	ft. exposed wall A				31 /	A		33 A	4		18 A	ND	26 A		44 A		A		A		A		A			A		A	
	ft. exposed wall A ft. exposed wall B				E	A		В	4		18 A B	ND	26 A B		44 A B	11.0	В		В		В		В			В		В	
	ft. exposed wall A ft. exposed wall B Ceiling height				11.0	A B		11.0	A 3		18 A B 13.0	ND	26 A B 12.0		44 A B 11.0	11.0	В 0		B 11.0		В 11.0		B 11.0		11.0	В		B 11.0	
Run ft	ft. exposed wall A ft. exposed wall B Ceiling height Floor area				11.0 226 A	A B Area		11.0 225 A	A B Area		18 A B 13.0 69 Area	ND	26 A B 12.0 79 Area		44 A B 11.0 424 Area	11.0	B 0 Area		B 11.0 Area		B 11.0 Area		B 11.0 Area	ı	11.0	B Area		B 11.0 Area	
Run ft Exp	ft. exposed wall A ft. exposed wall B Ceiling height Floor area cposed Ceilings A				11.0 226 A	A B Area A		11.0 225 A	A 3 Area A		18 A B 13.0 69 Area A	ND	26 A B 12.0 79 Area A		44 A B 11.0 424 Area A	11.0	B 0 Area A		B 11.0 Area A		B 11.0 Area A		B 11.0 Area A	ı	11.0	B Area A		B 11.0 Area A	
Run ft Exp Exp	ft. exposed wall A ft. exposed wall B Ceiling height Floor area cposed Ceilings A cposed Ceilings B				11.0 226 A	A B Area A B		11.0 225 A A B	A Area A B		18 A B 13.0 69 Area A B	ND	26 A B 12.0 79 Area A B		44 A B 11.0 424 Area A B	11.0	B 0 Area A B		B 11.0 Area A B		B 11.0 Area A B		B 11.0 Area A B	ı	11.0	B Area A B		B 11.0 Area A B	
Run ft Exp Exp	ft. exposed wall A ft. exposed wall B Ceiling height Floor area cposed Ceilings A cposed Ceilings B Exposed Floors				11.0 226 A	A B Area A		11.0 225 A	A Area A B		18 A B 13.0 69 Area A	ND	26 A B 12.0 79 Area A B Fir		44 A B 11.0 424 Area A	11.0	B 0 Area A		B 11.0 Area A		B 11.0 Area A		B 11.0 Area A	ı	11.0	B Area A		B 11.0 Area A	
Run ft Exp Exp G	ft. exposed wall A ft. exposed wall B Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B				11.0 226 A E	A B Area A B Fir		11.0 225 A A B	A Area A B		18 A B 13.0 69 Area A B Fir	ND	26 A B 12.0 79 Area A B		44 A B 11.0 424 Area A B Fir	11.0	B 0 Area A B		B 11.0 Area A B		B 11.0 Area A B		B 11.0 Area A B	ı	11.0	B Area A B		B 11.0 Area A B	
Run ft Exp Exp G	ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Teilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components			ain	11.0 226 / E F 341	A B Area A B Fir	Gain	11.0 225 A A B F 363	A Area A B Fir		18 A B 13.0 69 Area A B Fir 234	Gain	26 A B 12.0 79 Area A B Fir 312		44 A B 11.0 424 Area A B Fir		B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B		11.0	B Area A B Flr	Gain	B 11.0 Area A B	Gain
Run ft Exp Exp G	ft. exposed wall A ft. exposed wall B Ceiling height Floor area kposed Ceilings B Exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded	3.55	22.93	11.62	11.0 226 A E F 341	A B Area A B Fir		11.0 225 A A B F 363	A Area A B Fir	Gain	18 A B 13.0 69 Area A B Fir 234	Gain	26 A B 12.0 79 Area A B Fir 312 Loss	Gain	44 A B 11.0 424 Area A B FIr		B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G	ft. exposed wall A ft. exposed wall B Ceiling height Floor area cposed Ceilings A cposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West	3.55 3.55	22.93 22.93	11.62 29.56	11.0 226 A E F 341	A B Area A B Fir		11.0 225 A A B F 363	A Area A B Fir		18 A B 13.0 69 Area A B Fir 234	Gain	26 A B 12.0 79 Area A B Fir 312	Gain	44 A B 11.0 424 Area A B Fir 484	ain	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G	ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area qosed Ceilings A Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South	3.55 3.55 3.55	22.93 22.93 22.93	11.62 29.56 22.50	11.0 226 A E F 341	A B Area A B Fir		11.0 225 A A B F 363	A Area A B Fir	Gain	18 A B 13.0 69 Area A B Fir 234	Gain	26 A B 12.0 79 Area A B Fir 312 Loss	Gain	44 A B 11.0 424 Area A B FIr		B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G	ft. exposed wall B ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Floors Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows	3.55 3.55 3.55 1.99	22.93 22.93 22.93 40.90	11.62 29.56 22.50 23.66	11.0 226 A E F 341	A B Area A B Fir		11.0 225 A A B F 363	A Area A B Fir	Gain	18 A B 13.0 69 Area A B Fir 234	Gain	26 A B 12.0 79 Area A B Fir 312 Loss	Gain	44 A B 11.0 424 Area A B Fir 484	ain	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G	ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight	3.55 3.55 3.55 1.99 2.03	22.93 22.93 22.93 40.90 40.10	11.62 29.56 22.50 23.66 88.23	11.0 226 A A E F 341 L	A B Area A B Fir		11.0 225 A A B F 363	A Area A B Fir	Gain	18 A B 13.0 69 Area A B Fir 234 Loss 11 25	Gain 2 128	26 A B 12.0 79 Area A B Fir 312 Loss	Gain 916	44 A B 11.0 424 Area A B Fir 484	ain	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G G	ft. exposed wall A ft. exposed wall B ft. exposed wall B Ceiling height Floor area qosed Ceilings B Exposed Floors Gross Exp Wall A Components North Shaded East/West South Existing Windows Skylight Doors	3.55 3.55 3.55 1.99 2.03 4.00	22.93 22.93 22.93 40.90 40.10 20.35	11.62 29.56 22.50 23.66 88.23 2.75	11.0 226 / E F 341	A B Area A B B Fir Loss	2187	11.0 225 A B F 363 L	AArea AArea AA BEIT	Gain 1360	18 A B 13.0 69 Area A B Fir 234 Loss 11 25	Gain 2 128	26 A B 12.0 79 Area A B Fir 312 Loss 31 711	Gain 916	44 A B B11.0 424 Area A B Fir 484 Loss G	ain 675	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp Exp G G G Net	ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A	3.55 3.55 3.55 1.99 2.03 4.00 17.03	22.93 22.93 22.93 40.90 40.10 20.35 4.78	11.62 29.56 22.50 23.66 88.23 2.75 0.65	11.0 226 / E F 341	A B Area A B Fir	2187	11.0 225 A B F 363 L	A Area A B Fir	Gain 1360	18 A B 13.0 69 Area A B Fir 234 Loss 11 25	Gain 2 128	26 A B 12.0 79 Area A B Fir 312 Loss 31 711	Gain 916	44 A B 11.0 424 Area A B Fir 484	ain	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G G F Net	ft. exposed wall A ft. exposed wall B ft. exposed wall B Ceiling height Floor area exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls B	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29	11.0 226 / E F 341	A B Area A B B Fir Loss	2187	11.0 225 A B F 363 L	AArea AArea AA BEIT	Gain 1360	18 A B 13.0 69 Area A B Fir 234 Loss 11 25	Gain 2 128	26 A B 12.0 79 Area A B Fir 312 Loss 31 711	Gain 916	44 A B B11.0 424 Area A B Fir 484 Loss G	ain 675	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G G M Net Net Exp	ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area qosed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A t exposed walls B qosed Ceilings A	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64	11.0 226 / E F 341	A B Area A B B Fir Loss	2187	11.0 225 A B F 363 L	AArea AArea AA BEIT	Gain 1360	18 A B 13.0 69 Area A B Fir 234 Loss 11 25	Gain 2 128	26 A B 12.0 79 Area A B Fir 312 Loss 31 711	Gain 916	44 A B B11.0 424 Area A B Fir 484 Loss G	ain 675	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp Exp G G W Exp Exp Run ft	ft. exposed wall A ft. exposed wall B Ceiling height Floor area copies of Ceilings A copies of Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A t exposed walls A coposed Ceilings A coposed Ceilings B	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37	11.0 226 / E F 341	A B Area A B B Fir Loss	2187	11.0 225 A B F 363 L	AArea AArea AA BEIT	Gain 1360	18 A B 13.0 69 Area A B Fir 234 Loss 11 25	Gain 2 128	26 A B 12.0 79 Area A B Fir 312 Loss 31 711	Gain 916	44 A B B11.0 424 Area A B Fir 484 Loss G	ain 675	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G G M Exp	ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A exposed Ceilings B	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64	11.0 226 / E F 341	A B Area A B B Fir Loss	2187	11.0 225 A B F 363 L	AArea AArea AA BEIT	Gain 1360	18 A B 13.0 69 Area A B Fir 234 Loss 11 25	Gain 2 128	26 A B 12.0 79 Area A B Fir 312 Loss 31 711	Gain 916	44 A B B11.0 424 Area A B Fir 484 Loss G	ain 675	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G G Met Exp Exp Exp Exp Exp Exp Foundation Conduction	ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A exposed Ceilings B	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 0.17	11.0 226 / E F 341	A B Area A B B Fir Loss	2187	11.0 225 A B F 363 L	AArea AArea AA BEIT	Gain 1360	18 A B 13.0 69 Area A B Fir 234 Loss 11 25	Gain 2 128 7 58 6 130	26 A B 12.0 79 Area A B Fir 312 Loss 31 711	916 88 161	44 A B B11.0 424 Area A B Fir 484 Loss G	ain 675	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G G M Exp	ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Floors Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A t exposed walls A posed Ceilings A exposed Ceilings A exposed Floors	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 0.17	11.0 226 / E F 341	A B Area A B Fir Loss 1697	2187	11.0 225 A B F 363 L	A A A A A A A A A A A A A A A A A A A	Gain 1360	18 A B 13.0 69 Area A B Fir 234  Loss 11 25 21 42 202 96	Gain 2 128 7 58 6 130	26 A B 12.0 79 Area A B Fir 312 Loss 31 711 32 651 249 1190	916 88 161	44 A B B 11.0 424 Area A B FIr 484 Loss G 30 688	ain 675	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft Exp Exp G G Met Exp Exp Exp Exp Exp Exp Foundation Conduction	ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls B exposed Ceilings B Exposed Floors uctive Heatloss Heat Loss	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 0.17	11.0 226 / E F 341	A B Area A B Fir Loss 1697	172	11.0 225 A B F 363 L	A A A A A A A A A A A A A A A A A A A	1360 205	18 A B 13.0 69 Area A B Fir 234  Loss 11 25 21 42 202 96	Gain 2 128 77 58 6 130 5 316	26 A B 12.0 79 Area A B Fir 312 Loss 31 711 32 651 249 1190	Gain 916 88 161	44 A B B 11.0 424 Area A B FIr 484 Loss G 30 688	675 293	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp  G  G  G  Net  Net  Exp  Foundation Conduct  Total Conductive  Air Leakage	ft. exposed wall A ft. exposed wall B ft. exposed wall B Ceiling height Floor area exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls B exposed Ceilings A t exposed Ceilings B Exposed Floors ictive Heatloss Heat Loss Heat Gain	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94 2.73	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 0.17 x	11.0 226 / E F 341	A B B Area A B B Fir Loss 1697	2187 172 2360	11.0 225 A B F 363 L	A A A A A A A A A A A A A A A A A A A	Gain 1360 205	18 A B 13.0 69 Area A B Fir 234  Loss 11 25 21 42 202 96	Gain 2 128 77 58 6 130 5 316	26 A B 12.0 79 Area A B Fir 312 Loss 31 711 32 651 249 1190	Gain 916 88 161	44 A B B 11.0 424 Area A B Fir 484 Loss G 30 688 454 2170	675 293	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp  G  G  Net  Net  Exp  Exp  Net  Conductive  Foundation Conductive	ft. exposed wall A ft. exposed wall B ft. exposed wall B Ceiling height Floor area (posed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls B exposed Ceilings A t exposed Ceilings B Exposed Floors ictive Heatloss Heat Loss Heat Casi Heat Loss/Gain Case 1 Case 2	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94 2.73	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 0.17 x	11.0 226 / E F 341	A B B Area A B B Fir Loss 1697	2187 172 2360 101	11.0 225 A B F 363 L	A 3 Area A 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Gain 1360 205	18 A B 13.0 69 Area A B Fir 234  Loss 11 25 21 42 202 96	Gain 2 128 7 586 130 5 316 1 14	26 A B 12.0 79 Area A B Fir 312  Loss  31 711  32 651 249 1190  2552 1195	916 88 161 1165 50	44 A B B 11.0 424 Area A B Fir 484 Loss G 30 688 454 2170	968 41	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp Exp G G G  Net Net Exp Exp Foundation Conductive Air Leakage Ventilation	It. exposed wall A It. exposed wall B Ceiling height Floor area Gross Exp Wall B Cyposed Ceilings B Exposed Floors Gross Exp Wall B Components South Existing Windows Skylight Doors t exposed walls A t exposed walls A t exposed walls A t exposed floors cities and the service of the service Heat Gain Heat Loss Heat Gase 1 Case 1 Case 2 Case 3	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94 2.73	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 0.17 x	11.0 226 / E F 341	A B B Area A B B Fir Loss 1697	2187 172 2360	11.0 225 A B F 363 L	A A A A A A A A A A A A A A A A A A A	Gain 1360 205	18 A B 13.0 69 Area A B Fir 234  Loss 11 25 21 42 202 96	Gain 2 128 7 588 6 130 5 316 1 14	26 A B 12.0 79 Area A B Fir 312  Loss  31 711  32 651 249 1190  2552 1195	916 88 161 1165 50	44 A B B 11.0 424 Area A B Fir 484 Loss G 30 688 454 2170	675 293	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp  G  G  G  Net  Net  Exp  Foundation Conduct  Total Conductive  Air Leakage  Ventilation	ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls B exposed Ceilings A t exposed walls B exposed Ceilings A texposed Floors active Heatloss Heat Gain Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94 2.73 0.4684 0.03 14.95	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 0.17 x	11.0 / 226 / 267	A B B Area A B B Fir Loss 1697	2187 172 2360 101	11.0 225 A B F 363 L	A 3 Area A 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Gain  1360  205  1564 67	18 A B 13.0 69 Area A B Fir 234  Loss 11 25 21 42 202 96	Gain 2 128 7 586 130 5 316 1 14 4 20	26 A B 12.0 79 Area A B Fir 312 Loss  31 711 32 651 249 1190 2552 1195	916 88 161 1165 50	44 A B B 11.0 424 Area A B FIr 484 Loss G 30 688 454 2170 2858 1339 94	293 293 968 41	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp Exp G G G  Net Net Exp Exp  Foundation Conductive Air Leakage Ventilation  A A A A A A A A A A A A A A A A A A	ft. exposed wall A ft. exposed wall B Ceiling height Floor area exposed Ceilings A exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A t exposed walls A t exposed walls A exposed ceilings A exposed Ceilings A exposed Floors sictive Heatloss Heat Loss Heat Cain Heat Loss/Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94 2.73 0.4684 0.03 14.95	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 0.17 x 0.0428 0.06 11.88 0.06 239 3842	11.0 226 / E F 341	A B B Area A B B Fir Loss 1697	2187 172 2360 101	11.0 225 A B F 363 L	A 3 Area A 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Gain  1360  205  1564 67	18 A B 13.0 69 Area A B Fir 234  Loss 11 25 21 42 202 96	Gain 2 128 7 586 130 5 316 1 14	26 A B 12.0 79 Area A B Fir 312 Loss  31 711 32 651 249 1190 2552 1195	916 88 161 1165 50	44 A B B 11.0 424 Area A B Fir 484 Loss G 30 688 454 2170	968 41	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp  G  G  G  Net  Net  Exp  Foundation Conductive  Air Leakage  Ventilation  A  D  D	It. exposed wall A It. exposed wall A It. exposed wall B Ceiling height Floor area Grosse Ceilings A Grosse Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A exposed Ceilings A exposed Ceilings A exposed Walls A grosse Exp Wall B Components South Existing Windows Skylight Doors t exposed walls A exposed Ceilings A exposed Ceilings B Exposed Floors scrive Heatdoss Heat Loss Heat Gain Heat Loss/Gain Case 1 Case 2 Gase 3 Heat Gain People Case 3 Heat Gain People Appliances Loads suct and Pipe loss	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94 2.73 0.4684 0.03 14.95 0.03	11.62 29.56 22.50 23.66 88.23 2.75 0.64 1.37 0.17 x 0.0428 0.06 11.88 0.06 239 3842 10%	11.0 / 226 / 267	A B B Area A B B FIr Loss 1697 1276 2973 1392 98	2187 172 2360 101	11.0 225 A B F 363 L	A 3 Area A 3 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Gain  1360  205  1564 67	18 A B 13.0 69 Area A B Fir 234 Loss 11 25 21 42 202 96	Gain 2 128 7 58 6 130 5 316 1 14 4 20 480	26 A B 12.0 79 Area A B Fir 312  Loss  31 711  32 651 249 1190  2552 1195	916 88 161 1165 50	44 A B B 11.0 424 Area A B Fir 484 Loss G 454 2170 2858 1339 94	293 293 968 41	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp  G  G  G  Net  Net  Exp  Foundation Conduct  Total Conductive  Air Leakage  Ventilation  Level HL Total	ft. exposed wall A ft. exposed wall A ft. exposed wall B Ceiling height Floor area Gposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls B exposed Ceilings A t exposed walls B exposed Floors active Heatloss Heat Loss Heat Gain Heat Loss/Gai 1 Case 2 Case 3 Heat Gain People Appliances Loads uct and Pipe loss 18,914	3.55 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94 2.73 0.4684 0.03 14.95 0.03	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 x 0.0428 0.06 11.88 0.06 239 3842 10% er room	11.0 / 226 / 267	A B B Area A B B Fir Loss 1697	2187 172 2360 101 146 1441	11.0 225 A B F 363 L	A 3 Area A 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Gain  1360  205  1564 67  97	18 A B 13.0 69 Area A B Fir 234  Loss 11 25 21 42 202 96	Gain 2 128 7 586 130 5 316 1 14 4 20 480	26 A B 12.0 79 Area A B Fir 312  Loss  31 711  32 651 249 1190  2552 1195 84	916 88 161 1165 50	44 A B B 11.0 424 Area A B Fir 484 Loss G 30 688 1339 94 1.0 4291	968 41 60 960	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain
Run ft  Exp  G  G  G  Net  Net  Exp  Foundation Conductive  Air Leakage  Ventilation  A  D  D	It. exposed wall A It. exposed wall A It. exposed wall B Ceiling height Floor area Grosse Ceilings A Grosse Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A exposed Ceilings A exposed Ceilings A exposed Walls A grosse Exp Wall B Components South Existing Windows Skylight Doors t exposed walls A exposed Ceilings A exposed Ceilings B Exposed Floors scrive Heatdoss Heat Loss Heat Gain Heat Loss/Gain Case 1 Case 2 Gase 3 Heat Gain People Case 3 Heat Gain People Appliances Loads suct and Pipe loss	3.55 3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 27.65 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.94 2.73 0.4684 0.03 14.95 0.03	11.62 29.56 22.50 23.66 88.23 2.75 0.65 1.29 0.64 1.37 x 0.0428 0.06 11.88 0.06 239 3842 10% er room	11.0 / 226 / 267	A B B Area A B B FIr Loss 1697 1276 2973 1392 98	2187 172 2360 101	11.0 225 A B F 363 L	A 3 Area A 3 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Gain  1360  205  1564 67	18 A B 13.0 69 Area A B Fir 234 Loss 11 25 21 42 202 96	Gain 2 128 7 58 6 130 5 316 1 14 4 20 480	26 A B 12.0 79 Area A B Fir 312  Loss  31 711  32 651 249 1190  2552 1195 84	916 88 161 1165 50	44 A B B 11.0 424 Area A B Fir 484 Loss G 30 688 1339 94 1.0 4291	293 293 968 41	B 0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir	Gain	B 11.0 Area A B Fir		11.0	B Area A B Flr		B 11.0 Area A B Fir	Gain

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under

Division C subsection 3.2.5. of the Building Code. Individual BCIN:

Mana Alex

David DaCosta

SB-12 Package
Package A1



57,319

28,688

tu/h

htu/h

Total Heat Loss

**Total Heat Gain** 

#### Heatloss/Gain Calculations CSA-F280-12

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800

e-mail hvac@gtadesigns.ca

Builder: **Bayview Wellington** June 25, 2021 Weather Data Bradford 44 -9.4 86 22 48.2 Page 5 Barossa 3 Project # P.I-00041 System 1 2012 OBC Heat Loss ^T 81.4 deg. F Project: **Green Valley East** Model: S38-3 Lot 147 Ht gain ^T 11 deg. F GTA: 2593 Layout # JB-07273 Level 3 MAST BED 2 BATH BED 3 LOFT BED 4 ENS 2 ENS Run ft. exposed wall A 30 A 18 A 15 A 23 A 32 A 13 A 6 A 22 A Run ft. exposed wall B В В В R В В R В В В Ceiling height 10.0 8.0 8.0 8.0 8.0 8.0 8.0 295 Area 74 Area 268 Area 131 Area 69 Area 113 Area Floor area 166 Area 172 Area Area Area Area **Exposed Ceilings A** 295 A 166 A 74 A 172 A 268 A 131 A 69 A 113 A Α Α Exposed Ceilings B В В В Exposed Floors Flr 9 Flr 74 Flr 172 Flr 12 Flr Flr Flr Flr Flr Flr Flr Gross Exp Wall A 300 144 120 207 256 104 48 176 Gross Exp Wall B Components R-Values Loss Gain Gain Loss Loss Loss Loss Loss Gain Loss Loss Gain Loss Loss Loss Loss North Shaded 3.55 22.93 11.62 16 367 186 32 734 236 34 30 13 East/West 3.55 22.93 29.56 South 3.55 22.93 22.50 16 367 360 161 158 **Existing Windows** 1.99 40.90 23.66 Skylight 2.03 40.10 88.23 Doors 4.00 20.35 2.75 Net exposed walls A 17.03 4.78 0.65 268 1281 173 128 612 83 112 535 72 173 827 112 226 1080 146 88 421 57 41 196 26 163 779 105 Net exposed walls B 8.50 9.58 1.29 **Exposed Ceilings A** 59.22 1.37 0.64 295 405 189 166 228 107 74 102 47 172 236 110 268 368 172 131 180 69 95 44 113 155 Exposed Ceilings B 27.65 2.94 1.37 Exposed Floors 2.73 0.17 202 172 470 29 12 33 29.80 Foundation Conductive Heatloss 1231 Heat Loss 2420 1023 2313 2169 968 451 1233 **Total Conductive** Heat Gain 1308 377 369 1256 1207 501 228 562 Air Leakage Heat Loss/Gain 0.3331 0.0428 806 56 410 16 341 770 54 723 52 322 21 150 411 24 Case 1 0.02 0.06 Ventilation Case 2 14.95 11.88 Case 3 0.03 0.06 81 23 34 23 76 32 **Heat Gain People** 239 478 239 239 239 Appliances Loads 3842 136 308 149 **Duct and Pipe loss** 10% 37 3306 1684 Level HL Total 16,576 Total HL for per room 1682 1533 3468 2964 1322 617 Level HG Total 10,761 Total HG per room x 1.3 2500 852 577 2309 2357 1030 328 807 Level 4 Run ft. exposed wall A Run ft. exposed wall B Ceiling height Area Area Area Floor area Area Area Area **Area** Area Area Area Area **Exposed Ceilings A** Exposed Ceilings B В В В В В В В В В Exposed Floors Flr Gross Exp Wall A Gross Exp Wall B Components R-Values Loss Gain Loss Gain Gain Gain Gain Gain Gain Loss Gain Loss Loss Loss Loss Loss Loss Loss Loss North Shaded 3.55 22.93 11.62 East/West 3.55 22.93 29.56 South 3.55 22.93 22.50 **Existing Windows** 1.99 40.90 23.66 2.03 40.10 88.23 Skylight Doors 4 00 20 35 2 75 Net exposed walls A 17.03 4.78 0.65 Net exposed walls B 8.50 9.58 1.29 **Exposed Ceilings A** 59.22 1.37 0.64 Exposed Ceilings B 27.65 2.94 1.37 Exposed Floors 29.80 2.73 0.17 Foundation Conductive Heatloss Heat Loss **Total Conductive** Heat Gain Air Leakage 0.0000 0.0428 Heat Loss/Gain Case 1 0.00 0.06 Ventilation 14.95 11.88 Case 3 0.03 0.06 Heat Gain People 239 **Appliances Loads** 3842 10% **Duct and Pipe loss** Level HL Total Total HL for per room Total HG per room x 1.3 Level HG Total

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under

Division C subsection 3.2.5. of the Building Code. Individual BCIN:

Mane Alex

David DaCosta

SB-12 Package
Package A1



2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

Project # Layout # Page 6 PJ-00041 JB-07273

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under

Division C subsection 3.2.5. of the Building Code. Individual BCIN: 32964

System Design Option
Exhaust only / forced air system

HRV WITH DUCTING / forced air system

Part 6 design

HRV simplified connection to forced air system HRV full ducting/not coupled to forced air system

1 2

3 x

Mane Het c

David DaCosta

Package:	Package A1	,	220.01.444	
Project:	Bradford	Model:	S38-3 Lot 14	.7
	RESIDENTIAL MECHANICAL For systems serving one dwelling unit & co			
	Location of Installation	Total Vo	ntilation Canacity 0 22 2	2/4)
Lot #	Plan #	I Ulai Ve	ntilation Capacity 9.32.3.	3(1)
Township		Bsmt & Master Bdrm Other Bedrooms	2 @ 21.2 cfr 3 @ 10.6 cfr	
	Bradford	Bathrooms & Kitchen	5 @ 10.6 cfr	m 53 cfm
Roll #	Permit #	Other rooms	5 @ 10.6 cfr Total	m <u>53</u> cfm 180.2
Address				
		Principal \	Ventilation Capacity 9.32.	3.4(1)
	Builder			•
Name	Powiow Wollington	Master bedroom Other bedrooms	1 @ 31.8 cfr	
Address	Bayview Wellington	Other beardoins	3 @ 15.9 cfr Total	m 47.7 cfm 79.5
City				
T <sub>0</sub> 1	Fax	Princi Make	ipal Exhaust Fan Capacit	
Tel	rax		Model	Location
	Installing Contractor	VanEE	65H HRV	Base
Name	instailing Contractor	129 cfm		Sones or Equiv.
Address			eat Recovery Ventilator	
O:r.		Make	VanEE	
City		Model1	65H HRV 29 cfm high	80 cfm low
Tel	Fax	Sensible efficiency @ - Sensible efficiency @ (	25 deg C	60% 75%
		Note: Installer to bala	nce HRV/ERV to within 10	percent of PVC
	Combustion Appliances 9.32.3.1(1)	Supple	mental Ventilation Capac	ity
a) <u>x</u> b)	Direct vent (sealed combustion) only Positive venting induced draft (except fireplaces)	Total ventilation capaci	itv	180.2
c)	Natural draft, B-vent or induced draft fireplaces	Less principal exhaust	capacity	79.5
d)	Solid fuel (including fireplaces)	REQUIRED supplement	ntal vent. Capacity	100.7 cfm
e)	No combustion Appliances			
		Sup	plemental Fans 9.32.3.5.	
	Heating System	Location	cfm Model	Sones
Х	Forced air Non forced air	Ens	50 XB50	0.3
	Electric space heat (if over 10% of heat load)	Ens 2 Bath	50 XB50 50 XB50	0.3 0.3
			7,000	
	Electric space fleat (ii over 10% of fleat load)			
l x	House Type 9.32.3.1(2)  Type a) or b) appliances only, no solid fuel	all fans HVI listed	Make Broan	or Equiv.
Ш	House Type 9.32.3.1(2)  Type a) or b) appliances only, no solid fuel  Type I except with solid fuel (including fireplace)			
_	House Type 9.32.3.1(2)  Type a) or b) appliances only, no solid fuel		Make Broan  Designer Certification s ventilation system has been	or Equiv.

	Designer	Sertification	
I hereby certify t	hat this ventilatio	n system has been	designed
in accordance w	rith the Ontario B	uilding Code.	•
Name	David D	aCosta	
	Mane	16000	
Signature	- 0		
HRAI#	5190	BCIN #	32964
Date	June 25	5, 2021	
		<u> </u>	

# ♦GTA\DESIGNS

#### **Energy Efficiency Design Summary: Prescriptive Method**

(Building Code Part 9, Residential)

Page 7

Project # PJ-00041 Layout # JB-07273

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643 e-mail dave@gtadesigns.ca

This form is used by a designer to demonstrate that the energy efficiency design of a house complies with the building code using the prescriptive method described in Subsection 3.1.1. of SB-12. This form is applicable where the ratio of gross area of windows/sidelights/skylights/glazing in doors and sliding glass doors to the gross area of peripheral walls is not more than 22%.

			For us	e by Princip	oal Authori	ty				
Application No:					Model/Cer	tification Nu	mber			
A. Project Information										
Building number, street name			Baross	sa 3			Unit numb	er	Lot/Con	
			38-3 Lo							
Municipality Bradford			Postal co	de	Reg. Plan	number / oth	her descript	tion		
B. Prescriptive Compliance [indica	te the bu	ilding code	e complia	ance packa	ge being e	mployed in	the house	design]		
SB-12 Prescriptive (input design pa	ckage):			<u>Pack</u>	age A1			Table:	3.1.1.2.	<u>A</u>
C. Project Design Conditions										,
Climatic Zone (SB-1):		Heat. E	quip. E	fficiency			Spac	e Heating F	uel Sour	ce
Zone 1 (< 5000 degree days)		✓ ≥ 92	% AFUE		~	Gas		Propane		Solid Fuel
☐ Zone 2 (≥ 5000 degree days)		□ ≥8	4% < 92	% AFUE		Oil		Electric		Earth Energy
Ratio of Windows, Skylights & Glas	s (W, S	& G) to \	Nall Are	a			Other E	Building Cha	aracteris	tics
Area of Walls = $\frac{401.33}{100}$ m <sup>2</sup> or $\frac{4319.9}{100}$	ft²				☐ Log/F	ost&Beam		ICF Above (	Grade	☐ ICF Basement
71100 01 VVIIIS = <u>101.00</u> 111 01 <u>1010.0</u>		W,S &	G % =	<u>10.0%</u>		on-ground	4	Walkout Ba	sement	
					☑ Air C	onditioning		Combo Unit	:	
Area of W, S & G = <u>40.319</u> m <sup>2</sup> or <u>434.0</u>	ft²	Utilize V	Vindow	☐ Yes	☐ Air S	ourced Hea	t Pump (A	SHP)		
		Avera	aging	☑ No	☐ Grou	nd Source I	Heat Pump	(GSHP)		
D. Building Specifications [provide	values a	nd ratings	of the e	nergy effici	ency comp	onents prop	posed]			
Energy Efficiency Substitutions										
☐ ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))										
Combined space heating and domestic				.1.2(7) / 3.	1.1.3.(7))					
Airtightness substitution(s)		Table 3.1	.1.4.B	Required:				Permitted S		
Airtightness test required		Table 3.1	.1.4.C	Required:				Permitted S		
(Refer to Design Guide Attached)				Required:				Permitted S	Substitution	n:
Building Component		mum RS ⁄Iaximum				Buile	ding Con	nponent		Efficiency Ratings
Thermal Insulation	Non	ninal	Effe	ective	Windov	/s & Doo	<b>rs</b> Provide	e U-Value <sup>(1)</sup> o	r ER rating	)
Ceiling with Attic Space	6	0	59	9.22	Windows	Soliding G	lass Dooi	rs		1.6
Ceiling without Attic Space	3	31	27	7.65	Skylights					2.8
Exposed Floor	3	1	29	9.80	Mechar	icals				_
Walls Above Grade	22		17	7.03	Heating	Equip.(AFL	JE)			96%
Basement Walls		20.0ci	2′	1.12	HRV Effi	ciency (SR	RE% at 0°C	<b>C</b> )		75%
Slab (all >600mm below grade)	,	x		Х	DHW He	ater (EF)				0.80
Slab (edge only ≤600mm below grade)	1	0	1′	1.13	DWHR (	CSA B55.1	(min. 42%	efficiency))		#Showers 2
Slab (all ≤600mm below grade, or heated)	1	0	11	1.13	Combine	d Heating	System			
(1) U value to be provided in either W/(m²·K) or Bt										
E. Designer(s) [name(s) & BCIN(s), if	applicable	e, of perso	n(s) prov		mation her			t design meet	s building	code]
Name				BCIN		Signature		11	11	7 /
David DaCosta				329	964			Mane.	/\$C=	<del>~</del>



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Project # PJ-00041
Layout # JB-07273

Package:Package A1System:System 1Project:BradfordModel:\$38-3 Lot 147

#### Air Leakage Calculations **Building Air Leakage Heat Loss Building Air Leakage Heat Gain** HL^T В LRairh Vb HLleak В LRairh ٧b HG^T **HG Leak** 0.018 0.422 31807 81.4 19669 0.018 0.104 31807 Levels Air Leakage Heat Loss/Gain Multiplier Table (Section 11) 1 2 3 4 Level Building Level Conductive Air Leakage Heat Loss Level (LF) (LF) (LF) (LF) **Heat Loss** Multiplier Factor (LF) Level 1 0.5 11612 0.8469 1.0 0.6 0.5 0.4 Level 2 12598 0.4684 0.3 0.3 0.3 0.4 19669 0.3331 11808 Level 3 0.2 0.2 0.2 Level 4 0 0.0000 Air Leakage Heat Gain Levels this Dwelling **HG LEAK** 653 0.0428 3 **BUILDING CONDUCTIVE HEAT GAIN** 15248 Ventilation Calculations **Ventilation Heat Loss Ventilation Heat Gain** Vent Vent **Ventilation Heat Loss** Ventilation Heat Gain **PVC** (1-E) HRV HLbvent PVC HG^T **HGbvent** 1.08 81.4 0.17 1188 79.5 944 79.5 11 Case 1 Case 1 **Ventilation Heat Loss (Exhaust only Systems)** Ventilation Heat Gain (Exhaust Only Systems) Case 1 - Exhaust Only Case 1 - Exhaust Only Multiplier Case Case LVL Cond. HL HGbvent 944 Level LF HLbvent Multiplier 0.06 Level 1 0.5 11612 0.05 Building 15248 12598 Level 2 0.3 0.03 1188 11808 Level 3 0.2 0.02 Level 4 0 0 0.00 Case 2 Case 2 **Ventilation Heat Loss (Direct Ducted Systems)** Ventilation Heat Gain (Direct Ducted Systems) Case Multiplier Multiplier C HL^T (1-E) HRV С HG^T 14.95 11.88 1.08 81.4 0.17 1.08 11 Case 3 Case 3 Ventilation Heat Loss (Forced Air Systems) **Ventilation Heat Gain (Forced Air Systems)** Case Vent Heat Gain **HLbvent** Multiplier Multiplier HGbvent HG\*1.3 Total Ventilation Load 1188 0.03 944 0.06 944 Foundation Conductive Heatloss Level 1 Level 1 1857 Watts 6336 Btu/h **Foundation Conductive Heatloss Level 2** Level 2 Watts Btu/h Slab on Grade Foundation Conductive Heatloss Watts Btu/h Walk Out Basement Foundation Conductive Heatloss Watts 242 826 Btu/h

# **Envelope Air Leakage Calculator**

Supplemental tool for CAN/CSA-F280

Weather Station	Description
Province:	Ontario
Region:	Bradford
Weather Station Location:	Open flat terrain, grass
Anemometer height (m):	10
Local Shie	lding
Building Site:	Suburban, forest
Walls:	Heavy ▼
Flue:	Heavy ▼
Highest Ceiling Height (m):	9.45
Building Confi	guration
Type:	Detached
Number of Stories:	Two
Foundation:	Shallow
House Volume (m³):	900.77
Air Leakage/Ve	entilation
Air Tightness Type:	Present (1961-) (ACH=3.57)
Constant DDT Date:	ELA @ 10 Pa. 322.44 cm²
Custom BDT Data:	3.57 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply: Total Exhaust:
	39.75
Flue #:	#1 #2 #3 #4
Diameter (mm):	0 0 0 0
Heating Air Leakage Rate (ACH/H):	0.422
Cooling Air Leakage Rate (ACH/H):	0.104

## **Residential Foundation Thermal Load Calculator**

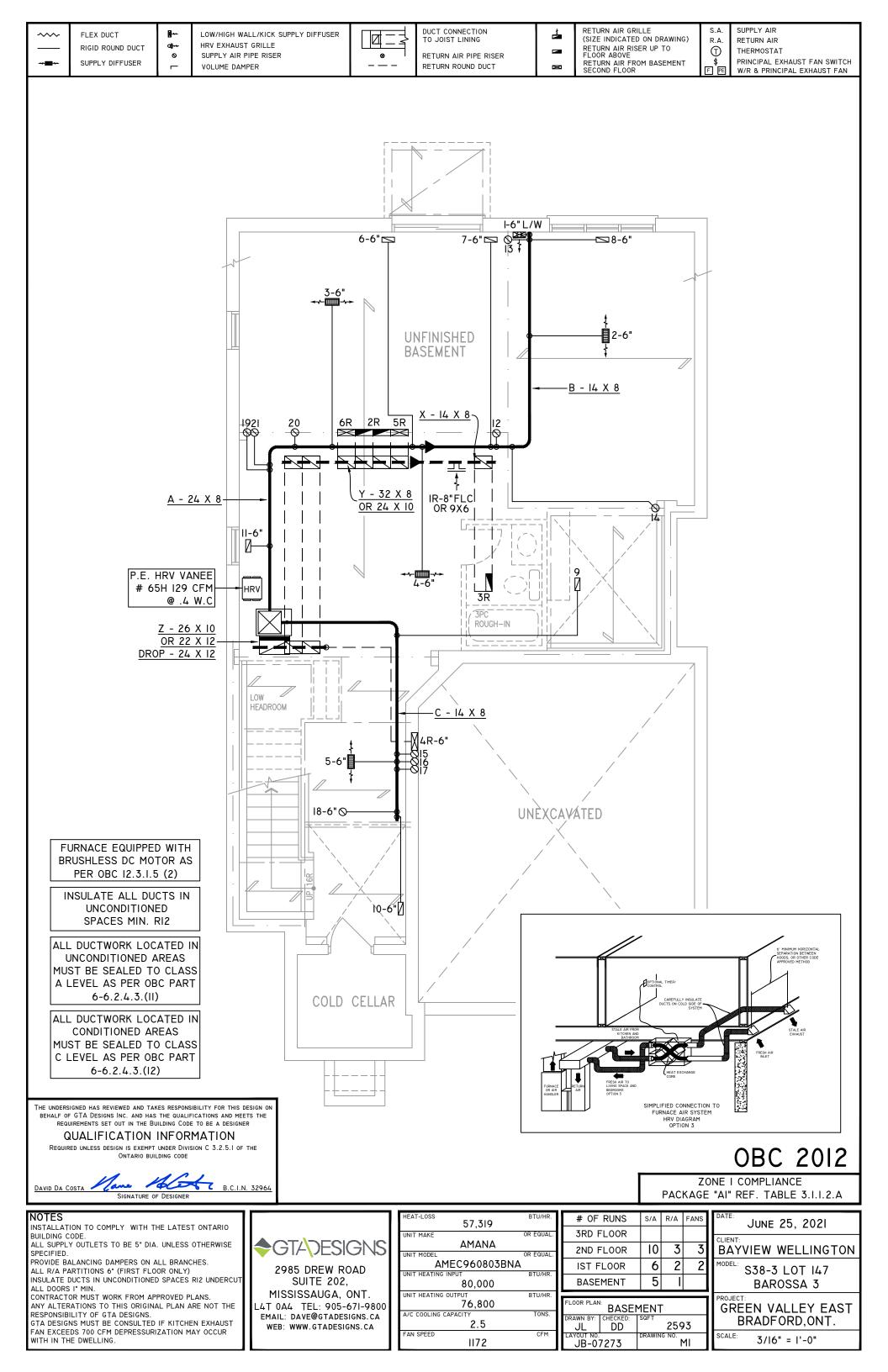
Supplemental tool for CAN/CSA-F280

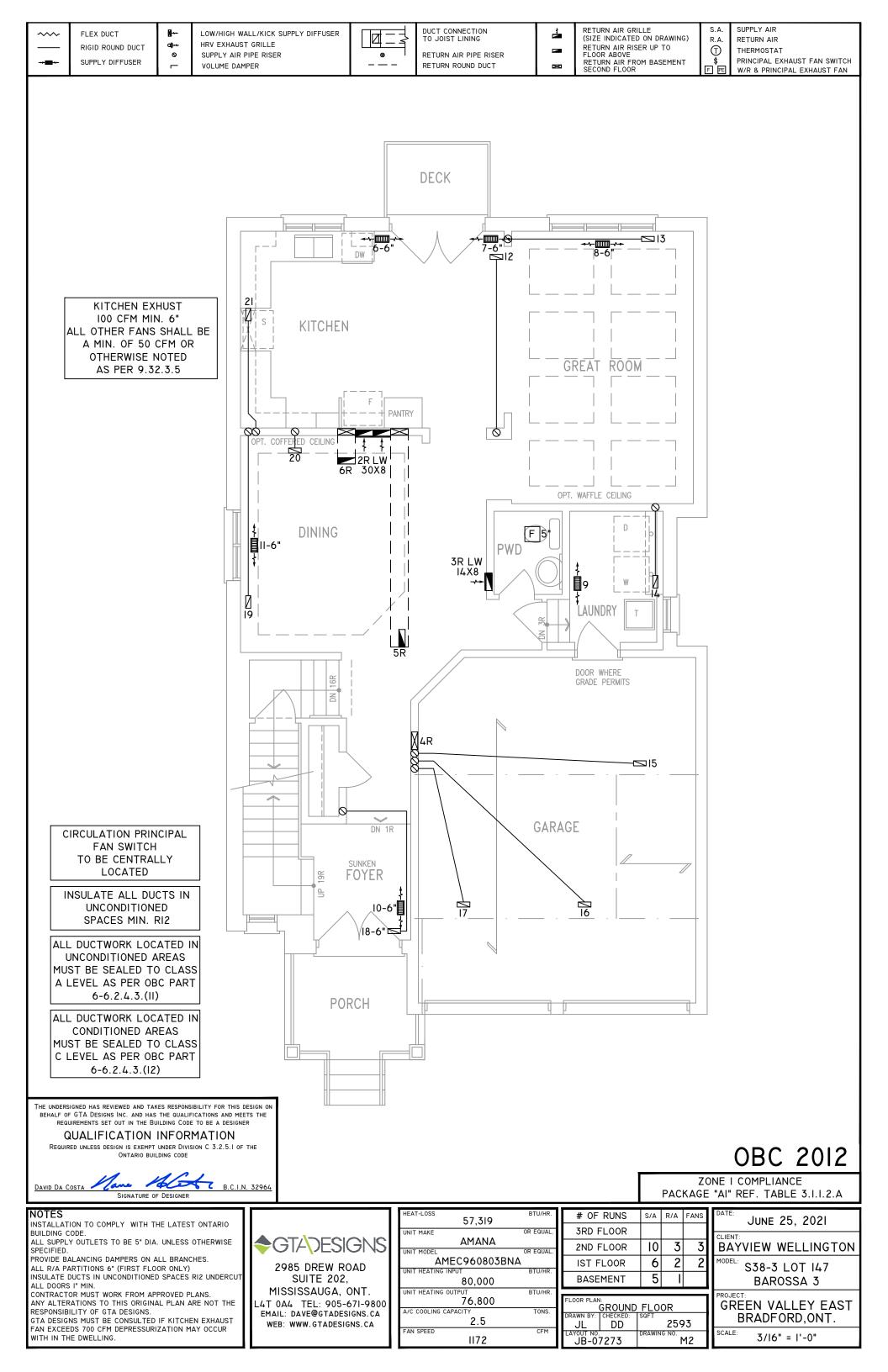
Weat	her Sta	tion Description
Province:		Ontario
Region:		Bradford ▼
	Site D	escription
Soil Conductivity:		High conductivity: moist soil ▼
Water Table:		Normal (7-10 m, 23-33 Ft) ▼
Fou	ındatio	n Dimensions
Floor Length (m):	16.17	
Floor Width (m):	4.10	
Exposed Perimeter (m):	31.39	
Wall Height (m):	3.05	
Depth Below Grade (m):	0.91	Insulation Configuration
Window Area (m²):	0.46	
Door Area (m²):	1.95	
	Radi	ant Slab
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
	Desig	n Months
Heating Month	1	
	Founda	ation Loads
Heating Load (Watts):		1857

## **Residential Slab on Grade Thermal Load Calculator**

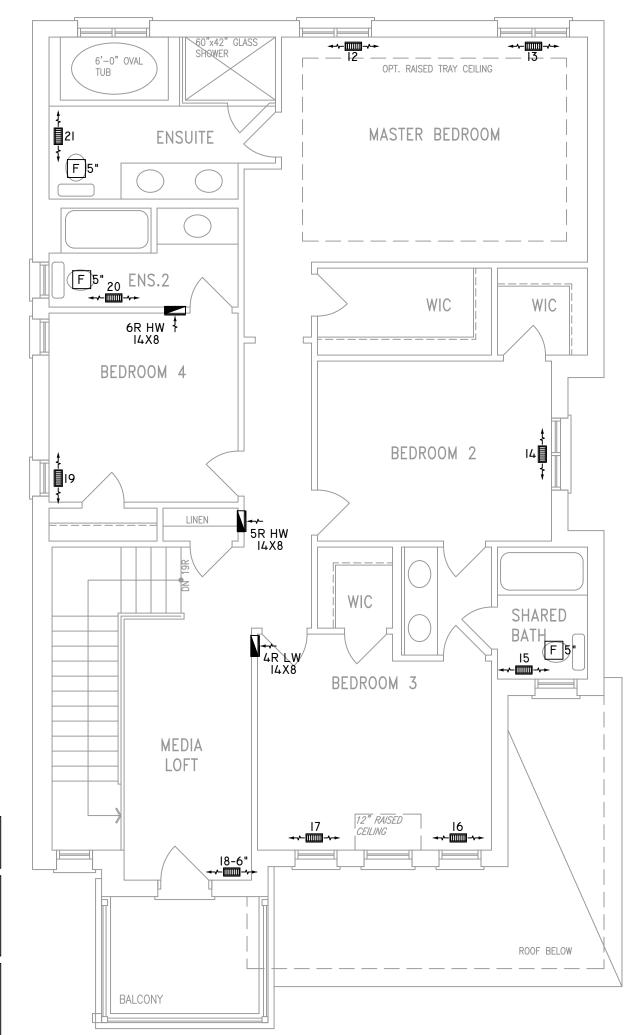
Supplemental tool for CAN/CSA-F280

Weat	her Sta	tion Description								
Province:		Ontario <b>V</b>								
Region:		Bradford ▼								
	Site Description									
Soil Conductivity:		High conductivity: moist soil ▼								
Water Table:		Normal (7-10 m, 23-33 Ft)								
Floor Dimensions										
Length (m):	9.21									
Width (m):	3.14									
Exposed Perimeter (m):	15.54	Insulation Configuration								
	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):		242								





RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) DUCT CONNECTION TO JOIST LINING SUPPLY AIR FLEX DUCT LOW/HIGH WALL/KICK SUPPLY DIFFUSER 占 R.A. RETURN AIR HRV EXHAUST GRILLE RETURN AIR RISER UP TO FLOOR ABOVE RETURN AIR FROM BASEMENT SECOND FLOOR **a**]⊶ ⊘ RIGID ROUND DUCT 1 THERMOSTAT RETURN AIR PIPE RISER SUPPLY AIR PIPE RISER 8 SUPPLY DIFFUSER PRINCIPAL EXHAUST FAN SWITCH VOLUME DAMPER RETURN ROUND DUCT



INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. RI2

ALL DUCTWORK LOCATED IN UNCONDITIONED AREAS MUST BE SEALED TO CLASS A LEVEL AS PER OBC PART 6-6.2.4.3.(11)

ALL DUCTWORK LOCATED IN CONDITIONED AREAS MUST BE SEALED TO CLASS C LEVEL AS PER OBC PART 6-6.2.4.3.(12)

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

### QUALIFICATION INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C 3.2.5.1 OF THE

ONTARIO BUILDING CODE

B.C.I.N. 32964

## OBC 2012

JUNE 25, 2021

3/16" = 1'-0"

ZONE I COMPLIANCE PACKAGE "AI" REF. TABLE 3.1.1.2.A

CLIENT

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE

PROVIDE BALANCING DAMPERS ON ALL BRANCHES. ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY) INSULATE DUCTS IN UNCONDITIONED SPACES RIZ UNDERCUT ALL DOORS I\* MIN.

CONTRACTOR MUST WORK FROM APPROVED PLANS.
ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE

RESPONSIBILITY OF GTA DESIGNS. GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING.



2985 DREW ROAD SUITE 202,

MISSISSAUGA, ONT. L4T 0A4 TEL: 905-671-9800 EMAIL: DAVE@GTADESIGNS.CA WEB: WWW.GTADESIGNS.CA

57,319  UNIT MAKE  AMANA  UNIT MODEL  AME C960803BNA  UNIT HEATING INPUT  80,000  UNIT HEATING OUTPUT  76,800  A/C COOLING CAPACITY  2.5  FAN SPEED  1172	HEAT-LOSS	BTU/HR.
AMANA  UNIT MODEL OR EQUAL.  AME C 9 60 80 3 BNA  UNIT HEATING INPUT BTU/HR.  80,000  UNIT HEATING OUTPUT BTU/HR.  76,800  A/C COOLING CAPACITY TONS.  2.5  FAN SPEED CFM	57,319	
UNIT MODEL OR EQUAL.  AME C 9 60 80 3 BNA  UNIT HEATING INPUT BTU/HR.  80,000  UNIT HEATING OUTPUT BTU/HR.  76,800  A/C COOLING CAPACITY TONS.  2.5  FAN SPEED CFM	UNIT MAKE	OR EQUAL.
AMEC960803BNA UNIT HEATING INPUT 80,000 UNIT HEATING OUTPUT 76,800  A/C COOLING CAPACITY 2.5  FAN SPEED  CFM	AMANA	
UNIT HEATING INPUT 80,000  UNIT HEATING OUTPUT BTU/HR. 76,800  A/C COOLING CAPACITY TONS. 2.5  FAN SPEED CFM	UNIT MODEL	OR EQUAL.
80,000  UNIT HEATING OUTPUT BTU/HR. 76,800  A/C COOLING CAPACITY TONS. 2.5  FAN SPEED CFM		-
UNIT HEATING OUTPUT BTU/HR.  76,800  A/C COOLING CAPACITY TONS.  2.5  FAN SPEED CFM	UNIT HEATING INPUT	BTU/HR.
76,800  A/C COOLING CAPACITY TONS.  2.5  FAN SPEED CFM	80,000	
A/C COOLING CAPACITY TONS.  2.5  FAN SPEED CFM	UNIT HEATING OUTPUT	BTU/HR.
2.5 FAN SPEED CFM	76,800	
FAN SPEED CFM	A/C COOLING CAPACITY	TONS.
	2.5	
1172		CFM
	1172	

# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	10	3	3
IST FLOOR	6	2	2
BASEMENT	5	I	
FLOOR PLAN: SECOND	FLO	OR	

DD

JB-07273

2593

M3

BAYVIEW WELLINGTON
MODEL: S38-3 LOT 147
BAROSSA 3
GREEN VALLEY EAST BRADFORD.ONT.