

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			Lot:	
	TH-6E		Lot/con.	
Municipality Bradford	Postal code	Plan number/ other description		
B. Individual who reviews and takes responsibility for	design activities	T		
Name David DaCosta		Firm	gtaDesigns Inc.	
Street address 2985 Drev	w Road, Suite 202		Unit no.	Lot/con.
Municipality	Postal code	Province	E-mail	
Mississauga	L4T 0A4	Ontario	dave@gtades	igns.ca
Telephone number (905) 671-9800	Fax number	7) 494-9643	Cell number (416) 268-6	820
C. Design activities undertaken by individual identified		,	` '	020
	AC – House ding Services		Building StructuralPlumbing – House	
J				
5 5	ection, Lighting and Po Protection	wer	Plumbing – All BuildingsOn-site Sewage System	
Description of designer's work	Model Certification	1	Project #:	PJ-00204
Description of designer's work	model oci miodiloi	•	Layout #:	JB-04869
Heating and Cooling Load Calculations	Main X	Builder	Bayview Wellingto	
	rnate	Project	Green Valley	
	Sq ft: 1902	Model		
Residential System Design per CAN/CSA-F280-12		CD 12	TH-6E	
Residential New Construction - Forced Air D. Declaration of Designer		SB-12	Package A1	
l David DaCosta	declare that (choose one as appro	opriate):	
(print name)				
I review and take responsibility				
3.2.4 Division C of the Buildir classes/categories.	ng Code. I am qualifie	d, and the firm is regist	ered, in the appropriate	
Individual	BCIN:		TOWN OF BRADFORD	
			BUILDING DEPARTMEI PLANS EXAMINED	NI
Firm BCIN	V:		ONTARIO BUILDING CO	
	lity for the design and	am qualified in the app	propriate category as an	
"other designer" under subse	ection 3.2.5 of Division	C, of the Building Cod	de. INSPECTOR: BG	
Individual	BCIN: 329	64		
Basis for e	exemption from registr	ation:	Division C 3.2.4.1. (4)	
☐ The design work is exempt fr	om the registration an	d qualification requirer	nents of the Building Code.	
Basis for e	exemption from registr	ation and qualification:		
I certify that:				
The information contained in this schedule is true to the be	st of my knowledge.			
I have submitted this application with the knowledge and co				
December 12, 2023		Mare 14	Colo	
Date		Signature of De	esigner	
Date		ga.a.c.o.n		

NOTE:

Page 1

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.

Schedule 1 does not require to be completed a holder of a license, temporary license, or a certificate of authorization, issed by the
Ontario Associstion 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.

REVIEWED



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

Page 2

Style B: 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 Obors Style B: Style A: As per Selected OBC SB12 Package A1 R 4.00 Windows Style A: As per Selected OBC SB12 Package A1 R 3.55 Style B: Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C: Style B: Existing Windows (When Applicable) R 1.99 Skylights	Heat loss and gain calcu	lation summary sheet CSA-F280-M12 Standard Form No. 1
Substitution Subs	These documents issued for the use of	ayview Wellington Layout No.
Address (Model : TH-6E Site: Green Valley Site: Site: Green Valley Site: Site: Green Valley Site: Site: Site: Green Valley Site: Sit	and may not be used by any other persons without authorization. Document	s for permit and/or construction are signed in red. JB-04869
Colty and Province Bradford Foundation Postal code: Post	Building	Location
Postal code: Post	Address (Model): TH-6E	Site: Green Valley
Calculations David	Model:	Lot:
Michael Mic	City and Province: Bradford	Postal code:
Act	Calculation	s based on
No. of Levels: 3 Ventilated? Included Air tightness: 1961-Present (ACH=3.57) Assumed? Yes	Dimensional information based on:	VA3 DESIGN22/May/2018
Wind exposure: Sheltered Wind exposure: Sheltered	Attachment: Townhome	Front facing: East/West Assumed? Yes
Remail R	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 -OC	HRV? LifeBreath RNC155	Internal shading: Light-translucent Occupants: 5
Cooling design conditions	Sensible Eff. at -25C 71% Apparent Effect. at -0C 84%	Units: Imperial Area Sq ft: 1902
According to both the contract of the contra	Sensible Eff. at -0C 75%	
Style A: As per OBC SB12 Package A1 R 22 Style A: As per OBC SB12 Package A1 R 20 20 20 20 20 20 20	Heating design conditions	Cooling design conditions
Style A: As per OBC SB12 Package A1 R 22 Style A: As per OBC SB12 Package A1 R 20ct	Outdoor temp -9.4 Indoor temp: 72 Mean soil tem; 48	Outdoor temp 86 Indoor temp: 75 Latitude: 44
Style B: Existing Walls (When Applicable) R 12 Style B: Style C: Style D: Style D: Style D: Style D: Style D: Style D: Style A: As per Selected OBC SB12 Package A1 Style A: As per Selected OBC SB12 Package A1 R 60 Style B: Style A: As per Selected OBC SB12 Package A1 R 31	Above grade walls	Below grade walls
Style C: Style C: Style D: Style D: Style D: Style D: Style D: Style D: Style A: As per Selected OBC SB12 Package A1 R 60 Style B: Style B: Style B: Style B: Style A: As per Selected OBC SB12 Package A1 R 31 Style A: As per Selected OBC SB12 Package A1 R 31 Style A: As per Selected OBC SB12 Package A1 R 31 Style B:	Style A: As per OBC SB12 Package A1 R 22	Style A: As per OBC SB12 Package A1 R 20ci
Style D: Style D: Style D: Style A: As per Selected OBC SB12 Package A1 R 60	Style B: Existing Walls (When Applicable) R 12	Style B:
Style A: As per Selected OBC SB12 Package A1 Style B: Style B: As per Selected OBC SB12 Package A1 R 60	Style C:	Style C:
Style A: As per Selected OBC SB12 Package A1 Style A: As per Selected OBC SB12 Package A1 R 31	Style D:	Style D:
Style B: Style B: Style B: Style C: 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 3.55 Style C: Style B: Style B: Style B: Style B: Style B: Style B: Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C: Style B: Style A: As per Selected OBC SB12 Package A1 R 2.03 Style B: Style C: Style B:	Floors on soil	Ceilings
Style A: As per Selected OBC SB12 Package A1 R 31 Doors	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 4.00 Windows Style B: Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C: Style B: Existing Windows (When Applicable) R 1.99 Skylights Style A: As per Selected OBC SB12 Package A1 R 2.03 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 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	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 4.00 Windows Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C: Style B: Existing Windows (When Applicable) R 1.99 Skylights Style C: Style B: Style A: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: As per Selected OBC SB12 Package A1 R 2.03 Style D: Style B: Style C: Style B: Style B: Style C: Style B: Style C: Style B: Style B	Exposed floors	Style C:
Windows Style B: Style A: As per Selected OBC SB12 Package A1 R 3.55 Style C: Style B: Style B: Style B: Style B: Style C: Style B: Style A: As per Selected OBC SB12 Package A1 R 2.03 Style B: Style	Style A: As per Selected OBC SB12 Package A1 R 31	Doors
As per Selected OBC SB12 Package A1 R 3.55 Style C: Style B: Existing Windows (When Applicable) R 1.99 Skylights Style C: Style A: As per Selected OBC SB12 Package A1 R 2.03 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 Calculations performed by Postal code: L4T 0A4 Company: gtaDesigns Inc. Telephone: (905) 671-9800 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	Style B:	Style A: As per Selected OBC SB12 Package A1 R 4.00
Style B: Existing Windows (When Applicable) R 1.99 Skylights Style C: Style A: As per Selected OBC SB12 Package A1 R 2.03 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 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	Windows	Style B:
Style C: Style A: As per Selected OBC SB12 Package A1 R 2.03 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 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	Style A: As per Selected OBC SB12 Package A1 R 3.55	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 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	Style B: Existing Windows (When Applicable) R 1.99	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 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	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 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	Style D:	Style B:
Calculations performed byName:David DaCostaPostal code:L4T 0A4Company:gtaDesigns Inc.Telephone:(905) 671-9800Address:2985 Drew Road, Suite 202Fax:(416) 268-6820	Attached documents: As per Shedule 1 Heat Loss/Ga	ain Caculations based on CSA-F280-12 Effective R-Values
Name: David DaCosta Postal code: L4T 0A4 Company: gtaDesigns Inc. Telephone: (905) 671-9800 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	Notes: Residential New C	Construction - Forced Air
Company: gtaDesigns Inc. Telephone: (905) 671-9800 Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	Calculations	performed by
Address: 2985 Drew Road, Suite 202 Fax: (416) 268-6820	Name: David DaCosta	Postal code: L4T 0A4
	Company: gtaDesigns Inc.	Telephone: (905) 671-9800
City: Mississauga E-mail dave@gtadesigns.ca L	Address: 2985 Drew Road, Suite 202	Fax: (416) 268-6820
	City: Mississauga	E-mail dave@gtadesigns.ca



Builder:

Bayview Wellington

Date:

Air System Design

SB-12 Package A1 December 12, 2023

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

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. Mane 14CIN Project #

Page 3 PJ-00204

System 1 JB-04869 Green Valley TH-6E Individual BCIN: 32964 David DaCosta Lavout # Project: Model: A/C UNIT DATA: DESIGN LOAD SPECIFICATIONS AIR DISTRIBUTION & PRESSURE FURNACE/AIR HANDLER DATA: BOILER/WATER HEATER DATA: Level 1 Net Load 11,063 btu/h **Equipment External Static Pressure** 0.5 "w.c. Make 2.0 Ton Amana Make Туре Amana Level 2 Net Load 11,755 btu/h **Additional Equipment Pressure Drop** 0.225 "w.c. Model AMEC960403ANA Model Cond.--2.0 Level 3 Net Load 10.469 btu/h Available Design Pressure 0.275 "w.c. Input Btu/h 40000 Input Btu/h Coil 2.0 Return Branch Longest Effective Length 300 ft 38400 Level 4 Net Load 0 btu/h Output Btu/h Output Btu/h 0.50 " W C Min.Output Btu/h ΔWH Total Heat Loss 33.288 btu/h R/A Plenum Pressure 0 138 "w c E.s.p. Blower DATA: **Total Heat Gain** 18,632 btu/h S/A Plenum Pressure 0.14 "w.c. Water Temp deg. F. W2 Combo System HL + 10% 36,617 Btuh. Heating Air Flow Proportioning Factor 0.0232 cfm/btuh AFUE Blower Speed Selected: ECM 96% **Blower Type** 21620 ft³ Cooling Air Flow Proportioning Facter (Brushless DC OBC 12.3.1.5.(2)) **Building Volume Vb** 0.0414 cfm/btuh Aux. Heat Ventilation Load 1.118 Btuh. R/A Temp SB-12 Package Package A1 Heating Check 772 cfm Cooling Check 772 cfm 70 dea. F. Ventilation PVC 79.5 cfm S/A Temp 116 deg. F. Supply Branch and Grill Sizing Diffuser loss Temp. Rise>>> 772 cfm Cooling Air Flow Rate 772 cfm 0.01 "w.c. 46 deg. F. Selected cfm> Level 1 Level 2 S/A Outlet No. 2 4 5 Room Use BASE BASE BASE KIT KIT FAM LAUN PWD FOY Btu/Outlet 3688 3688 3688 1902 1902 3589 1215 641 2506 Heating Airflow Rate CFM 86 86 86 44 44 83 28 15 58 Cooling Airflow Rate CFM 15 15 15 95 95 112 49 36 14 0.13 **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 **Actual Duct Length** 59 46 10 68 74 57 24 2 12 **Equivalent Length** 140 100 120 70 70 70 70 70 70 70 70 70 70 70 100 120 90 120 130 100 70 70 70 70 70 70 70 70 Total Effective Length 199 146 130 70 70 70 70 70 70 70 70 70 70 168 194 147 144 132 112 70 70 70 70 70 70 70 70 70 Adjusted Pressure 0.07 0.09 0.10 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.08 0.07 0.09 0.09 0.10 0.12 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 **Duct Size Round** 6 6 **Outlet Size** 4x10 4x10 4x10 4x10 4x10 4x10 4x10 3x10 3x10 3x10 4x10 Trunk В Level 3 Level 4 S/A Outlet No. 10 12 15 11 13 14 Room Use MAST FNS RFD 4 BFD 3 BFD 2 RATH Btu/Outlet 1984 1931 1238 2618 2554 144 **Heating Airflow Rate CFM** 46 45 29 61 59 3 89 49 42 Cooling Airflow Rate CFM 75 71 2 **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** 65 89 76 22 35 **Equivalent Length** 170 150 170 100 130 110 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 Total Effective Length 235 239 246 122 145 70 70 70 70 70 70 70 70 70 70 70 70 70 70 166 70 70 Adjusted Pressure 0.06 0.05 0.05 0.11 0.08 0.09 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 **Duct Size Round** 6 6 Outlet Size 4x10 4x10 3x10 3x10 3x10 4x10 Trunk R R Return Branch And Grill Sizing Grill Pressure Loss 0.02 "w.c **Return Trunk Duct Sizing** Supply Trunk Duct Sizing R/A Inlet No. 1R 2R 3R 4R 5R 6R 7R 8R 9R 10R 11R Trunk CFM Press. Round Rect. Size Trunk CFM Press. Round Rect. Size Inlet Air Volume CFM 130 327 105 105 105 **Duct Design Pressure** 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 Drop 772 0.05 14.5 24x10 772 0.05 14.5 24x8 18x10 Α 22 772 0.05 293 0.05 12 33 63 70 z 145 R 10.5 12x8 10v10 **Actual Duct Length** 24v8 18y10 **Equivalent Length** 115 140 130 195 160 50 50 50 50 50 50 Υ 537 0.05 13.0 18x8 14x10 c 50 50 50 **Total Effective Length** 127 162 163 258 230 50 50 50 Х 0.07 w Adjusted Pressure 0.09 0.07 0.05 0.05 0.24 0.24 0.24 0.24 0.24 0.24 Е Duct Size Round 6.0 10.0 6.0 6.0 6.0 ν F Inlet Size FLC G 8 U Inlet Size 30 14 s REVIEW R Q Trunk



Heatloss/Gain Calculations CSA-F280-12

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643

e-mail dave@gtadesigns.ca

	Builder:	Bayview Well	llington	_	Date:		December 1	2, 2023				Weath	er Data	Bradford	44	-9.4 86	22	48.2				Page 4
2012 OBC	Project:	Green Val	lley	М	odel:		TH-68	E			System 1	Heat	Loss ^T 81.4	deg. F	Ht gain ^T	11 de	g. F	GTA:	1902	Project # Layout #		-00204 -04869
			-	_	-															-		
Level 1			BASE	Ξ	_		_		_					_							_	
Run ft. exposed wall A Run ft. exposed wall E	A D		111 A B		A B		A B		A B		A B	A B		A B	A B		A B		A B		A B	
Ceiling heigh			3.5 AG		3.5 AG		3.5 AG		3.5 AG		3.5 AG	3.5 AG	3.5	i AG	3.5 AG		3.5 AG		3.5 AG	3.5	AG	
Floor area			767 Area		Area		Area		Area		Area	Area		Area	Area		Area		Area		Area	
Exposed Ceilings A			Α		Α		Α		Α		Α	Α		Α	Α		Α		Α		Α	
Exposed Ceilings E			В		В		В		В		В	В		В	В		В		В		В	
Exposed Floors Gross Exp Wall A			Fir 389		Flr		Flr		Flr		Fir	Flr		Flr	Flr		Flr		Flr		Flr	
Gross Exp Wall E			309																			
Component	R-Values Lo	ss Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss Ga	in Loss	Gain	Loss Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss G	Gain
North Shaded		22.93 10.91																				
East/Wes		22.93 27.35																				
South WOB Windows		22.93 20.89 25.84 28.32		125																		
Skyligh		40.10 88.23																				
Doors	4.00	20.35 2.75	21 427																			
Net exposed walls A		3.85 0.52		181																		
Net exposed walls E Exposed Ceilings A		5.62 0.76 1.37 0.64																				
Exposed Ceilings E		3.56 1.66																				
Exposed Floors	s 29.80	2.73 0.17																				
Foundation Conductive Heatloss		or Abo	4781																			
Total Conductive Heat Loss Heat Gain			5644	720																		
Air Leakage Heat Loss/Gair		0.9086 0.0392	5128																			
Case '		0.10 0.11																				
Ventilation Case 2		14.07 11.88																				
Case 3		0.05 0.11 239		79																		
Appliances Loads																						
Duct and Pipe loss	5	10%																				
Level 1 HL Total 11,063 Level 1 HG Total 1,075		I HL for per room		1075																		
20101111010101																						
	•	IG per room x 1.3		10/5																		
		io per room x 1.5		1075																		
Level 2		is per room x 1.3		1075	FΔI	M	LAU	N	PWD		FOY											
Level 2	2	is per room x 1.5	KIT 35 A	10/5	FAI 36 A	М	LAU 10 A	N	PWD 6 A		FOY 23 A	Α		Α	Α		Α		Α		Α	
Run ft. exposed wall A	<u>2</u> A 3	IO PEL TOOHI X 1.3	KIT 35 A B	10/5	36 A B	М	10 A B	IN .	6 A B		23 A B	В		В	В		В		В		В	
Run ft. exposed wall A Run ft. exposed wall E Ceiling heigh	2 A 3 t	is per room x r.s	KIT 35 A B 10.0	1075	36 A B 10.0	M	10 A B 11.0	N	6 A B 10.0		23 A B 11.0	B 10.0	10.0	В	B 10.0	1	B 0.0		B 10.0	10.0	В	
Run ft. exposed wall A Run ft. exposed wall E Ceiling heigh Floor area	A B t	is per room x 1.3	KIT 35 A B 10.0 235 Area	1075	36 A B 10.0 375 Area	М	10 A B 11.0 65 Area	N	6 A B 10.0 30 Area		23 A B 11.0 61 Area	B 10.0 Area	10.0	B) Area	B 10.0 Area	1	B 0.0 Area		B 10.0 Area	10.0	B Area	
Run ft. exposed wall A Run ft. exposed wall E Ceiling heigh	A B t	IS PER TOOM X 1.3	KIT 35 A B 10.0	1075	36 A B 10.0	м	10 A B 11.0	N	6 A B 10.0		23 A B 11.0	B 10.0	10.0	В	B 10.0	1	B 0.0		B 10.0	10.0	В	
Run ft. exposed wall I Run ft. exposed wall I Ceiling heigh Floor are: Exposed Ceilings I Exposed Ceilings I Exposed Floor:) A 3 4 4 4 4 5 5	IS PER TOOM X 1.3	35 A B 10.0 235 Area A B Fir	1075	36 A B 10.0 375 Area A B FIr	м	10 A B 11.0 65 Area A B FIr	N	6 A B 10.0 30 Area A B Fir		23 A B 11.0 61 Area A B FIr	B 10.0 Area A	10.0	B Area A	B 10.0 Area A	1	B 0.0 Area A		B 10.0 Area A	10.0	B Area A	
Run ft. exposed wall I Run ft. exposed wall I Ceiling heigh Floor are: Exposed Ceilings I Exposed Geilings E Exposed Floor: Gross Exp Wall I	A A A A A A A A A A A A A A A A A A A	IS PER TOURN X 1.5	KIT 35 A B 10.0 235 Area A B	1075	36 A B 10.0 375 Area A B	м	10 A B 11.0 65 Area A B	N.	6 A B 10.0 30 Area A B		23 A B 11.0 61 Area A B	B 10.0 Area A B	10.0	B Area A B	B 10.0 Area A B	1	B 0.0 Area A B		B 10.0 Area A B	10.0	B Area A B	
Run ft. exposed wall I Run ft. exposed wall I Ceiling heigh Floor are: Exposed Ceilings I Exposed Folings I Exposed Floor: Gross Exp Wall I Gross Exp Wall I	3 t t a a a a a a a a a a a a a a a a a		35 A B 10.0 235 Area A B Fir 350		36 A B 10.0 375 Area A B Fir 360		10 A B 11.0 65 Area A B FIr		6 A B 10.0 30 Area A B Fir		23 A B 11.0 61 Area A B Fir 253	B 10.0 Area A B Fir		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall I Run ft. exposed wall I Ceiling heigh Floor are: Exposed Ceilings I Exposed Ceilings I Exposed Floor: Gross Exp Wall I Gross Exp Wall I North Shadee	2	oss Gain 22.93 10.91	35 A B 10.0 235 Area A B Fir 350 Loss	Gain	36 A B 10.0 375 Area A B Fir 360	M Gain	10 A B 11.0 65 Area A B FIr	N Gain	6 A B 10.0 30 Area A B Fir	Gain	23 A B 11.0 61 Area A B Fir 253	B 10.0 Area A B Fir		B Area A B	B 10.0 Area A B Fir	1 Gain	B 0.0 Area A B	Gain	B 10.0 Area A B	10.0	B Area A B	Gain
Run ft. exposed wall I Run ft. exposed wall I Celling heigh Floor are: Exposed Ceilings I Exposed Ceilings I Exposed Floor: Gross Exp Wall I Gross Exp Wall I Component: North Shadec East/Wes	R-Values LC 3.55	22.93 Gain 22.93 10.91 22.93 27.35	35 A B 10.0 235 Area A B Fir 350 Loss	Gain	36 A B 10.0 375 Area A B FIr 360	Gain	10 A B 11.0 65 Area A B FIr		6 A B 10.0 30 Area A B Fir 60	Gain	23 A B 11.0 61 Area A B Fir 253	B 10.0 Area A B Fir		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Gain
Run ft. exposed wall I Run ft. exposed wall I Ceiling heigh Floor are Exposed Ceilings S Exposed Ceilings S Exposed Floor Gross Exp Wall I Gross Exp Wall I Component North Shaded East/Wes	8 R-Values Lc 13 3.55 14 3.55 15 3.55	ess Gain 22.93 10.91 22.93 27.35 22.93 20.89	35 A B 10.0 235 Area A B Fir 350 Loss	Gain	36 A B 10.0 375 Area A B Fir 360	Gain	10 A B 11.0 65 Area A B FIr		6 A B 10.0 30 Area A B Fir	Gain	23 A B 11.0 61 Area A B Fir 253	B 10.0 Area A B Fir		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall I Run ft. exposed wall I Ceiling heigh Floor are: Exposed Ceilings I Exposed Ceilings I Exposed Floor: Gross Exp Wall I Gross Exp Wall I Component North Shade East/Wes Soutt	8 R-Values Lc 1 3.55 1 3.55 1 1.99	oss Gain 22.93 10.91 22.93 27.35 22.93 20.89 22.15 20.89	35 A B 10.0 235 Area A B Fir 350 Loss 55 1261	Gain	36 A B 10.0 375 Area A B FIr 360	Gain	10 A B 11.0 65 Area A B FIr		6 A B 10.0 30 Area A B Fir 60	Gain	23 A B 11.0 61 Area A B Fir 253	B 10.0 Area A B Fir		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall I Run ft. exposed wall I Celling heigh Floor are Exposed Cellings I Exposed Cellings I Exposed Floor Gross Exp Wall I Gross Exp Wall I Component North Shaded East/Wes Soutl Existing Windows Skyligh Doors	R-Values Lc 3	ess Gain 22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 2.75 2.75 2.035 2.75	35 A B 10.0 235 Area A B Fir 350 Loss	Gain 1504	36 A B 10.0 375 Area A B Fir 360 Loss	Gain 919	10 A B 11.0 65 Area A B Fir 110 Loss	Gain 7 58	6 A B 10.0 30 Area A B Fir 60 Loss	Gain 188	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321	B 10.0 Area A B Fir in Loss 383		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Gain
Run ft. exposed wall / Run ft. exposed wall / Celling heigh Floor are: Exposed Ceilings / Exposed Ceilings / Exposed Floor: Gross Exp Wall / Gross Exp Wall / Gross Exp Wall / Existing Window: Existing Window: Skyligh Door	R-Values Lc 3	SSS Gain 22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65	35 A B 10.0 235 Area A B Fir 350 Loss 55 1261	Gain 1504	36 A B 10.0 375 Area A B FIr 360	Gain 919	10 A B 11.0 65 Area A B Fir 110 Loss	Gain 7 58	6 A B 10.0 30 Area A B Fir 60	Gain 188	23 A B B 11.0 61 Area A B Fir 253 Loss Ga	B 10.0 Area A B Fir in Loss		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall # Run ft. exposed wall # Ceiling heigh Floor are: Exposed Ceilings \$ Exposed Ceilings \$ Exposed Floor: Gross Exp Wall # Component: North Shade East/Wes Soutt Existing Windows Skyligh Door: Net exposed walls \$ Net exposed walls \$ Exposed wall \$	R-Values Lc 3 S R-Values Lc 3 3.55 4 3.55 5 1.99 4 4.00 17.03 3 8.55	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 82.32 20.35 2.75 4.78 0.65	35 A B 10.0 235 Area A B Fir 350 Loss 295 1410	Gain 1504	36 A B 10.0 375 Area A B Fir 360 Loss	Gain 919	10 A B 11.0 65 Area A B Fir 110 Loss	Gain 7 58	6 A B 10.0 30 Area A B Fir 60 Loss	Gain 188	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321	B 10.0 Area A B Fir in Loss 383		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall A Run ft. exposed wall A Run ft. exposed wall B Ceiling heigh Floor are Exposed Ceilings A Exposed Ceilings B Exposed Floor Gross Exp Wall I Gross Exp Wall I Component North Shaded East/Wes Souti Existing Windows Skyligh Door Net exposed walls A Net exposed Ceilings A	R-Values LC 3	22.93 10.91 22.93 27.35 22.93 20.93 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29	35 A B 10.0 235 Area A B Fir 350 Loss 55 1261	Gain 1504	36 A B 10.0 375 Area A B Fir 360 Loss	Gain 919	10 A B 11.0 65 Area A B Fir 110 Loss	Gain 7 58	6 A B 10.0 30 Area A B Fir 60 Loss	Gain 188	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321	B 10.0 Area A B Fir in Loss 383		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall # Run ft. exposed wall # Ceiling heigh Floor are; Exposed Ceilings \$ Exposed Floor; Gross Exp Wall # Component: North Shade East/Wes Souti Existing Window; Net exposed walls \$ Net exposed ceilings # Exposed Ceilings # Exposed Ceilings # Exposed Ceilings #	8 R-Values Lc 3 3 5 R-Values Lc 4 3 .55 5 3 .55 6 1 .99 8 4.00 A 17.03 8 8.50 A 59.22 A 59.22 8 29.80	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 82.32 20.35 2.75 4.78 0.65 1.29 1.37 0.64 3.56 1.66	35 A B 10.0 235 Area A B Filr 350 Loss 55 1261	Gain 1504	36 A B 10.0 375 Area A B Fir 360 Loss	Gain 919	10 A B 11.0 65 Area A B Fir 110 Loss	Gain 7 58	6 A B 10.0 30 Area A B Fir 60 Loss	Gain 188	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321	B 10.0 Area A B Fir in Loss 383		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall I Run ft. exposed wall I Ceiling heigh Floor are: Exposed Ceilings I Exposed Ceilings I Exposed Ceilings I Exposed Floor: Gross Exp Wall I Gross Exp Wall I Gross Exp Wall I Somponent North Shadee East/Wes Soutt Existing Window: Skyligh Door: Net exposed walls I Net exposed walls I Exposed Ceilings I Exposed Floor:	R-Values LC 3	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 82.32 20.35 2.75 4.78 0.65 1.29 1.37 0.64 3.56 1.66	35 A B 10.0 235 Area A B Filr 350 Loss 55 1261	Gain 1504	36 A B 10.0 375 Area A B Fir 360 Loss 44 100	Gain 919 910 204	10 A B 11.0 65 Area A B Fir 110 Loss	Gain 7 58 5 57	6 A B 10.0 30 Area A B Fir 60 Loss 9 206	Gain 188	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321 19 387 220 1052	B 10.0 Area A B Fir in Loss 383		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Gain
Run ft. exposed wall I Run ft. exposed wall I Celling heigh Floor are: Exposed Cellings I Exposed Cellings E Exposed Cellings E Exposed Floor: Gross Exp Wall I Gross Exp Wall I Component: North Shades East/Wes Soutt Existing Window: Skyligh Door: Net exposed walls I Exposed Cellings E Exposed Cellings E Exposed Cellings E Exposed Cellings E Exposed Floor: Foundation Conductive HeatLoss: Fotal Conductive	R-Values Lc 3 3.55 4 3.55 5 1.99 6 4.00 6 17.03 8 8.50 6 17.03 8 8.50 6 17.03 8 8.50 6 17.03 8 17.03 8 17.03 8 17.03 9 17.03 9 17.03 9 17.03 9 17.03	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 82.32 20.35 2.75 4.78 0.65 1.29 1.37 0.64 3.56 1.66	35 A B 10.0 235 Area A B Filr 350 Loss 55 1261	Gain 1504	36 A B 10.0 375 Area A B Fir 360 Loss	Gain 919 919 00 204	10 A B 11.0 65 Area A B Fir 110 Loss	Gain 7 58 5 57	6 A B 10.0 30 Area A B Fir 60 Loss	Gain 188	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321	B 10.0 Area A B Fir in Loss 52 142		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall A Run ft. exposed wall A Run ft. exposed wall E Ceiling heigh Floor area Exposed Ceilings S Exposed Floors Gross Exp Wall I Component North Shade East/Wes Souti Existing Windows Skyligh Doors Net exposed walls E Exposed Ceilings A Exposed Ceilings B Exposed Ceilings B Exposed Ceilings B Exposed Floors Foundation Conductive Heatloss Heat Loss Heat Loss	8 R-Values Lc 1 3.55 1 3.55 1 3.55 1 3.55 1 4.00 2 1.70 3 8 8.50 2 9.80 3 On Grade ()	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 82.32 20.35 2.75 4.78 0.65 1.29 1.37 0.64 3.56 1.66	35 A B 10.0 235 Area A B Fir 350 Loss 55 1261 295 1410	Gain 1504 191 1695	36 A B 10.0 375 Area A B Fir 360 Loss 44 100	Gain 09 919 10 204	10 A B 11.0 65 Area A B Fir 110 Loss	Gain 7 58 5 57 3 115	6 A B 10.0 30 Area A B Fir 60 Loss 9 206	Gain 188 33	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321 19 387 220 1052	B 10.0 Area A B Fir in Loss 383		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Gain
Run ft. exposed wall A Run ft. exposed wall A Run ft. exposed wall A Celling heigh Floor are: Exposed Ceilings E Exposed Ceilings E Exposed Floor: Gross Exp Wall A Gross Exp Wall A Gross Exp Wall B Component: North Shadee East/Wes Soutt Existing Window: Skyligh Door: Net exposed walls A Net exposed Walls A Exposed Ceilings E Exposed Ceilings E Exposed Ceilings E Exposed Ceilings G Exposed Floor: Foundation Conductive Heatloss Fotal Conductive Heat Loss Heat Gail Air Leakage Heat Loss/Gail Case	R-Values Lc 3	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 82.32 20.35 2.75 4.78 0.65 1.37 0.64 3.56 1.66 2.73 0.17 or Abo x	Signature Signature Signature Signature Si	Gain 1504 191 1695	36 A B 10.0 375 Area A B Fir 360 Loss 44 100 316 151	Gain 09 919 10 204	10 A B 11.0 65 Area A B Fir 110 Loss 21 42 89 42	Gain 7 58 5 57 3 115	6 A B 10.0 30 Area A B Fir 60 Loss 9 206	Gain 188 33	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321 19 387 220 1052	B 10.0 Area A B Fir in Loss 383 52 142		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Gain
Run ft. exposed wall A Run ft. exposed wall A Run ft. exposed wall E Celling heigh Floor are; Exposed Cellings E Exposed Floor; Gross Exp Wall I Component North Shade East/Wes Souti Existing Window: Skyligh Door: Net exposed walls E Exposed Cellings H Exposed Cellings E Exposed Cellings H Exposed Cellings E Exposed	8 R-Values Lc 1 3.55 1 3.55 1 3.55 1 3.55 2 0.33 3 8.50 3 8.50 3 9.90 3 8.50 3 9.90 3 0 0 Grade ()	22.93 10.91 22.93 27.35 20.89 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17 or Abo x	STA B 10.0 235 Area A B Fir 350 Loss 1261 295 1410 2671 996	Gain 1504 191 1695 66	36 A B 10.0 375 Area A B Fir 360 Loss 251 93	Gain 10 204 110 204 11123 1123	10 A B B 11.0 65 Area A B Fir 110 Loss 21 422 89 42	Gain 77 58 55 57 3 115 8 5	6 A B 10.0 30 Area A B Fir 60 Loss 9 206 51 244	33 221	23 A B B 11.0 61 Area A B Fir 253 Loss G2 14 321 19 387 220 1759 656	B 10.0 Area A B Fir in Loss 383 52 142 577 23		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall I Run ft. exposed wall I Celling heigh Floor are: Exposed Ceilings I Exposed Ceilings I Exposed Ceilings I Exposed Ceilings I Exposed Floor: Gross Exp Wall I Gross Exp Wall I Gross Exp Wall I Exposed Floor: North Shadet East/Wes Soutt Existing Window: Skyligh Door: Net exposed walls I Exposed Ceilings I Exposed Ceilings I Exposed Ceilings I Exposed Ceilings I Exposed Floor: Foundation Conductive Heat Loss Heat Gail Air Leakage Heat Loss/Gail Case: Case: Case:	R-Values LC 3	SS Gain 22.93 10.91 22.93 27.35 22.93 20.93 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17 or Abo x 0.3729 0.0392 0.04 0.11 14.07 11.88	SE TO	Gain 1504 191 1695 66	36 A B 10.0 375 Area A B Fir 360 Loss 44 100 316 151	Gain 10 204 110 204 11123 1123	10 A B 11.0 65 Area A B Fir 110 Loss 21 42 89 42	Gain 77 58 55 57 3 115 8 5	6 A B 10.0 30 Area A B Fir 60 Loss 9 206	33 221	23 A B B 11.0 61 Area A B Fir 253 Loss Ga 14 321 19 387 220 1052	B 10.0 Area A B Fir in Loss 383 52 142		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	3ain
Run ft. exposed wall # Run ft. exposed wall # Celling heigh Floor are:	R-Values Lc 3	Ses Gain 22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 4.78 0.65 4.78 0.65 4.73 0.64 3.56 1.66 2.73 0.17 or Abo X 0.3729 0.0392 0.04 0.11 14.07 11.88 0.05 0.11	STATE OF THE PROPERTY OF THE P	Gain 1504 191 1695 66 186	36 A B 10.0 375 Area A B Fir 360 Loss 251 93	Gain 99 919 10 204 19 1123 39 44 30 123	10 A B B 11.0 65 Area A B Fir 110 Loss 21 42 89 42	Gain 7 58 5 57 3 115 5 4 13	6 A B 10.0 30 Area A B Fir 60 Loss 9 206 51 244	33 221	23 A B B 11.0 61 Area A B Fir 253 Loss G2 14 321 19 387 220 1759 656	B 10.0 Area A B Fir in Loss 383 52 142 577 23		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall I Run ft. exposed wall I Run ft. exposed wall I Ceiling heigh Floor are: Exposed Ceilings I Exposed Ceilings I Exposed Ceilings I Exposed Floor: Gross Exp Wall I Gross Exp Wall I Gross Exp Wall I Service I Exposed Floor: North Shadet Existing Window: Skyligh Door: Net exposed walls I Exposed Ceilings I Exposed Floor: Foundation Conductive Heatloss Total Conductive Heat Loss Heat Gail Air Leakage Heat Loss/Gail Case: Ventilation Case: Case:	R-Values Lc 1 3.55 1 3.55 1 3.55 1 3.99 2 .03 3 4.00 A 17.03 3 8.50 A 59.22 3 22.86 D On Grade () 1 1	Ses Gain 22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 4.78 0.65 4.78 0.65 4.73 0.64 3.56 1.66 2.73 0.17 or Abo X 0.3729 0.0392 0.04 0.11 14.07 11.88 0.05 0.11	STA B 10.0 235 Area A B Fir 350 Loss 1261 295 1410 2671 996 138	Gain 1504 191 1695 66	36 A B 10.0 375 Area A B Fir 360 Loss 251 93	Gain 10 204 110 204 11123 1123	10 A B B 11.0 65 Area A B Fir 110 Loss 21 42 89 42	Gain 77 58 55 57 3 115 8 5	6 A B 10.0 30 Area A B Fir 60 Loss 9 206 51 244	33 221	23 A B B 11.0 61 Area A B Fir 253 Loss G: 14 321 19 387 220 1052	B 10.0 Area A B Fir in Loss 383 52 142 577 23		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall # Run ft. exposed wall # Celling heigh Floor are: Exposed Cellings Exposed Cellings Exposed Cellings Exposed Floor: Gross Exp Wall # Gross Exp Wall # Gross Exp Wall # Gross Exp Wall # Gross Exp Wall Existing Window: South Existing Window: Skyligh Door: Net exposed walls # Exposed Cellings Exposed Floor: Foundation Conductive Heatloss Heat Loss Heat Gail Air Leakage Heat Loss/Gail Heat Gail Case Case Case Case Heat Gain People Appliances Load Duct and Pipe loss Level 2 HL Total 11,755 Lord	R-Values Lc 3	22.93 10.91 22.93 27.35 22.93 20.89 40.90 22.15 40.10 82.15 478 0.65 4.78 0.65 1.60 2.73 0.17 or Abo x 0.3729 0.0392 0.04 0.11 14.07 11.88 0.05 0.11 14.07 11.88 0.05 0.11 14.07 1239 cent 3128	STATE OF THE PROPERTY OF THE P	Gain 1504 191 1695 66 186 1564	36 A B 10.0 375 Area A B Fir 360 Loss 251 93	Gain 99 919 10 204 19 1123 39 44 30 123 782	10 A B B 11.0 65 Area A B Fir 110 Loss 21 42 89 42	Gain 7 58 5 57 3 115 5 4 13 782	6 A B 10.0 30 Area A B Fir 60 Loss 9 206 51 244 450 168 23	Gain 188 33 221 9	23 A B B 11.0 61 Area A B Fir 253 Loss G2 14 321 19 387 220 1759 656	B 10.0 Area A B Fir in Loss 52 142 577 23 63		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain
Run ft. exposed wall A Run ft. exposed wall A Run ft. exposed wall E Celling heigh Floor are: Exposed Cellings E Exposed Cellings E Exposed Floor: Gross Exp Wall A Gross Exp Wall B Component: North Shadee East/Wes Soutt Existing Window: Skyligh Door: Net exposed walls S Net exposed walls S Exposed Cellings E Exposed Cellings E Exposed Cellings E Exposed Cellings E Exposed Floor: Foundation Conductive Heat Loss otal Conductive Heat Case Ventilation Case : Case Heat Gain People Appliances Loadd	R-Values Lc 3	ess Gain 22.93 10.91 22.93 27.35 22.93 28.94 40.90 22.15 40.10 88.23 20.35 2.75 4.78 0.65 9.58 1.29 1.37 0.64 3.56 1.66 2.73 0.17 or Abo x 0.3729 0.0392 0.04 0.11 14.07 11.88 1.05 2.39 2.01 1.05 2.39 2.01 1.05 2.39 2.01 1.05 2.39 2.01 1.05	STATE OF THE PROPERTY OF THE P	Gain 1504 191 1695 66 186 1564	36 A B 10.0 375 Area A B Fir 360 Loss 251 93 11.0	Gain 99 919 10 204 19 1123 19 44 30 123 782	10 A B 11.0 65 Area A B Fir 110 Loss 21 42 89 42 85 31	Gain 7 58 5 57 3 115 8 5 4 13 782	6 A B 10.0 30 Area A B Fir 60 Loss 9 206 51 244 450 168 23	33 221	23 A B B 11.0 61 Area A B Fir 253 Loss G: 14 321 19 387 220 1052	B 10.0 Area A B Fir in Loss 383 52 142 577 23		B Area A B Fir	B 10.0 Area A B Fir		B 0.0 Area A B Fir	Gain	B 10.0 Area A B Fir	10.0	B Area A B Fir	Sain

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under 32964

Total Heat Loss 33,288 btu/h Total Heat Gain 18,632 btu/h Division C subsection 3.2.5. of the Building Code. Individual BCIN:

Name Alexa

David DaCosta

SB-12 Package Package A1



Heatloss/Gain Calculations CSA-F280-12

2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643

e-mail dave@gtadesigns.ca

																			egiades	-									
		Builder:	Bayvi	iew Wellin	gton	_	Date:			December	12, 2023						Wea	ther Data		Bradford	44	-9.4	86 2	2 48.2	2		Proje		Page 5 PJ-00204
2012 OBC		Project:	G	reen Valley	y	_	Model:			TH-6	E			S	ystem	1	He	at Loss ^1	Γ 81.4 de	j. F	Ht gain ^T		11 deg. F	GT.	A: 190	12	Proje Layo		JB-04869
														•															_
Eun /	Level 3 ft. exposed wall A				MA 15 A	ST	22	ENS		BEI 13 A	0 4	27 A	ED 3	18	BED 2		BA'	TH	А		Α		А			Α		Α	
	ft. exposed wall B				В			В		В		27 А			В		В		В		B		В			В		B	
	Ceiling height				8.0		8.0			8.0		10.0		8.0			8.0		8.0		8.0		8.0		8.			8.0	
Ε.	Floor area xposed Ceilings A				311 Area 311 A		113 . 113 .			112 Area 112 A		122 Are	ea	212 212			60 Area 60 A		Are A	a	Are:	a	A	rea		Area A		Area A	9
	kposed Ceilings B			•	В			В		В		В			В		В		В		В		В			В		В	
	Exposed Floors				Flr			Flr		Flr		9 Flr		144	Flr		10 Flr		Flr		Flr		F	lr		Flr		Flr	
	Gross Exp Wall A Gross Exp Wall B			•	120		176			104		270		144															
	Components	R-Values Lo	ss Ga	ain	Loss	Gain		Loss	Gain	Loss	Gain	Los	ss Gain		Loss (Gain	Loss	Gain	Lo	s Gain	Los	s Gai	in L	oss Gai	in	Loss	Gain	Los	s Gain
	North Shaded	3.55	22.93	10.91																									
	East/West South	3.55 3.55	22.93 22.93	27.35 20.89	28 6	42 766	13 13	298 298	356 272	16 30	334		642 7	66 22	504	602													
F	Existing Windows	1.99	40.90	22.15			13	250	212	10 31	334																		
	Skylight	2.03	40.10	88.23																									
No	Doors	4.00 17.03	20.35 4.78	2.75 0.65	02 4	40 59	150	747	07	00 4) E	7 242	1157 1	56 122	502	70													
	t exposed walls A t exposed walls B	8.50	9.58	1.29	92 4	-0 59	150	717	97	88 42	21 57	242	1157 1	56 122	583	79													
Ex	xposed Ceilings A	59.22	1.37	0.64	311 4	27 200	113	155	73	112 1	64 72	122	168	78 212	291	136	60	82 39	9										
Ex	kposed Ceilings B	22.86	3.56	1.66									25	2 444	202	24	10	27											
Foundation Condu	Exposed Floors uctive Heatloss	29.80	2.73	0.17								9	25	2 144	393	24	10	27 2											
Total Conductive	Heat Loss				15			1468		94			1991		1772		1												
Air Leakage	Heat Gain		0.2633	0.0392	3	1025 97 40		387	797	24	463 18 18		524		467	841 33		29 2								4			
All Leakage	Heat Loss/Gain Case 1		0.2633	0.0392	3	97 40		387	31	2	18 18	,	524	39	467	33		29 .	2										
Ventilation	Case 2		14.07	11.88																									
	Case 3 Heat Gain People	x	0.05	0.11 239		78 112 478		76	87		19 51 239			10 39 1	91	92 239		6 4	1							4			
	Appliances Loads	1 =.25 per	cent	3128	2	4/8				1	238	, 1		39 1		239													
D	Ouct and Pipe loss			10%										1	224	108													
Level 3 HL Total Level 3 HG Total	10,469 7,917		al HL for pe IG per roor		19	2152		1931	1189	123	1002		2618 18		2554	1707	1-	44 60											
	.,		ранта		L	1							1						1	ı.	_1			I		L L	1	L	
																													
	Level 4																												
	ft. exposed wall A				Α			A		A		A			A		A		A B		A		A			A		A	
Kun f	ft. exposed wall B											В			В						В		В			В		В	
					В			В		В		_			_		В						_			_			
	Ceiling height Floor area				B Area			B Area		B Area		Are	ea		Area		В Area		Are	a	Area	a		rea		Area		Area	a
	Ceiling height Floor area xposed Ceilings A				Area A			Area A		Area A		Are A	ea		Area A		Area A		Are A	a	Are:	a	A A	rea		Area A		Α	a
Ex	Ceiling height Floor area xposed Ceilings A xposed Ceilings B				Area A B			Area A B		Area A B		Are A B			Area A B		Area A B		Are A B	a	Area A B	a	A A B	rea		Area A B		A B	a
Ex	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A				Area A			Area A		Area A		Are A			Area A		Area A		Are A	a	Are:	a	A A	rea		Area A		Α	a
Ex	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B		la.		Area A B Fir			Area A B Fir		Area A B Fir		Are A B Fir			Area A B Fir		Area A B Fir		Are A B Fir		Area A B Fir		A A B Fi	rea Ir		Area A B Fir		A B Fir	
Ex	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components				Area A B	Gain		Area A B Fir	Gain	Area A B	Gain	Are A B Fir			Area A B Fir	Gain	Area A B	Gain	Are A B		Area A B		A A B Fi	rea	<u>in</u>	Area A B Fir	Gain	A B	
Ex	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Gross Exp Wall B Components North Shaded East/West	3.55 3.55	22.93 22.93	10.91 27.35	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex	Ceiling height Floor area xposed Ceilings A xposed Ceilings B 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	10.91 27.35 20.89	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall A Components North Shaded East/West South Existing Windows	3.55 3.55 3.55 1.99	22.93 22.93 22.93 40.90	10.91 27.35 20.89 22.15	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex (Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall B Gross Exp Wall B 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	10.91 27.35 20.89 22.15 88.23 2.75	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex ()	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors 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	10.91 27.35 20.89 22.15 88.23 2.75 0.65	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex (((((((((((((((((((Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floor 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	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex () () () () () () () () () (Ceiling height Floor area xposed Ceilings A xposed 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 xposed Ceilings B	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex (((((((((((((((((((Ceiling height Floor area xposed Ceilings A xposed 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 xposed Ceilings A xposed Floors Exposed Floors	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	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex () () () () () () () (Ceiling height Fioor area xposed Ceilings A xposed Ceilings B Exposed Fioors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A t exposed walls A xposed Ceilings B xposed Ceilings A xposed Ceilings A	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex O Net Net Ex Foundation Condu Total Conductive	Ceiling height Fioor area xposed Ceilings A xposed Ceilings B Exposed Fioors Gross Exp Wall B Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors t exposed walls A xposed Ceilings B xposed Ceilings A xposed Ceilings A xposed Fioors uctive Heatloss Heat Loss Heat Gain	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66 0.17	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex () () () () () () () (Ceiling height Fioor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors It exposed walls A t exposed walls A to exposed Ceilings A xposed Ceilings B Exposed Floors Lexitive Heatloss Heat Loss Heat Gain Heat Loss/Gain	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66 0.17	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex O Net Net Ex Foundation Condu Total Conductive	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors at exposed walls A t exposed walls A t exposed Hoors cut exposed Floors Heat Loss Heat Case Heat Loss Case 1	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 2.73	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 0.17	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in .	Area A B Fir	Gain	A B Fir	
Ex O O Net Net Ex Ex Foundation Conductive Air Leakage Ventilation	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors It exposed walls A t exposed walls A t exposed floors xposed Ceilings A xposed Ceilings B Exposed Floors Letter Heat Gain Heat Loss Heat Gain Heat Case 1 Case 2 Case 2 Case 3	3.55 3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66 0.17 0.0392 0.11	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir		A A B Fi	rea Ir	in	Area A B Fir	Gain	A B Fir	
Ex O O O O O O O O O O O O O O O O O O O	Ceiling height Floor area xposed Ceilings A xposed 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 t exposed Heatloss Heat Loss Heat Gain Case 1 Case 2 Case 3 Heat Gain People	3.55 3.55 1.99 2.03 4.00 17.03 8.50 29.80 29.80	22.93 22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66 0.17 0.0392 0.11 11.88 0.11 239	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir		Area A B Fir Los	s Gai	A A B B FI	rea Ir	in	Area A B Fir	Gain	A B Fir	
Net Foundation Conductive Air Leakage Ventilation	Ceiling height Fioor area xposed Ceilings A xposed 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 xposed Ceilings B xposed Ceilings B xposed Ceilings A xposed Floors Letting Windows Heat Loss Heat Loss Heat Loss Heat Gain Loss Gase 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 22.86 29.80	22.93 22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66 0.17 0.0392 0.11 11.88 0.11 239 3128	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir Los	s Gai	A A B B FI	rea Ir	in	Area A B Fir	Gain	A B Fir	
Net Foundation Conductive Air Leakage Ventilation	Ceiling height Floor area xposed Ceilings A xposed 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 t exposed Heatloss Heat Loss Heat Gain Case 1 Case 2 Case 3 Heat Gain People	3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80 x	22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 0.0000 0.00 14.07 0.05	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66 0.17 0.0392 0.11 11.88 0.11 239 3128 1006	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	Sain	Area A B Fir	Gain	Are A B Fir		Area A B Fir	s Gai	A A B B FI	rea Ir	in .	Area A B Fir	Gain	A B Fir	
Ex OC	Ceiling height Floor area xposed Ceilings A xposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors It exposed walls A t exposed walls A to exposed walls A to exposed floors Lictive Heatloss Heat Loss Heat Gain Case 1 Case 2 Case 3 Heat Gain People Appliances Loads Buct and Pipe loss	3.55 3.55 1.99 2.03 4.00 17.03 8.50 59.22 22.86 29.80 x	22.93 22.93 22.93 22.93 22.93 40.90 40.10 20.35 4.78 9.58 1.37 3.56 2.73 0.0000 0.00 14.07 0.05	10.91 27.35 20.89 22.15 88.23 2.75 0.65 1.29 0.64 1.66 0.17 0.0392 0.11 11.88 0.11 239 3128 1006	Area A B Fir	Gain		Area A B Fir	Gain	Area A B Fir	Gain	Are A B Fir			Area A B Fir	33ain	Area A B Fir	Gain	Are A B Fir		Area A B Fir Los	s Gai	A A B B FI	rea Ir	in	Area A B Fir	Gain	A B Fir	

I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under 32964

33,288 Total Heat Loss btu/h Total Heat Gain 18,632 btu/h Division C subsection 3.2.5. of the Building Code. Individual BCIN:

Name Met

David DaCosta

SB-12 Package Package A1



Combustion Appliances 9.32.3.1(1) Direct vent (sealed combustion) only

Heating System

House Type 9.32.3.1(2) Type a) or b) appliances only, no solid fuel Type I except with solid fuel (including fireplace)

Type I or II either electric space heat

System Design Option Exhaust only / forced air system

HRV WITH DUCTING / forced air system

HRV simplified connection to forced air system

HRV full ducting/not coupled to forced air system

Electric space heat (if over 10% of heat load)

Solid fuel (including fireplaces)

No combustion Appliances

Any type c) appliance

Part 6 design

Type I, II or IV no forced air

Forced air Non forced air

Positive venting induced draft (except fireplaces)

Natural draft, B-vent or induced draft fireplaces

a) b)

c)

d)

e)

Ш

Ш

IV

Othe

2

3

4

Χ

PJ-00204

Page 6 2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 Fax: 647-494-9643 Project # e-mail dave@gtadesigns.ca JB-04869 Layout # 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 Dane State David DaCosta Package: Package A1 **Bradford** Model: Project: TH-6E RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY For systems serving one dwelling unit & conforming to the Ontario Building Code, O.reg 332/12 **Total Ventilation Capacity 9.32.3.3(1)** Location of Installation Lot # Plan # Bsmt & Master Bdrm 42.4 cfm 2 @ 21.2 cfm Township Other Bedrooms 31.8 cfm 3 @ 10.6 cfm Bradford Bathrooms & Kitchen @ 10.6 cfm 42.4 cfm 4 Roll # Permit # Other rooms 10.6 cfm 31.8 cfm Total 148.4 Address Principal Ventilation Capacity 9.32.3.4(1) Builder Master bedroom @ 31.8 cfm Name 31.8 cfm 1 **Bayview Wellington** Other bedrooms @ 15.9 cfm 47.7 cfm 79.5 Address Total City **Principal Exhaust Fan Capacity** Tel Fax Make Location Model LifeBreath **RNC155** Base **Installing Contractor** Name 132 cfm Sones or Equiv. Address City Tel Fax

	Heat Recovery Ventilator						
Make	LifeBreath						
Model	RNC155						
	132 cfm high	80 cfm low					
Sensible effic	Sensible efficiency @ -25 deg C 71%						
Sensible effic	ciency @ 0 deg C	<u>75%</u>					

Note: Installer to balance HRV/ERV to within 10 percent of PVC **Supplemental Ventilation Capacity**

Total ventilation capacity 148.4 Less principal exhaust capacity 79.5 REQUIRED supplemental vent. Capacity 68.9 cfm

Supplemental Fans 9.32.3.5.											
Location	cfm	Model	Sones								
Ens	50	XB50	0.3								
Bath	50	XB50	0.3								
all fans HVI listed	Make	Broan	or Equiv.								
ali iaris i i vi iisteu	Make	Divaii	or Equiv.								

Designer Certification I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.										
David Da	Costa									
Mane	16626									
5190	BCIN#	32964	_							
December	12, 2023	M/F								
	hat this ventilation with the Ontario Bu David Da	hat this ventilation system has been with the Ontario Building Code. David DaCosta	hat this ventilation system has been designed with the Ontario Building Code. David DaCosta Mana Macaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa							



Energy Efficiency Design Summary: Prescriptive Method

(Building Code Part 9, Residential)

Page 7

Project # PJ-00204 Layout # JB-04869

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 use by Princi	pal Authority						
Application No:				Model/Certification Number						
A. Project Information										
Building number, street name					Unit number	Lot/Con				
			TH-6E							
Municipality Bradford			Postal code	Reg. Plan number / o	ther description					
B. Prescriptive Compliance [indica	ate the bu	ilding cod	e compliance packa	age being employed in	n the house design]					
SB-12 Prescriptive (input design pa	ckage):		Pack	rage A1	Table:	3.1.1.2.	<u>A</u>			
C. Project Design Conditions										
Climatic Zone (SB-1):		Heat. E	quip. Efficiency		Space Heating F	uel Sourc	e			
Zone 1 (< 5000 degree days)			2% AFUE	✓ Gas	☐ Propane		Solid Fuel			
Zone 2 (≥ 5000 degree days)		_ ≥ 8	34% < 92% AFUE	☐ Oil	☐ Electric		Earth Energy			
Ratio of Windows, Skylights & Glas	s (W. S				Other Building Ch	aracterist	• • • • • • • • • • • • • • • • • • • •			
	-			☐ Log/Post&Beam			☐ ICF Basement			
Area of Walls = $\frac{290.87}{100}$ m ² or $\frac{3130.9}{100}$	ft²	W,S &	G % = 8%	☐ Slab-on-ground		sement	_			
		,	<u>—</u>	☑ Air Conditioning	Combo Unit	t				
Area of W, S & G = <u>24.247</u> m ² or <u>261.0</u>	ft²	Utilize \	Vindow ☐ Yes		at Pump (ASHP)					
		Avera			Heat Pump (GSHP)					
D. Building Specifications [provide	values a	nd ratings		iency components pro	pposedl					
Energy Efficiency Substitutions			or and onergy care							
ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))										
Combined space heating and domestic	water he	eating syst	ems (3.1.1.2(7) / 3.	1.1.3.(7))						
☐ Airtightness substitution(s)		Table 3.1	I.1.4.B Required:	d: Permitted Substitution:						
Airtightness test required			Required:	d: Permitted Substitution:						
(Refer to Design Guide Attached)		Table 3.1	1.1.4.C Required:	:	Permitted S	Substitution	:			
5 " " 6	Mini	mum RS	SI/R-Values or	r						
Building Component	N	/laximun	n U-Value¹	Bui	Iding Component		Efficiency Ratings			
Thermal Insulation	Non	ninal	Effective	Windows & Doo	ors Provide U-Value ⁽¹⁾ o	r ER rating				
Ceiling with Attic Space	6	0		Windows/Sliding (Glass Doors		1.6			
Ceiling without Attic Space	3	1		Skylights			2.8			
Exposed Floor	3	51		Mechanicals						
Walls Above Grade	22			Heating Equip.(AF	UE)		96%			
Basement Walls		20.0ci		HRV Efficiency (S	RE% at 0°C)		75%			
Slab (all >600mm below grade)	2	x		DHW Heater (EF)			0.80			
Slab (edge only ≤600mm below grade)	1	0		DWHR (CSA B55.	1 (min. 42% efficiency))		#Showers 2			
Slab (all ≤600mm below grade, or heated)	1	0		Combined Heating	g System					
(1) U value to be provided in either W/(m²·K) or Bt	u/(h·ft·F) b	out not bot	h.	•						
E. Designer(s) [name(s) & BCIN(s), if	applicable	e, of perso	on(s) providing infor	mation herein to subs	stantiate that design mee	ts building	code]			
Name		_	BCIN	Signature						
David DaCosta			329	964	Mane	14C=				
Form authorized by OHBA. OBOA. LMCBO. Revised December 1, 20	16		•							





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

Page PJ-00204

Project # Layout # JB-04869

Package: Package A1 System 1 System: Project: **Bradford** Model: TH-6E Air Leakage Calculations **Building Air Leakage Heat Loss Building Air Leakage Heat Gain** В LRairh ۷b **HLleak** В LRairh Vb HG^T HG Leak 0.018 0.324 21620 81.4 10257 0.018 0.079 21620 11 338 Levels Air Leakage Heat Loss/Gain Multiplier Table (Section 11) 1 2 3 4 Level Building Level Conductive Air Leakage Heat Loss (LF) (LF) (LF) (LF) Level Factor (LF) Air **Heat Loss** Multiplier 0.9086 1.0 0.5 Level 1 0.5 5644 0.6 0.4 0.3729 8253 0.3 Level 2 0.3 0.4 0.3 10257 Level 3 7792 0.2633 0.2 0 0.0000 Level 4 0 0.1 Air Leakage Heat Gain Levels this Dwelling **HG LEAK** 338 0.0392 3 **BUILDING CONDUCTIVE HEAT GAIN** 8619 **Ventilation Calculations Ventilation Heat Loss Ventilation Heat Gain /ent Vent** Ventilation Heat Loss **Ventilation Heat Gain** PVC (1-E) HRV **HLbvent** PVC HG^T **HGbvent** 1118 944 1.08 79.5 81.4 0.16 1.1 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 Level LF HLbvent LVL Cond. HL Multiplier **HGbvent** 944 0.11 Building 8619 5644 Level 1 0.5 0.10 Level 2 0.3 8253 0.04 1118 7792 Level 3 0.2 0.03 Level 4 0 0 0.00 Case 2 Case 2 **Ventilation Heat Loss (Direct Ducted Systems) Ventilation Heat Gain (Direct Ducted Systems)** Case Case Multiplier Multiplier HL^T (1-E) HRV HG^T С 14.07 11.88 1.08 1.08 81.4 Case 3 Case 3 Ventilation Heat Loss (Forced Air Systems) Ventilation Heat Gain (Forced Air Systems) ase **HLbvent** Multiplier Vent Heat Gain Multiplier **HGbvent** HG*1.3 **Total Ventilation Load** 1118 0.05 944 0.11 944 Foundation Conductive Heatloss Level 1 1401 Watts 4781 Btu/h

Btu/h

Foundation Conductive Heatloss Level 2

Envelope Air Leakage Calculator

Supplemental tool for CAN/CSA-F280

Weather Station	Description
Province:	Ontario T
Region:	Bradford ▼
Weather Station Location:	Open flat terrain, grass
Anemometer height (m):	10
Local Shiel	ding
Building Site:	Suburban, forest ▼
Walls:	Heavy ▼
Flue:	Heavy ▼
Highest Ceiling Height (m):	6.55
Building Confi	guration
Type:	Semi-Detached
Number of Stories:	Two
Foundation:	Shallow
House Volume (m³):	612.26
Air Leakage/Ve	entilation
Air Tightness Type:	Present (1961-) (ACH=3.57)
Custom DDT Data	ELA @ 10 Pa. 322,44 cm ²
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):	0.324
Cooling Air Leakage Rate (ACH/H):	0.079

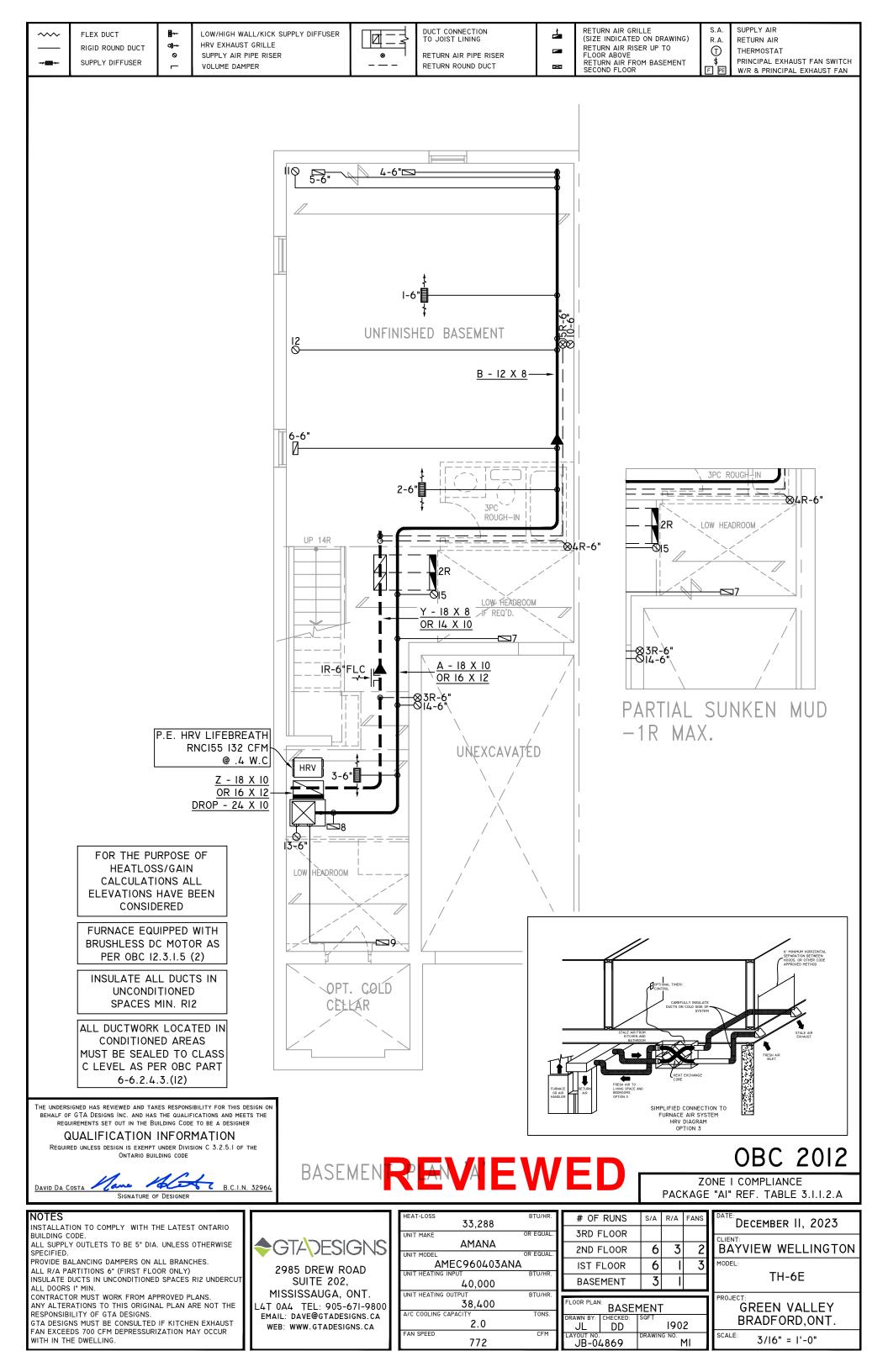


Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station 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):	17.59									
Floor Width (m):	4.05									
Exposed Perimeter (m):	33.83									
Wall Height (m):	2.59	<u>ammun</u>								
Depth Below Grade (m):	1.52	Insulation Configuration								
Window Area (m²):	1.77									
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):		1401								





FLEX DUCT RIGID ROUND DUCT SUPPLY DIFFUSER

LOW/HIGH WALL/KICK SUPPLY DIFFUSER HRV EXHAUST GRILLE 0 SUPPLY AIR PIPE RISER VOLUME DAMPER

a]--

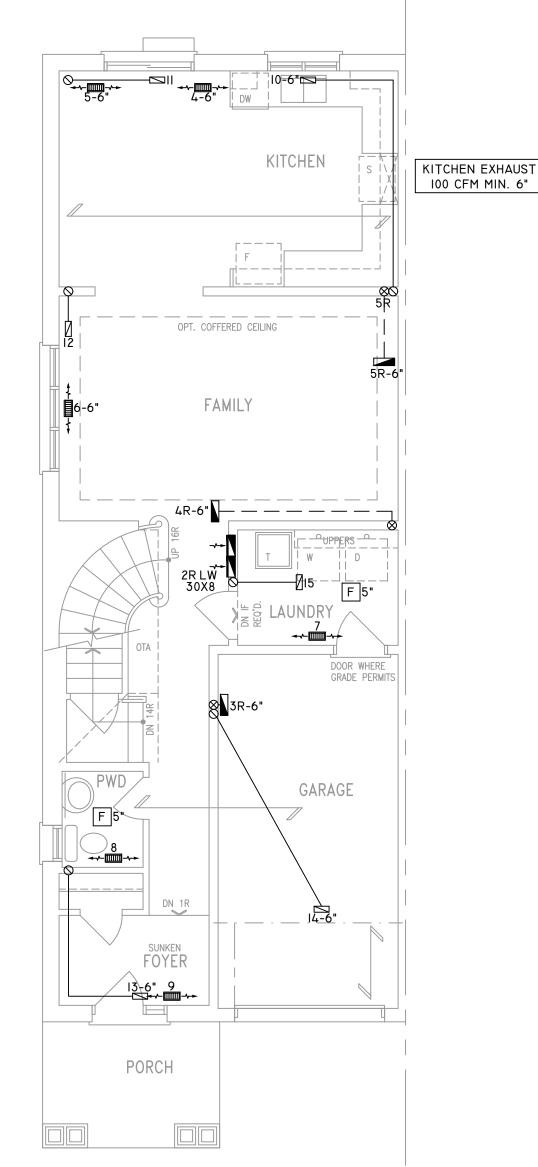


DUCT CONNECTION TO JOIST LINING RETURN AIR PIPE RISER RETURN ROUND DUCT

RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) 4 RETURN AIR RISER UP TO FLOOR ABOVE RETURN AIR FROM BASEMENT SECOND FLOOR \mathbf{x}

R.A 1

SUPPLY AIR RETURN AIR THERMOSTAT PRINCIPAL EXHAUST FAN SWITCH W/R & PRINCIPAL EXHAUST FAN



FOR THE PURPOSE OF **HEATLOSS/GAIN** CALCULATIONS ALL **ELEVATIONS HAVE BEEN** CONSIDERED

CIRCULATION PRINCIPAL FAN SWITCH TO BE CENTRALLY LOCATED

INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. RI2

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

Ane 166 B.C.I.N. 32964 SIGNATURE OF DESIGNER

GROUND ROOR /LAE WED

OBC 2012

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

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 RI2 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

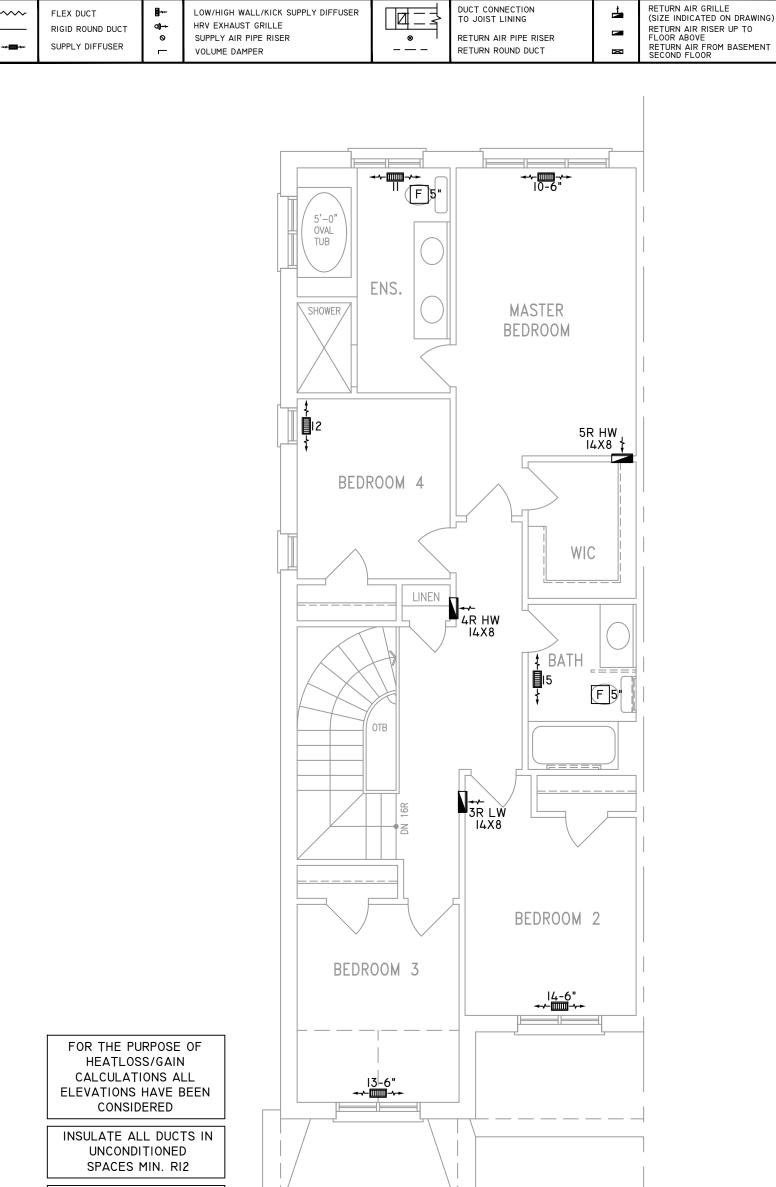
33,288	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960403ANA	
UNIT HEATING INPUT	BTU/HR.
40,000	
UNIT HEATING OUTPUT	BTU/HR.
38,400	
A/C COOLING CAPACITY	TONS.
2.0	
FAN SPEED	CFM
772	

-				
# OF RUNS	S/A	R/A	FANS	[
3RD FLOOR				_
2ND FLOOR	6	3	2	
IST FLOOR	6	I	3	1
BASEMENT	3	I		
				Ī
FLOOR PLAN: GROUND	FLO	0R		

	•	_	- 1	
LOOR PLAN	ŀ			
	ĞROUND		OR	
RAWN BY:	CHECKED:	SQFT		
. JI	DD		1902	
AYOUT NO.		DRAWIN	C NO	-
JB-04869		DIVAMIN	° М2	
UD-04009			114	

,
DECEMBER II, 2023
BAYVIEW WELLINGTON
MODEL: TH-6E
PROJECT:

GREEN VALLEY BRADFORD, ONT. 3/16" = 1'-0"



LOW/HIGH WALL/KICK SUPPLY DIFFUSER

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

FLEX DUCT

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

SECOND ROOK VIAL WED

DUCT CONNECTION

4

OBC 2012

ZONE I COMPLIANCE PACKAGE "AI" REF. TABLE 3.I.I.2.A

SUPPLY AIR

RETURN AIR

THERMOSTAT

PRINCIPAL EXHAUST FAN SWITCH

W/R & PRINCIPAL EXHAUST FAN

R.A

1

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

SPECIFIED. PROVIDE BALANCING DAMPERS ON ALL BRANCHES. ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)

INSULATE DUCTS IN UNCONDITIONED SPACES RI2 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.

ROOF BELOW

2985 DREW ROAD SUITE 202, MISSISSAUGA, ONT.

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

33,288	_,
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960403ANA	
UNIT HEATING INPUT	BTU/HR.
40,000	
UNIT HEATING OUTPUT	BTU/HR.
38,400	
A/C COOLING CAPACITY	TONS.
2.0	
FAN SPEED	CFM
772	

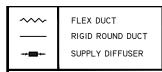
RUNS S/A R/A FANS	S/A R/A	S/A	RUNS	# OF
FLOOR			3RD FLOOR	
-LOOR 6 3 2	6 3	6	FLOOR	2ND F
LOOR 6 1 3	6	6	IST FLOOR	
MENT 3 I	3	3	BASEMENT	
SECOND FLOOR	LOOR	FLO	: SECOND	FLOOR PLAN
CHECKED: SQFT 1902		SQFT	CHECKED: DD	DRAWN BY:

M3

JL DD YOUT NO. JB-04869

,
DECEMBER II, 2023
BAYVIEW WELLINGTON
MODEL: TH-6E
PROJECT: GREEN VALLEY

BRADFORD, ONT. 3/16" = 1'-0"



LOW/HIGH WALL/KICK SUPPLY DIFFUSER HRV EXHAUST GRILLE **a**]---0 SUPPLY AIR PIPE RISER VOLUME DAMPER



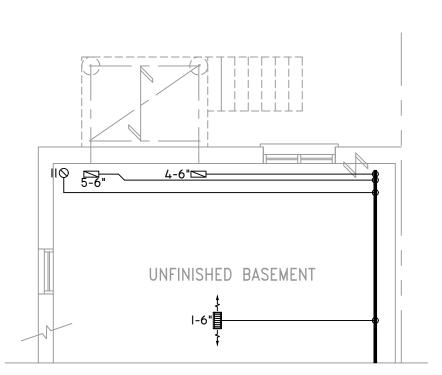
DUCT CONNECTION TO JOIST LINING RETURN AIR PIPE RISER RETURN ROUND DUCT

4 \mathbf{x}

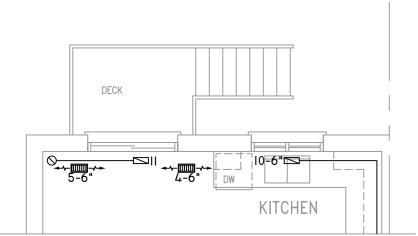
RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE RETURN AIR FROM BASEMENT SECOND FLOOR

R.A 1

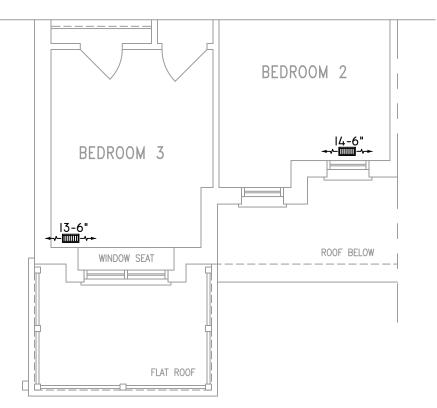
SUPPLY AIR RETURN AIR THERMOSTAT PRINCIPAL EXHAUST FAN SWITCH W/R & PRINCIPAL EXHAUST FAN



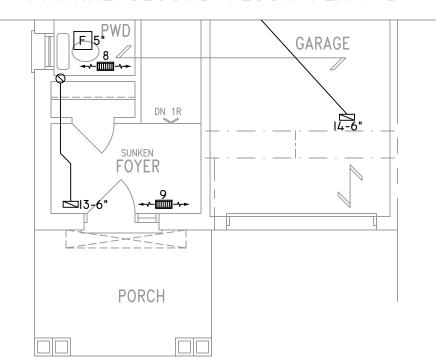
PARTIAL BASEMENT PLAN W.O.D. CONDITION (9R OR GREATER)



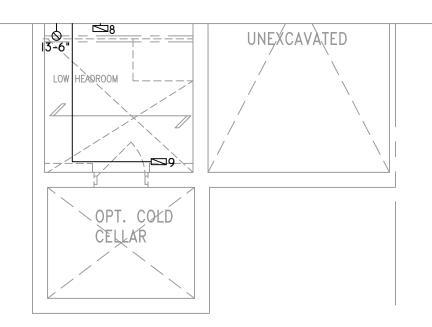
PARTIAL GROUND FLOOR PLAN W.O.D. CONDITION (9R OR GREATER)



PARTIAL SECOND FLOOR PLAN 'B'



PARTIAL GROUND FLOOR PLAN 'B'



PARTIAL BASEMENT PLAN 'B'

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

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

OBC 2012

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 RI2 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.

GTADESIGNS

2985 DREW ROAD SUITE 202, MISSISSAUGA, ONT.

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

HEAT-LOSS	BTU/HR.
33,288	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960403ANA	-
UNIT HEATING INPUT	BTU/HR.
40,000	
UNIT HEATING OUTPUT	BTU/HR.
38,400	
A/C COOLING CAPACITY	TONS.
2.0	
FAN SPEED	CFM
772	

DATE:	FANS	R/A	S/A	RUNS	# OF
CLIENT:				LOOR	3RD F
BAY	2	3	6	FLOOR	2ND F
MODEL:	3	I	6	LOOR	IST F
		I	3	MENT	BASE
PROJEC		FLOOR PLAN: PARTIAL PLAN(S) DRAWN BY: [CHECKED: SOFT			
	2	190		DD	JL
SCALE:	44	G NÖ.	DRAWIN		JB-04

_	711 11E1 : 71BEE 0:::::E:71
	DECEMBER II, 2023
	BAYVIEW WELLINGTON
	MODEL: TH-6E
ĺ	GREEN VALLEY BRADFORD,ONT.

3/16" = 1'-0"