

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 Ridea	u 8		Lot:		
S42-8C Alt.	2nd FLR		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				Lot/con.	
Municipality Mississauga	Postal code L4T 0A4	Province Ontario	E-mail dave@gtadesi	gns.ca	
Telephone number					
(905) 671-9800 C. Design activities undertaken by individual identified in S	•	') 494-9643	(416) 268-68	320	
Design activities undertaken by individual identified in S	ection b. [bu	liding Code Table 3	5.5.2.1 OF DIVISION C		
☐ House ☑ HVAC – H	louse		■ Building Structural		
☐ Small Buildings ☐ Building Se	ervices		☐ Plumbing – House		
	Lighting and Pov	wer	☐ Plumbing – All Buildings		
☐ Complex Buildings ☐ Fire Protect			☐ On-site Sewage System		
Description of designer's work Mod	del Certification	1	Project #:	PJ-00204	
Heating and Cooling Load Calculations Main		Builder	Layout #:	JB-04615	
Heating and Cooling Load Calculations Main Air System Design Alternate		Project	Bayview Wellingto Green Valley East		
Residential mechanical ventilation Design Summary Area Sq ft:			Rideau 8		
Residential System Design per CAN/CSA-F280-12		Model	S42-8C Alt. 2nd FL	R	
Residential New Construction - Forced Air		SB-12	Package A1		
D. Declaration of Designer					
David DaCosta	declare that (c	choose one as appro	priate):		
(print name)					
I review and take responsibility for					
3.2.4 Division C of the Building Cocclasses/categories.	de. i am qualilled	i, and the illin is registe	ered, in the appropriate		
Individual BCIN:					
Firm BCIN:			•		
, · · · ·			•		
Individual BCIN:	3296	64			
Basis for exemp	tion from registra	ation: [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 n	ny knowledge.				
I have submitted this application with the knowledge and consent	t of the firm.				
April 4, 2018		Mare Ho			
Date		Signature of De	signer		

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.
- 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 Fax: 647-494-9643 e-mail dave@gtadesigns.ca

Page 2

Heat loss and gain calcu	Ilation summary sheet CSA-F280-M12 Standard Form No. 1
These documents issued for the use of	Bayview Wellington Layout No.
and may not be used by any other persons without authorization. Docume	nts for permit and/or construction are signed in red. JB-04615
Building	Location
Address (Model): S42-8C Alt. 2nd FLR	Site: Green Valley East
Model: Rideau 8	Lot:
City and Province: Bradford	Postal code:
Calculation	ns based on
Dimensional information based on:	VA3 Design Jan/2018
Attachment: Detached	Front facing: East/West Assumed? Yes
No. of Levels: 3 Ventilated? Included	Air tightness: 1961-Present (ACH=3.57) Assumed? Yes
Weather location: Bradford	Wind exposure: Sheltered
HRV? LifeBreath RNC155	Internal shading: Light-translucent Occupants: 6
Sensible Eff. at -25C 71% Apparent Effect. at -0C 84%	Units: Imperial Area Sq ft: 3454
Sensible Eff. at -0C 75%	
Heating design conditions	Cooling design conditions
Outdoor temp -9.4 Indoor temp: 72 Mean soil tem; 48	Outdoor temp 86 Indoor temp: 75 Latitude: 44
Above grade walls	Below grade walls
Style A: As per OBC SB12 Package A1 R 22	Style A: As per OBC SB12 Package A1 R 20ci
Style B: Existing Walls (When Applicable) R 1	2 Style B:
Style C:	Style C:
Style D:	Style D:
Floors on soil	Ceilings
Style A: As per Selected OBC SB12 Package A1	Style A: As per Selected OBC SB12 Package A1 R 60
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 3	1 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 3.5	5 Style C:
Style B: Existing Windows (When Applicable) R 1.9	9 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/0	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
City: Mississauga	E-mail dave@gtadesigns.ca
	Site Co



Trunk

Air System Design

SB-12 Package A1

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.

Κ

Bayview Wellington April 4, 2018 Builder: Date: Page 3 Rideau 8 of the Building Code. Project # PJ-00204 System 1 Mane Alex **Green Valley East** S42-8C Alt. 2nd FLR David DaCosta JB-04615 Project: Model: Individual BCIN: 32964 Layout # A/C UNIT DATA: DESIGN LOAD SPECIFICATIONS AIR DISTRIBUTION & PRESSURE FURNACE/AIR HANDLER DATA: BOILER/WATER HEATER DATA: Level 1 Net Load 18,384 btu/h **Equipment External Static Pressure** 0.5 "w.c. 3.0 Ton Make Amana Make Туре Amana Level 2 Net Load 21,267 btu/h **Additional Equipment Pressure Drop** 0.225 "w.c. Model AMEC960803BNA Model Cond.--3.0 Level 3 Net Load 21.455 btu/h Available Design Pressure 0.275 "w.c. Input Btu/h 80000 Input Btu/h Coil 3.0 76800 Level 4 Net Load 0 btu/h Return Branch Longest Effective Length 300 ft Output Btu/h Output Btu/h 0.50 " W C Min.Output Btu/h ΔWH 61.107 btu/h 0 138 "w c Total Heat Loss R/A Plenum Pressure E.s.p. Blower DATA: Total Heat Gain 35,110 btu/h S/A Plenum Pressure 0.14 "w.c. Water Temp deg. F. W2 67,217 Btuh. Heating Air Flow Proportioning Factor 0.0192 cfm/btuh AFUE Blower Speed Selected: Blower Type ECM Combo System HL + 10% 96% 40445 ft³ (Brushless DC OBC 12.3.1.5.(2)) **Building Volume Vb** Cooling Air Flow Proportioning Factor 0.0334 cfm/btuh Aux. Heat 1.342 Btuh. SB-12 Package Heating Check 1172 cfm 1172 cfm Ventilation Load R/A Temp 70 dea. F. Package A1 Cooling Check Ventilation PVC 95.4 cfm S/A Temp 131 deg. F. Supply Branch and Grill Sizing Diffuser loss 61 deg. F. 1172 cfm Cooling Air Flow Rate 1172 cfm 0.01 "w.c. Temp. Rise>>> Selected cfm> Level 1 Level 2 S/A Outlet No. 2 5 6 10 11 12 13 14 Room Use BASE BASE BASE BASE KIT KIT STUDY STUDY FOY I IV/DIN GRT GRT Btu/Outlet 4596 4596 4596 4596 2114 2114 3304 2573 2573 2407 1468 1468 1623 1623 **Heating Airflow Rate CFM** 88 88 88 88 41 41 63 49 49 28 28 31 31 12 12 12 12 71 71 82 60 60 59 59 48 48 Cooling Airflow Rate CFN 31 0.13 **Duct Design Pressure** 0.13 **Actual Duct Length** 33 37 29 50 36 37 53 54 59 41 38 35 47 53 **Equivalent Length** 110 110 140 100 70 70 70 70 70 70 70 70 70 70 120 150 110 130 110 130 90 100 120 70 70 70 70 Total Effective Length 143 147 169 150 70 70 70 70 70 70 70 70 116 157 203 164 189 151 168 125 147 173 70 70 70 70 70 70 Adjusted Pressure 0.09 0.09 0.08 0.09 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.11 0.08 0.06 0.08 0.07 0.09 0.08 0.10 0.09 0.08 0.19 0.19 0.19 0.19 **Duct Size Round** 6 5 5 5 **Outlet Size** 4x10 3x10 3x10 3x10 3x10 3x10 4x10 4x10 4x10 4x10 4x10 4x10 4x10 3x10 3x10 4x10 4x10 4x10 4x10 Trunk С D D Level 3 Level 4 S/A Outlet No. 15 16 17 20 21 22 23 24 27 28 18 19 25 26 Room Use MAST MAST FNS wc. WIC: RFD 2 RATH BFD 3 BFD 3 RFD 4 RFD 4 FNS 3 BFD 5 FNS 4 Btu/Outlet 1580 1580 1766 513 558 2293 1131 1949 1949 1818 1818 1151 2521 827 37 **Heating Airflow Rate CFM** 30 30 34 10 11 44 22 37 35 35 22 48 16 Cooling Airflow Rate CFM 46 46 43 69 10 57 5 41 41 57 27 71 16 **Duct Design Pressure** 0.13 **Actual Duct Length** 61 52 53 48 62 74 70 81 70 49 **Equivalent Length** 110 125 110 165 100 120 180 170 150 145 135 155 170 100 70 70 70 70 70 70 70 70 70 70 70 70 70 70 171 163 Total Effective Length 177 213 182 246 244 220 226 200 225 149 70 70 70 70 70 70 70 70 70 70 70 149 230 70 70 70 Adjusted Pressure 0.08 0.07 0.08 0.06 0.09 0.07 0.05 0.05 0.06 0.06 0.07 0.06 0.06 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 **Duct Size Round** 5 3 6 5 5 5 3 Outlet Size 3x10 3x10 3x10 3x10 3x10 3x10 4x10 3x10 3x10 3x10 3x10 3x10 4x10 3x10 4x10 Trunk D G R Return Branch And Grill Sizing Grill Pressure Loss 0.02 "w.c **Return Trunk Duct Sizing** Supply Trunk Duct Sizing CFM R/A Inlet No. 1R 2R 3R 4R 5R 6R 7R 8R 9R 10R 11R Trunk CFM Press. Round Rect. Size Trunk Round Rect. Size Inlet Air Volume CFM 176 434 154 154 154 100 **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 1172 0.05 17.0 24x12 1173 0.05 17.0 26x10 22x12 Drop Α 50 0.05 0.06 10 22 49 56 83 z 1172 17.0 R 479 12 0 16v8 **Actual Duct Length** 26v10 22x12 12v10 **Equivalent Length** 150 125 200 155 155 165 50 50 50 50 50 Υ 254 0.05 10.0 12x8 10x10 c 233 0.07 9.0 8x8 10x7 50 **Total Effective Length** 160 147 250 204 211 248 50 50 50 50 Х D 191 0.06 8.5 8x8 Adjusted Pressure 0.07 0.08 0.05 0.06 0.06 0.05 0.24 0.24 0.24 0.24 0.24 w Ε 694 0.05 14.0 22x8 18x10 **Duct Size Round** 7.0 11.0 8.0 8.0 8.0 6.0 v 376 0.05 11.5 14x8 12x10 FLC G 134 0.06 7.5 8x8 Inlet Size Inlet Size 30 14 14 14 s

Q



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

	Build	der:	Bayview We	llington			Date:			April 4, 2	018		_			We	ather Data	Br	radford	44	-9.4	86 22	48.2					Page 4
2012 OBC	Proj	ject:	Green Valle	y East		м	lodel:		S4	Rideau 2-8C Alt. 2			_	Systen	1 1	He	at Loss ^1	81.4 deg. F	F	Ht gain ^T	1	deg. F	GTA:	3454		Proje Layo		PJ-00204 JB-04615
	el 1				BASE																							
Run ft. exposed v				183 A			A B			A R		A R		A		A R		A B		A		A B			A		A B	
Run ft. exposed v Ceiling h				3.7	_		3.7 AC			В 3.7 AG		3.7 AG		B 3.7 AG		3.7 AG		3.7 AG		B 3.7 AG		3.7 AG		3.7	В		3.7 AG	
Floor				1409 A			J./ Ac		•	Area		3.7 AG		Area		3.7 AG		3.7 AG		3.7 AG		3.7 AG	a		Area		3.7 AG	
Exposed Ceilin				, 100 /			A			A		A		A		A		A		A		A	-		A		A	
Exposed Ceili				Е	В		В			В		В		В		В		В		В		В			В		В	
Exposed F	loors				Flr		Fli	r		Flr		Flr		Flr		Flr		Fir		Flr		Flr			Flr		Flr	
Gross Exp V				677																								
Gross Exp V	all B nents R-Val		Gain		Loss	Gain		oss Ga		Loss	Gain	Loss	Gain	Loss	Gain		Gain	Loss	Gain	Loss	Gain	Los	s Gain		Loss	0-!		Gain
North Sh		3.55 22.5			69	33	LC)55 Ga	1111	LUSS	Gain	LUSS	Gain	LUSS	Gain	LUSS	Gain	LUSS	Gain	LUSS	Gain	LUS	S Gain		LUSS	Gain	LUSS	Gain
East		3.55 22.5			413	492																						
		3.55 22.			69	63																						
WOB Win	dows 3	3.55 22.9		3																								
		2.03 40.																								\perp		
		4.00 20.3 1.12 3.8			427	58 329																						
Net exposed w		4.49 5.0				329																						
Exposed Ceilii		9.22 1.3																										
Exposed Ceilin		2.86 3.																										
Exposed F	loors 29	9.80 2.	73 0.17																									
Foundation Conductive Heatlo	ss on G	rade () or A	bot		7679															4								
Total Conductive Heat					8656	075																						
Air Leakage Heat Loss	Gain	1.09	0.0354		9441	975 34														1				_				
	ase 1	0.0			3441	34																						
	ase 2	14.0																										
	ase 3 x				287	62																						
Heat Gain P			239																									
Appliances L		=.25 percent	5753																	4								
Duct and Pipe Level 1 HL Total 18,384		Total III	10% for per room		18384																							
Level 1 HG Total 1,392					10304																							
		Total HG ne	rroom x 1 3	:		1392																1		1				
Level i HG Total 1,392		Total HG pe	r room x 1.3	4 L		1392	L											1		J L		1 —						
Level 1 no Total 1,592		Total HG pe	r room x 1.3			1392												1 L				1 L						
		Total HG pe	r room x 1.3		KIT	1392		LAUN		STUI	DY.	FOY	,	LIV/DII		G	RT	1						l 				
	el 2	Total HG pe	r room x 1.3	37 #	KIT A	1392	31 A	LAUN		STUI	ρΥ	FOY 18 A	,	LIV/DII	ı	G 30 A	RT	Α		Α		A		l 	Α		A	
Lev Run ft. exposed v Run ft. exposed v	el 2 vall A	Total HG pe	r room x 1.3	37 <i>A</i>	A	1392	31 A B	LAUN		40 A B	ργ	18 A B	,	25 A B	ı	30 A B	RT	В		В		В			В		В	
Run ft. exposed v Run ft. exposed v Ceiling h	el 2 vall A vall B eight	Total HG pe	r room x 1.3	37 A E 10.0	A B	1392	31 A B 12.0		10	40 A B 0.0	ργ	18 A B 11.0	,	25 A B 10.0	I	30 A B 10.0		B 10.0		B 10.0		B 10.0		10.0	В		B 10.0	
Run ft. exposed v Run ft. exposed v Ceiling I Floo	el 2 vall A vall B eight area	Total HG pe	r room x 1.3	37 A E 10.0 329 A	A B Area	1392	31 A B 12.0 208 Ar		10	40 A B 0.0 171 Area	ΟY	18 A B 11.0 137 Area	,	25 A B 10.0 340 Area	ı	30 A B 10.0 213 Area		B 10.0 Area		B 10.0 Area		B 10.0 Area	a	10.0	B Area		B 10.0 Area	
Run ft. exposed v Run ft. exposed v Ceiling i Floor Exposed Ceilin	el 2 vall A vall B eight area	Total HG pe	rroom x1.3	37 A E 10.0 329 A	A B Area A	1392	31 A B 12.0 208 Ar 17 A	rea	10	40 A B 0.0 I71 Area A	ÞΥ	18 A B 11.0 137 Area A	,	25 A B 10.0 340 Area A	ı	30 A B 10.0 213 Area A		B 10.0 Area A		B 10.0 Area A		B 10.0 Area A	a	10.0	B Area A		B 10.0 Area A	
Run ft. exposed Veling here and the constant of the constant o	el 2 vall A vall B eight area ags A ags B	Total HG pe	rroom x1.3	37 A E 10.0 329 A A	A B Area A B	1392	31 A B 12.0 208 Ar 17 A B	·ea	10	40 A B 0.0 171 Area A B	ÞΥ	18 A B 11.0 137 Area A B	,	25 A B 10.0 340 Area A B	I	30 A B 10.0 213 Area A B		B 10.0 Area A B		B 10.0 Area A B		B 10.0 Area A B	a	10.0	B Area A B		B 10.0 Area A B	
Run ft. exposed v Run ft. exposed v Ceiling i Floor Exposed Ceilin	el 2 rall A rall B eight area lgs A lgs B	Total HG pe	rroom x1.3	37 A E 10.0 329 A A	A B Area A	1392	31 A B 12.0 208 Ar 17 A	·ea	1(1	40 A B 0.0 I71 Area A	DΥ	18 A B 11.0 137 Area A	,	25 A B 10.0 340 Area A	l	30 A B 10.0 213 Area A		B 10.0 Area A		B 10.0 Area A		B 10.0 Area A	a	10.0	B Area A		B 10.0 Area A	
Run ft. exposed very flow for the exposed very flow flow flow flow flow flow flow flow	el 2 vall A rall B eight area tgs A tgs B loors lall A			37 A E 10.0 329 A E F 370	A B Area A B FIr		31 A B 12.0 208 Ar 17 A B Fli 372	rea r	10 1	40 A B 0.0 171 Area A B Fir		18 A B 11.0 137 Area A B FIr 198		25 A B 10.0 340 Area A B Fir 250		30 A B 10.0 213 Area A B Fir 300		B 10.0 Area A B Fir		B 10.0 Area A B Fir		B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	
Run ft. exposed v Run ft. exposed v Ceiling i Floor Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo	el 2 vall A vall B eight area ugs A ugs B oors vall A all B enents R-Val	lues Loss	Gain	37 A E 10.0 329 A E F 370	A B Area A B Fir	Gain	31 A B 12.0 208 Ar 17 A B Fli 372	rea r oss Ga	10 1 4 ain	40 A B 0.0 I71 Area A B FIr	OY Gain	18 A B 11.0 137 Area A B Fir	Gain	25 A B 10.0 340 Area A B Fir 250	i Gain	30 A B 10.0 213 Area A B Fir		B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B		10.0	B Area A B Fir	Gain	B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling i Frossed Ceiling Exposed Ceilin Exposed Fross Exp V Gross Exp V Compo	el 2 rall A rall B eight area ags A ags B loors fall A rall B eents R-Val aded	lues Loss 3.55 22.	Gain 33 10.91	37	A B Area A B Fir Loss	Gain 262	31 A B 12.0 208 Ar 17 A B Fli 372	rea r oss Ga	10 1 4 ain 131	40 A B 0.0 171 Area A B Fir 100	Gain	18 A B 11.0 137 Area A B Fir 198		25 A B 10.0 340 Area A B Fir 250		30 A B 10.0 213 Area A B Fir 300	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling I Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo North SI	el 2 vall A rall B eight area ggs A sloors vall A tall B enents R-Val aded west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west west	lues Loss 3.55 22.3 3.55 22.5	Gain 33 10.91 33 27.35	37	A B Area A B Fir	Gain	31 A B 12.0 208 Ar 17 A B Fli 372	rea r oss Ga	10 1 4 ain 131	40 A B 0.0 171 Area A B Fir 100 Loss	Gain 1 1313	18 A B 11.0 137 Area A B Fir 198 Loss	Gain	25 A B 10.0 340 Area A B Fir 250	Gain	30 A B 10.0 213 Area A B Fir 300 Loss	Gain 34 875	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling f Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo North St	el 2 vall A vall B eight area egs A egs B eos so lall A fall B eents R-Val awwest south S eos so eoo	lues Loss 3.55 22.3 3.55 22.3	Gain 33 10.91 33 27.35 33 20.89	37 A E 10.0 329 A E F 370	A B Area A B Fir Loss	Gain 262	31 A B 12.0 208 Ar 17 A B Fli 372	rea r oss Ga	10 1 4 ain 131	40 A B 0.0 171 Area A B Fir 100	Gain 1 1313	18 A B 11.0 137 Area A B Fir 198 Loss	Gain	25 A B 10.0 340 Area A B Fir 250		30 A B 10.0 213 Area A B Fir 300 Loss	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling t From Compo Exposed Ceilin Exposed Frose Exp V Gross Exp V Compo North St East	ei 2 All A Beight Beigh	lues Loss 3.55 22. 3.55 22. 3.55 22. 1.99 40.	Gain 33 10.91 33 27.35 33 20.89 90 22.15	37 A E 10.0 329 A A E 370	A B Area A B Fir Loss	Gain 262	31 A B 12.0 208 Ar 17 A B Fli 372	rea r oss Ga	10 1 4 ain 131	40 A B 0.0 171 Area A B Fir 100 Loss	Gain 1 1313	18 A B 11.0 137 Area A B Fir 198 Loss	Gain	25 A B 10.0 340 Area A B Fir 250	Gain	30 A B 10.0 213 Area A B Fir 300 Loss	Gain 34 875	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling f Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo North St Eastu	el 2 vall A vall B veight varea vgs A vgs B voors vall B	lues Loss 3.55 22.3 3.55 22.3	Gain 33 10.91 33 27.35 33 20.89 30 22.15 10 88.23	37 A E 10.0 329 A A E F 370 L 24	A B Area A B Fir Loss	Gain 262	31 A B 12.0 208 Ar 17 A B Fli 372	rea r oss Ga	10 1 4 ain 131	40 A B 0.0 171 Area A B Fir 100 Loss	Gain 1 1313	18 A B 11.0 137 Area A B Fir 198 Loss	Gain 0 501	25 A B 10.0 340 Area A B Fir 250	Gain	30 A B 10.0 213 Area A B Fir 300 Loss	Gain 34 875	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling t From Compo Exposed Ceiling Exposed From Sexp V Gross Exp V Compo North St East Existing Win Sk	el 2 rall A rall B eight area ggs A ggs B loors fall B sents R-Val aded downs fouth fou	lues Loss 3.55 22. 3.55 22. 1.99 40. 2.03 40. 4.00 20. 7.03 4.	Gain 33 10.91 33 27.35 39 22.89 90 22.15 10 88.23 35 2.75 78 0.65	37	A B Area A B Fir Loss	Gain 262	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12	r r pss Ga 275 427	10 1 4 4 sin 131 58	40 A B 0.0 171 Area A B Fir 100 Loss	Gain 1 1313 1 1003	18 A B 11.0 137 Area A B Fir 198 Loss 24 550	Gain 501 58	25 A B 10.0 340 Area A B Fir 250	Gain	30 A B 10.0 213 Area A B Fir 300 Loss	Gain 34 875 67 334	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling f Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo North Sf East Existing Win Net exposed w Net exposed w	el 2 rall A rall B eight area ggs A ggs A ggs B loors rall A rall B eight area ggs A ggs A ggs B loors rall A rall B ents R-Val aded dows dows dows dows dows dows dight dish 11 lills A 11 lills B	lues Loss 3.55 22: 3.55 22: 3.55 22: 1.99 40: 4.00 20: 4.00 40: 8.50 9.3	Gain 10.91 33 10.91 33 27.35 33 20.89 30 22.15 10 88.23 35 2.75 36 0.65 36 1.29	37 A E 10.0 329 A E F 370 L 24 44 44	A B Area A B Fir Loss 550 1009	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r oss Ga 275 427 1620	10 1 1 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 0.0 171 Area A B Fir 100 Loss 110 110	Gain 1 1313 1 1003	18 A B 11.0 137 Area A B Fir 198 Loss 24 550	Gain 501 58	25 A B 10.0 340 Area A B Fir 250 Loss	Gain 1023	30 A B 10.0 213 Area A B Fir 300 Loss 32 7 16 3	Gain 34 875 67 334	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling f Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo North SI Easts Existing Win Sk Net exposed w Net exposed veilin	el 2 vall A vall B eight area ggs A ggs B olors (all B all B R-Val aded olows fight couth olows fight couth olows fight ggs A fight ggs A fight ggs A fight ggs A fight	lues Loss 3.55 22. 3.55 22: 1.99 40. 2.03 40. 4.00 20. 7.03 4. 8.50 9.	Gain 33 10.91 33 27.35 33 20.88 90 22.15 90 22.75 8 0.55 8 1.29 37 0.64	37 A E 10.0 329 A A E E 370 L L 24 44 44	A B Area A B Fir Loss 550 1009	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12	r r pss Ga 275 427	10 1 4 4 sin 131 58	40 A B 0.0 171 Area A B Fir 100 Loss 110 110	Gain 1 1313 1 1003	18 A B 11.0 137 Area A B Fir 198 Loss 24 550	Gain 501 58	25 A B 10.0 340 Area A B Fir 250 Loss	Gain 1023	30 A B 10.0 213 Area A B Fir 300 Loss 32 7 16 3	Gain 34 875 67 334	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling t From Compo Exposed Ceiling Exposed From From From From From From From From	el 2 rall A rall B eight area ggs A ggs B loors fall B sents R-Val aded downs flight flowns rilight flowns flight flis B flis B flight flis B flight flis B flight flis B flight	lues Loss 3.55 22. 3.55 22. 1.99 40. 2.03 40. 4.00 20. 7.03 4. 8.50 9. 9.22 1. 2.86 3.	Gain 33 10.91 33 27.35 33 20.89 30 22.15 10 88.23 35 2.75 78 0.65 58 1.29 37 0.64 56 1.66	37	A B Area A B Fir Loss 550 1009	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r oss Ga 275 427 1620	10 1 1 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 0.0 171 Area A B Fir 100 Loss 110 110	Gain 1 1313 1 1003	18 A B 11.0 137 Area A B Fir 198 Loss 24 550	Gain 501 58	25 A B 10.0 340 Area A B Fir 250 Loss	Gain 1023	30 A B 10.0 213 Area A B Fir 300 Loss 32 7 16 3	Gain 34 875 67 334	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Ceiling i Floor Exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo North St Easts Existing Win Sk I Net exposed w Net exposed veilin Exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed Ceilin	el 2 vall A vall B eight e	lues Loss 3.55 22: 3.55 22: 3.55 22: 1.99 40: 2.03 40: 4.00 20: 7.03 4: 8.50 9.9 9.22 1. 2.86 3.	Gain 10.91 33 10.91 33 20.89 30 22.15 30 0.88.23 35 2.75 78 0.65 88 1.29 37 0.64 67 3 0.17	37	A B Area A B Fir Loss 550 1009	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r oss Ga 275 427 1620	10 1 1 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 0.0 171 Area A B Fir 100 Loss 110 110	Gain 1 1313 1 1003	18 A B 11.0 137 Area A B Fir 198 Loss 24 550	Gain 501 58	25 A B 10.0 340 Area A B Fir 250 Loss	Gain 1023	30 A B 10.0 213 Area A B Fir 300 Loss 32 7 16 3	Gain 34 875 67 334	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling i Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo North St Existing Win Sk V Net exposed v Net exposed v Exposed Ceilin	el 2 vall A vall B eight area gs A gs B oors vall A dall B R-Val dows do	lues Loss 3.55 22: 3.55 22: 3.55 22: 1.99 40: 2.03 40: 4.00 20: 7.03 4: 8.50 9.9 9.22 1. 2.86 3.	Gain 10.91 33 10.91 33 20.89 30 22.15 30 0.88.23 35 2.75 78 0.65 88 1.29 37 0.64 67 3 0.17	37	A B Area A B Fir Loss 550 1009	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r oss Ga 275 427 1620	10 1 1 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 0.0 171 Area A B Fir 100 Loss 110 110	Gain 1 1313 1 1003	18 A B 11.0 137 Area A B Fir 198 Loss 24 550	Gain 501 58 99	25 A B 10.0 340 Area A B Fir 250 Loss	Gain 1023	30 A B 10.0 213 Area A B Fir 300 Loss 32 7 16 3	Gain 34 875 67 334 05 163	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed varieties of the service of the ser	el 2 vall A vall B eight e	lues Loss 3.55 22.3 3.55 22.1 1.99 40.2 2.03 40.0 2.0.3 4.00 20.0 7.03 4.8 8.50 9.9 9.22 1.2 2.86 3.3 9.80 2.7 irade () or Al	Gain 10.91 33 10.91 33 27.35 33 20.89 30 22.15 30 82.23 35 2.75 8 0.65 88 1.22 37 0.64 66 1.66 73 0.17	37	A B Area A B Fir Loss 550 1009 1443	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r r soss Ga 275 427 1620 23 2346	110 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 8 0.0 171 Area A B Fir 1000 Loss 1110 48 1110 365 145 145 145 145 145 145 145 145 145 14	Gain 1 1313 1 1003 3 196	18 A B 11.0 137 Area A B Fir 198 Loss 24 556 21 4221 153 73	Gain) 501 , 58 , 99	25 A B 10.0 340 Area A B Fir 250 Loss 49 1124 201 961	Gain 1023 130	30 A B 10.0 213 Area A B Fir 300 Loss 252 16 33 252 12	Gain 34 875 67 334 05 163	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling i Floor Exposed Ceilin Exposed Forose Exp V Gross Exp V Compo North St Easts Existing Win Sk Net exposed w Net exposed ceilin Exposed Geilin Exposed Forose Exp V Compo North St Easts Existing Win Sk Existing Win Sk Forose Exp V Lore Forose Exp V Lore Forose Forose Forose Forose Ceilin Exposed Ceilin Exposed Geilin Exposed Forose Foros	el 2 vall A vall B eight area ggs A ggs B olors vall A dall B R-Val aded dows	lues Loss 3.55 22: 3.55 22: 1.99 40: 2.03 40: 4.00 20: 7.03 4: 8.50 9: 9.22 1. 2.86 3: 9.80 2: Frade () or A	Gain 33 10.91 39 27.35 39 20.89 90 22.15 10 88.23 55 2.75 78 0.65 56 1.66 56 1.66 57 0.04 58 0.17 59 0.17	37 A E E 10.0 329 A A E E T S T E E E E E E E E E E E E E E E	A B Area A B Fir Loss 550 1009	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 0.0 1/71 Area A B Fir 100 Loss 1110 1100 1100 1100 1100 1100 1100 1	Gain 1 1313 1 1003 3 196	18 A B 11.0 137 Area A B Fir 198 Loss 24 550 21 422 153 731	Gain) 501 , 58 , 99	25 A B 10.0 B 10.0 B 10.0 C A B Fir 250 Loss 49 1124 201 961	Gain 1023 130	30 A B 10.0 213 Area A B Fir 300 Loss 252 12 23	Gain 34 875 67 334 05 163	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed value ft. exposed celling from the following follo	el 2 all A rall B eight rall B eight ggs A ggs B loors fall A ments R-Val aded S couth S	lues Loss 3.55 22.3 3.55 22.3 3.55 22.03 40.400 20.7 7.03 4.8.50 9.9.22 1.2.286 3.3 9.80 2.56 2.56 2.56 2.56 2.56 2.56 2.56 2.56	Gain 10.91 33 27.35 33 20.89 30 22.15 30 88.23 35 2.75 36 1.29 37 0.64 36 1.666 36 6.666 37 0.17 30 0.17	37 / E E 10.0 329 / E E 5370 370 L 24 44 44	A B Area A B Fir Loss 550 1009 1443	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r r soss Ga 275 427 1620 23 2346	110 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 8 0.0 171 Area A B Fir 1000 Loss 1110 48 1110 365 145 145 145 145 145 145 145 145 145 14	Gain 1 1313 1 1003 3 196	18 A B 11.0 137 Area A B Fir 198 Loss 24 556 21 4221 153 73	Gain) 501 , 58 , 99	25 A B 10.0 340 Area A B Fir 250 Loss 49 1124 201 961	Gain 1023 130	30 A B 10.0 213 Area A B Fir 300 Loss 252 12 23	Gain 34 875 67 334 05 163	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Ceiling i Floor Exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Compo North St Existing Win Sk Existing Win Exposed Ceilin	el 2 vall A vall B eight e	lues Loss 3.55 22.2 3.55 22.3 3.55 22.2 1.99 40.2 2.03 40.0 20.0 7.03 4.8.50 9.9 9.22 1.2 2.86 3.9 9.80 2.2 irade () or Ai	Gain 10.91 33 10.91 39 20.89 90 22.15 10 88.23 35 2.75 78 0.65 86 1.26 66 1.66 67 0.0354 30 0.06 77 11.88	37 # 10.0 E 10.0 329 # 4 E 5 370 L 24 4 4 4 4 4 4 4 4 4 4 4 4 4 4 6 6 6 6	A B B Area A B B Fir S 500 1009 1443 3003 1126	Gain 262 1204 195	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r sss Ga 275 427 1620 23 2346 880	11 1 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 8 0.0 171 Area A B Fir 100 Loss 110 145 137	Gain 1 1313 1 1003 3 196 4 2512 1 89	18 A B 11.0 137 Area A B Fir 198 Loss 24 556 21 4221 153 73	Gain 501 58 99 658 23	25 A B 10.0 340 Area A B Fir 250 Loss 49 1124 201 961	1023 130 1153 41	30 A B 10.0 213 Area A B Fir 300 Loss 7 16 3 252 12	Gain 34 875 667 334 05 163 05 1372 65 45	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling i Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Gross Exp V Compo North SI Easts Existing Win Sk Net exposed v Net exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed Ceilin Conductive Heati Total Conductive Heat Air Leakage Heat Loss Ventilation C C Ventilation C C C	el 2 vall A vall B eight area ggs A ggs B oloors vall A all B aded dows	lues Loss 3.55 22.3 3.55 22.1 3.9 40. 2.03 40. 4.00 20. 7.03 4. 8.50 9. 9.22 1. 2.86 3. 9.22 1. 2.86 3. 9.80 2. iriade () or Ai	Gain 33 10.91 33 20.89 30 22.15 10 88.23 51 0.65 58 1.29 77 0.64 56 1.66 73 0.17 000 X	37 / E 10.0 329 / A E 370 370 321 302	A B Area A B Fir Loss 550 1009 1443	Gain 262 1204	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r r soss Ga 275 427 1620 23 2346	110 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 8 0.0 171 Area A B Fir 1000 Loss 1110 48 1110 365 145 145 145 145 145 145 145 145 145 14	Gain 1 1313 1 1003 3 196 4 2512 1 89	18 A B 11.0 137 Area A B Fir 198 Loss 24 556 21 4221 153 73	Gain 501 58 99 658 23	25 A B 10.0 340 Area A B Fir 250 Loss 49 1124 201 961	Gain 1023 130	30 A B 10.0 213 Area A B Fir 300 Loss 7 16 3 252 12	Gain 34 875 67 334 05 163	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed varieties of the control of the con	el 2 rall A rall B	lues Loss 3.55 22: 3.55 22: 3.55 22: 1.99 40: 2.03 40: 8.50 99: 9.22 1: 2.86 3: 9.80 2: iriade () or Ai	Gain 10.9133 10.9133 27.3593 20.8990 22.151 0.88.23235 52.7578 0.6558 1.22937 0.64637 0.075 000 X 11.88833 0.066 077 11.88333 0.066 22393	37	A B B Area A B B Fir S 500 1009 1443 3003 1126	Gain 262 1204 195 1661 59	31 A B B 12.0 208 Ar 17 A B Flu 372 Lc 21 339 17	r Gapes Gape	11 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	40 A B 8 0.0 171 Area A B Fir 100 Loss 110 145 137	Gain 1 1313 1 1003 3 196 4 2512 1 89	18 A B 11.0 137 Area A B Fir 198 Loss 24 556 21 4221 153 73	Gain 501 58 99 658 23	25 A B 10.0 340 Area A B Fir 250 Loss 49 1124 201 961 2084 782	1023 130 1153 41	30 A B 10.0 213 Area A B Fir 300 Loss 252 16 232 8	Gain 34 875 67 334 05 163 05 1377 65 48	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling i Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Gross Exp V Compo North SI Easts Existing Win Sk Net exposed v Net exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed Ceilin Conductive Heati Total Conductive Heat Air Leakage Heat Loss Ventilation C C Ventilation C C C	el 2 vall A vall B eight area egs A egs B egs S vall A vall B elents R-Val elents vall B elents	lues Loss 3.55 22.2 3.55 22.3 3.55 22.2 1.99 40.2 2.03 40.0 20.0 7.03 4.8.50 9.9 9.22 1.2 2.86 3.9 9.80 2.2 irade () or Ai	Gain 33 10.91 33 20.89 30 22.15 10 88.23 51 0.65 58 1.29 77 0.64 56 1.66 73 0.17 000 X	37	A B B Area A B B Fir S 500 1009 1443 3003 1126	Gain 262 1204 195	31 A B 12.0 208 Ar 17 A B Fli 372 Lc 12 21 339	r Gapes Gape	11 1 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 8 0.0 171 Area A B Fir 100 Loss 110 145 137	Gain 1 1313 1 1003 3 196 4 2512 1 89	18 A B 11.0 137 Area A B Fir 198 Loss 24 556 21 4221 153 73	Gain 501 58 99 658 23	25 A B 10.0 340 Area A B Fir 250 Loss 49 1124 201 961	1023 130 1153 41	30 A B 10.0 213 Area A B Fir 300 Loss 7 16 3 252 12	Gain 34 875 667 334 05 163 05 1372 65 45	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed varieties of the state of th	el 2 all A all B eight area ags A ags B ags B loors all B eents R-Val all B	lues Loss 3.55 22: 3.55 22: 3.55 22: 1.99 40: 4.00 20: 7.03 4. 8.50 9.9 9.22 1. 2.86 3. 9.80 2: irade () or Ai 0.377 0.0 14.1 10. 2.25 percent Total HL	Gain 10.9133 10.9133 27.353 33 20.893 00 22.15 00 88.232 35 2.75 78 0.65 78 1.66 73 0.17 70 71 11.88 33 0.06 77 11.88 33 0.06 239 5753 10% for per room	37	A B B Area A B B Fir S 500 1009 1443 3003 1126	Gain 262 1204 195 1661 59 105 1438	31 A B 12.0 208 Ar 17 A B FII 372 LC 21 339 17	r Gapes Gape	11 1 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40 A B 8 0.0 171 Area A B Fir 100 Loss 110 145 137	Gain 1 1313 1 1003 3 196 4 2512 1 89 1 159	18 A B 11.0 137 Area A B Fir 198 Loss 24 550 21 42: 153 73: 170: 644 55:	Gain 501 58 99 658 23	25 A B 10.0 340 Area A B Fir 250 Loss 49 1124 201 961 2084 782	1023 130 1153 41 73 1438	30 A B 10.0 213 Area A B Fir 300 Loss 252 16 232 8	Gain 34 875 67 334 05 163 05 1372 65 45 76 87 715	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 Area A B Fir	Gain
Run ft. exposed v Run ft. exposed v Ceiling i Floor Exposed Ceilin Exposed Ceilin Exposed F Gross Exp V Gross Exp V Gross Exp V Compo North St Easts Existing Win Sk I Net exposed v Net exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed Ceilin Exposed T Foundation Conductive Heatic Total Conductive Heat Loss Ventilation C Ventilation C Heat Gain P Appliances L Duct and Pipe	el 2 all A all B eight area ags A ags B ags B loors all B eents R-Val all B	lues Loss 3.55 22: 3.55 22: 3.55 22: 1.99 40: 4.00 20: 7.03 4. 8.50 9.9 9.22 1. 2.86 3. 9.80 2: irade () or Ai 0.377 0.0 14.1 10. 2.25 percent Total HL	Gain 33 10.91 33 20.93 30 20.93 30 22.15 10 88.23 55 2.75 78 0.65 58 1.29 77 0.64 56 1.66 73 0.17 00 X 51 0.0354 33 0.06 30 0.06 31 0.05 31 0.06 32 0.06 33 0.06 35 0.07 36 0.06 37 0.06 38 0.06 39 0.06 30 0	37	A B B Area A B B Fir 550 1009 1126 1126 1100	Gain 262 1204 195 1661 59	31 A B 12.0 208 Ar 17 A B FII 372 LC 21 339 17	r Gapes Gape	11 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	40 A B B 0.0 C A B Fir 100 Loss 1110 110 110 110 110 110 110 110 110	Gain 1 1313 1 1003 3 196 4 2512 1 89 1 159	18 A B 11.0 137 Area A B Fir 198 Loss 24 550 21 42: 153 73: 170: 644 55:	Gain 501 58 99 658 23	25 A B 10.0 340 Area A B Fir 250 Loss 49 1124 201 961 2084 782 69	1023 130 1153 41	30 A B 10.0 213 Area A B Fir 300 Loss 7 16 3 252 12 23 8	Gain 34 875 67 334 05 163 05 1372 65 45 76 87	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir	Gain	B 10.0 Area A B Fir		10.0	B Area A B Fir		B 10.0 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

Total Heat Loss 61,107 btu/h Division C subsection 3.2.5. of the Building Code. Individual BCIN: Total Heat Gain 35,110 btu/h

Man 16Cot 2

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 **Bayview Wellington** April 4, 2018 Weather Data Bradford 44 -9.4 86 22 48.2 Page 5 Rideau 8 Project # P.I-00204 System 1 2012 OBC Heat Loss ^T 81.4 deg. F Project: **Green Valley East** Model: S42-8C Alt. 2nd FLR Ht gain ^T 11 deg. F GTA: 3454 Layout # JB-04615 Level 3 MAST ENS wc WIC BED 2 BATH BED 3 BED 4 ENS 3 BED 5 ENS 4 Run ft. exposed wall A 30 A 19 A 6 A 8 A 21 A 6 A 32 A 26 A 10 A 16 A Run ft. exposed wall B В В В В В В R В В R Ceiling height 9.0 8.0 8.0 9.0 9.0 10.0 8.0 266 Area 24 Area 298 Area 195 Area 206 Area 96 Area 226 Area 69 Area Floor area 135 Area 100 Area 108 Area **Exposed Ceilings A** 266 A 135 A 24 A 100 A 298 A 108 A 195 A 206 A 96 A 226 A 69 A Exposed Ceilings B В В Exposed Floors Flr Flr Flr Flr 43 Flr 108 Flr 178 Flr 12 Flr Flr Flr Flr Gross Exp Wall A 270 152 168 288 234 80 160 72 Gross Exp Wall B Gain Components R-Values Loss Loss Gain Gain Loss Gain Loss Loss Loss Loss Gain Loss Gain Loss Loss Loss Loss North Shaded 3.55 22.93 10.91 183 87 27 619 295 183 87 33 757 27 38 871 1039 40 917 1094 East/West 3.55 22.93 27.35 903 South 3.55 22.93 20.89 14 321 292 917 835 22 504 459 51 1169 1065 12 275 251 **Existing Windows** 1.99 40.90 22.15 Skylight 2.03 40.10 88.23 4.00 20.35 2.75 Doors Net exposed walls A 17.03 4.78 0.65 223 1066 144 125 597 81 40 191 26 64 306 41 141 674 91 40 191 26 250 1195 161 154 736 99 58 277 37 109 521 70 60 287 39 Net exposed walls B 8.50 9.58 1.29 **Exposed Ceilings A** 59.22 1.37 0.64 266 366 171 135 186 87 24 33 100 137 64 298 410 191 108 148 195 268 125 206 283 132 96 132 62 226 311 145 69 95 44 Exposed Ceilings B 22.86 3.56 1.66 Exposed Floors 2.73 0.17 43 117 108 295 178 486 30 12 33 29.80 Foundation Conductive Heatloss Heat Loss 2509 1402 408 443 1820 818 2821 2886 914 2001 657 **Total Conductive** 334 Heat Gain 1510 129 106 584 201 1356 2163 559 1281 Air Leakage Heat Loss/Gain 0.2264 0.0354 568 53 317 32 92 100 412 21 185 639 654 77 207 20 453 45 149 Case 1 0.02 0.06 Ventilation Case 2 14.07 11.88 Case 3 0.03 0.06 57 37 27 137 35 22 21 **Heat Gain People** 239 478 239 239 239 239 5753 0.5 719 Appliances Loads 100 346 159 **Duct and Pipe loss** 10% 20 1151 Level 3 HL Total 3161 21,455 Total HL for per room 1766 513 2293 1131 3899 3636 2521 827 Level 3 HG Total 2778 1294 184 151 2080 313 2455 3401 798 2140 477 Total HG per room x 1.3 Level 4 Run ft. exposed wall A Α Run ft. exposed wall B Ceiling height Floor area Area Area Area Area Area Area **Area** Area Area Area Area **Exposed Ceilings A** В В В В В В В В В **Exposed Ceilings B** Exposed Floors Flr Gross Exp Wall A Gross Exp Wall B Components R-Values Loss Gain Gain Gain Gain Gain Gain Loss Gain Loss Loss Loss Loss Loss Loss Loss Loss North Shaded 3.55 22.93 10.91 East/West 3.55 22.93 27.35 South 3.55 22.93 20.89 **Existing Windows** 1.99 40.90 22.15 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 22.86 3.56 1.66 Exposed Floors 29.80 2.73 0.17 Foundation Conductive Heatloss Heat Loss **Total Conductive** Heat Gain Air Leakage 0.0000 0.0354 Heat Loss/Gain Case 1 0.00 0.06 Ventilation 14.07 11.88 Case 3 0.03 0.06 **Heat Gain People** 239

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

Total Heat Loss 61,107 otu/h 35,110 **Total Heat Gain** btu/h

Level 4 HL Total

Level 4 HG Total

Appliances Loads

Duct and Pipe loss

5753 10%

Total HL for per room Total HG per room x 1.3

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

Manu Halita

David DaCosta

SB-12 Package Package A1



House Type 9.32.3.1(2) Type a) or b) appliances only, no solid fuel

Type I or II either electric space heat Type I, II or IV no forced air

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

Any type c) appliance

Part 6 design

Type I except with solid fuel (including fireplace)

Ш

Ш IV

Othe

2

3

4

Χ

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

Page 6 PJ-00204

Project # e-mail dave@gtadesigns.ca JB-04615 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 Mana Hotel David DaCosta Package: Package A1 Project: **Bradford** Model: S42-8C Alt. 2nd FLR 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 2 @ 21.2 cfm 42.4 cfm Township Other Bedrooms 42.4 cfm @ 10.6 cfm Bradford Bathrooms & Kitchen 6 @ 10.6 cfm 63.6 cfm Roll# Permit # Other rooms 10.6 cfm 63.6 cfm Total 212 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 63.6 cfm Address 95.4 Total City **Principal Exhaust Fan Capacity** Tel Fax Make Location Model LifeBreath **RNC155** Base **Installing Contractor** or Equiv. Name 132 cfm Sones Address **Heat Recovery Ventilator** Make LifeBreath City Model RNC155 132 cfm high 80 cfm low Tel Fax Sensible efficiency @ -25 deg C 71% Sensible efficiency @ 0 deg C 75% Note: Installer to balance HRV/ERV to within 10 percent of PVC Combustion Appliances 9.32.3.1(1) **Supplemental Ventilation Capacity** Direct vent (sealed combustion) only a) b) Positive venting induced draft (except fireplaces) Total ventilation capacity 212.0 Natural draft, B-vent or induced draft fireplaces Less principal exhaust capacity 95.4 c) Solid fuel (including fireplaces) REQUIRED supplemental vent. Capacity d) 116.6 cfm No combustion Appliances e) Supplemental Fans 9.32.3.5. **Heating System** Location cfm Model Sones Forced air Ens 50 XB50 0.3 Bath 50 XB50 0.3 Non forced air Electric space heat (if over 10% of heat load) Ens 3 50 XB50 0.3

an fario i i vi noto	ra mano	Broam	or Equiv.
	Designer (Certification	
, ,	hat this ventilatio vith the Ontario B	n system has beel uilding Code.	n designed
Name	David D	aCosta	
Signature	Mane	MACEN	7
HRAI#	5190	BCIN#	32964
Date	April 4	, 2018	
<u> </u>			SIFA

Make

Broan

all fans HVI listed

or Equiv.

Energy Efficiency Design Summary: Prescriptive Method

(Building Code Part 9, Residential)

Page 7

Project # PJ-00204 Layout # JB-04615

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 Princip	pal Authori	ty					
Application No:					Model/Cer	tification Nu	mber				
A. Project Information											
Building number, street name			Rideau	ı 8			Unit numb	per	Lot/Con		
		S42-	BC Alt. 2	2nd FLR							
Municipality Bradford			Postal cod	de	Reg. Plan	number / oth	ner descrip	otion			
B. Prescriptive Compliance [indica	te the bu	ilding cod	e complia	nce packa	ige being e	mployed in	the house	e design]			
SB-12 Prescriptive (input design pa	ckage):			Pack	age A1			Table:	3.1.1.2	<u>A</u>	
C. Project Design Conditions											
Climatic Zone (SB-1):		Heat. E	quip. Ef	ficiency			Spac	e Heating F	uel Sourc	ce	
✓ Zone 1 (< 5000 degree days)		√ ≥ 92	2% AFUE		V	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	& G) to \	Wall Area	а			Other	Building Ch	aracteris	tics	
					☐ Log/F	ost&Beam		ICF Above	Grade	☐ ICF Basement	
Area of Walls = $\frac{385.64}{100}$ m ² or $\frac{4151.0}{100}$	ft²	W,S &	G % =	<u>15%</u>	☐ Slab-	on-ground		Walkout Ba	sement		
					☑ Air C	onditioning		Combo Uni	t		
Area of W, S & G = <u>59.549</u> m ² or <u>641.0</u>	ft²	Utilize V	Vindow	☐ Yes	☐ Air S	ourced Hea	t Pump (A	(SHP)			
		Avera		☑ No	☐ Grou	nd Source I	Heat Pum	p (GSHP)			
D. Building Specifications [provide	values a	nd ratings	of the en	nergy effici	ency comp	onents prop	oosed]				
Energy Efficiency Substitutions											
☐ ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))											
☐ Combined space heating and domestic	water he	ating syst	ems (3.1.	1.2(7) / 3.	1.1.3.(7))						
☐ Airtightness substitution(s)		Table 3.1	I.1.4.B	Required:				Permitted S	Substitution	1:	
Airtightness test required		Table 3.1	1110	Required:	d: Permitted Substitution:						
(Refer to Design Guide Attached)		Table 3. I		Required:	d: Permitted Substitution:						
Building Component	Mini	mum RS	I/R-Valu	es or	Building Component					Efficiency Ratings	
Building Component	N	/laximun	n U-Valu	e¹	Building Component Em					Linciency Radings	
Thermal Insulation	Non	ninal	Effe	ctive	Windov	s & Doo	rs Provid	e U-Value ⁽¹⁾ o	r ER rating	J _	
Ceiling with Attic Space	6	0			Windows	s/Sliding G	lass Doo	rs		1.6	
Ceiling without Attic Space	3	1			Skylights	i				2.8	
Exposed Floor	3	31			Mechar	icals					
Walls Above Grade	22				Heating	Equip.(AFL	JE)			96%	
Basement Walls		20.0ci			HRV Effi	ciency (SR	E% at 0°0	C)		75%	
Slab (all >600mm below grade)	2	X			DHW He	ater (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			Combine	d Heating	System				
(1) U value to be provided in either $W/(m^2 \cdot K)$ or Bt	u/(h·ft·F) k	out not bot	h.								
E. Designer(s) [name(s) & BCIN(s), if	applicable	e, of perso			mation her	ein to subst	antiate tha	at design mee	ts building	code]	
Name				BCIN		Signature		. 1	. 1 1	,	
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 8 PJ-00204

Project # Layout # JB-04615

Package: Package A1 System 1 System: Project: **Bradford** Model: S42-8C Alt. 2nd FLR

					Air	Leaka	ge Ca	alcula	atior	าร					
			Building A	ir Leakage	Heat Loss						Building	Air Leakag	e Heat Ga	in	
		В	LRairh	Vb	HL^T	HLleak	1			В	LRairh	Vb	HG^T	HG Leak	
		0.018	0.319	40445	81.4	18882				0.018	0.079	40445	11	632	
							•							•	
												Lev	vels		
						Table (Section	•				1	2	3	4	
	Level	Level Factor (LF)	Building Air	Level Co Heat			kage He Multiplie				(LF)	(LF)	(LF)	(LF)	
	Level 1	0.5			56		1.0907				1.0	0.6	0.5	0.4	
	Level 2	0.3	18882		102		0.3751					0.4	0.3	0.3	
	Level 3 Level 4	0.2			679 D		0.2264						0.2	0.2 0.1	
	Level 4	U		'	,		0.0000			l				0.1	
						Air Lea	kage He	at Gain				Levels thi	s Dwelling	3	
			.EAK		632		0.0354						3		
	BUILD	ING CONDU	CTIVE HEA	T GAIN	17876										
					Ve	entilatio	n Ca	Icula	tions	S					
			Ventilat	ion Heat Los	s						Ventila	ation Heat G	ain		
Vent			Ventilation	Heat Loss						V	entilation I	Heat Gain		1	Vent
$ \tilde{\gamma} $	С	PVC	HL^T	(1-E) HRV	н	bvent	1		С	PVC	HG^T	HGh	vent	+	$ \stackrel{\sim}{>} $
	1.08	95.4	81.4	0.16		342			1.1	95.4	11		33		
			Cas	e 1			_					Case 1			
		Ventila	tion Heat Los	s (Exhaust o	nly Systems))		Ventilation Heat Gain (Exhaust Only Systems)							
_			Case 1 - Ex	haust Only	1				Case	1 - Exh	aust Only	Mult	iplier	1	_
	Level	LF	HLbvent		nd. HL	Multiplier	1			vent	1133		-	+	e l
ase	Level 1	0.5	HEDVOIL		56	0.08		•	Build		17876	0.	06		Case
\circ	Level 2	0.3	1342		102	0.03		_							
	Level 3	0.2	.0.2		679	0.02	_								
	Level 4	0		')	0.00									
			Cas	e 2								Case 2			
2		Ventilat	tion Heat Los	s (Direct Duc	ted Systems)				Ventila	ition Heat G	ain (Direct D	ucted Syste	ems)	2
Case				Mult	iplier	1		ſ				Mult	iplier	7	ase
á	С	HL^T	(1-E) HRV		.07			•	(2	HG^T		.88	7	98
0	1.08	81.4	0.16	14	.07				1.0	80	11	11	.00		O
			Cas	e 3								Case 3			
3		Ventil	ation Heat Lo	ss (Forced A	ir Systems)					Vent	ilation Heat	Gain (Force	d Air System	ns)	3
				wont	NA:-I	tiplier						Ventill	nat Gain	Multiplia	
Case	_			vent		•	1		HGh	vent	HG*1.3		eat Gain	Multiplier	Case
Ö	Total Vent	ilation Load	13	342	0	0.03			113		1	11	33	0.06	S
		oundation	Conduct	ive Heat	nee Love	11			2250		Watta	7/	270	D4u/b	
	F	oundation	Conduct	ive neath	oss reve	1 1			2250		Watts	/6	579	Btu/h	

Foundation Conductive Heatloss Level 2

Btu/h

Watts

Envelope Air Leakage Calculator

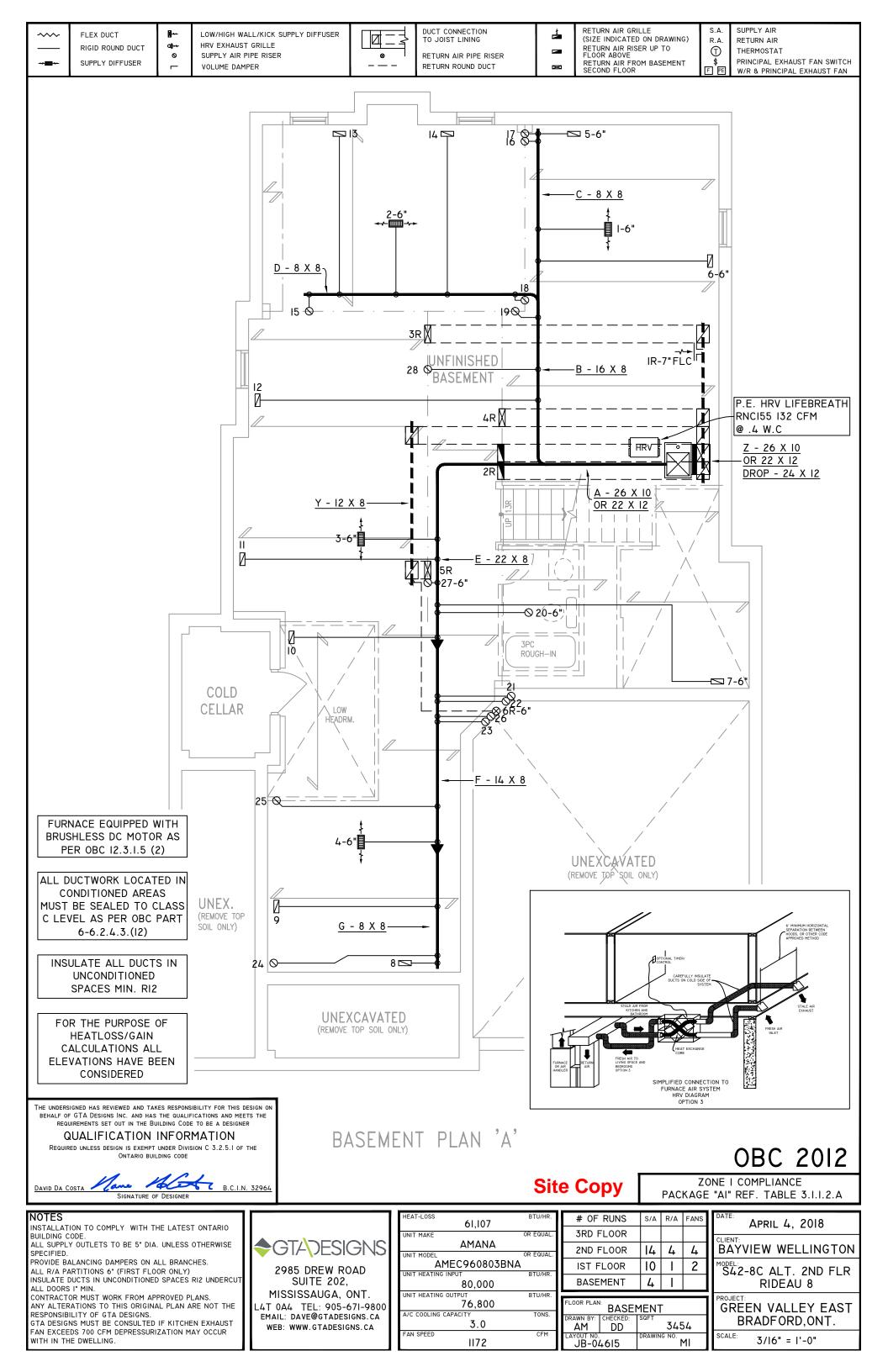
Supplemental tool for CAN/CSA-F280

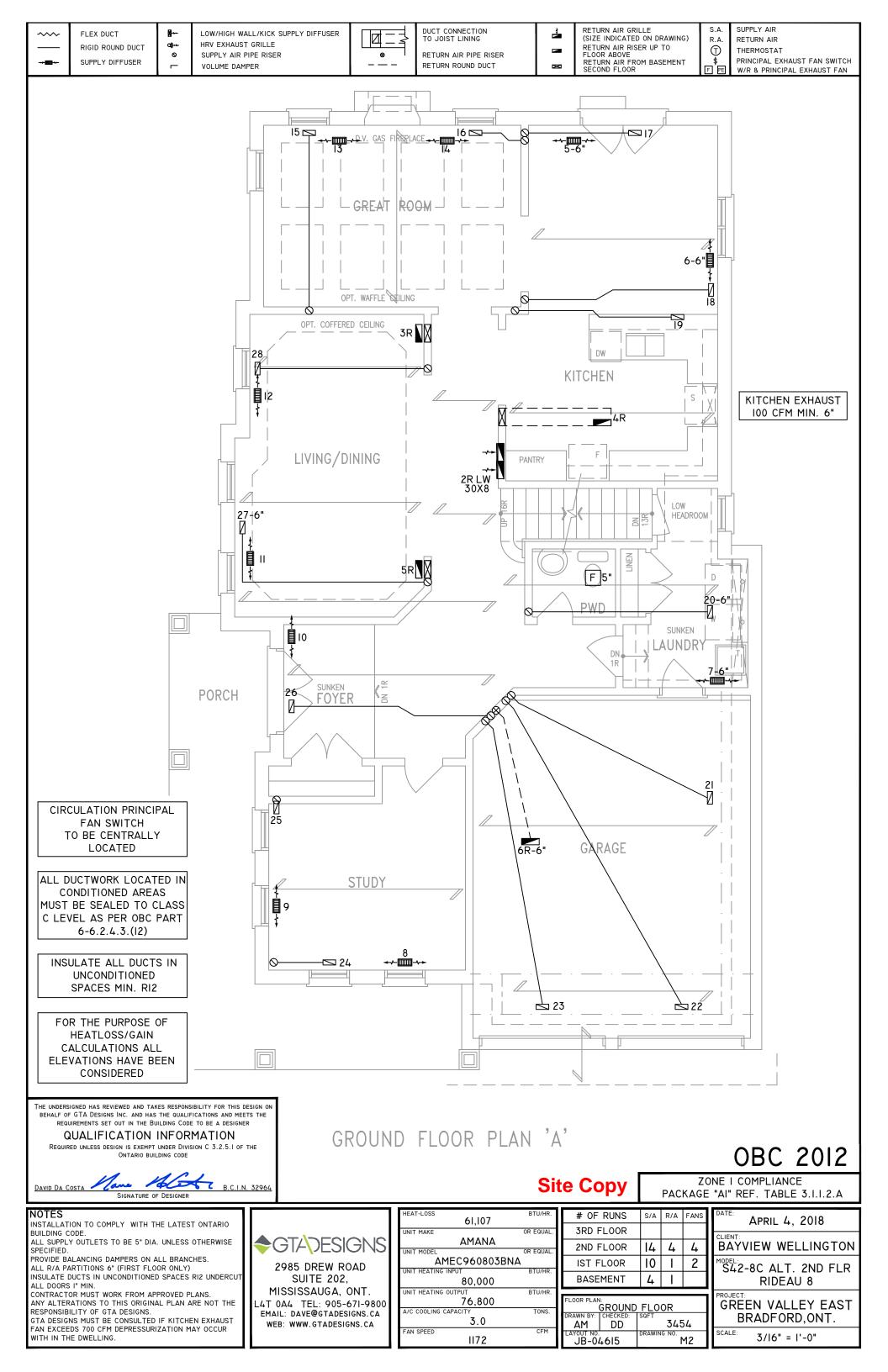
Weather Station	Description
Province:	Ontario
Region:	Bradford ▼
Weather Station Location:	Open flat terrain, grass
Anemometer height (m):	10
Local Shie	lding
Building Site:	Suburban, forest ▼
Walls:	Heavy ▼
Flue:	Heavy ▼
Highest Ceiling Height (m):	6.61
Building Confi	guration
Type:	Detached
Number of Stories:	Two
Foundation:	Full
House Volume (m³):	1145.40
Air Leakage/Ve	entilation
Air Tightness Type:	Present (1961-) (ACH=3.57)
	ELA @ 10 Pa. 322.44 cm²
Custom BDT Data:	3.57 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply: Total Exhaust:
	47.7 47.7
Flue #:	#1 #2 #3 #4
Diameter (mm):	0 0 0 0
Heating Air Leakage Rate (ACH/H):	0.319
Cooling Air Leakage Rate (ACH/H):	0.079

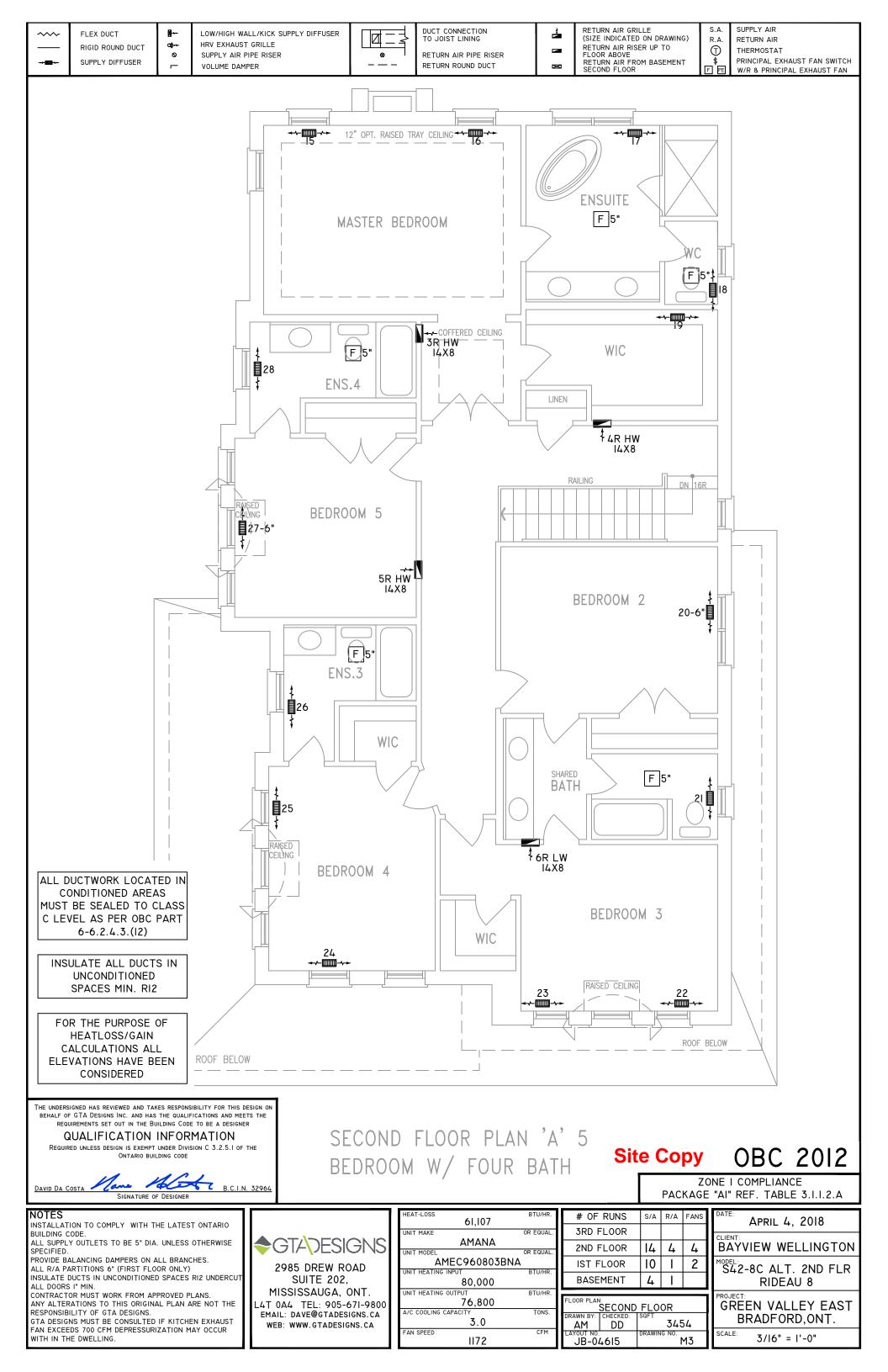
Residential Foundation Thermal Load Calculator

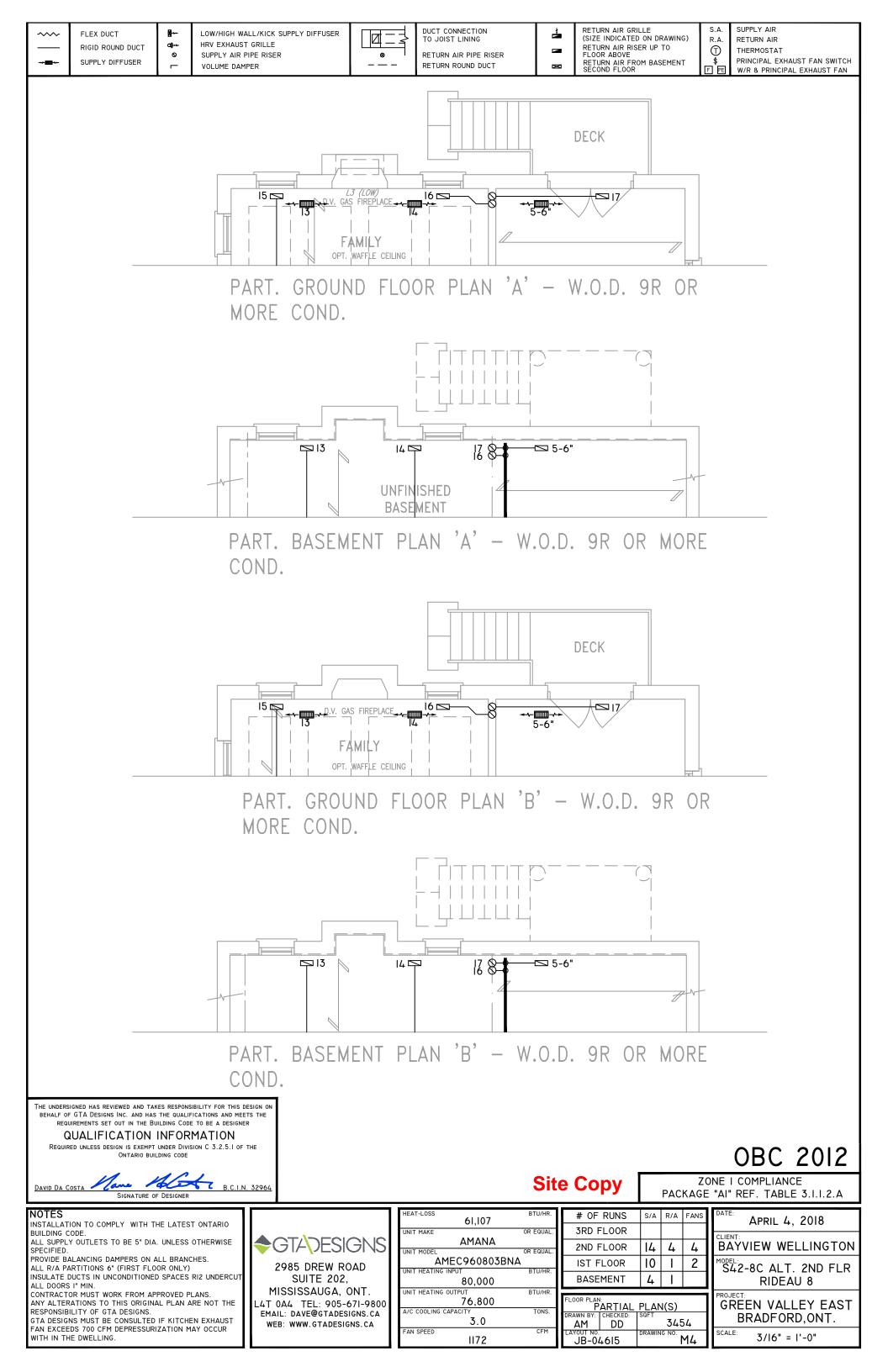
Supplemental tool for CAN/CSA-F280

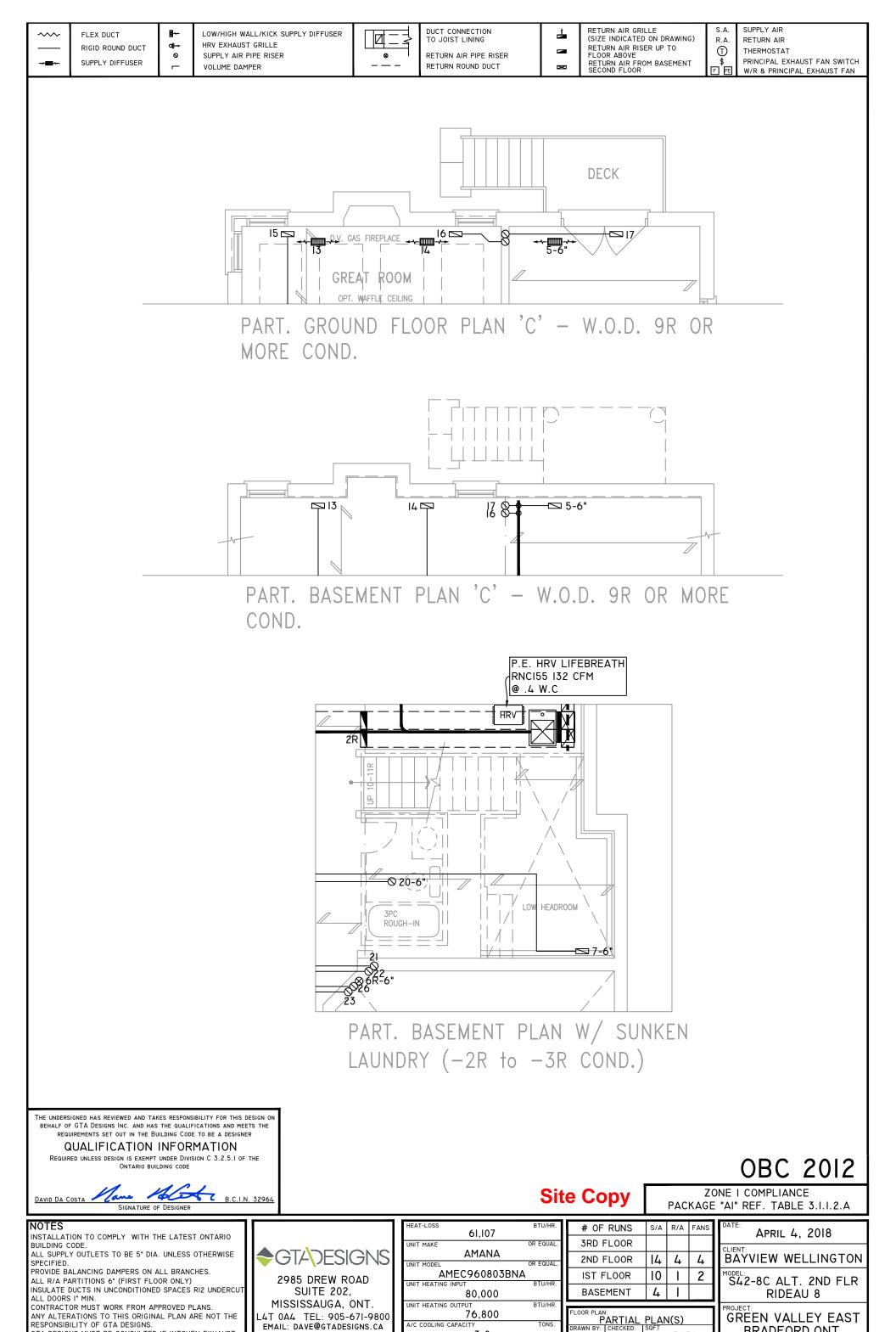
Weat	her Sta	tion Description
Province:		Ontario
Region:		Bradford ▼
	Site D	escription
Soil Conductivity:		High conductivity: moist soil ▼
Water Table:		Normal (7-10 m, 23-33 Ft)
For	undatio	n Dimensions
Floor Length (m):	21.92	
Floor Width (m):	5.97	
Exposed Perimeter (m):	55.78	
Wall Height (m):	2.74	
Depth Below Grade (m):	1.62	Insulation Configuration
Window Area (m²):	2.23	
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):		2250











76,800

3.0

1172

AWN BY:

JB-04615

DD

3454

M5

GREEN VALLEY EAST

BRADFORD, ONT.

3/16" = 1'-0"

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

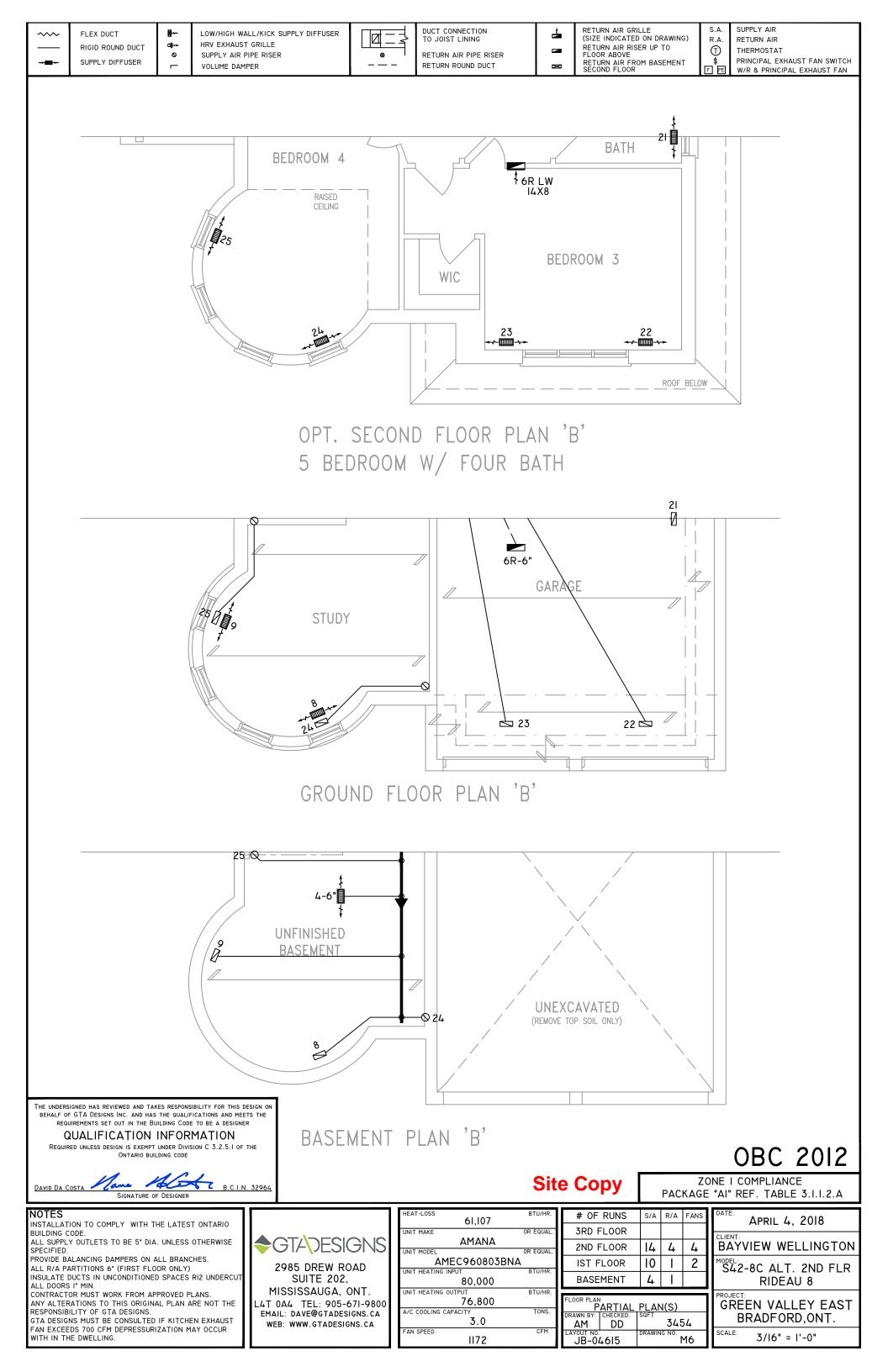
WEB: WWW.GTADESIGNS.CA

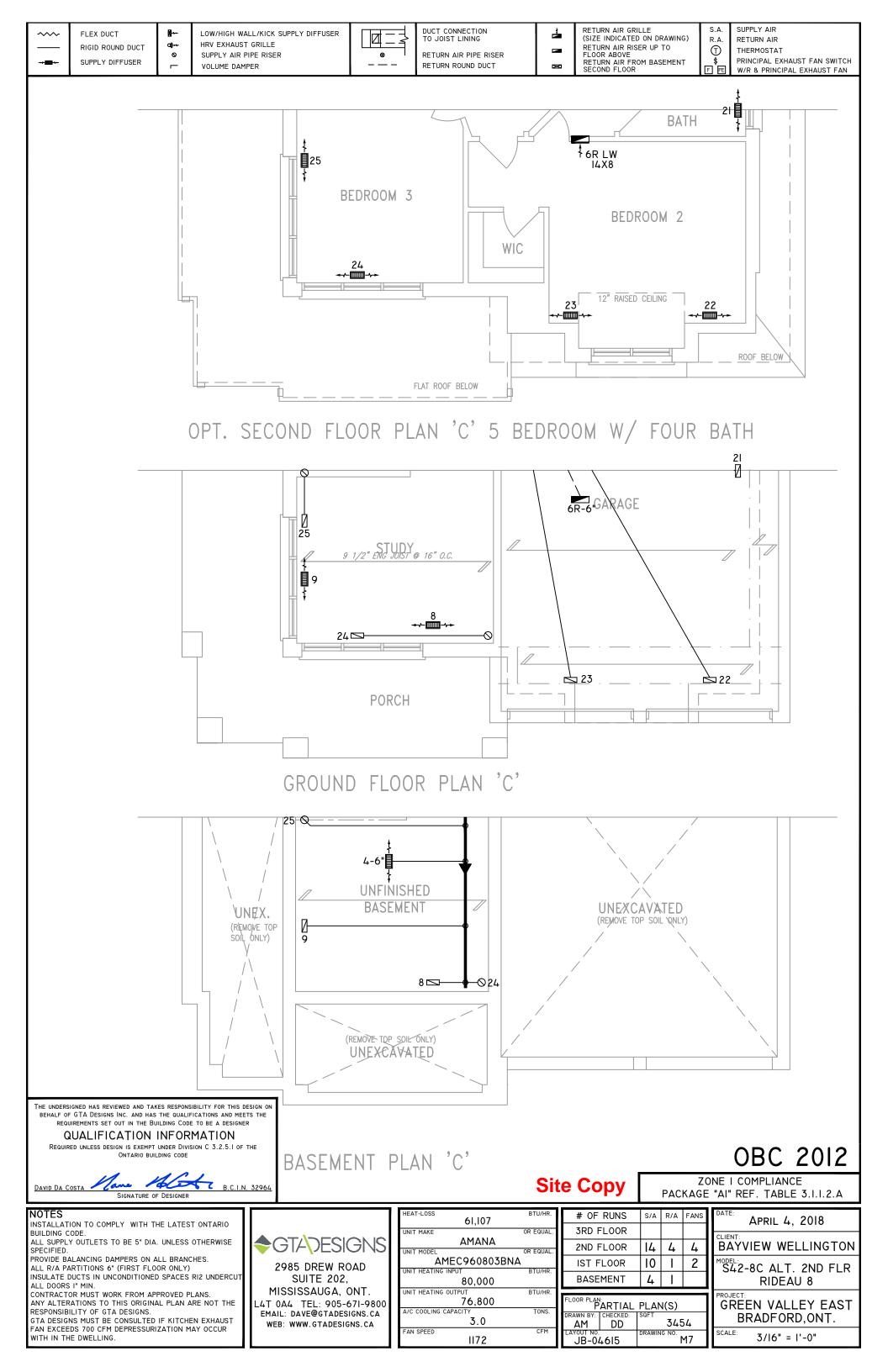
ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE

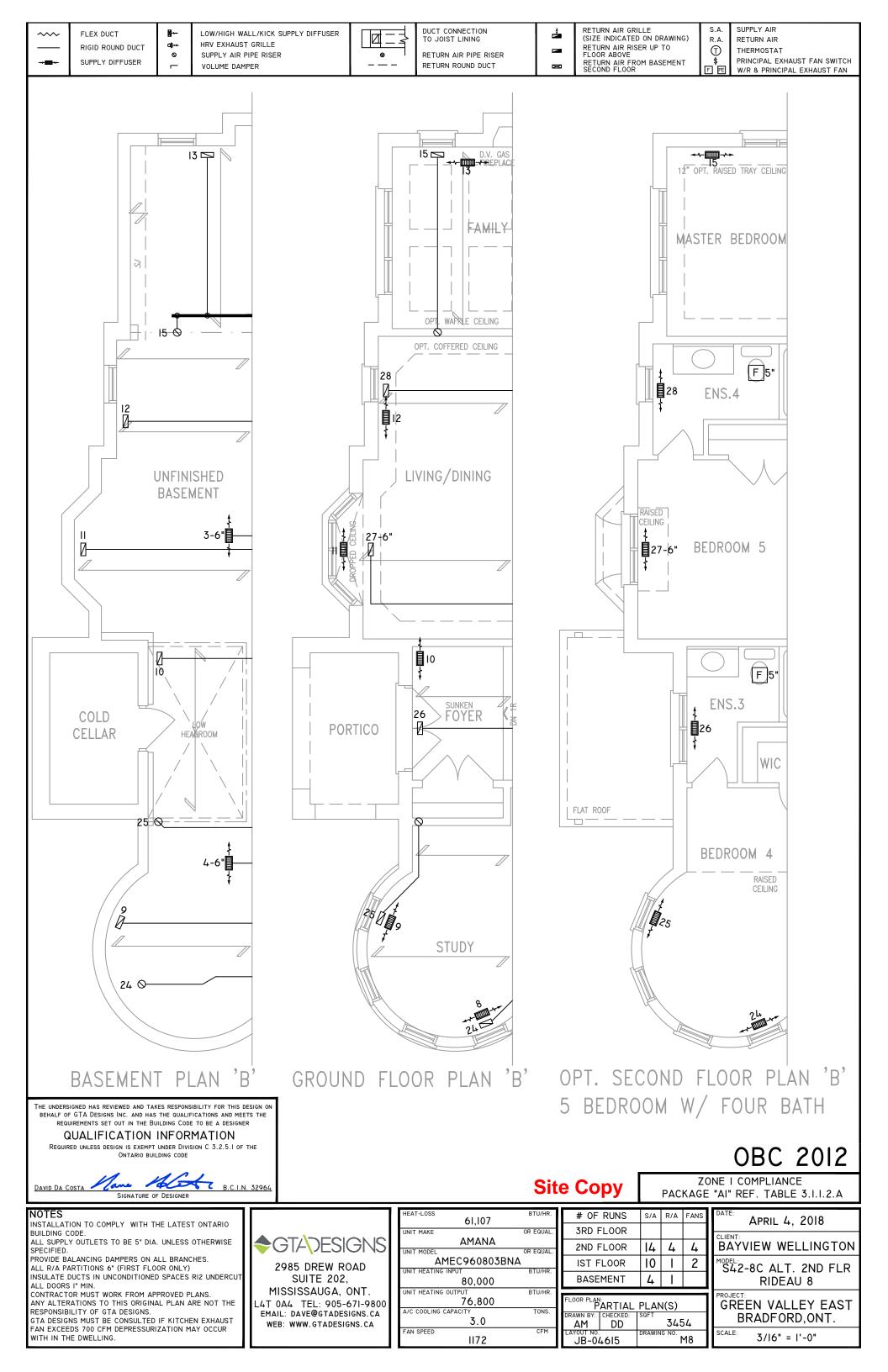
GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR

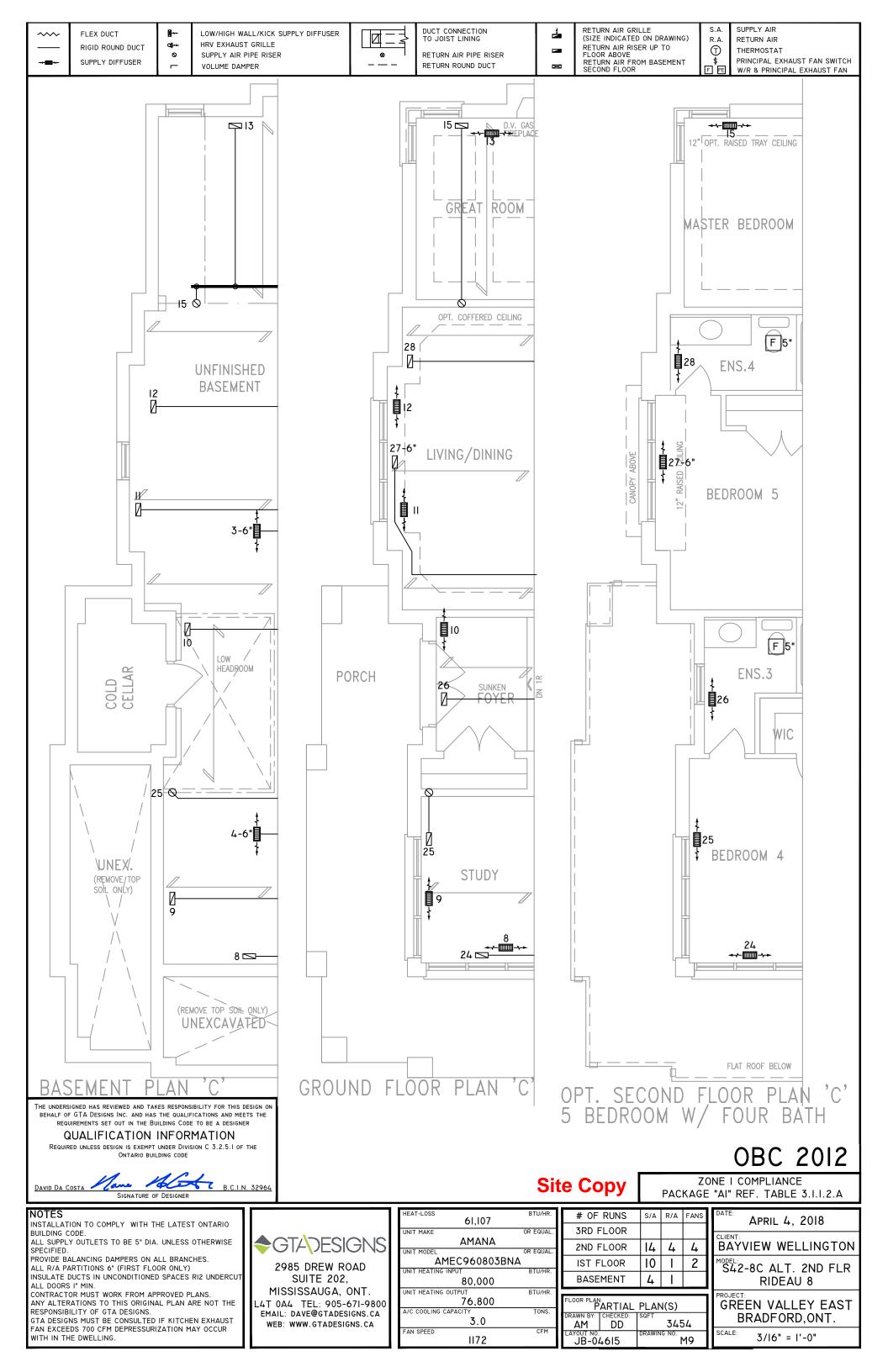
RESPONSIBILITY OF GTA DESIGNS.

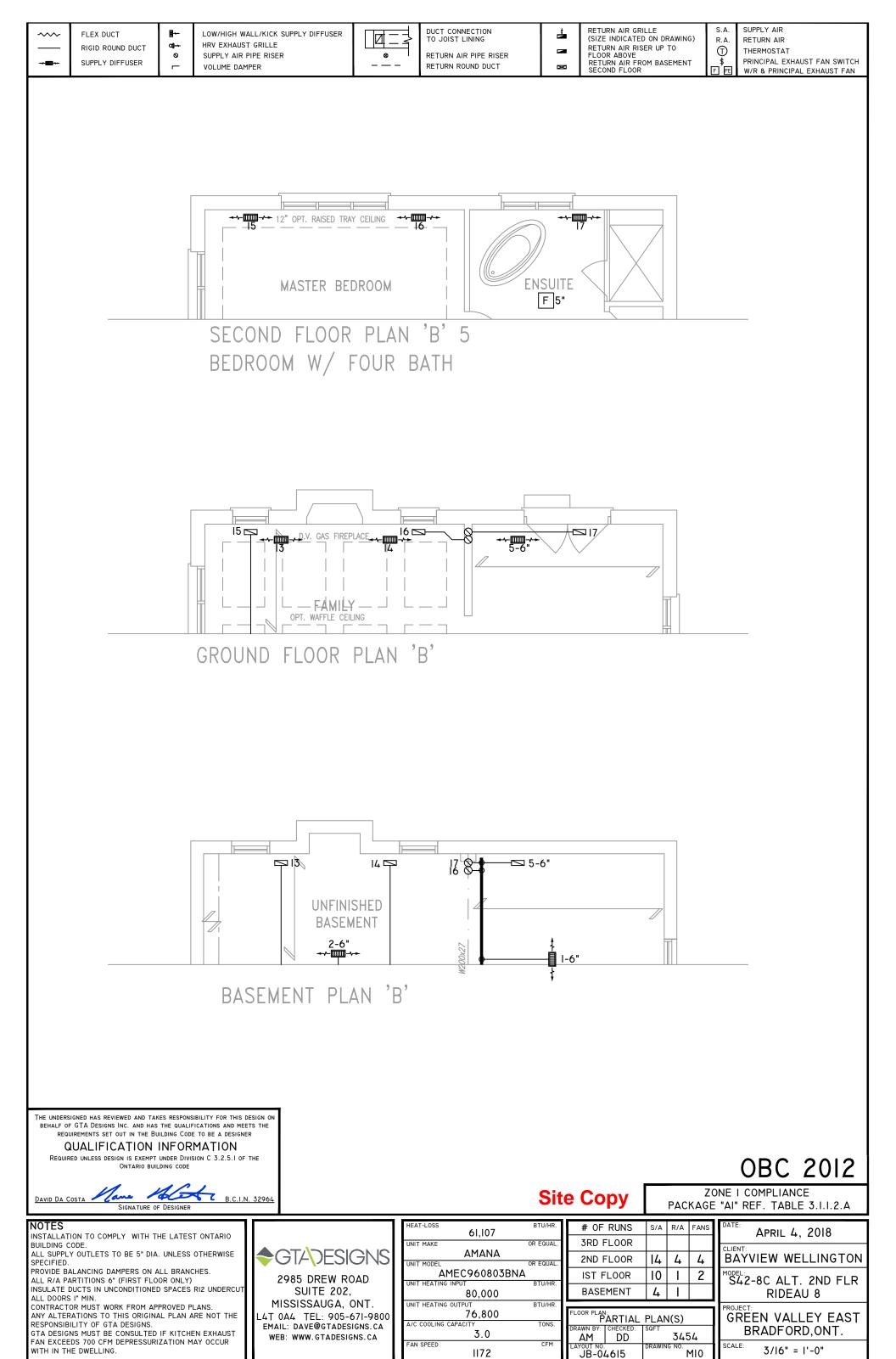
WITH IN THE DWELLING.

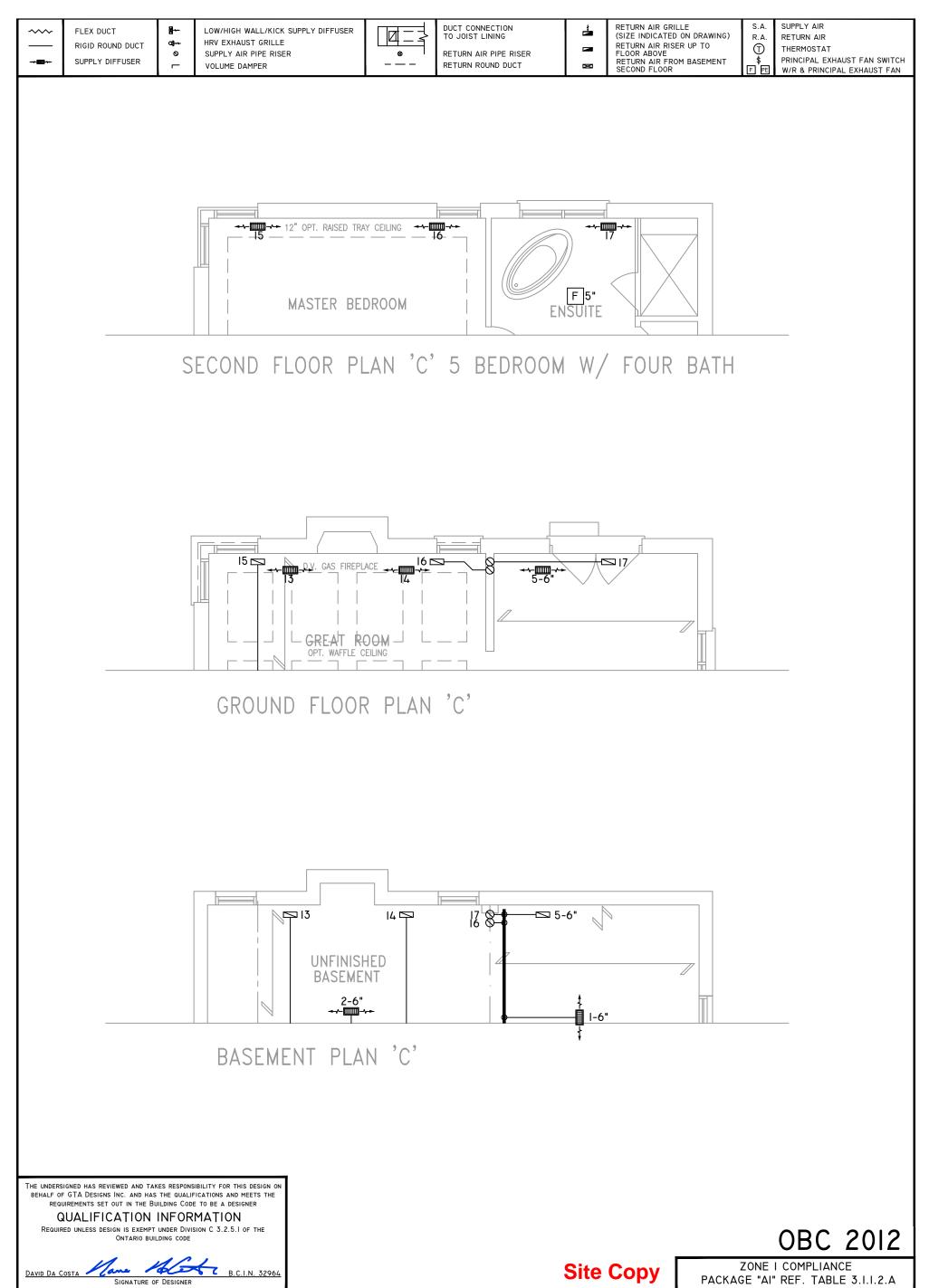












INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE

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 ROA SUITE 202, MISSISSAUGA, ON L4T 0A4 TEL: 905-671 EMAIL: DAVE@GTADESIGN

2985 DREW ROAD SUITE 202,	UNIT HE
MISSISSAUGA, ONT. T 0A4 TEL: 905-671-9800	UNIT HE
MAIL: DAVE@GTADESIGNS.CA WEB: WWW.GTADESIGNS.CA	A/C COO
	FAN SPE

HEAT-LOSS	BTU/HR.
61,107	
UNIT MAKE	OR EQUAL.
AMANA	
UNIT MODEL	OR EQUAL.
AMEC960803BNA	
UNIT HEATING INPUT	BTU/HR.
80,000	
UNIT HEATING OUTPUT	BTU/HR.
76,800	
A/C COOLING CAPACITY	TONS.
3.0	
FAN SPEED	CFM
1172	
·	

DATE:					
DATE:	FANS	R/A	S/A	RUNS	# OF
				LOOR	3RD F
CLIENT:			l		
BAY	4	4	14	FLOOR	2ND F
MODEL:	2	1	10	LOOR	IST F
544	_		<u>. •</u>		
			4	MENT	BASE
PROJEC					
GRE		1/01		ADTIAL	FLOOR PLAN
GKL		1(2)		ARTIAL	
I E	.,	7,5	SQFT	I I	DRAWN BY:
	04	345		DD	AM
SCALE:		G NO.	DRAWIN		LAYOUT NO.

MII

<u>JB-</u>04615

· · · · · · · · · · · · · · · · · · ·
BAYVIEW WELLINGTON
S42-8C ALT. 2ND FLR RIDEAU 8
GREEN VALLEY EAST BRADFORD,ONT.

3/16" = 1'-0"

APRIL 4, 2018