

Schedule 1: Designer Information

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

A. Project Information			
Building number, street name Unit 3803 - Elve A,B and C		Lot: 3802	
Municipality Brampton		Postal code	Plan number/ other description
B. Individual who reviews and takes responsibility for design activities			
Name Doug McCallum		Firm McCallum HVAC Design Inc.	
Street address 2 Dewside Drive Unit 208		Unit no.	Lot/con.
Municipality Brampton	Postal code L6R 3Y5	Province Ontario	E-mail info@mccallumhvac.com
Telephone number (905) 840-8166	Fax number	Cell number (647) 229-0380	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]			
House ☒	HVAC – House	Building Structural	
Small Buildings	Building Services	Plumbing – House	
Large Buildings	Detection, Lighting and Power	Plumbing – All Buildings	
Complex Buildings	Fire Protection	On-site Sewage Systems	
Description of designer's work		Model Certification	
Heating and Cooling Load Calculations Air System Design Residential mechanical ventilation Design Summary Residential System Design per CAN/CSA-F280-12 Residential New Construction - Forced Air		Project #: RP23048	
		Builder	Royal Pine Homes
		Project	Forestside Estates
		Model	Unit 3803 - Elve A,B and C
		SB-12	SB 12 Performance 28
D. Declaration of Designer			
I, <u>Doug McCallum</u> declare that (choose one as appropriate): (print name)			
☒ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4 Division C of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories.			
Individual BCIN: <u>25896</u>			
Firm BCIN: <u>102614</u>			
I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5 of Division C, of the Building Code.			
Individual BCIN: _____			
Basis for exemption from registration: _____			
The design work is exempt from the registration and qualification requirements of the Building Code.			
Basis for exemption from registration and qualification: _____			
I certify that:			
1. The information contained in this schedule is true to the best of my knowledge.			
2. I have submitted this application with the knowledge and consent of the firm.			
<u>2022-06-21</u> Date		 Signature of Designer	

NOTE:

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

2 Dewside Drive Unit 208, Brampton, Ontario L6R 3Y5 Tel: 905-840-8166

e-mail - info@mccallumhvac.com

Heat loss and gain calculation summary sheet		CSA-F280-M12 Standard Form No. 1
These documents issued for the use of <u>Royal Pine Homes</u>		Project No. RP23048
and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red.		
Building Location		
Address (Model): <u>Unit 3803 - Elve A,B and C</u>	Site: <u>Forestside Estates</u>	
Model:	Lot: <u>3802</u>	
City and Province: <u>Brampton</u>	Postal code:	
Calculations based on		
Dimensional information based on:		
Attachment: <u>Detached</u>	Front facing: <u>East</u>	Assumed? Yes
No. of Levels: <u>3</u> Ventilated? Included	Air tightness: <u>-1</u>	Assumed? Yes
Weather location: <u>Brampton</u>	Wind exposure: Shelterd	
HRV? <u>VanEE</u> <u>65H</u>	Internal shading: Light-translucent	Occupants: <u>6</u>
Sensible Eff. at -25C <u>60.0 %</u> Apparent Effect. at -0C <u>75.0 %</u>	Units: Imperial	
Heating design conditions		Cooling design conditions
Outdoor temp: -2.2°F Indoor temp: 72.0°F Mean soil temp: 48.2°F		Outdoor temp: 86.0°F Indoor temp: 72.0°F Latitude: 43.68
Above grade walls		Below grade walls
Style A: As per Selected OBC SB12 SB 1 R 22+1.	Style A: As per Selected OBC SB12 SB 1 R 20ci	
Style B: Existing Walls (When Applicable) R 8.50	Style B:	
Style C:	Style C:	
Style D:	Style D:	
Floors on soil		Ceilings
Style A: As per Selected OBC SB12 SB 12 F	Style A: As per Selected OBC SB12 SB 12 P R 60.0	
Style B:	Style B: As per Selected OBC SB12 SB 12 P R 22.8	
Exposed floors		Style C:
Style A: As per Selected OBC SB12 SB 12 R 31	Doors	
Style B:	Style A: As per Selected OBC SB12 SB 12 R 3.01	
Windows		Style B:
Style A: As per Selected OBC SB12 SB 12 I R 3.57	Style C:	
Style B: Existing Windows (When Applicable) R	Skylights	
Style C:	Style A: As per Selected OBC SB12 SB 12 R 2.04	
Style D:	Style B:	
Attached documents: As per Shedule 1		
Notes: Residential New Construction - Forced Air		
Calculations performed by		
Name: Doug McCallum	Postal code: L6R 3Y5	
Company: McCallum HVAC Design Inc.	Telephone: (905) 840-8166	
Address: 2 Dewside Drive Unit 208	Mobile: (647) 229-0380	
City: Brampton	E-mail: info@mccallumhvac.com	

Project: Forestside Estates

Model: Unit 3803 - Elve A.B and C

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

For systems serving one dwelling unit & conforming to the Ontario Building Code, O.geg 159/93

Location of Installation	
Lot #	Plan #
Township Brampton	
Roll #	Permit #
Address	

Total Ventilation Capacity 9.32.3.3(1)					
Bsmt & Master Bdrm	2	@ 21.2	cfm	42.4	cfm
Other Bedrooms	4	@ 10.6	cfm	42.4	cfm
Bathrooms & Kitchen	5	@ 10.6	cfm	53.0	cfm
Other rooms	5	@ 10.6	cfm	53.0	cfm
Total				190.8	

Builder	
Name	Royal Pine Homes
Address	
City	
Tel	Fax

Principal Ventilation Capacity 9.32.3.4(1)					
Master bedroom	1	@ 31.8	cfm	31.8	cfm
Other bedrooms	4	@ 15.9	cfm	63.6	cfm
Total				95.4	

Installing Contractor	
Name	
Address	
City	
Tel	Fax

Principal Exhaust Fan Capacity			
Make	Model	Location	
VanEE	65H	BASE	
129	cfm	64	Sones

Heat Recovery Ventilator			
Make	VanEE		
Model	65H		
129	cfm high	64	cfm low
Sensible efficiency @ -25 deg C		60	%
Sensible efficiency @ 0 deg C		75	%

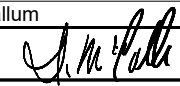
Combustion Appliances 9.32.3.1(1)	
a)	☒ Direct vent (sealed combustion) only
b)	☐ Positive venting induced draft (except fireplaces)
c)	☐ Natural draft, B-vent or induced draft fireplaces
d)	☐ Solid fuel (including fireplaces)
e)	☐ No combustion Appliances

Supplemental Ventilation Capacity	
Total ventilation capacity	190.8
Less principal exhaust capacity	95.4
REQUIRED supplemental vent. Capacity	95.4 cfm

Heating System	
☒	Forced air
☐	Non forced air
☐	Electric space heat (if over 10% of heat load)

Supplemental Fans 9.32.3.5.			
Location	cfm	Model	Sones
B BATH 1	50	770	2.5
GF PWDR	50	770	2.5
SF BATH 1 &	50	770	2.5
SF ENSUITE	50	770	2.5
all fans HVI listed		Make	Broan or Equiv.

House Type 9.32.3.1(2)	
I	☒ Type a) or b) appliances only, no solid fuel
II	☐ Type I except with solid fuel (including fireplace)
III	☐ Any type c) appliance
IV	☐ Type I or II either electric space heat
Other	☐ Type I, II or IV no forced air

Designer Certification	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name	Doug McCallum
Signature	
HRAI #	BCIN # 25896
Date	2022-06-21

System Design Option	
1	☐ Exhaust only / forced air system
2	☐ HRV WITH DUCTING / forced air system
3	☒ HRV simplified connection to forced air system
4	☐ HRV full ducting/not coupled to forced air system
	☐ Part 6 design

Project: Forestside Estates

Model: Unit 3803 - Elve A,B and C

Air Leakage Calculations

Air Leakage Calculations

Building Air Leakage Heat Loss

B	LRairh	Vb	HL^T	HLleak
0.018	0.257	39779.0	74.2	13650.44

Building Air Leakage Heat Gain

B	LRairh	Vb	HG^T	HG Leak
0.018	0.0749344	39779	14.00	751.17

Air Leakage Heat Loss/Gain Multiplier Table (Section 11)

Level	Level Factor (LF)	Building Air Leakage	Level Conductive Heat Loss (HLclevel)	Air Leakage Heat Loss Multiplier
1	0.5	13650	5300	1.28778
2	0.3		11875	0.34485
3	0.2		12693	0.21509
4	0		0	0.00000

HG LEAK		751.17	0.05196
BUILDING CONDUCTIVE HEAT GAIN			

Air Leakage Heat Gain Multiplier

0.05196

Levels

1	2	3	4
(LF)	(LF)	(LF)	(LF)
1.0	0.6	0.5	0.4
	0.4	0.3	0.3
		0.2	0.2
			0.1

Levels this Dwelling

3

Air Leakage Calculations

Ventilation Calculations

Vent	Ventilation Heat Loss					Ventilation Heat Gain				Vent		
	Ventilation Heat Loss					Ventilation Heat Gain						
	C	PVC	HL^T	(1-E) HRV	HLbvent	C	PVC	HG^T	HGbvent			
	1.08	95.4	74.20	0.250	1911.24	1.08	95.4	14.00	1442.448			
Case 1												
Case 1	Ventilation Heat Loss (Exhaust only Systems)					Ventilation Heat Gain (Exhaust Only Systems)				Case 1		
	Case 1 - Exhaust Only					Case 1 - Exhaust Only		Multiplier				
	Level	LF	HLbvent	LVL Cond. HL	Multiplier	HGbvent	1442.448	0.10				
	1	0.5	1911	5300	0.18	Building Cond. HG	14456.00					
	2	0.3		11875	0.05							
	3	0.2		12693	0.03							
	4	0		0	0							
	Case 2											
	Case 2	Ventilation Heat Loss (Direct Ducted Systems)					Ventilation Heat Gain (Direct Ducted Systems)				Case 2	
					Multiplier							
C		HL^T	(1-E) HRV	20.03	C	HG^T	Multiplier					
1.08		74.20	0.25		1.08	14.00	15.12					
Case 3												
Case 3	Ventilation Heat Loss (Forced Air Systems)					Ventilation Heat Gain (Forced Air Systems)				Case 3		
			HLbvent	Multiplier				Vent Heat Gain	Multiplier			
	Total Ventilation Load		1911	0.06		HGbvent	HG*1.3	1442	0.10			
			1442.448			1						

Envelope Air Leakage Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description

Province:	Brampton
Region:	ON
Weather Station Location:	Open flat terrain, grass
Anemometer height (m):	10

Local Shielding

Building Site:	Suburban, forest
Walls:	Heavv
Flue:	Heavv
Highest Ceiling Height (m):	6.40

Building Configuration

Type:	Detached
Number of Stories:	Two
Foundation:	Full
House Volume (m ³):	1127

Air Leakage/Ventilation

Air Tightness Type:	Custom - DBT values		
Custom BDT Data:	ELA @ 10 Pa.	1197.633	
	3.00	ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply:	Total Exhaust:	
	0	0	

Flue Size

Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0

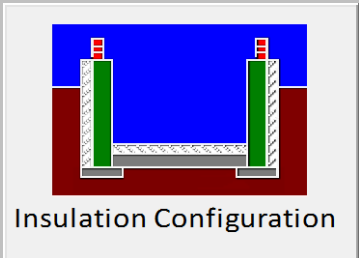
Envelope Air Leakage Rate

Heating Air Leakage Rate (ACH/H):

Cooling Air Leakage Rate (ACH/H):

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Brampton	
Region:	ON	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Deep (>10 m, >33 Ft)	
Foundation Dimensions		
Floor Length (m):	22.1	 Insulation Configuration BCIN_1
Floor Width (m):	5.28	
Exposed Perimeter (m):	54.8	
Wall Height (m):	3.05	
Depth Below Grade (m):	2.44	
Window Area (m ²):	1.30	
Door Area (m ²):	0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	23	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	1468	

SYSTEM A

DESIGN LOAD SPECIFICATIONS				AIR DISTRIBUTION AND PRESSURE			
LEVEL 1 NET LOAD	12464 btu/h			EQUIPMENT EXTERNAL STATIC PRESSURE	0.500"W.C.		
LEVEL 2 NET LOAD	16730 btu/h			ADDITIONAL EQUIPMENT PRESSURE DROP	0.250"W.C.		
LEVEL 3 NET LOAD	16383 btu/h			AVAILABLE DESIGN PRESSURE	0.250"W.C.		
LEVEL 4 NET LOAD	0 btu/h			RETURN BRANCH LONGEST EFFECTIVE LENGTH	300ft		
SYSTEM HEATLOSS	45577 btu/h			R/A PLENUM PRESSURE	0.120"W.C.		
SYSTEM HEATGAIN	30426 btu/h			S/A PLENUM PRESSURE	0.130"W.C.		
BUILDING VOLUME Vb	39779.00 ft3			HEATING AIR FLOW PROPORTIONING FACTOR	0.0251 cfm/btuh		
VENTILATION LOAD	1911.00 btu/h			COOLING AIR FLOW PROPORTIONING FACTOR	0.0376 cfm/btuh		
VENTILATION PVC	95.40 cfm			R/A TEMP. 70°F	S/A TEMP. 121.75°F	DIFFUSER LOSS 0.01"W.C.	
FURNACE/AIR HANDLER DATA				BLOWER DATA			
MAKE	LENNOX			HEATING CHECK	1143.00 CFM		
MODEL	EL296UH070XE36B			SELECTED CFM	1145.00 CFM		
HIGH INPUT btu/h	66000	LOW INPUT btu/h	0	COOLING CHECK	1146.00 CFM		
HIGH OUTPUT btu/h	64000	LOW OUTPUT btu/h	0	COOLING AIR FLOW RATE	1145.00 CFM		
E.S.P.	0.50			BLOWER TYPE ECM (BRUSHLESS DC OBC 12.3.1.5.(2))			
WATER TEMP.				A/C UNIT DATA			
AFUE	96.97%			MAKER	3.0 TON		
AUX. HEAT	0			CONDENSER	3.0 TON		
SB-12 PACKAGE	SB 12 Performance 28			COIL	3.0 TON		
TEMP. RISE	51.75°F						

SUPPLY BRANCH AND GRILL SIZING

OUTLET #	ROOM USE	BTU/H OUTLET	HEATING AIR FLOW RATE CFM	COOLING AIR FLOW RATE CFM	DUCT DESIGN PRESSURE	ACTUAL DUCT LENGTH	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	DUCT SIZE ROUND	OUTLET SIZE	TRUNK
24	UNF. BSMT	3116	78	40	0.13	38	125	163	0.07	6.0	4x10	B1
25	UNF. BSMT	3116	78	40	0.13	40	115	155	0.08	6.0	4x10	B1
26	UNF. BSMT	3116	78	40	0.13	45	175	220	0.05	6.0	4x10	C1
27	UNF. BSMT	3116	78	40	0.13	22	165	187	0.06	6.0	4x10	E1
1	M ENS	1819	46	58	0.13	44	165	209	0.06	5.0	4x10	B1
2	PRIM BED	1461	37	54	0.13	35	155	190	0.06	6.0	4x10	A1
3	PRIM BED	1461	37	54	0.13	43	135	178	0.07	6.0	4x10	A1
5	S BATH 1	866	22	10	0.13	47	175	222	0.05	5	4x10	E1
11	SHD BATH 2	546	14	15	0.13	29	155	184	0.07	5	4x10	E1
13	M WIC	433	11	6	0.13	27	175	202	0.06	5	4x10	B1
14	KITC/ BREAK	1849	46	85	0.13	39	155	194	0.06	6.0	4x10	A1
15	KITC/ BREAK	1849	46	85	0.13	32	145	177	0.07	6.0	4x10	A1
16	FAM ROOM	2598	65	85	0.13	42	165	207	0.06	6.0	4x10	A1
17	DEN	1131	28	36	0.13	23	185	208	0.06	5.0	4x10	B1
18	LAUN	846	21	37	0.13	36	145	181	0.07	5.0	4x10	E1
22	PWDR	225	6	2	0.13	29	175	204	0.06	5	4x10	D1
23	DINNING	2092	53	69	0.13	27	175	202	0.06	6.0	4x10	E1
8	WIC 4	831	21	30	0.13	43	155	198	0.06	5	4x10	D1
20	FOYER	2831	71	24	0.13	43	165	208	0.06	6.0	4x10	C1
21	SIDE ENT	2416	61	18	0.13	34	165	199	0.06	6.0	4x10	E1
19	MUD	894	22	7	0.13	28	135	163	0.07	5	4x10	E1
12	BED 5	1361	34	50	0.13	45	155	200	0.06	6.0	4x10	B1
6	BED 3	1760	44	56	0.13	52	175	227	0.05	6.0	4x10	D1
7	BED 3	1760	44	56	0.13	47	165	212	0.06	6.0	4x10	D1

4	BED 2	1426	36	37	0.13	7	120	127	0.09	6.0	4x10	PL
9	BED 4	1330	33	56	0.13	60	175	235	0.05	6.0	4x10	C1
10	BED 4	1330	33	56	0.13	54	165	219	0.05	6.0	4x10	C1

RETURN BRANCH AND GRILL SIZING

R/A INLET #	INLET AIR VOLUME CFM	DUCT DESIGN PRESSU RE	ACTUAL DUCT LENGTH	EQUIVAL ENT LENGTH	TOTAL EFFECTIV E LENGTH	ADJUSTE D PRESSU RE	DUCT SIZE ROUND	INLET SIZE	TRUNK
1R	140	0.12	28	120	148	0.07	7.5	14x8	Z1
2R	140	0.12	38	120	158	0.06	7.5	14x8	Y1
3R	75	0.12	49	130	179	0.06	6	14x8	X1
4R	70	0.12	55	160	215	0.05	6	14x8	X1
5R	70	0.12	35	160	195	0.05	6	14x8	Y1
6R	390	0.12	26	160	186	0.05	11.5	30x8	Z1
7R	140	0.12	20	200	220	0.05	8	14x8	Z1
8R	120	0.12	21	120	141	0.07	7	FLC	Y1

RETURN TRUNK DUCT SIZING

TRUNK	CFM	PRESSU RE	ROUND	RECT. SIZE	SIZE ALTERNA TE
DROP	1145	0.05		0	
Z1	1145	0.05	17	26x10	26x10
Y1	475	0.05	12	16x8	22x6
X1	145	0.05	8	8x8	10x6

SUPPLY TRUNK DUCT SIZING

TRUNK	CFM	PRESSU RE	ROUND	RECT. SIZE	SIZE ALTERNA TE
A1	231	0.06	9	10x8	
B1	506	0.06	12	16x8	22x6
C1	215	0.05	9	10x8	
D1	330	0.05	10.5	12x8	16x6
E1	601	0.05	13.5	20x8	16x10
F1	1107	0.05	17	26x10	26x10

**HEATLOSS/GAIN
CALCULATIONS
CSA-F280-12**

ADDRESS/MODEL: Unit 3803 - Elve A,B and CLIENT: Royal Pine Homes
C
PROJECT #: RP23048
COMPLIANCE PACKAGE: SB 12
GTA: 3212
LOT: 3802
SITE: Forestside Estates



WEATHER DATA [Brampton] [43.68] [-2.20] [86.00] [51.80] [48.20] [74.20] [14.00]

LEVEL 1																									
UNF. BSMT		TOTALS H.L.: 12464 btuh						H.G.: 4285 btuh				AREA: 1259 ft2		Above Grade: 2		GROSS EXP. WALL NEW 360 ft EXIST 0 ft									
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT								
	NEW: 180 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2						
Eff. R-V	21.12		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03						
LOSS	3.5	0 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh					
GAIN	0.7	229 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh					
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS								
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 7.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 7.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2						
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99						
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	145 btuh	37.3	0 btuh	0	0	0	0	20.8	145 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh					
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	197 btuh	14.9	0 btuh	0	0	0	0	21.7	152 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh					
FUND. CONDUCTIVE HEATLOSS				5009 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE				LOSS	5300 btuh		LOSS	1.2878	6825 btuh		LOSS	0.0000	0 btuh	LOSS	0.1	339.1 btuh		239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE				GAIN	579 btuh		GAIN	0.0520	30 btuh		GAIN	0.0000	0 btuh	GAIN	0.10	58 btuh		0	0 btuh	50%	2629 btuh		GAIN	0%	0 btuh
LEVEL 2																									
KITC/BREAK		TOTALS H.L.: 3697 btuh						H.G.: 4501 btuh				AREA: 255 ft2		C.Height: 10		GROSS EXP. WALL NEW 320 ft EXIST 0 ft									
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT								
	NEW: 32 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2						
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03						
LOSS	4.0	961 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh					
GAIN	0.8	181 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh					
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS								
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 80.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2						
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99						
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	1663 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh					
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	2254 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh					
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE				LOSS	2624 btuh		LOSS	0.3449	905 btuh		LOSS	0.0000	0 btuh	LOSS	0.1	167.9 btuh		239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE				GAIN	2435 btuh		GAIN	0.0520	127 btuh		GAIN	0.0000	0 btuh	GAIN	0.10	243 btuh		0	0 btuh	13%	657 btuh		GAIN	0%	0 btuh
FAM ROOM		TOTALS H.L.: 2598 btuh						H.G.: 2246 btuh				AREA: 239 ft2		C.Height: 10		GROSS EXP. WALL NEW 360 ft EXIST 0 ft									
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT								
	NEW: 36 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2						
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03						
LOSS	4.0	1345 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh					
GAIN	0.8	254 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh					
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS								
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 24.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2						
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99						
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	499 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh					
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	676 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh					
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE				LOSS	1844 btuh		LOSS	0.3449	636 btuh		LOSS	0.0000	0 btuh	LOSS	0.1	118.0 btuh		239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE				GAIN	930 btuh		GAIN	0.0520	48 btuh		GAIN	0.0000	0 btuh	GAIN	0.10	93 btuh		0	0 btuh	13%	657 btuh		GAIN	0%	0 btuh
DEN		TOTALS H.L.: 1131 btuh						H.G.: 953 btuh				AREA: 104 ft2		C.Height: 10		GROSS EXP. WALL NEW 100 ft EXIST 0 ft									
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT								
	NEW: 10 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2						
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03						
LOSS	4.0	304 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh					
GAIN	0.8	57 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh					
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS								
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 24 ft2		EXIST: 0 ft2						
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99						
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	499 btuh	37.3	0 btuh					
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	282 btuh	14.9	0 btuh					
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE				LOSS	803 btuh		LOSS	0.3449	277 btuh		LOSS	0.0000	0 btuh	LOSS	0.1	51.4 btuh		239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE				GAIN	339 btuh		GAIN	0.0520	18 btuh		GAIN	0.0000	0 btuh	GAIN	0.10	34 btuh		0	0 btuh	7%	342 btuh		GAIN	0%	0 btuh
LAUN		TOTALS H.L.: 846 btuh						H.G.: 989 btuh				AREA: 43 ft2		C.Height: 10		GROSS EXP. WALL NEW 150 ft EXIST 0 ft									
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT								
	NEW: 15 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2						
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03						

**HEATLOSS/GAIN
CALCULATIONS
CSA-F280-12**

ADDRESS/MODEL: Unit 3803 - Elve A,B and CLIENT: Royal Pine Homes
C
PROJECT #: RP23048
COMPLIANCE PACKAGE: SB 12
GTA: 3212
LOT: 3802
SITE: Forestside Estates



LOSS	4.0	601 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	113 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2		
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99		
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh	
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh	
FUND. CONDUCTIVE HEATLOSS				0 btuh		AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3			H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	601 btuh	LOSS	0.3449	207 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	38.5 btuh	239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE			GAIN	113 btuh	GAIN	0.0520	6 btuh	GAIN	0.0000	0 btuh	GAIN	0.10	11 btuh	0	0 btuh	12%	631 btuh	GAIN	0%	0 btuh	
PWDR				TOTALS H.L.: 225 btuh				H.G.: 46 btuh				AREA: 27 ft2		C.Height: 10		GROSS EXP. WALL		NEW 40 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT				
	NEW: 4 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03		
LOSS	4.0	160 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	30 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2		
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99		
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh	
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh	
FUND. CONDUCTIVE HEATLOSS				0 btuh		AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3			H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	160 btuh	LOSS	0.3449	55 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	10.2 btuh	239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE			GAIN	30 btuh	GAIN	0.0520	2 btuh	GAIN	0.0000	0 btuh	GAIN	0.10	3 btuh	0	0 btuh	0%	0 btuh	GAIN	0%	0 btuh	
DINNING				TOTALS H.L.: 2092 btuh				H.G.: 1824 btuh				AREA: 309 ft2		C.Height: 10		GROSS EXP. WALL		NEW 220 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT				
	NEW: 22 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03		
LOSS	4.0	737 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	139 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 36.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2		
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99		
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	748 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh	
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	782 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh	
FUND. CONDUCTIVE HEATLOSS				0 btuh		AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3			H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	1485 btuh	LOSS	0.3449	512 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	95.0 btuh	239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE			GAIN	921 btuh	GAIN	0.0520	48 btuh	GAIN	0.0000	0 btuh	GAIN	0.10	92 btuh	0	0 btuh	7%	342 btuh	GAIN	0%	0 btuh	
FOYER				TOTALS H.L.: 2831 btuh				H.G.: 638 btuh				AREA: 83 ft2		C.Height: 10		GROSS EXP. WALL		NEW 260 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT				
	NEW: 26 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03		
LOSS	4.0	849 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	160 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 42.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 6 ft2		EXIST: 0 ft2		
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99		
LOSS	24.7	1035 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	125 btuh	37.3	0 btuh	
GAIN	4.7	195 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	70 btuh	14.9	0 btuh	
FUND. CONDUCTIVE HEATLOSS				0 btuh		AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3			H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	2009 btuh	LOSS	0.3449	693 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	128.6 btuh	239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE			GAIN	426 btuh	GAIN	0.0520	22 btuh	GAIN	0.0000	0 btuh	GAIN	0.10	43 btuh	0	0 btuh	0%	0 btuh	GAIN	0%	0 btuh	
SIDE ENT				TOTALS H.L.: 2416 btuh				H.G.: 485 btuh				AREA: 170 ft2		C.Height: 10		GROSS EXP. WALL		NEW 320 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT				
	NEW: 32 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03		
LOSS	4.0	1197 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	226 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 21.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2		
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99		
LOSS	24.7	518 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh	
GAIN	4.7	98 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh	

**HEATLOSS/GAIN
CALCULATIONS
CSA-F280-12**

ADDRESS/MODEL: Unit 3803 - Elve A,B and CLIENT: Royal Pine Homes
C
GTA: 3212
PROJECT #: RP23048
LOT: 3802
COMPLIANCE PACKAGE: SB 12
SITE: Forestside Estates



FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE				APP. LOAD				DUCT PIPE L.											
TOTAL CONDUCTIVE				LOSS	1715 btuh				LOSS	0.3449	591 btuh				LOSS	0.0000	0 btuh				LOSS	0.1	109.7 btuh				239		5258		LOSS	0%	0 btuh						
TOTAL CONDUCTIVE				GAIN	324 btuh				GAIN	0.0520	17 btuh				GAIN	0.0000	0 btuh				GAIN	0.10	32 btuh				0	0 btuh		0%	0 btuh		GAIN	0%	0 btuh				
MUD		TOTALS H.L.: 894 btuh								H.G.: 179 btuh				AREA: 30 ft2				C.Height: 10				GROSS EXP. WALL				NEW 50 ft				EXIST 0 ft									
EXPPOSED WALLS				EXPPOSED CEILING W/ATTIC				EXPPOSED CEILING NO ATTIC				EXPPOSED FLOORS				SKYLIGHT																							
NEW: 5 ft				EXIST: 0 ft				NEW: 0				EXIST: 0				NEW: 0				EXIST: 0				NEW: 0 ft2				EXIST: 0 ft2				NEW: 0.0 ft2				EXIST: 0.0 ft2			
Eff. R-V	18.53			8.50			59.22			22.86			27.65			22.05			29.80			22.05			2.04			2.03											
LOSS	4.0	116 btuh		8.7	0 btuh		1.3	0 btuh		3.2	0 btuh		2.7	0 btuh		3.4	0 btuh		2.5	0 btuh		3.4	0 btuh		36.4	0 btuh		37	0 btuh										
GAIN	0.8	22 btuh		1.6	0 btuh		0.7	0 btuh		1.8	0 btuh		1.5	0 btuh		1.9	0 btuh		0.3	0 btuh		0.4	0 btuh		89.7	0 btuh		14.7	0 btuh										
DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS																							
NEW: 21.0 ft2				EXIST: 0.0 ft2				NEW: 0.0 ft2				EXIST: 0.0 ft2				NEW:				EXIST:				NEW: 0.0 ft2				EXIST: 0.0 ft2				NEW: 0 ft2				EXIST: 0 ft2			
Eff. R-V	3.01			3.01			3.57			1.99			0			0			3.57			1.99			3.57			1.99											
LOSS	24.7	518 btuh		24.7	0 btuh		20.8	0 btuh		37.3	0 btuh		0	0		0	0		20.8	0 btuh		37.3	0 btuh		20.8	0 btuh		37.3	0 btuh										
GAIN	4.7	98 btuh		4.7	0 btuh		28.2	0 btuh		14.9	0 btuh		0	0		0	0		21.7	0 btuh		14.9	0 btuh		11.7	0 btuh		14.9	0 btuh										
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE				APP. LOAD				DUCT PIPE L.											
TOTAL CONDUCTIVE				LOSS	634 btuh				LOSS	0.3449	219 btuh				LOSS	0.0000	0 btuh				LOSS	0.1	40.6 btuh				239		5258		LOSS	0%	0 btuh						
TOTAL CONDUCTIVE				GAIN	120 btuh				GAIN	0.0520	6 btuh				GAIN	0.0000	0 btuh				GAIN	0.10	12 btuh				0	0 btuh		0%	0 btuh		GAIN	0%	0 btuh				
LEVEL 3																																							
M ENS		TOTALS H.L.: 1819 btuh								H.G.: 1530 btuh				AREA: 132 ft2				C.Height: 8				GROSS EXP. WALL				NEW 184 ft				EXIST 0 ft									
EXPPOSED WALLS				EXPPOSED CEILING W/ATTIC				EXPPOSED CEILING NO ATTIC				EXPPOSED FLOORS				SKYLIGHT																							
NEW: 23 ft				EXIST: 0 ft				NEW: 132 ft2				EXIST: 0				NEW: 0				EXIST: 0				NEW: 0 ft2				EXIST: 0 ft2				NEW: 0.0 ft2				EXIST: 0.0 ft2			
Eff. R-V	18.53			8.50			59.22			22.86			27.65			22.05			29.80			22.05			2.04			2.03											
LOSS	4.0	613 btuh		8.7	0 btuh		1.3	165 btuh		3.2	0 btuh		2.7	0 btuh		3.4	0 btuh		2.5	0 btuh		3.4	0 btuh		36.4	0 btuh		37	0 btuh										
GAIN	0.8	116 btuh		1.6	0 btuh		0.7	91 btuh		1.8	0 btuh		1.5	0 btuh		1.9	0 btuh		0.3	0 btuh		0.4	0 btuh		89.7	0 btuh		14.7	0 btuh										
DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS																							
NEW: 0.0 ft2				EXIST: 0.0 ft2				NEW: 22.0 ft2				EXIST: 0.0 ft2				NEW:				EXIST:				NEW: 9.0 ft2				EXIST: 0.0 ft2				NEW: 0 ft2				EXIST: 0 ft2			
Eff. R-V	3.01			3.01			3.57			1.99			0			0			3.57			1.99			3.57			1.99											
LOSS	24.7	0 btuh		24.7	0 btuh		20.8	457 btuh		37.3	0 btuh		0	0		0	0		20.8	187 btuh		37.3	0 btuh		20.8	0 btuh		37.3	0 btuh										
GAIN	4.7	0 btuh		4.7	0 btuh		28.2	620 btuh		14.9	0 btuh		0	0		0	0		21.7	195 btuh		14.9	0 btuh		11.7	0 btuh		14.9	0 btuh										
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE				APP. LOAD				DUCT PIPE L.											
TOTAL CONDUCTIVE				LOSS	1422 btuh				LOSS	0.2151	306 btuh				LOSS	0.0000	0 btuh				LOSS	0.1	91.0 btuh				239		5258		LOSS	0%	0 btuh						
TOTAL CONDUCTIVE				GAIN	1022 btuh				GAIN	0.0520	53 btuh				GAIN	0.0000	0 btuh				GAIN	0.10	102 btuh				0	0 btuh		0%	0 btuh		GAIN	0%	0 btuh				
PRIM BED		TOTALS H.L.: 2922 btuh								H.G.: 2881 btuh				AREA: 343 ft2				C.Height: 8				GROSS EXP. WALL				NEW 304 ft				EXIST 0 ft									
EXPPOSED WALLS				EXPPOSED CEILING W/ATTIC				EXPPOSED CEILING NO ATTIC				EXPPOSED FLOORS				SKYLIGHT																							
NEW: 38 ft				EXIST: 0 ft				NEW: 343 ft2				EXIST: 0				NEW: 0				EXIST: 0				NEW: 0 ft2				EXIST: 0 ft2				NEW: 0.0 ft2				EXIST: 0.0 ft2			
Eff. R-V	18.53			8.50			59.22			22.86			27.65			22.05			29.80			22.05			2.04			2.03											
LOSS	4.0	1065 btuh		8.7	0 btuh		1.3	430 btuh		3.2	0 btuh		2.7	0 btuh		3.4	0 btuh		2.5	0 btuh		3.4	0 btuh		36.4	0 btuh		37	0 btuh										
GAIN	0.8	201 btuh		1.6	0 btuh		0.7	237 btuh		1.8	0 btuh		1.5	0 btuh		1.9	0 btuh		0.3	0 btuh		0.4	0 btuh		89.7	0 btuh		14.7	0 btuh										
DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS																							
NEW: 0.0 ft2				EXIST: 0.0 ft2				NEW: 38.0 ft2				EXIST: 0.0 ft2				NEW:				EXIST:				NEW: 0.0 ft2				EXIST: 0.0 ft2				NEW: 0 ft2				EXIST: 0 ft2			
Eff. R-V	3.01			3.01			3.57			1.99			0			0			3.57			1.99			3.57			1.99											
LOSS	24.7	0 btuh		24.7	0 btuh		20.8	790 btuh		37.3	0 btuh		0	0		0	0		20.8	0 btuh		37.3	0 btuh		20.8	0 btuh		37.3	0 btuh										
GAIN	4.7	0 btuh		4.7	0 btuh		28.2	1071 btuh		14.9	0 btuh		0	0		0	0		21.7	0 btuh		14.9	0 btuh		11.7	0 btuh		14.9	0 btuh										
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE				APP. LOAD				DUCT PIPE L.											
TOTAL CONDUCTIVE				LOSS	2285 btuh				LOSS	0.2151	491 btuh				LOSS	0.0000	0 btuh				LOSS	0.1	146.2 btuh				239		5258		LOSS	0%	0 btuh						
TOTAL CONDUCTIVE				GAIN	1509 btuh				GAIN	0.0520	78 btuh				GAIN	0.0000	0 btuh				GAIN	0.10	151 btuh				2	478 btuh		0%	0 btuh		GAIN	0%	0 btuh				
S BATH 1		TOTALS H.L.: 866 btuh								H.G.: 257 btuh				AREA: 122 ft2				C.Height: 8				GROSS EXP. WALL				NEW 72 ft				EXIST 0 ft									
EXPPOSED WALLS				EXPPOSED CEILING W/ATTIC				EXPPOSED CEILING NO ATTIC				EXPPOSED FLOORS				SKYLIGHT																							
NEW: 9 ft				EXIST: 0 ft				NEW: 122 ft2				EXIST: 0				NEW: 0				EXIST: 0				NEW: 71 ft2				EXIST: 0 ft2				NEW: 0.0 ft2				EXIST: 0.0 ft2			
Eff. R-V	18.53			8.50			59.22			22.86			27.65			22.05			29.80			22.05			2.04			2.03											
LOSS	4.0	288 btuh		8.7	0 btuh		1.3	153 btuh		3.2	0 btuh		2.7	0 btuh		3.4	0 btuh		2.5	177 btuh		3.4	0 btuh		36.4	0 btuh		37	0 btuh										
GAIN	0.8	54 btuh		1.6	0 btuh		0.7	84 btuh		1.8	0 btuh		1.5	0 btuh		1.9	0 btuh		0.3	19 btuh		0.4	0 btuh		89.7	0 btuh		14.7	0 btuh										
DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS																							
NEW: 0.0 ft2				EXIST: 0.0 ft2				NEW: 0.0 ft2				EXIST: 0.0 ft2				NEW:				EXIST:				NEW: 0.0 ft2				EXIST: 0.0 ft2				NEW: 0 ft2				EXIST: 0 ft2			
Eff. R-V	3.01			3.01			3.57			1.99			0			0			3.57			1.99			3.57			1.99											
LOSS	24.7	0 btuh		24.7	0 btuh		20.8	0 btuh		37.3	0 btuh		0	0		0	0		20.8	0 btuh		37.3	0 btuh		20.8	0 btuh		37.3	0 btuh										
GAIN	4.7	0 btuh		4.7	0 btuh		28.2	0 btuh		14.9	0 btuh		0	0		0	0		21.7	0 btuh		14.9	0 btuh		11.7	0 btuh		14.9	0 btuh										
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE				APP. LOAD				DUCT PIPE L.											
TOTAL CONDUCTIVE				LOSS	618 btuh				LOSS	0.2151	133 btuh				LOSS	0.0000	0 btuh				LOSS	0.1	39.5 btuh				239		5258		LOSS	10%	75 btuh						
TOTAL CONDUCTIVE				GAIN	158 btuh				GAIN	0.0520	8 btuh				GAIN	0.0000	0 btuh				GAIN	0.10	16 btuh				0	0 btuh		0%	0 btuh		GAIN	10%	16 btuh				
SHD BATH 2		TOTALS H.L.: 546 btuh								H.G.: 386 btuh				AREA: 78 ft2				C.Height: 8				GROSS EXP. WALL				NEW 48 ft				EXIST 0 ft									
EXPPOSED WALLS				EXPPOSED CEILING W/ATTIC				EXPPOSED CEILING NO ATTIC				EXPPOSED FLOORS				SKYLIGHT																							

**HEATLOSS/GAIN
CALCULATIONS
CSA-F280-12**

ADDRESS/MODEL: Unit 3803 - Elve A,B and CLIENT: Royal Pine Homes
C
PROJECT #: RP23048
COMPLIANCE PACKAGE: SB 12
GTA: 3212
LOT: 3802
SITE: Forestside Estates



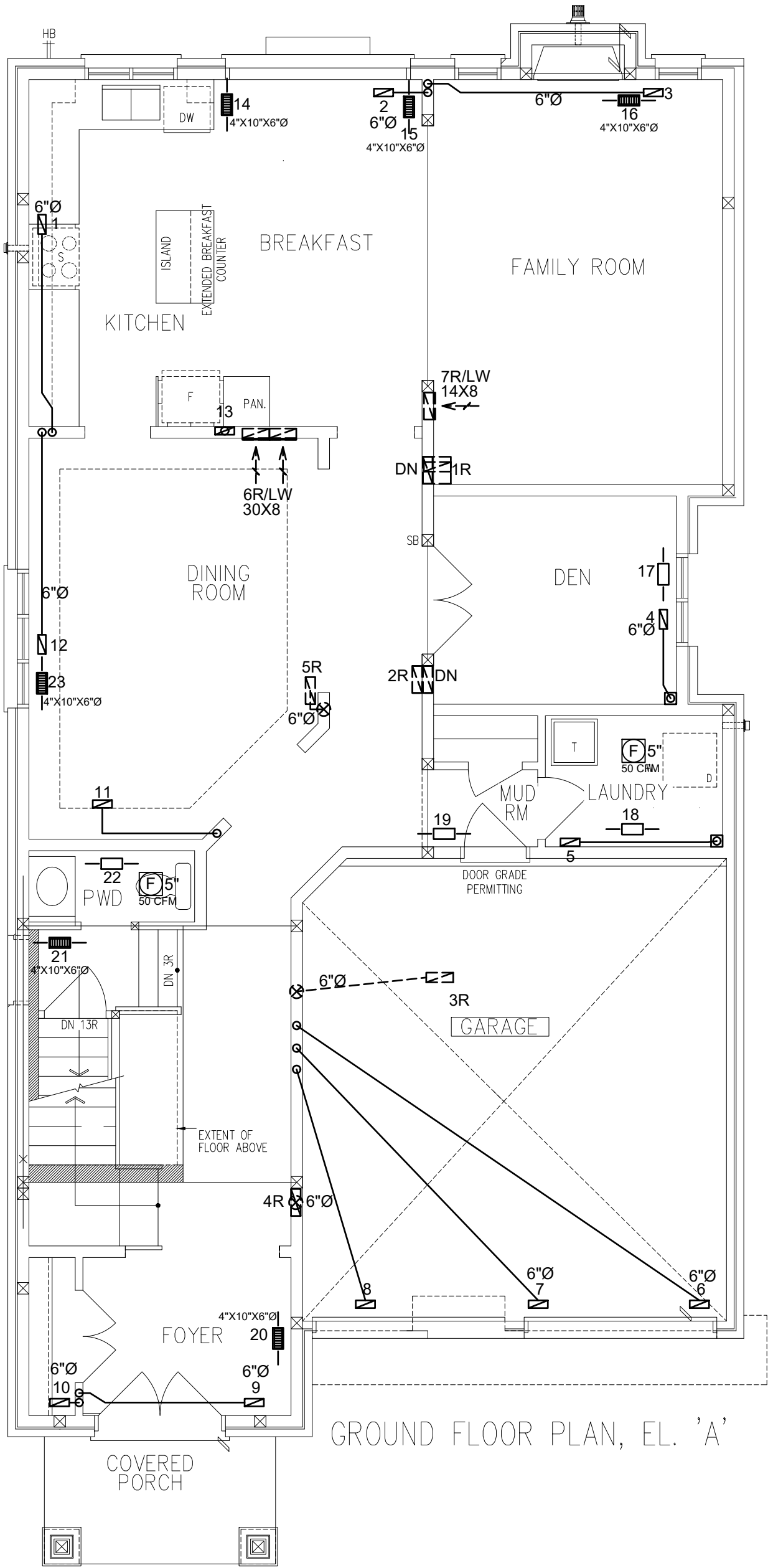
	NEW: 6 ft			EXIST: 0 ft		NEW: 78 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 1 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53			8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	160 btuh	8.7	0 btuh	1.3	98 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	2 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	30 btuh	1.6	0 btuh	0.7	54 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 0.0 ft2			EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 8.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01			3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	166 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh	
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	174 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh	
FUND. CONDUCTIVE HEATLOSS				0 btuh		AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L			
TOTAL CONDUCTIVE			LOSS	427 btuh	LOSS	0.2151	92 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	27.3 btuh	239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE			GAIN	258 btuh	GAIN	0.0520	13 btuh	GAIN	0.0000	0 btuh	GAIN	0.10	26 btuh	0	0 btuh	0%	0 btuh	GAIN	0%	0 btuh	
M WIC		TOTALS H.L.: 433 btuh				H.G.: 156 btuh				AREA: 91 ft2		C.Height: 8		GROSS EXP. WALL				NEW 56 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT				
	NEW: 7 ft			EXIST: 0 ft		NEW: 91 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53			8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	224 btuh	8.7	0 btuh	1.3	114 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	42 btuh	1.6	0 btuh	0.7	63 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 0.0 ft2			EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01			3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh	
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh	
FUND. CONDUCTIVE HEATLOSS				0 btuh		AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L			
TOTAL CONDUCTIVE			LOSS	338 btuh	LOSS	0.2151	73 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	21.6 btuh	239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE			GAIN	105 btuh	GAIN	0.0520	5 btuh	GAIN	0.0000	0 btuh	GAIN	0.10	11 btuh	0	0 btuh	0%	0 btuh	GAIN	0%	0 btuh	
WIC 4		TOTALS H.L.: 831 btuh				H.G.: 789 btuh				AREA: 34 ft2		C.Height: 8		GROSS EXP. WALL				NEW 56 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT				
	NEW: 7 ft			EXIST: 0 ft		NEW: 34 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 30 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53			8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	164 btuh	8.7	0 btuh	1.3	43 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	75 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	31 btuh	1.6	0 btuh	0.7	24 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	8 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 0.0 ft2			EXIST: 0.0 ft2		NEW: 15.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01			3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	312 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh	
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	423 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh	
FUND. CONDUCTIVE HEATLOSS				0 btuh		AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L			
TOTAL CONDUCTIVE			LOSS	593 btuh	LOSS	0.2151	128 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	37.9 btuh	239		5258		LOSS	10%	72 btuh	
TOTAL CONDUCTIVE			GAIN	485 btuh	GAIN	0.0520	25 btuh	GAIN	0.0000	0 btuh	GAIN	0.10	48 btuh	0	0 btuh	0%	0 btuh	GAIN	10%	49 btuh	
BED 5		TOTALS H.L.: 1361 btuh				H.G.: 1331 btuh				AREA: 197 ft2		C.Height: 8		GROSS EXP. WALL				NEW 112 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT				
	NEW: 14 ft			EXIST: 0 ft		NEW: 197 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53			8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	360 btuh	8.7	0 btuh	1.3	247 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	68 btuh	1.6	0 btuh	0.7	136 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 0.0 ft2			EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 22.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01			3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	457 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh	
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	478 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh	
FUND. CONDUCTIVE HEATLOSS				0 btuh		AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L			
TOTAL CONDUCTIVE			LOSS	1064 btuh	LOSS	0.2151	229 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	68.1 btuh	239		5258		LOSS	0%	0 btuh	
TOTAL CONDUCTIVE			GAIN	682 btuh	GAIN	0.0520	35 btuh	GAIN	0.0000	0 btuh	GAIN	0.10	68 btuh	1	239 btuh	0%	0 btuh	GAIN	0%	0 btuh	
BED 3		TOTALS H.L.: 3520 btuh				H.G.: 2967 btuh				AREA: 255 ft2		C.Height: 8		GROSS EXP. WALL				NEW 248 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT				
	NEW: 31 ft			EXIST: 0 ft		NEW: 255 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 248 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53			8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	797 btuh	8.7	0 btuh	1.3	320 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	618 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh	
GAIN	0.8	150 btuh	1.6	0 btuh	0.7	177 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	67 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh	
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS				
	NEW: 0.0 ft2			EXIST: 0.0 ft2		NEW: 49.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01			3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	

**HEATLOSS/GAIN
CALCULATIONS
CSA-F280-12**

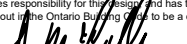
ADDRESS/MODEL: Unit 3803 - Elve A,B and CLIENT: Royal Pine Homes
C
PROJECT #: RP23048
COMPLIANCE PACKAGE: SB 12
GTA: 3212
LOT: 3802
SITE: Forestside Estates



LOSS	24.7	0 btuh	24.7	0 btuh	20.8	1018 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh					
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	1381 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh					
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE			LOSS	2752 btuh		LOSS	0.2151		592 btuh	LOSS	0.0000		0 btuh	LOSS	0.1		176.1 btuh	239		5258		LOSS	0%		0 btuh
TOTAL CONDUCTIVE			GAIN	1774 btuh		GAIN	0.0520		92 btuh	GAIN	0.0000		0 btuh	GAIN	0.10		177 btuh	1	239 btuh	0%	0 btuh	GAIN	0%		0 btuh
BED 2																									
		TOTALS H.L.: 1426 btuh								H.G.: 985 btuh				AREA: 201 ft2		C.Height: 8		GROSS EXP. WALL				NEW 136 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT								
	NEW: 17 ft		EXIST: 0 ft		NEW: 201 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2						
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03						
LOSS	4.0	469 btuh	8.7	0 btuh	1.3	252 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh					
GAIN	0.8	88 btuh	1.6	0 btuh	0.7	139 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh					
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS								
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 19 ft2		EXIST: 0 ft2						
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99						
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	395 btuh	37.3	0 btuh					
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	223 btuh	14.9	0 btuh					
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE			LOSS	1115 btuh		LOSS	0.2151		240 btuh	LOSS	0.0000		0 btuh	LOSS	0.1		71.3 btuh	239		5258		LOSS	0%		0 btuh
TOTAL CONDUCTIVE			GAIN	451 btuh		GAIN	0.0520		23 btuh	GAIN	0.0000		0 btuh	GAIN	0.10		45 btuh	1	239 btuh	0%	0 btuh	GAIN	0%		0 btuh
BED 4																									
		TOTALS H.L.: 2659 btuh								H.G.: 2998 btuh				AREA: 168 ft2		C.Height: 8		GROSS EXP. WALL				NEW 232 ft		EXIST 0 ft	
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT								
	NEW: 29 ft		EXIST: 0 ft		NEW: 168 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2						
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03						
LOSS	4.0	705 btuh	8.7	0 btuh	1.3	210 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh					
GAIN	0.8	133 btuh	1.6	0 btuh	0.7	116 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh					
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS								
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 51.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 5.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2						
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99						
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	1060 btuh	37.3	0 btuh	0	0	0	0	20.8	104 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh					
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	1437 btuh	14.9	0 btuh	0	0	0	0	21.7	109 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh					
FUND. CONDUCTIVE HEATLOSS				0 btuh				AIR LEAKAGE NEW				AIR LEAKAGE EXIST				VENTILATION CASE 3				H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE			LOSS	2079 btuh		LOSS	0.2151		447 btuh	LOSS	0.0000		0 btuh	LOSS	0.1		133.0 btuh	239		5258		LOSS	0%		0 btuh
TOTAL CONDUCTIVE			GAIN	1795 btuh		GAIN	0.0520		93 btuh	GAIN	0.0000		0 btuh	GAIN	0.10		179 btuh	1	239 btuh	0%	0 btuh	GAIN	0%		0 btuh
LEVEL 4																									



GROUND FLOOR PLAN, EL. 'A'

3RD	# S/A	- # R/A	- # FANS	-	- DESIGNER TO BE NOTIFIED OF ALL & ANY CHANGES TO THE STRUCTURE AND/OR SYSTEM DESIGN BEFORE INSTALLATION BEGINS. INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. - COORDINATE EXACT LOCATION OF GRILLES AND REGISTERS WITH OTHER TRADES, SITE CONDITIONS, OWNER BUILDER, AND/OR ARCHITECT BEFORE INSTALLATION. - PROVIDE MANUAL BALANCING DAMPERS AS REQUIRED TO S/A BRANCH OUTLETS, MAIN TAKE OFF'S & "Y" FITTINGS. - ALL S/A RUNS TO BE 4"x10"x5" ROUND UNLESS OTHERWISE NOTED - INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL DUCTS - ALL DUCTWORK LOCATED IN UNHEATED SPACES SHALL BE MIN R-12. UNDERCUT ALL DOORS IN ROOMS WITHOUT RETURN AIR, KEEP JOINTS TIGHT AND AIR LEAKAGE TO A MINIMUM.						
2ND	13	5	3								
1ST	10	2	2								
B	4	1	-								
TOTAL	27	8	5								
CONTRACTOR TO WORK FROM MUNICIPAL APPROVED DRAWINGS ONLY					TOTAL LOSS	45,577 BTUH		MODEL:	Unit 3803 - Elev A,B & C		
					TOTAL GAIN	30,426 BTUH		PROJECT #:	RP23048	SQFT: 3212	W%: 11.05
The undersigned has reviewed and takes responsibility for this design and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer. Doug McCallum  NAME SIGNATURE BCIN / BCDN					HEATING UNIT	LENNOX		SITE:	Forestside Estates		
					MODEL #	EL296UH070XE36B		3 TON	FOR:	Royal Pine Homes	
					OUTPUT	64,000 BTUH		1145 CFM	BUILDER:	Royal Pine Homes	

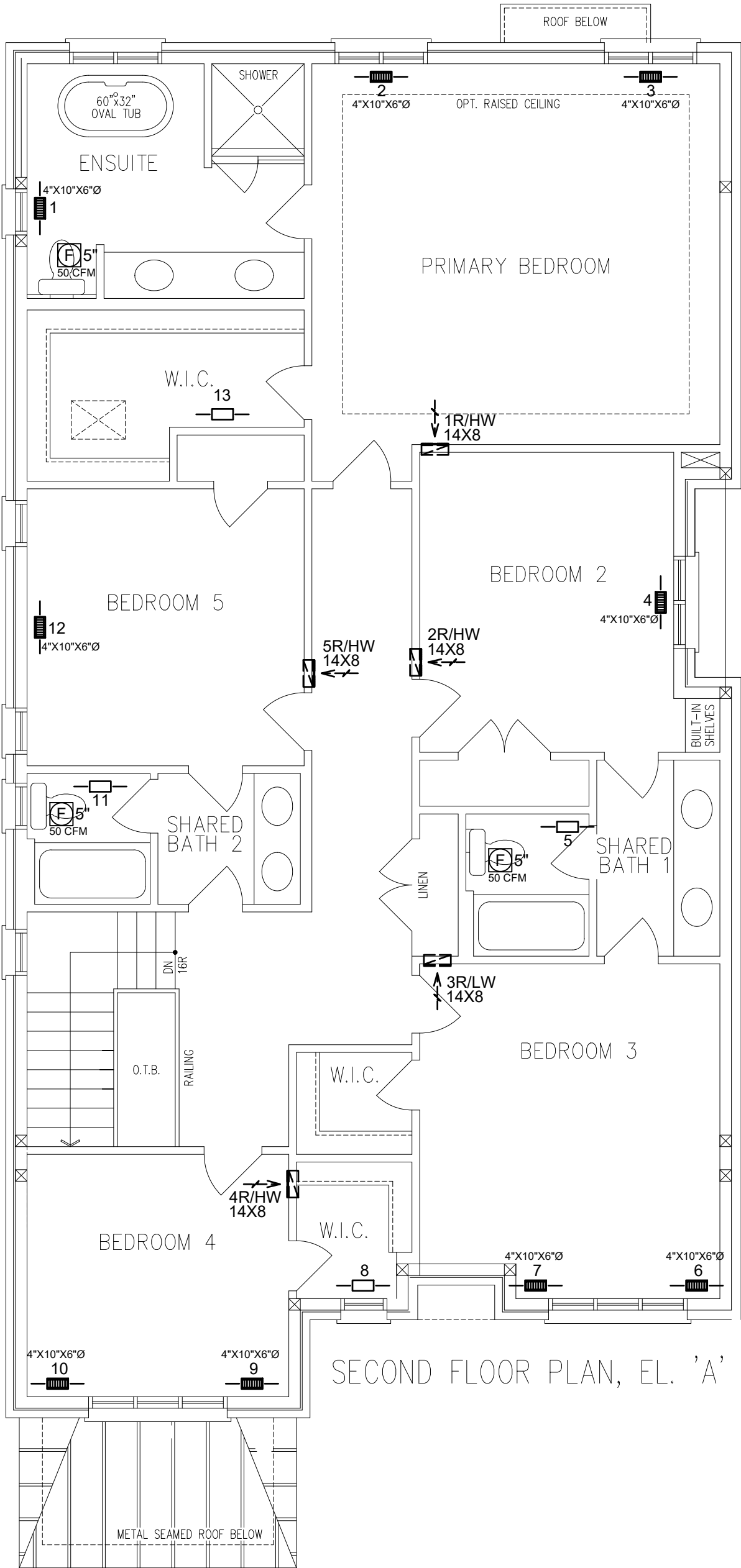
PROPOSED 1ST FLOOR

DATE: JUN/2023 | SCALE: 1/4"=1'-0" | DRAWN BY: JG/MP

SB-12 PERFORMANCE
CSA F280-12

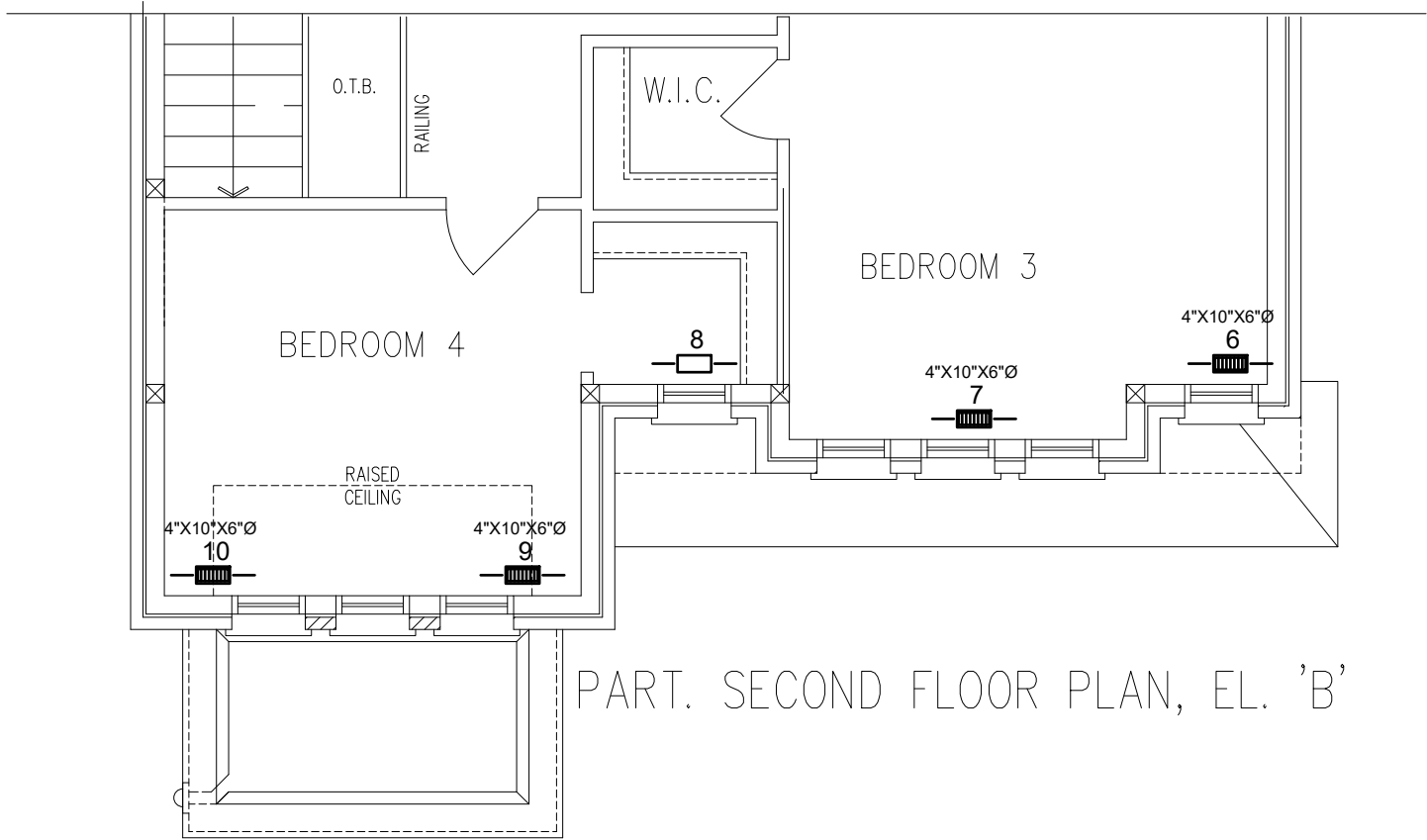
MCCALLUM
HVAC DESIGN INC
Brampton, Ontario, 905-840-8166, info@mccallumhvac.com

M2

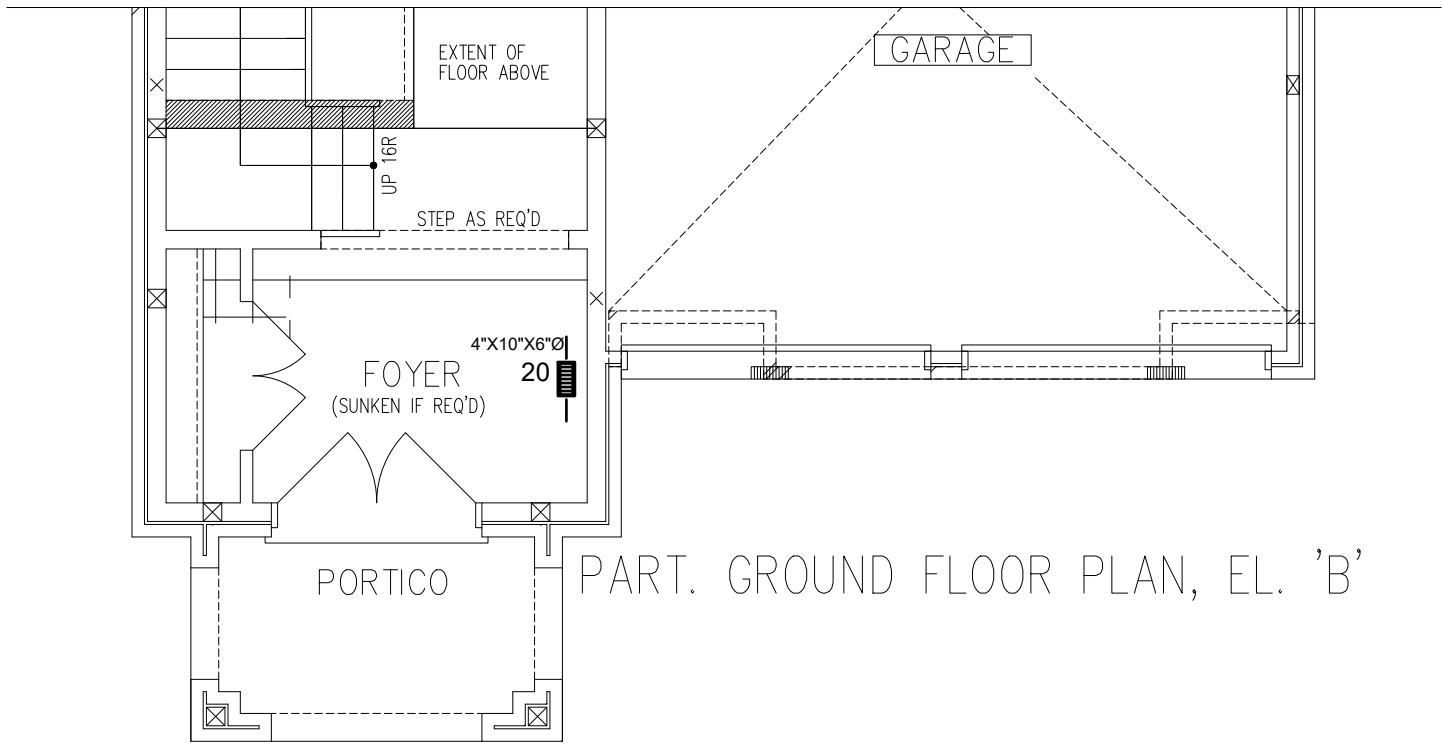


SECOND FLOOR PLAN, EL. 'A'

<table><tr><td>3RD</td><td># S/A</td><td>- # R/A</td><td>- # FANS</td><td>-</td></tr><tr><td>2ND</td><td>13</td><td>5</td><td>3</td><td></td></tr><tr><td>1ST</td><td>10</td><td>2</td><td>2</td><td></td></tr><tr><td>B</td><td>4</td><td>1</td><td>-</td><td></td></tr><tr><td>TOTAL</td><td>27</td><td>8</td><td>5</td><td></td></tr></table>				3RD	# S/A	- # R/A	- # FANS	-	2ND	13	5	3		1ST	10	2	2		B	4	1	-		TOTAL	27	8	5		• DESIGNER TO BE NOTIFIED OF ALL & ANY CHANGES TO THE STRUCTURE AND/OR SYSTEM DESIGN BEFORE INSTALLATION BEGINS. • INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. • COORDINATE EXACT LOCATION OF GRILLES AND REGISTERS WITH OTHER TRADES, SITE CONDITIONS, OWNER BUILDER, AND/OR ARCHITECT BEFORE INSTALLATION. • PROVIDE MANUAL BALANCING DAMPERS AS REQUIRED TO S/A BRANCH OUTLETS, MAIN TAKE OFF'S & "Y" FITTINGS. • ALL S/A RUNS TO BE 4"x10"x5" ROUND UNLESS OTHERWISE NOTED • INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL DUCTS • ALL DUCTWORK LOCATED IN UNHEATED SPACES SHALL BE MIN R-12. UNDERCUT ALL DOORS IN ROOMS WITHOUT RETURN AIR, KEEP JOINTS TIGHT AND AIR LEAKAGE TO A MINIMUM.				PROPOSED 2ND FLOOR <table><tr><td>DATE:</td><td>JUN/2023</td><td>SCALE:</td><td>1/4"=1'-0"</td><td>DRAWN BY:</td><td>JG/MP</td></tr></table> SB-12 PERFORMANCE CSA F280-12				DATE:	JUN/2023	SCALE:	1/4"=1'-0"	DRAWN BY:	JG/MP
3RD	# S/A	- # R/A	- # FANS	-																																						
2ND	13	5	3																																							
1ST	10	2	2																																							
B	4	1	-																																							
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CONTRACTOR TO WORK FROM MUNICIPAL APPROVED DRAWINGS ONLY The undersigned has reviewed and takes responsibility for this design and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer. Doug McCallum NAME SIGNATURE BCIN / BCDN 102614				TOTAL LOSS 45,577 BTU/H		MODEL: Unit 3803 - Elev A,B & C		M MCCALLUM HVAC DESIGN INC Brampton, Ontario, 905-840-8166, info@mccallumhvac.com M3																																		
TOTAL GAIN 30,426 BTU/H		PROJECT #: RP23048 SQFT: 3212 W%: 11.05																																								
HEATING UNIT LENNOX		SITE: Forestside Estates																																								
MODEL # EL296UH070XE36B 3 TON		FOR: Royal Pine Homes																																								
OUTPUT 64,000 BTU/H 1145 CFM		BUILDER: Royal Pine Homes																																								

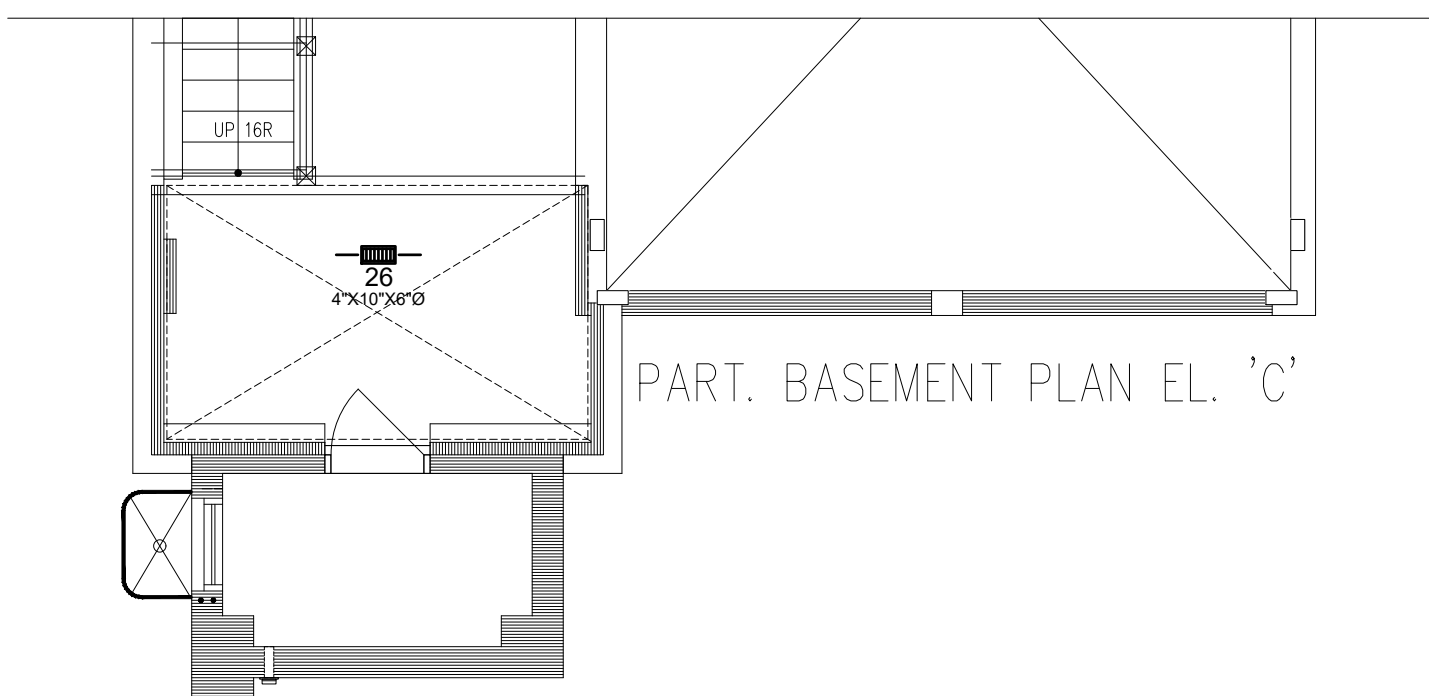
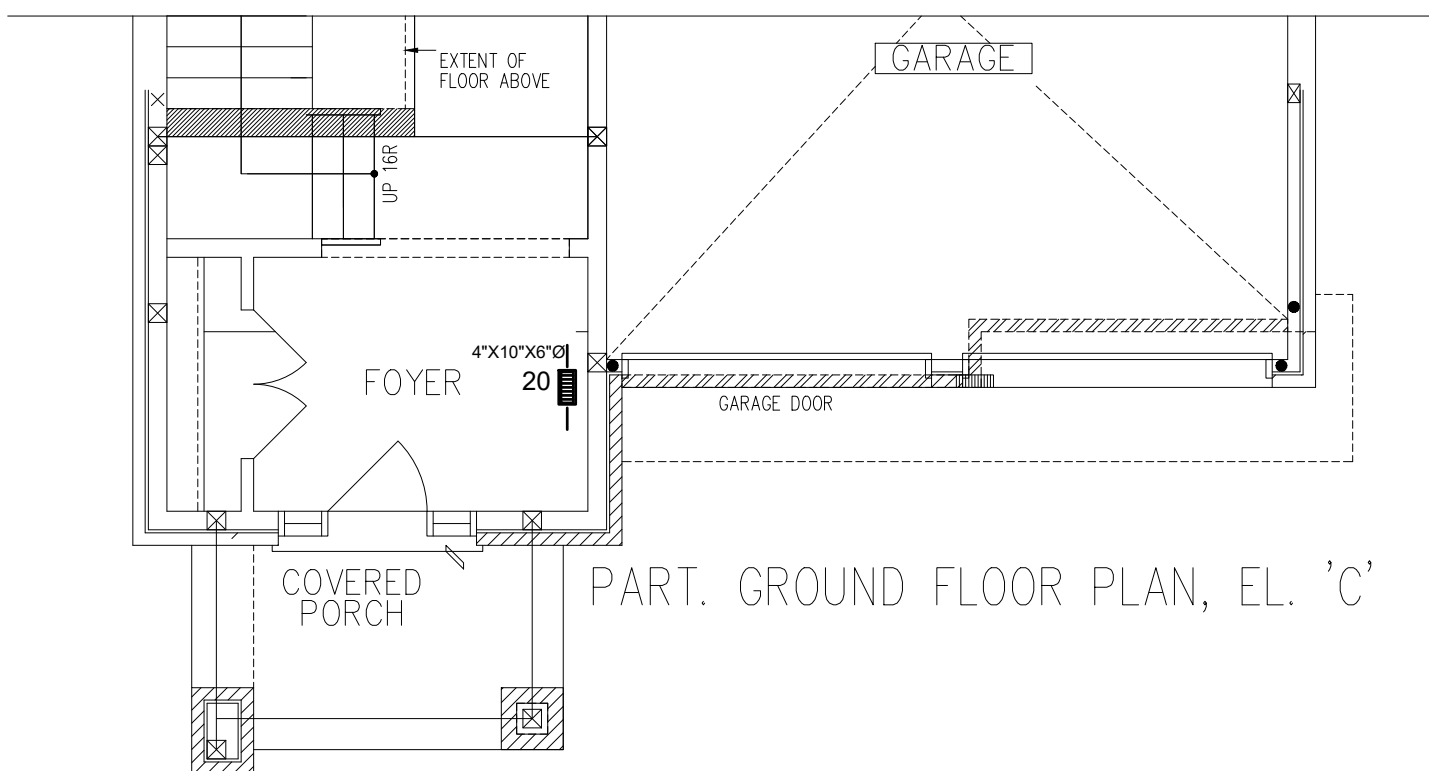
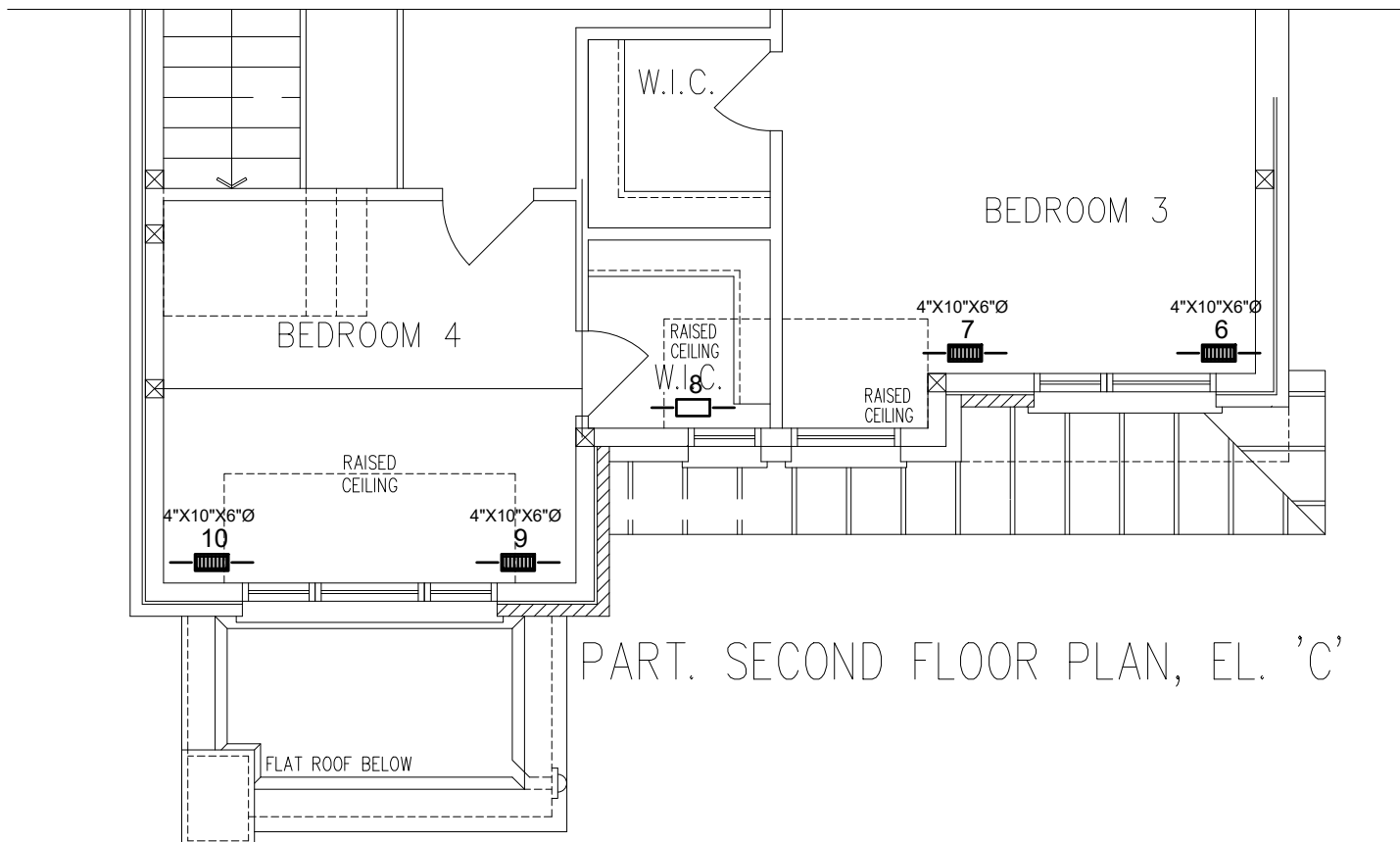


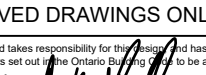
PART. SECOND FLOOR PLAN, EL. 'B'



PART. GROUND FLOOR PLAN, EL. 'B'

<table><tr><td>3RD</td><td># S/A</td><td>-</td><td># R/A</td><td>-</td><td># FANS</td><td>-</td></tr><tr><td>2ND</td><td>13</td><td></td><td>5</td><td></td><td>3</td><td></td></tr><tr><td>1ST</td><td>10</td><td></td><td>2</td><td></td><td>2</td><td></td></tr><tr><td>B</td><td>4</td><td></td><td>1</td><td></td><td>-</td><td></td></tr><tr><td>TOTAL</td><td>27</td><td></td><td>8</td><td></td><td>5</td><td></td></tr></table>					3RD	# S/A	-	# R/A	-	# FANS	-	2ND	13		5		3		1ST	10		2		2		B	4		1		-		TOTAL	27		8		5		• DESIGNER TO BE NOTIFIED OF ALL & ANY CHANGES TO THE STRUCTURE AND/OR SYSTEM DESIGN BEFORE INSTALLATION BEGINS. • INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. • COORDINATE EXACT LOCATION OF GRILLES AND REGISTERS WITH OTHER TRADES, SITE CONDITIONS, OWNER BUILDER, AND/OR ARCHITECT BEFORE INSTALLATION. • PROVIDE MANUAL BALANCING DAMPERS AS REQUIRED TO S/A BRANCH OUTLETS, MAIN TAKE OFF'S & "Y" FITTINGS. • ALL S/A RUNS TO BE 4"X10"X5" ROUND UNLESS OTHERWISE NOTED • INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL DUCTS • ALL DUCTWORK LOCATED IN UNHEATED SPACES SHALL BE MIN R-12. UNDERCUT ALL DOORS IN ROOMS WITHOUT RETURN AIR, KEEP JOINTS TIGHT AND AIR LEAKAGE TO A MINIMUM.	
3RD	# S/A	-	# R/A	-	# FANS	-																																			
2ND	13		5		3																																				
1ST	10		2		2																																				
B	4		1		-																																				
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3RD	# S/A	# R/A	# FANS	-																																
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