

SITE NAME: PINE VALLEY & TESTON BUILDER: GOLD PARK HOMES TYPE: 4007 THE SUMCREST GFA: 2494 DATE: Feb-20 WINTER NATURAL AIR CHANGE RATE 0.370 CSA-F280-12
LO# 86231 SUMMER NATURAL AIR CHANGE RATE 0.124 HEAT LOSS AT *F. 76 SB-12 PACKAGE A1
HEAT GAIN AT *F. 13

ROOM USE	MBR	ENS	ENS-2/3	BATH	BED-4	BED-3	BED-2	BED-1	WIR	FOY	LOD	BAS
EXP. WALL CLG. HT.	38	25	15	13	45	9	9	9	13	50	40	176
GRS.WALL AREA GLAZING	380	225	135	117	405	135	98	89	560	560	400	1352
NORTH	0	0	0	0	0	0	0	0	0	0	0	4
EAST	0	18	383	288	0	0	0	0	0	0	0	86
SOUTH	0	0	0	0	41	872	1704	42	894	1745	0	0
WEST	0	0	0	0	0	0	0	15	319	373	13	277
SKYL.T.	37.2	101.5	0	0	0	0	0	0	0	0	0	540
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.8	344	1535	289	195	870	147	221	985	166	828
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.5	316	406	186	154	198	90	120	154	71	0
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0	120	305	52	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2707	1706	1023	471	3237	2589	1988	993	1723	828	0.20	0.27
SUB TOTAL HT GAIN	1940	462	71	33	180	367	89	219	57	0	0	0
LEVEL FACTOR / MUL TIPLIER	0.20	0.27	0.20	0.27	0.20	0.27	0.20	0.27	0.20	0.27	0.20	0.27
AIR CHANGE HEAT LOSS	733	135	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	2	480	663	4525	5260	2408	1267	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	3439	4183	2168	1422	4828	5281	5135	5767	5135	5767	5135	5767
TOTAL HT GAIN x 1.3 BTU/H	4183	1422	2168	1422	4828	5281	5135	5767	5135	5767	5135	5767

ROOM USE	GTIDN	LAUN	WIR	FOY	LOD	BAS
EXP. WALL CLG. HT.	56	11	11	11	10	10
GRS.WALL AREA GLAZING	616	264	143	560	400	1352
NORTH	0	0	0	0	0	4
EAST	0	0	0	0	0	0
SOUTH	0	0	0	0	0	0
WEST	0	0	0	0	0	0
SKYL.T.	37.2	101.5	0	0	0	0
DOORS	25.2	4.3	0	0	0	0
NET EXPOSED WALL	4.5	0.8	536	2392	403	20
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0
EXPOSED CLG	1.3	0.5	316	406	186	154
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0
EXPOSED FLOOR	2.6	0.4	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0
SUBTOTAL HT LOSS	4122	3073	4122	3073	4122	3073
SUB TOTAL HT GAIN	3073	4122	3073	4122	3073	4122
LEVEL FACTOR / MUL TIPLIER	0.30	0.40	0.30	0.40	0.30	0.40
AIR CHANGE HEAT LOSS	1645	213	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	2	480	663	4525	5260
HEAT GAIN APPLIANCES/LIGHTS	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	5767	5135	5767	5135	5767	5135
TOTAL HT GAIN x 1.3 BTU/H	5135	5767	5135	5767	5135	5767

TOTAL HEAT GAIN BTU/H: 38286 TONS: 2.94 LOSS DUE TO VENTILATION LOAD BTU/H: 1631 STRUCTURAL HEAT LOSS: 66021 TOTAL COMBINED HEAT LOSS BTU/H: 57653

Michael O'Rourke

SITE NAME: PINE VALLEY & TESTON
 BUILDER: GOLD PARK HOMES

THE SUNCREST
 TYPE: 4007

DATE: Feb-20 CFA: 2494 LO# 85231

HEATING CFM 1100 COOLING CFM 1100
 TOTAL HEAT LOSS 56.021 TOTAL HEAT GAIN 34.961
 AIR FLOW RATE CFM 19.64 AIR FLOW RATE CFM 31.46

EL296UH070XE36B
 FAN SPEED 70

AFUE = 96 %
 INPUT (BTU/H) = 66,000
 OUTPUT (BTU/H) = 64,000

DESIGN CFM = 1100
 CFM @ .6" E.S.P.
 TEMPERATURE RISE 54 °F

4th	3rd	2nd	1st	Bas
0	0	11	7	4
0	0	4	2	1

All S/A diffusers 4"x10" unless noted otherwise on layout.

All S/A fans 5"Ø unless noted otherwise on layout.

ROOM NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	BED-2	BED-3	BED-4	BATH	BED-3	BED-4	BED-3	MBR	ENS-2/3	GT/DN	GT/DN	KIT	KIT	ENS-2/3	LAUN	W/R	FOY	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	1.72	2.17	1.47	1.44	2.26	1.26	1.44	2.26	1.44	1.72	1.20	2.88	2.88	2.65	2.65	1.20	2.23	1.13	4.77	4.67	4.67	4.67	4.67	4.67
CFM PER RUN HEAT	34	43	29	28	44	25	28	44	28	34	24	57	57	52	52	24	44	22	94	92	92	92	92	
RM GAIN MBH	2.09	1.42	2.01	2.17	2.62	0.76	2.17	2.62	2.09	2.09	0.63	2.57	2.57	2.41	2.41	0.63	1.24	0.49	0.80	0.81	0.81	0.81	0.81	
CFM PER RUN COOLING	66	45	63	68	83	24	68	83	66	66	20	81	81	76	76	20	39	15	25	26	26	26	26	
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.16	0.16	0.16	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	
EQUIVALENT LENGTH	150	230	240	150	210	200	160	200	150	150	160	160	160	100	110	180	180	160	140	150	170	170	170	
TOTAL EFFECTIVE LENGTH	191	251	276	204	283	237	222	280	179	179	64	178	187	122	130	237	189	211	191	137	207	207	207	
ADJUSTED PRESSURE	0.09	0.07	0.06	0.08	0.06	0.07	0.08	0.06	0.06	0.06	0.09	0.09	0.09	0.14	0.13	0.07	0.09	0.08	0.08	0.12	0.09	0.09	0.09	
ROUND DUCT SIZE	5	5	6	6	6	4	6	6	6	5	4	6	6	5	5	4	4	4	6	6	6	6	6	
HEATING VELOCITY (ft/min)	250	316	148	143	224	287	143	224	250	291	275	291	291	382	382	275	505	252	479	469	469	469	469	
COOLING VELOCITY (ft/min)	485	330	321	347	423	275	347	423	485	558	229	413	413	558	558	229	447	172	127	133	133	133	133	
OUTLET GRILL SIZE	3X10	3X10	4X10	4X10	4X10	3X10	4X10	4X10	4X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	

ROOM NAME	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
ROOM NAME	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67
CFM PER RUN HEAT	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
RM GAIN MBH	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
CFM PER RUN COOLING	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
TOTAL EFFECTIVE LENGTH	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
ADJUSTED PRESSURE	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
ROUND DUCT SIZE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
HEATING VELOCITY (ft/min)	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469
COOLING VELOCITY (ft/min)	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10

SUPPLY AIR TRUNK SIZE	TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	388	0.06	10.6	14	8	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK B	690	0.06	13.1	20	8	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK C	413	0.09	9.8	12	8	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK D	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK E	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK F	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK G	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK H	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK I	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK J	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK K	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK L	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK U	0	0.05	0	0	0	0	0.05	0	0	0	0	0.05	0	0	0	0	0.05	0	0	0
TRUNK V	0	0.05	0	0	0	0	0.05	0	0	0	0	0.05	0	0	0	0	0.05	0	0	0
TRUNK W	0	0.05	0	0	0	0	0.05	0	0	0	0	0.05	0	0	0	0	0.05	0	0	0
TRUNK X	1100	0.05	16.3	30	8	1100	0.05	16.3	30	8	1100	0.05	16.3	30	8	1100	0.05	16.3	30	8
TRUNK Y	740	0.05	14.1	24	8	740	0.05	14.1	24	8	740	0.05	14.1	24	8	740	0.05	14.1	24	8
TRUNK Z	340	0.05	10.5	14	8	340	0.05	10.5	14	8	340	0.05	10.5	14	8	340	0.05	10.5	14	8
DROP	1100	0.05	16.3	24	10	1100	0.05	16.3	24	10	1100	0.05	16.3	24	10	1100	0.05	16.3	24	10

RETURN AIR #	AIR VOLUME	PLENUM PRESSURE	ACTUAL DUCT LGH.	EQUIVALENT LENGTH	TOTAL EFFECTIVE LH	ADJUSTED PRESSURE	ROUND DUCT SIZE	INLET GRILL SIZE	VELOCITY (ft/min)
1	185	0.15	42	135	177	0.08	7.5	8	8
2	75	0.15	66	240	311	0.05	6	8	8
3	75	0.15	66	240	311	0.05	6	8	8
4	75	0.15	66	240	311	0.05	6	8	8
5	400	0.15	26	165	191	0.08	9.9	8	8
6	75	0.15	66	240	311	0.05	6	8	8
7	400	0.15	26	165	191	0.08	9.9	8	8
8	75	0.15	66	240	311	0.05	6	8	8
9	75	0.15	66	240	311	0.05	6	8	8
10	75	0.15	66	240	311	0.05	6	8	8
11	75	0.15	66	240	311	0.05	6	8	8
12	75	0.15	66	240	311	0.05	6	8	8
13	75	0.15	66	240	311	0.05	6	8	8
14	75	0.15	66	240	311	0.05	6	8	8
15									

TYPE: 4007
 SITE NAME: PINE VALLEY & TESTON

LO # 85231
 THE SUNCREST

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

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 gas fireplace

d) Solid Fuel (including fireplaces)

e) No Combustion Appliances

HEATING SYSTEM

Forced Air Non Forced Air

Electric Space Heat

HOUSE TYPE 9.32.1(2)

I Type a) or b) appliance only, no solid fuel

II Type I except with solid fuel (including fireplaces)

III Any Type c) appliance

IV Type I, or II with electric space heat

Other: Type I, II or IV no forced air

SYSTEM DESIGN OPTIONS O.N.H.W.P.

1 Exhaust only/Forced Air System

2 HRV with Ducting/Forced Air System

3 HRV Simplified/connected to forced air system

4 HRV with Ducting/non forced air system

Part 6 Design

TOTAL VENTILATION CAPACITY 9.32.3.3(1)

Basement + Master Bedroom	2	@ 21.2 cfm	42.4	cfm
Other Bedrooms	3	@ 10.6 cfm	31.8	cfm
Kitchen & Bathrooms	5	@ 10.6 cfm	53	cfm
Other Rooms	4	@ 10.6 cfm	42.4	cfm
Table 9.32.3.A.		TOTAL	169.6	cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED 9.32.3.4.(1)

1	Bedroom	31.8	cfm
2	Bedroom	47.7	cfm
3	Bedroom	63.6	cfm
4	Bedroom	79.5	cfm
5	Bedroom	95.4	cfm
	TOTAL	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5.

Total Ventilation Capacity	169.6	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	90.1	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANEE 65H Location: BSMT

79.5 cfm 3.0 sones HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM		ΔT °F		FACTOR		% LOSS
79.5 CFM	X	76 F	X	1.08	X	0.25

SUPPLEMENTAL FANS PANASONIC

Location	Model	cfm	HVI	Sones
ENS	FV-05-11VK1	50	<input checked="" type="checkbox"/>	0.3
BATH	FV-05-11VK1	50	<input checked="" type="checkbox"/>	0.3
ENS-2/3	FV-05-11VK1	50	<input checked="" type="checkbox"/>	0.3
W/R	FV-05-11VK1	50	<input checked="" type="checkbox"/>	0.3

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANEE 65H

155 cfm high 64 cfm low

75 % Sensible Efficiency HVI Approved
 @ 32 deg F (0 deg C)

LOCATION OF INSTALLATION

Lot: Concession

Township Plan:

Address

Roll # Building Permit #

BUILDER: GOLD PARK HOMES

Name:

Address:

City:

Telephone #: Fax #:

INSTALLING CONTRACTOR

Name:

Address:

City:

Telephone #: Fax #:

DESIGNER CERTIFICATION

I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.

Name: HVAC Designs Ltd.

Signature: *Michael O'Rourke*

HRAI # 001820

Date: February-20

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C. 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669

Michael O'Rourke

MICHAEL O'ROURKE

CSA F280-12 Residential Heat Loss and Heat Gain Calculations Formula Sheet (For Air Leakage / Ventilation Calculation)			
LO#: 85231	Model: 4007	Builder: GOLD PARK HOMES	Date: 02/04/2020
Air Change & Delta T Data			
House Volume		WINTER NATURAL AIR CHANGE RATE 0.370 SUMMER NATURAL AIR CHANGE RATE 0.124	
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	1138	10	11,380
First	1138	11	12,518
Second	1378	9	12,402
Third	0	9	0
Fourth	0	9	0
Total:		36,300.0 ft³	
Total:		1027.9 m³	
Design Temperature Difference			
	Tin °C	Tout °C	ΔT °C
Winter DTDh	22	-20	42
Summer DTDc	24	31	7
			ΔT °F
			76
			13
5.2.3.1 Heat Loss due to Air Leakage			
$HL_{air-b} = LR_{air-h} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$			
0.370	x	285.53	x
		42 °C	x
		1.2	x
			=
		5347 W	=
			=
		18243 Btu/h	=
5.2.3.2 Heat Loss due to Mechanical Ventilation			
$HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$			
80 CFM	x	76 °F	x
		1.08	x
		0.25	x
			=
		1631 Btu/h	=
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)			
$HL_{air} = Level\ Factor \times HL_{air-bv} \times \{(HL_{aggr} + HL_{bgr}) \div (HL_{aglevel} + HL_{bglevel})\}$			
Level	Level Factor (LF)	HLair Air Leakage + Ventilation Heat Loss (Btu/h)	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)
1	0.5	9,558	0.954
2	0.3	13,715	0.399
3	0.2	13,479	0.271
4	0	0	0.000
5	0	0	0.000

*HLairbv = Air leakage heat loss + ventilation heat loss
 *For a balanced or supply only ventilation system HLairve = 0

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 4007	THE SUNCREST	BUILDER: GOLD PARK HOMES
SFQT: 2494	LO# 85231	SITE: PINE VALLEY & TESTON

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75

BUILDING DATA

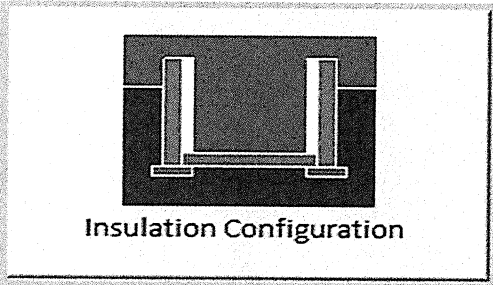
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft ³):	36300.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 58.0 ft	WIDTH: 30.0 ft	EXPOSED PERIMETER:	176.0 ft

2012 OBC - COMPLIANCE PACKAGE	Compliance Package	
	A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	0.28	-
Skylights Maximum U-Value	0.49	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

 INDIVIDUAL BCIN: 19669
 MICHAEL O'ROURKE

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	17.7	 <p style="text-align: center;">Insulation Configuration</p>
Floor Width (m):	9.1	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	4.7	
Door Area (m ²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	1693	

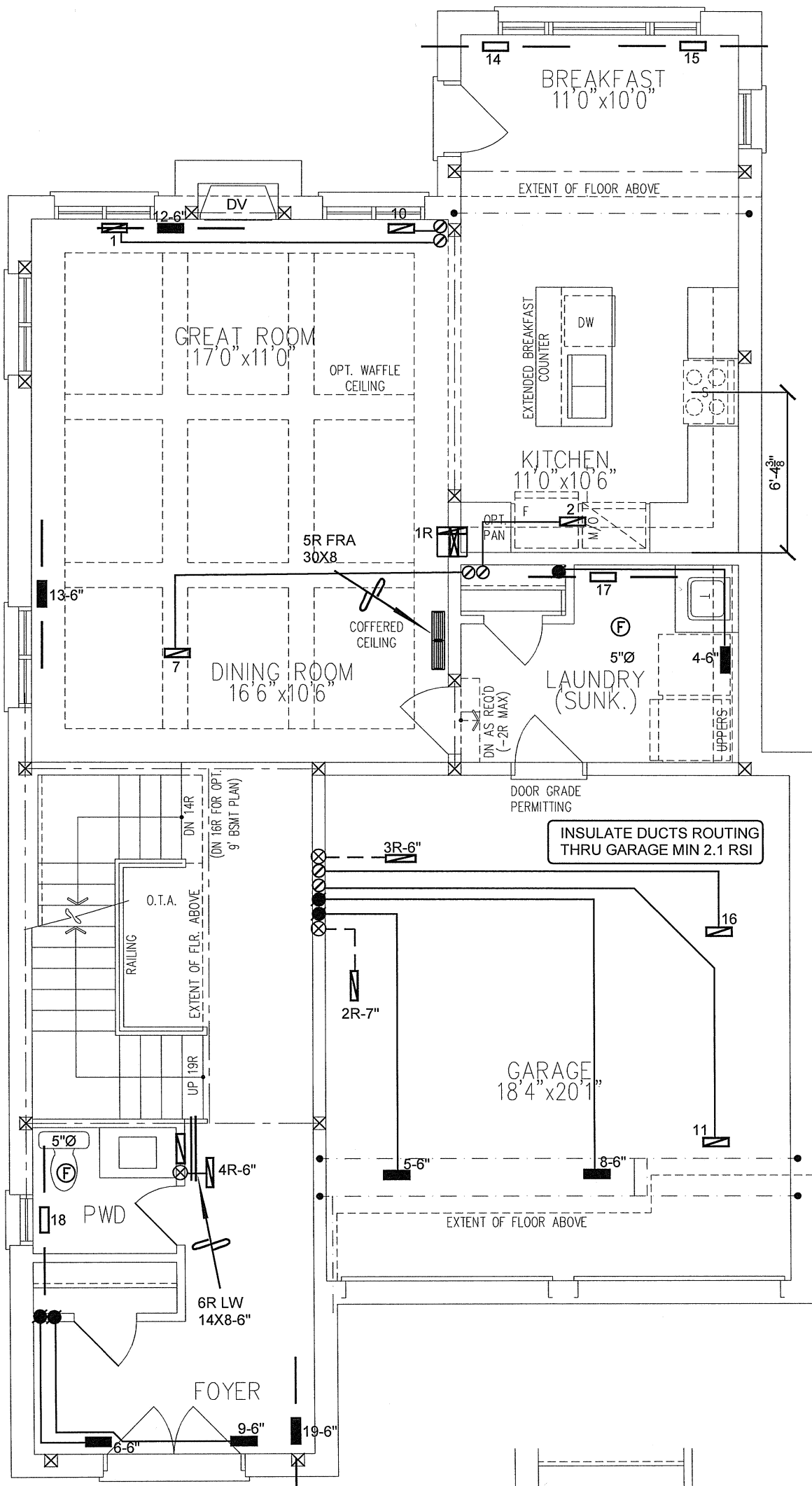
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

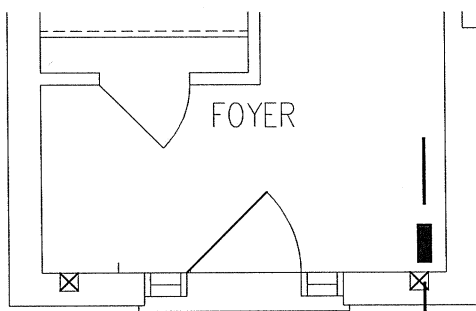
Weather Station Description			
Province:	Ontario		
Region:	Vaughan (Woodbridge)		
Weather Station Location:	Open flat terrain, grass		
Anemometer height (m):	10		
Local Shielding			
Building Site:	Suburban, forest		
Walls:	Heavy		
Flue:	Heavy		
Highest Ceiling Height (m):	7.92		
Building Configuration			
Type:	Detached		
Number of Stories:	Two		
Foundation:	Full		
House Volume (m ³):	1027.9		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (3.57 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1370.2 cm ²	
	3.57	ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust	
	37.5	37.5	
Flue Size			
Flue #:	#1	#2	#3 #4
Diameter (mm):	0	0	0 0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.370		
Cooling Air Leakage Rate (ACH/H):	0.124		

TYPE: 4007
 LO# 85231

THE SUNCREST



GROUND FLOOR PLAN, EL. 'A'



PART. GROUND FLOOR PLAN, EL. 'B'

I, MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
 Michael O'Rourke, BCIN# 19669
 HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

HVAC LEGEND						REVISIONS	
—○—	SUPPLY AIR GRILLE	—■—	6" SUPPLY AIR BOOT ABOVE	—▨—	14"x8" RETURN AIR GRILLE	3.	
—■—	SUPPLY AIR GRILLE 6" BOOT	○	SUPPLY AIR STACK FROM 2nd FLOOR	—▨—	30"x8" RETURN AIR GRILLE	2.	
—■—	SUPPLY AIR BOOT ABOVE	●	6" SUPPLY AIR STACK 2nd FLOOR	—▨—	FRA- FLOOR RETURN AIR GRILLE	1.	
				—X—	REDUCER	No.	Description Date

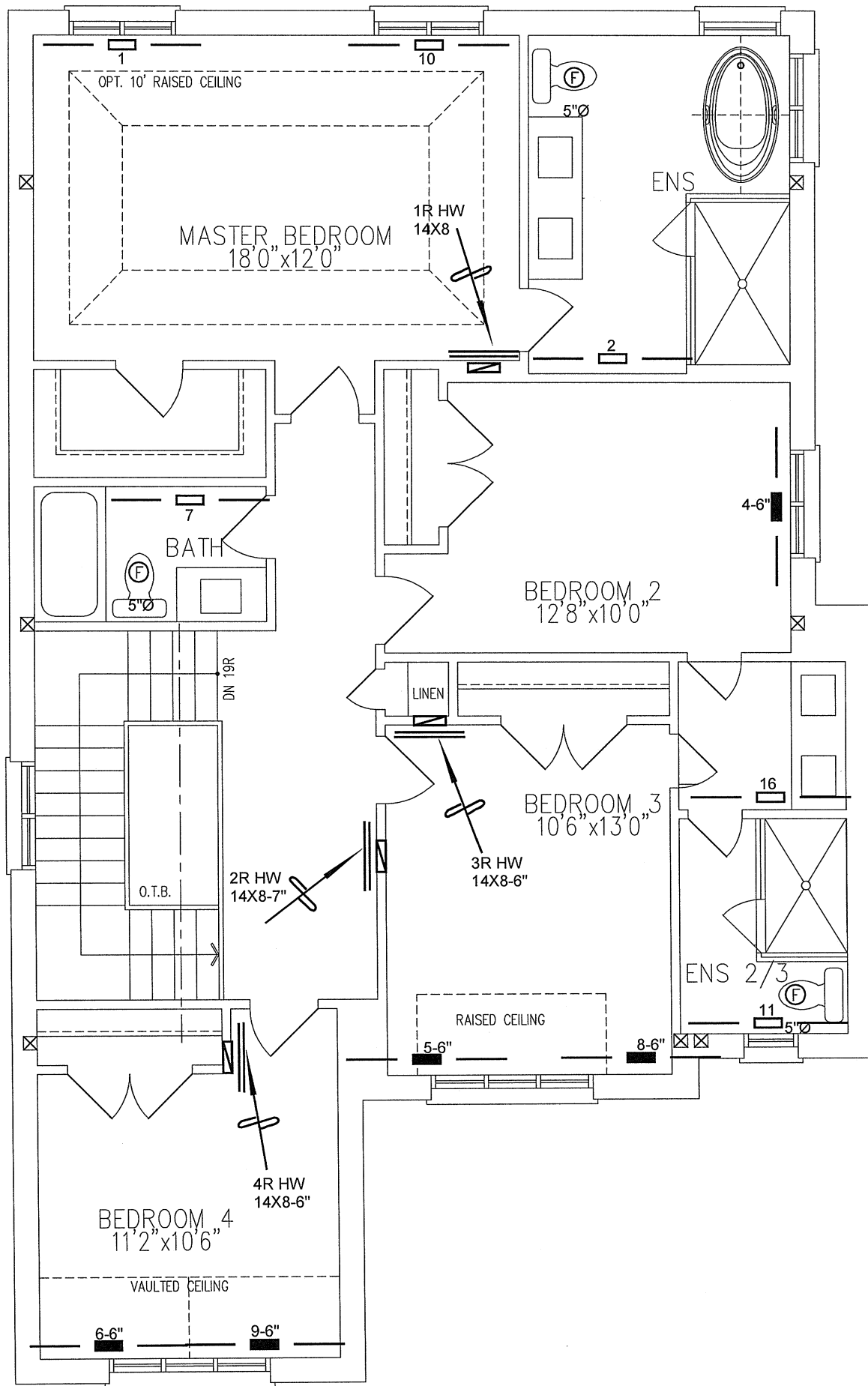
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Client
GOLD PARK HOMES
 Project Name
PINE VALLEY & TESTON VAUGHAN, ONTARIO
THE SUNCREST 4007
 2494 sqft

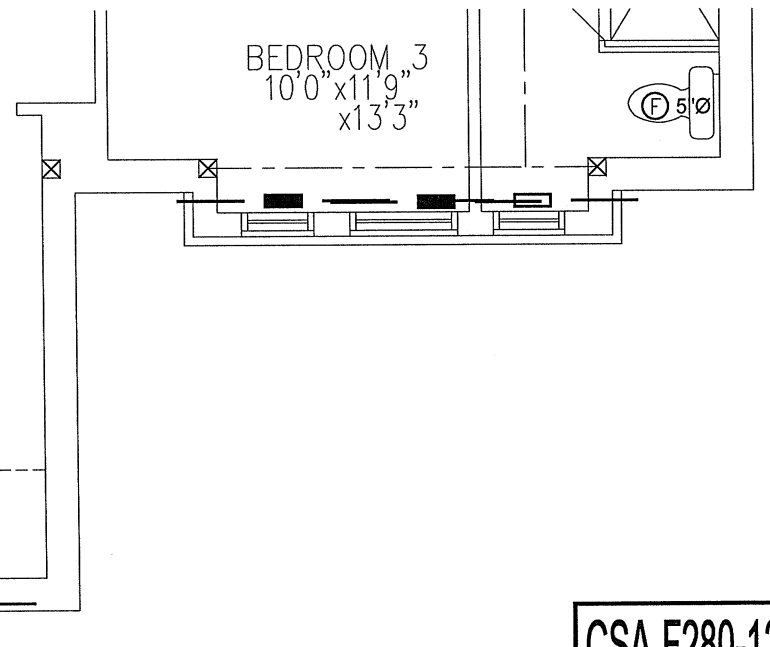
HVAC DESIGNS LTD.
 375 Finley Ave. Suite 202 - Ajax, Ontario
 L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
 Email: info@hvacdsgns.ca
 Web: www.hvacdsgns.ca
 Specializing in Residential Mechanical Design Services
 Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

Sheet Title
FIRST FLOOR HEATING LAYOUT
 Date
FEB/2020
 Scale
3/16" = 1'-0"
 BCIN# 19669
LO# 85231

Sheet Title
FIRST FLOOR HEATING LAYOUT
 Date
FEB/2020
 Scale
3/16" = 1'-0"
 BCIN# 19669
LO# 85231



SECOND FLOOR PLAN, EL. 'A'



PART. SECOND FLOOR PLAN, EL. 'B'

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
 Michael O'Rourke, BCIN# 19669
 HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

HVAC LEGEND							3.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No. Description Date	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS	

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 Project Name
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THE SUNCREST 4007 2494 sqft

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