

**Block 119 Units 25 to 30**

SITE NAME: BARLASSINA

BUILDER: GREENPARK HOMES

TYPE: CHERRY 2

GFA: 2030

DATE: Aug-22

LO# 98650

WINTER NATURAL AIR CHANGE RATE 0.319

SUMMER NATURAL AIR CHANGE RATE 0.085

HEAT LOSS ΔT °F. 72

HEAT GAIN ΔT °F. 9

CSA-F280-12

SB-12 PACKAGE A1

ROOM USE	FACTORS		MBR		ENS		WIC		BED-2		BED-3		BATH		FLEX					
EXP. WALL			13		7		0		11		13		0		0					
CLG. HT.			9		9		9		9		9		9		9					
GRS.WALL AREA	LOSS	GAIN	117		63		0		99		117		0		0					
GLAZING			LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN					
NORTH	20.3	15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
EAST	20.3	40.5	18	365	730	16	324	649	0	0	0	0	0	0	0	0				
SOUTH	20.3	23.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
WEST	20.3	40.5	0	0	0	0	0	0	27	547	1095	24	487	973	0	0				
SKYLT.	35.5	99.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
DOORS	19.1	2.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
NET EXPOSED WALL	4.3	0.5	99	421	53	47	200	25	0	0	0	72	306	39	93	395	50			
NET EXPOSED BSMT WALL ABOVE GR	3.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
EXPOSED CLG	1.2	0.5	286	350	151	144	176	76	80	98	42	176	215	93	155	189	82			
NO ATTIC EXPOSED CLG	2.6	1.1	0	0	0	0	0	0	0	0	0	0	0	0	15	39	17			
EXPOSED FLOOR	2.4	0.3	42	102	13	79	192	24	60	146	19	176	428	54	13	32	4			
BASEMENT/CRAWL HEAT LOSS			0		0		0		0		0		0		0		0			
SLAB ON GRADE HEAT LOSS			0		0		0		0		0		0		0		0			
SUBTOTAL HT LOSS			1237		892		244		1496		1142		230		599					
SUB TOTAL HT GAIN			947		774		61		1281		1126		53		218					
LEVEL FACTOR / MULTIPLIER	0.20	0.37			0.20 0.37		0.20 0.37		0.20 0.37		0.20 0.37		0.20 0.37		0.20 0.37					
AIR CHANGE HEAT LOSS			463		334		91		559		427		86		224					
AIR CHANGE HEAT GAIN			76		62		5		103		91		4		18					
DUCT LOSS			170		123		33		206		157		32		82					
DUCT GAIN			231		84		7		243		226		6		24					
HEAT GAIN PEOPLE	240			2		480		0		0		1		240		1		240		
HEAT GAIN APPLIANCES/LIGHTS			805		0		0		0		805		805		0		0		0	
TOTAL HT LOSS BTU/H			1870		1348		368		2261		1726		348		906					
TOTAL HT GAIN x 1.3 BTU/H			3301		1197		94		3474		3235		81		336					

ROOM USE	FACTORS		K/L/B		W/R		FOY		BAS				
EXP. WALL			61		13		25		100				
CLG. HT.			10		10		10		9				
GRS.WALL AREA	LOSS	GAIN	610		130		250		600				
GLAZING			LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN				
NORTH	20.3	15.0	0	0	0	0	0	0	0	0			
EAST	20.3	40.5	24	487	973	0	0	0	0	0			
SOUTH	20.3	23.9	0	0	0	0	0	0	0	0			
WEST	20.3	40.5	0	0	0	0	0	15	304	608			
SKYLT.	35.5	99.8	0	0	0	0	0	0	0	0			
DOORS	19.1	2.4	20	382	49	0	0	0	40	764	97		
NET EXPOSED WALL	4.3	0.5	566	2406	306	130	553	70	195	829	105		
NET EXPOSED BSMT WALL ABOVE GR	3.4	0.4	0	0	0	0	0	0	0	0	0		
EXPOSED CLG	1.2	0.5	0	0	0	0	0	0	0	0	0		
NO ATTIC EXPOSED CLG	2.6	1.1	0	0	0	0	0	0	0	0	0		
EXPOSED FLOOR	2.4	0.3	0	0	0	0	0	0	0	0	0		
BASEMENT/CRAWL HEAT LOSS			0		0		0		0		0		
SLAB ON GRADE HEAT LOSS			0		0		0		0		0		
SUBTOTAL HT LOSS			3275		553		1897		3048				
SUB TOTAL HT GAIN			1327		70		811		4540				
LEVEL FACTOR / MULTIPLIER	0.30	0.57			0.30 0.57		0.30 0.57		0.50 1.20		341		
AIR CHANGE HEAT LOSS			1874		316		1086		5459				
AIR CHANGE HEAT GAIN			107		6		65		28				
DUCT LOSS			0		0		0		0				
DUCT GAIN			0		0		0		0				
HEAT GAIN PEOPLE	240			0		0		0		0			
HEAT GAIN APPLIANCES/LIGHTS			805		0		0		0		805		
TOTAL HT LOSS BTU/H			5149		869		2983		9999				
TOTAL HT GAIN x 1.3 BTU/H			2911		99		1139		1526				

TOTAL HEAT GAIN BTU/H: 17590

TONS: 1.47

LOSS DUE TO VENTILATION LOAD BTU/H: 1554

STRUCTURAL HEAT LOSS: 27827

TOTAL COMBINED HEAT LOSS BTU/H: 29381

*Michael O'Rourke*

SITE NAME: BARLASSINA  
BUILDER: GREENPARK HOMES

TYPE: CHERRY 2

DATE: Aug-22

GFA: 2030

LO# 98650

HEATING CFM	695	COOLING CFM	695
TOTAL HEAT LOSS	27,827	TOTAL HEAT GAIN	17,393
AIR FLOW RATE CFM	24.98	AIR FLOW RATE CFM	39.96

furnace pressure	0.6
furnace filter	0.05
a/c coil pressure	0.2
available pressure for s/a & r/a	0.35

#GOODMAN  
GMCE960402BNA 40  
FAN SPEED LOW  
MEDLOW  
MEDIUM 695  
MEDIUM HIGH  
HIGH 890

AFUE = 96 %  
INPUT (BTU/H) = 40,000  
OUTPUT (BTU/H) = 38,400

DESIGN CFM = 695  
CFM @ .6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	10	5	3
R/A	0	0	4	1	1

plenum pressure s/a	0.18	r/a pressure	0.17
max s/a dif press. loss	0.02	r/a grille press. Loss	0.02
min adjusted pressure s/a	0.16	adjusted pressure r/a	0.15

All S/A diffusers 4"x10" unless noted otherwise on layout.  
All S/A runs 5"Ø unless noted otherwise on layout.

TEMPERATURE RISE 51 °F

RUN #	1	2	3	4	5	6	7	8	9	10	14	15	16	18	19	21	22	23
ROOM NAME	MBR	ENS	WIC	BED-3	BED-2	BED-2	BATH	FLEX	BED-3	MBR	K/L/B	K/L/B	K/L/B	W/R	FOY	BAS	BAS	BAS
RM LOSS MBH.	0.94	1.35	0.37	0.86	1.13	1.13	0.35	0.91	0.86	0.94	1.72	1.72	1.72	0.87	2.98	3.33	3.33	3.33
CFM PER RUN HEAT	23	34	9	22	28	28	9	23	22	23	43	43	43	22	75	83	83	83
RM GAIN MBH.	1.65	1.20	0.09	1.62	1.74	1.74	0.08	0.34	1.62	1.65	0.97	0.97	0.97	0.10	1.14	0.51	0.51	0.51
CFM PER RUN COOLING	66	48	4	65	69	69	3	13	65	66	39	39	39	4	46	20	20	20
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
ACTUAL DUCT LGH.	46	45	36	65	62	69	41	51	39	39	17	32	24	34	47	27	25	13
EQUIVALENT LENGTH	180	150	160	180	160	180	190	170	140	140	110	130	130	140	110	80	90	110
TOTAL EFFECTIVE LENGTH	226	195	196	245	222	249	259	211	191	179	127	162	154	174	157	107	115	123
ADJUSTED PRESSURE	0.08	0.09	0.09	0.07	0.08	0.07	0.07	0.08	0.09	0.1	0.14	0.11	0.11	0.1	0.11	0.15	0.14	0.13
ROUND DUCT SIZE	5	5	4	6	6	6	4	4	6	5	4	4	4	4	5	6	6	6
HEATING VELOCITY (ft/min)	169	250	103	112	143	143	103	264	112	169	493	493	493	252	551	423	423	423
COOLING VELOCITY (ft/min)	485	352	46	331	352	352	34	149	331	485	447	447	447	46	338	102	102	102
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10
TRUNK	A	A	B	C	C	C	C	C	C	A	B	A	A	C	C	B	B	C

RUN #	ROOM NAME	RM LOSS MBH.	CFM PER RUN HEAT	RM GAIN MBH.	CFM PER RUN COOLING	ADJUSTED PRESSURE	ACTUAL DUCT LGH.	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	ROUND DUCT SIZE	HEATING VELOCITY (ft/min)	COOLING VELOCITY (ft/min)	OUTLET GRILL SIZE	TRUNK

SUPPLY AIR TRUNK SIZE															RETURN AIR TRUNK SIZE				
TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY			
CFM	PRESS.	DUCT	DUCT	(ft/min)	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)	(ft/min)		
TRUNK A	166	0.08	7.2	8	X	8	374					TRUNK G	0	0.00	0	0	X	8	0
TRUNK B	384	0.08	9.8	12	X	8	576					TRUNK H	0	0.00	0	0	X	8	0
TRUNK C	312	0.07	9.4	12	X	8	468					TRUNK I	0	0.00	0	0	X	8	0
TRUNK D	0	0.00	0	0	X	8	0					TRUNK J	0	0.00	0	0	X	8	0
TRUNK E	0	0.00	0	0	X	8	0					TRUNK K	0	0.00	0	0	X	8	0
TRUNK F	0	0.00	0	0	X	8	0					TRUNK L	0	0.00	0	0	X	8	0

RETURN AIR #	1	2	3	4	5	BR											
AIR VOLUME	95	75	75	85	260	0	0	0	0	0	0	0	0	0	0	0	105
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	44	41	26	27	36	1	1	1	1	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	100	270	265	225	185	0	0	0	0	0	0	0	0	0	0	0	135
TOTAL EFFECTIVE LH	144	311	291	252	221	1	1	1	1	1	1	1	1	1	1	1	149
ADJUSTED PRESSURE	0.10	0.05	0.05	0.06	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.10
ROUND DUCT SIZE	5.5	6	6	6	8.8	0	0	0	0	0	0	0	0	0	0	0	5.7
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	8
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	30	0	0	0	0	0	0	0	0	0	0	0	14

TYPE: CHERRY 2  
SITE NAME: BARLASSINA

LO # 98650

**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	4	@ 10.6 cfm	42.4	cfm
Other Rooms	2	@ 10.6 cfm	21.2	cfm
Table 9.32.3.A.		TOTAL	137.8	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
	<b>TOTAL</b>	<b>79.5</b>	<b>cfm</b>

**SUPPLEMENTAL VENTILATION CAPACITY** 9.32.3.5.

Total Ventilation Capacity	137.8	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	58.3	cfm

**PRINCIPAL EXHAUST FAN CAPACITY**

Model: VANEE V150H Location: BSMT

79.5 cfm  HVI Approved

**PRINCIPAL EXHAUST HEAT LOSS CALCULATION**

CFM		ΔT °F		FACTOR		% LOSS
79.5 CFM	X	72 F	X	1.08	X	0.25

**SUPPLEMENTAL FANS** BY INSTALLING CONTRACTOR

Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5
BATH	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5
W/R	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5

**HEAT RECOVERY VENTILATOR** 9.32.3.11.

Model: VANEE V150H

150 cfm high 35 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:** GREENPARK 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: August-22

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																
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<b>5.2.3.1 Heat Loss due to Air Leakage</b>			<b>6.2.6 Sensible Gain due to Air Leakage</b>																																																													
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ <p>0.319 x 207.58 x 40 °C x 1.2 = 3200 W</p> <p>= 10919 Btu/h</p>			$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ <p>= 0.085 x 207.58 x 5 °C x 1.2 = 108 W</p> <p>= 367 Btu/h</p>																																																													
<b>5.2.3.2 Heat Loss due to Mechanical Ventilation</b>			<b>6.2.7 Sensible heat Gain due to Ventilation</b>																																																													
$HL_{vaib} = PVC \times DTD_h \times 1.08 \times (1 - E)$ <p>80 CFM x 72 °F x 1.08 x 0.25 = 1554 Btu/h</p>			$HL_{vaib} = PVC \times DTD_h \times 1.08 \times (1 - E)$ <p>80 CFM x 9 °F x 1.08 x 0.25 = 197 Btu/h</p>																																																													
<b>5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)</b>																																																																
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4	0		0	0.000																																																												
5	0		0	0.000																																																												
<p>*HLairbv = Air leakage heat loss + ventilation heat loss                  *For a balanced or supply only ventilation system HLairve = 0</p>																																																																
				Michael O'Rourke BCIN# 19669 																																																												



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375 Finley Ave. Suite 202 Ajax, ON L1S 2E2

Tel: 905.619.2300 Fax: 905.619.2375

Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

## HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: CHERRY 2  
SFQT: 2030

LO# 98650

BUILDER: GREENPARK HOMES  
SITE: BARLASSINA

### DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	0	OUTDOOR DESIGN TEMP.	84
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75
		WINDOW SHGC	0.50

### BUILDING DATA

ATTACHMENT:	ATTACHED	# 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 <sup>3</sup> ):	26390.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft <sup>2</sup> ):	1.70	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 62.0 ft	WIDTH: 17.0 ft	EXPOSED PERIMETER:	100.0 ft

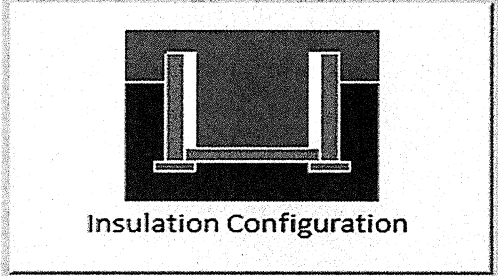
### 2012 OBC - COMPLIANCE PACKAGE

Component	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	96%	-
HRV/ERV 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:	Cambridge	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	18.9	 <p>Insulation Configuration</p>
Floor Width (m):	5.2	
Exposed Perimeter (m):	30.5	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m <sup>2</sup> ):	0.4	
Door Area (m <sup>2</sup> ):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
<b>Heating Load (Watts):</b>	<b>893</b>	

TYPE: CHERRY 2  
LO# 98650



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HVAC Designs Ltd.  
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Ajax ON, L1S 2E2  
905-619-2300

# Air Infiltration Residential Load Calculator

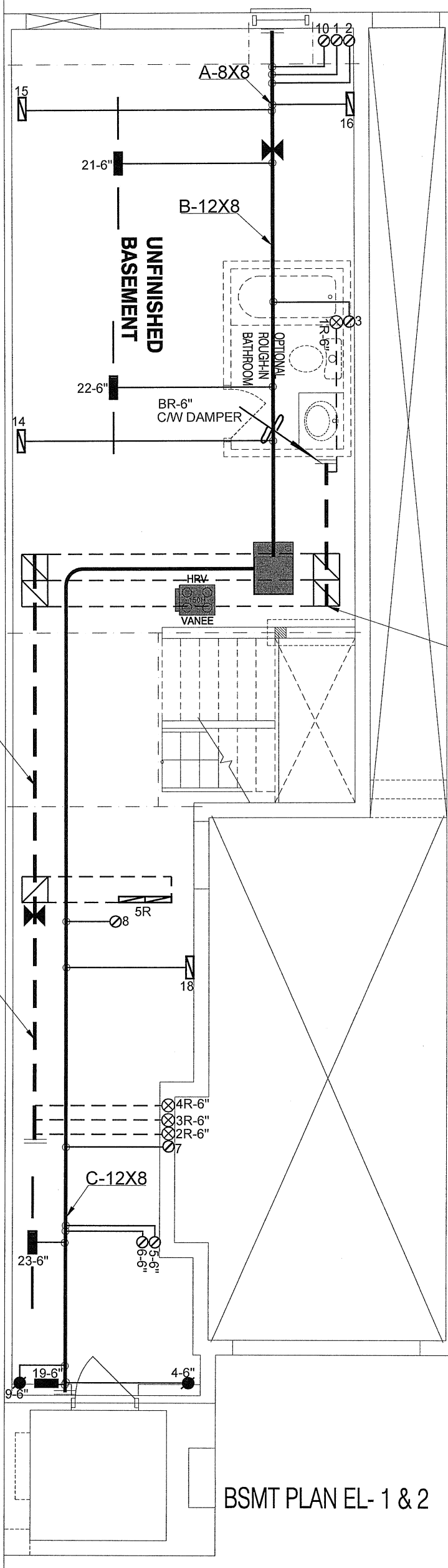
Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Cambridge			
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):	6.71			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m <sup>3</sup> ):	747.3			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	996.1 cm <sup>2</sup>		
	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):	<b>0.319</b>			
Cooling Air Leakage Rate (ACH/H):	<b>0.085</b>			

TYPE: CHERRY 2  
LO# 98650

Michael O'Rourke BCIN# 19669

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*Michael O'Rourke*  
 Michael O'Rourke, BCIN# 19669  
 HVAC DESIGNS LTD.

**CSA-F280-12**  
**PACKAGE A1**

HVAC LEGEND						REVISIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.	Date
	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		RETURN AIR STACK 2nd FLOOR	1.	
			FRA- FLOOR RETURN AIR GRILLE		REDUCER		

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Client  
**GREENPARK HOMES**  
 Project Name  
**BARLASSINA**  
**CAMBRIDGE, ONTARIO**  
 Block 119 Units 25 to 30  
**CHERRY 2**      2030 sqft

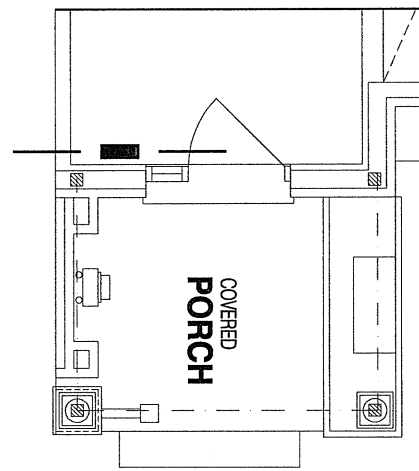
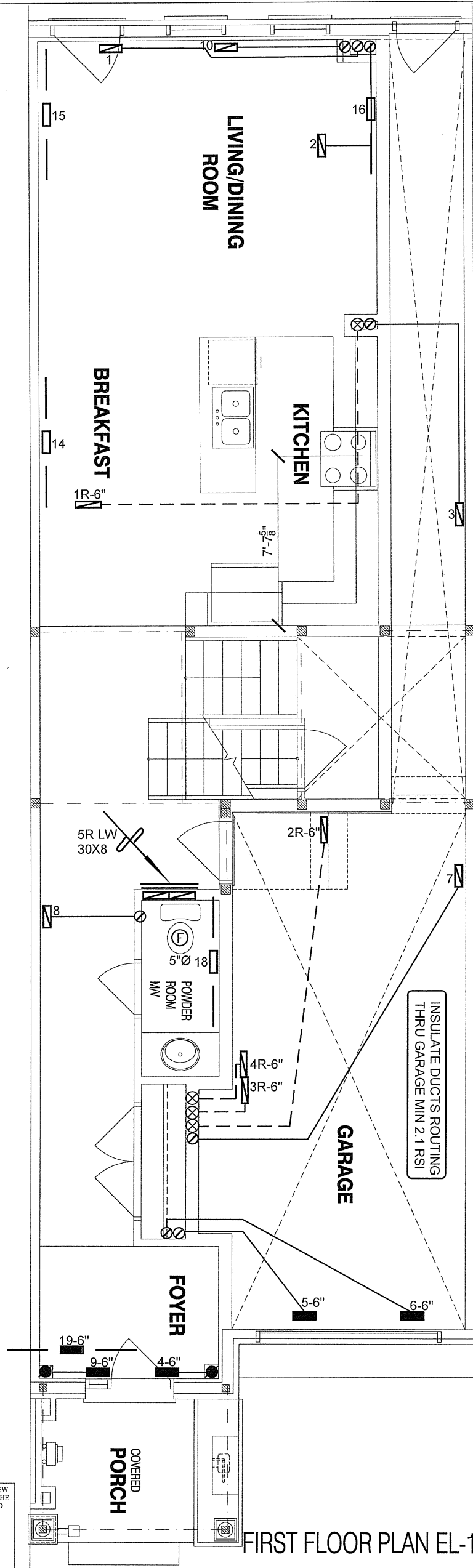
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 Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

HEAT LOSS	29381 BTU/H	# OF RUNS	S/A	R/A	FANS
UNIT DATA		3RD FLOOR			
MAKE	GOODMAN	2ND FLOOR	9	4	3
MODEL	GMEC960402BNA	1ST FLOOR	5	1	2
INPUT	40 MBTU/H	BASEMENT	3	1	0
OUTPUT	38.4 MBTU/H	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A			
COOLING	1.5 TONS				
FAN SPEED	695 cfm @ 0.6" w.c.				

Sheet Title  
**BASEMENT HEATING LAYOUT**  
 Date  
**AUG/2022**  
 Scale  
**3/16" = 1'-0"**  
 BCIN# 19669  
**LO# 98650**



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FIRST FLOOR PLAN EL-2

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Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

**CSA-F280-12**  
**PACKAGE A1**

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
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	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER

No.	Description	Date
3.		
2.		
1.		

**REVISIONS**

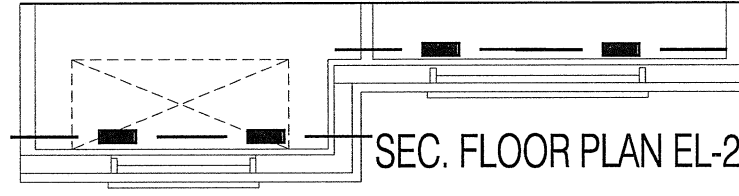
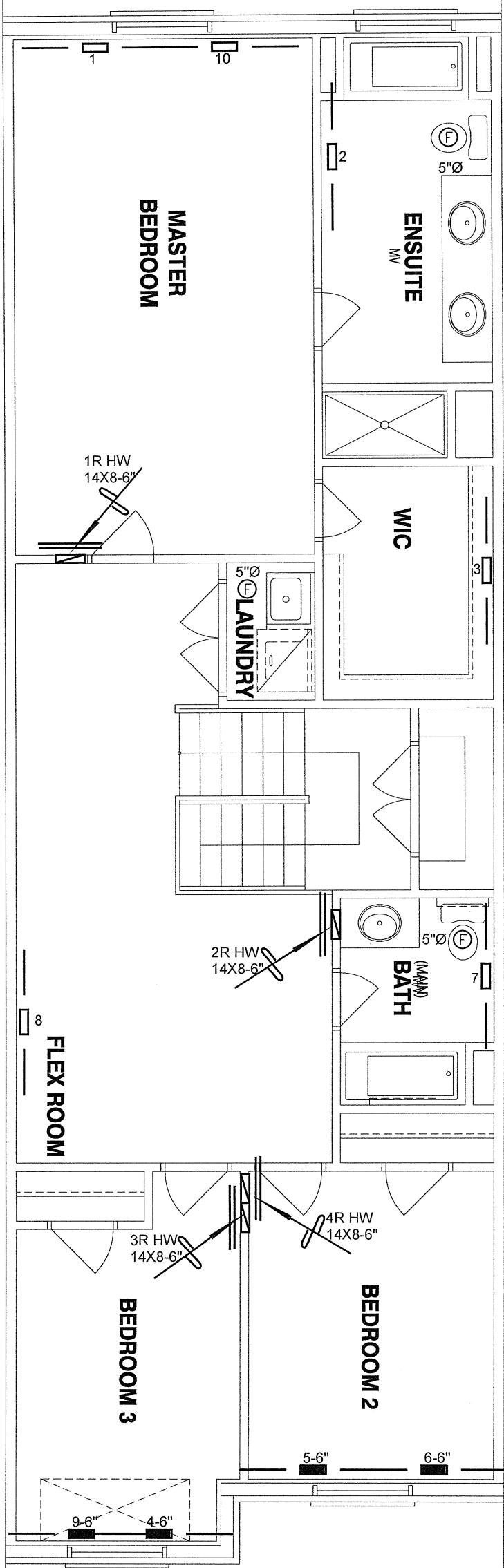
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Client  
**GREENPARK HOMES**  
Project Name  
**BARLASSINA**  
**CAMBRIDGE, ONTARIO**  
**Block 119 Units 25 to 30**  
**CHERRY 2**      **2030 sqft**

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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 **AUG/2022**  
Scale **3/16" = 1'-0"**  
BCIN# 19669  
**LO# 98650**

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SEC. FLOOR PLAN EL-1

**CSA-F280-12**  
**PACKAGE A1**

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Michael O'Rourke, BCIN# 19669  
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HVAC LEGEND							REVISIONS	
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	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	2.
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	1.
								No. Description Date

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Project Name  
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CAMBRIDGE, ONTARIO**

**Block 119 Units 25 to 30**

**CHERRY 2      2030 sqft**

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Sheet Title  
**SECOND FLOOR  
HEATING  
LAYOUT**

Date **AUG/2022**

Scale **3/16" = 1'-0"**

BCIN# 19669

**LO# 98650**

3.

2.

1.