

## **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 Baross                                    | a 17                   |                                | Lot:                                   |          |
| S38-   | 17                     |                                | Lot/con.                               |          |
| Municipality Bradford  | Postal code            | Plan number/ other description |  |          |
| B. Individual who reviews and takes responsibility for design          | gn activities          |                                |  |          |
| Name David DaCosta   |                        | Firm                           | gtaDesigns Inc.                        |          |
| Street address 2985 Drew Roa   | d, Suite 202           |                                |  | Lot/con. |
| Municipality Mississauga   | Postal code<br>L4T 0A4 | Province<br>Ontario            | E-mail hvac@gtadesi                    | gns.ca   |
| Telephone number (905) 671-9800  | Fax number             |                                | Cell number                            |          |
| C. Design activities undertaken by individual identified in S          | ection B. [Bu          | ilding Code Table 3            | 3.5.2.1 of Division C]                 |          |
| ☐ House ☒ HVAC – H   | louse                  |                                | ☐ Building Structural                  |          |
| ☐ Small Buildings ☐ Building Se  | ervices                |                                | ☐ Plumbing – House                     |          |
| ☐ Large Buildings ☐ Detection,   | Lighting and Po        | wer                            | ☐ Plumbing – All Buildings             |          |
| ☐ Complex Buildings ☐ Fire Protect                                     | tion                   |                                | ☐ On-site Sewage System                | s        |
| Description of designer's work Mod                                     | del Certification      | 1                              | Project #:                             | PJ-00041 |
|  | .,                     | I 5 11 I                       | Layout #:                              | JB-07358 |
| Heating and Cooling Load Calculations Main Air System Design Alternate | X                      | Builder<br>Project             | Bayview Wellingto<br>Green Valley East |          |
| Residential mechanical ventilation Design Summary Area Sq ft:          | 2511                   |                                | Barossa 17                             |          |
| Residential System Design per CAN/CSA-F280-12                          |                        | Model                          | S38-17                                 |          |
| Residential New Construction - Forced Air                              |                        | SB-12                          | Package A1                             |          |
| D. Declaration of Designer   |                        |                                |  |          |
| David DaCosta  | declare that (d        | choose one as appro            | priate):                               |          |
| (print name)   |                        |                                |  |          |
|  |                        |                                |  |          |
| ☐ I review and take responsibility for the Aprillation Co.             |                        |                                |  |          |
| 3.2.4 Division C of the Building Cocclasses/categories.                | ie. i am qualified     | i, and the firm is registe     | ered, in the appropriate               |          |
| Individual BCIN:   |                        |                                |  |          |
| Firm BCIN:   |                        |                                | 1                                      |          |
| Tilli Boliv.   |                        |                                | •                                      |          |
|  |                        |                                |  |          |
| Individual BCIN:   | 3296                   | 64                             |  |          |
| Basis for exemp  | tion from registr      | ation: E                       | Division C 3.2.4.1. (4)                |          |
| ☐ The design work is exempt from the                                   | e registration and     | d qualification requirem       | ents of the Building Code.             |          |
| Basis for exemp  | tion from registr      | ation and qualification:       |  |          |
| I certify that:  |                        |                                |  |          |
| The information contained in this schedule is true to the best of n    | ny knowledge.          |                                |  |          |
| I have submitted this application with the knowledge and consent       | of the firm.           |                                |  |          |
| July 23, 2021  |                        | Mane Sto                       |  |          |
| Date   |                        | Signature of Des               | signer                                 |          |

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d), of Division C, Article 3.2.5.1. of Division C and all other persons who are exempt from qualifications under Subsections 3.2.4. and 3.2.5.of Division C.

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



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| Heat loss and gain cald   | culation summary sheet CSA-F280-M12 Standard                      |
|---|---|
| These documents issued for the use of                                 | Bayview Wellington Layout No.                                     |
| and may not be used by any other persons without authorization. Docum | nents for permit and/or construction are signed in red.  JB-07358 |
| Buildi  | ng Location   |
| Address (Model): S38-17   | Site: Green Valley East   |
| Model: Barossa 17   | Lot:  |
| City and Province: Bradford   | Postal code:  |
| Calculat  | ions based on   |
| Dimensional information based on:                                     | VA3 Design13/May/2021   |
| Attachment: Detached  | Front facing: East/West Assumed? Yes                              |
| No. of Levels: 3 Ventilated? Included                                 | Air tightness: 1961-Present (ACH=3.57) Assumed? Yes               |
| Weather location: Bradford  | Wind exposure: Sheltered  |
| HRV? VanEE V150H75NS  | Internal shading: Light-translucent Occupants: 5                  |
| Sensible Eff. at -25C 60% Apparent Effect. at -0C 83                  | Units: Imperial Area Sq ft: 2511                                  |
| Sensible Eff. at -0C 75%  |   |
| Heating design conditions   | Cooling design conditions   |
| Outdoor temp -9.4 Indoor temp: 72 Mean soil temp: 4                   | 8 Outdoor temp 86 Indoor temp: 75 Latitude: 44                    |
| Above grade walls   | Below grade walls   |
| Style A: As per OBC SB12 Package A1 R 22                              | Style A: As per OBC SB12 Package A1 R 20ci                        |
| Style B:  | Style B:  |
| Style C:  | Style C:  |
| Style D:  | Style D:  |
| Floors on soil  | Ceilings  |
| Style A: As per Selected OBC SB12 Package A1                          | Style A: As per Selected OBC SB12 Package A1 R 60                 |
| Style B:  | Style B: As per Selected OBC SB12 Package A1 R 31                 |
| Exposed floors  | Style C:  |
| Style A: As per Selected OBC SB12 Package A1 R                        | 31 Doors  |
| Style B:  | Style A: As per Selected OBC SB12 Package A1 R 4.00               |
| Windows   | Style B:  |
| Style A: As per Selected OBC SB12 Package A1 R                        | 3.55 Style C:   |
| Style B:  | Skylights   |
| Style C:  | Style A: As per Selected OBC SB12 Package A1 R 2.03               |
| Style D:  | Style B:  |
| Attached documents: As per Shedule 1 Heat L                           | oss/Gain Caculations based on CSA-F280-12 Effective R-Values      |
| Notes: Residential N  | lew Construction - Forced Air                                     |
| Calculatio  | ns performed by   |
| Name: David DaCosta   | Postal code: L4T 0A4  |
| Company: gtaDesigns Inc.  | Telephone: (905) 671-9800   |
| Address: 2985 Drew Road, Suite 202                                    | Fax:  |
| City: Mississauga   | E-mail hvac@gtadesigns.ca   |
|   | <del>-</del>  |



**Total Effective Length** 

Adjusted Pressure

**Duct Size Round** 

Inlet Size

Inlet Size

Trunk

117

0.10

7.0

FLC

139

0.08

10.5

30

208

0.06

6.0

14

232

0.05

6.0

14

165

0.07

7.5

14

185

0.06

50

0.24

50

0.24

50

0.24

50

0.24

50

0.24

х

w

U

s

Q

### Air System Design

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70

70

328

202

G

0.06

0.06

10.5

8.5

12x8

8x8

10x10

107

e-mail hvac@gtadesigns.ca **SB-12** Package A1 I review and take responsibility for the design work and am qualified in the **Bayview Wellington** July 23, 2021 Builder: Date: Page 3 appropriate category as an "other designer" under Division C subsection 3.2.5. of the Barossa 17 Project # PJ-00041 **Building Code.** System 1 Mane Alex **Green Valley East** S38-17 Individual BCIN: 32964 David DaCosta Lavout # JB-07358 Project: Model: BOILER/WATER HEATER DATA: DESIGN LOAD SPECIFICATIONS AIR DISTRIBUTION & PRESSURE FURNACE/AIR HANDLER DATA: A/C UNIT DATA: Level 1 Net Load 18,033 btu/h **Equipment External Static Pressure** 0.5 "w.c. Make Make 2.5 Ton Amana Туре Amana AMEC960603ANA Level 2 Net Load 18,849 btu/h **Additional Equipment Pressure Drop** 0.225 "w.c. Model Model Cond.-2.5 Level 3 Net Load 18.592 btu/h **Available Design Pressure** 0.275 "w.c. Input Btu/h 60000 Input Btu/h Coil -2.5 Return Branch Longest Effective Length 57600 Level 4 Net Load 300 ft Output Btu/h Output Btu/h 0 btu/h " W C ΔWH 55.473 btu/h 0.138 "w.c. 0.50 Min.Output Btu/h Total Heat Loss R/A Plenum Pressure E.s.p. Blower DATA: **Total Heat Gain** 26,865 btu/h S/A Plenum Pressure 0.14 "w.c. deg. F. W2 Heating Air Flow Proportioning Factor 0.0167 cfm/btuh AFUE Blower Speed Selected: ECM 96% **Blower Type** 32215 ft<sup>3</sup> **Building Volume Vb** Cooling Air Flow Proportioning Factor 0.0346 cfm/btuh (Brushless DC OBC 12.3.1.5.(2)) Aux. Heat Ventilation Load 1.188 Btuh. SB-12 Package Package A1 Heating Check 929 cfm 929 cfm R/A Temp 70 dea. F. Cooling Check Ventilation PVC 79.5 cfm S/A Temp 127 deg. F. Supply Branch and Grill Sizing Diffuser loss 57 deg. F. 929 cfm **Cooling Air Flow Rate** 929 cfm 0.01 "w.c. Temp. Rise>>> Selected cfm> Level 1 Level 2 S/A Outlet No 2 5 10 11 12 Room Use BASE BASE BASE KIT KIT DIN MUD FOY PWD GRT GRT Btu/Outlet 4508 4508 4508 4508 2371 2371 3042 1482 3673 755 2578 2578 **Heating Airflow Rate CFM** 75 75 75 75 40 40 51 25 62 13 43 43 13 13 13 13 93 93 122 53 66 66 Cooling Airflow Rate CFM **Duct Design Pressure** 0.13 **Actual Duct Length** 22 31 27 19 31 24 23 10 39 33 38 32 Equivalent Length 120 130 130 110 70 70 70 70 70 70 70 70 70 70 120 130 70 130 130 120 100 90 70 70 70 70 70 Total Effective Length 142 161 157 129 70 70 70 70 70 70 70 70 70 151 154 93 140 169 153 138 122 70 70 70 70 70 70 70 Adjusted Pressure 0.09 0.08 0.08 0.10 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.09 0.08 0.14 0.09 0.08 0.08 0.09 0.11 0.19 0.19 0.19 0.19 0.19 0.19 **Duct Size Round Outlet Size** 4x10 4x10 4x10 4x10 4x10 4x10 3x10 3x10 3x10 4x10 3x10 3x10 4x10 4x10 4x10 4x10 4x10 4x10 Trunk C В D Level 3 Level 4 S/A Outlet No. 13 15 16 17 20 21 22 23 14 18 19 Room Use MAST MAST FNS 2 RFD 2 BFD 3 BFD 3 RATH RFD 4 LAUND WIC. **FNS** Btu/Outlet 1885 1885 613 1392 2162 2162 1021 3150 687 1889 1746 32 **Heating Airflow Rate CFM** 32 10 23 36 36 17 53 12 32 29 45 45 41 Cooling Airflow Rate CFM 12 37 41 16 86 11 29 **Duct Design Pressure** 0.13 37 55 **Actual Duct Length** 39 31 38 59 41 25 61 **Equivalent Length** 150 120 100 110 130 120 110 150 130 150 150 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 187 155 205 159 131 148 189 165 151 206 211 70 70 70 70 70 70 70 70 70 70 70 70 70 Total Effective Length 70 70 70 Adjusted Pressure 0.07 0.08 0.10 0.09 0.07 0.08 0.09 0.06 0.08 0.06 0.06 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 **Duct Size Round** 5 3 6 Outlet Size 3x10 3x10 3x10 3x10 3x10 3x10 3x10 4x10 3x10 3x10 3x10 4x10 Trunk D ח D C Return Branch And Grill Sizing **Grill Pressure Loss** 0.02 "w.c **Return Trunk Duct Sizing** Supply Trunk Duct Sizing R/A Inlet No 1R 2R 3R 4R 5R 6R 7R 8R 9R 10R 11R Trunk CFM Press. Round Rect. Size Trunk CFM Press. Round Rect. Size Inlet Air Volume CFM 151 418 105 105 150 **Duct Design Pressure** 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 929 0.05 15.5 24x10 601 13.0 18x8 14x10 Drop 0.06 929 307 28 37 35 0.05 15.5 R 0.08 9.5 10v8 **Actual Duct Length** 7 14 40 Z 28**y**8 22v10 127 **Equivalent Length** 110 125 180 195 130 145 50 50 50 50 50 Υ 361 0.05 11.5 14x8 12x10 C 294 0.06 10.0 12x8 10x10



Total Heat Loss

Total Heat Gain

55,473 btu/h

26,865 btu/h

## Heatloss/Gain Calculations CSA-F280-12

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Name Alexa

David DaCosta

Package A1

32964

|  |  | Builder:   | Bayview Wo   | llington  | _  | Date:   |                          | J   | uly 23, 20                          | 21                   |   |                                  |   |   | Weatl  | her Data                                 | Bradford                           | 44                                 | -9.4 | 86 22                              | 48.2 |                                  |         |                                   | F          |
|--|--|--|--|---|--|---|--------------------------|---|-------------------------------------|----------------------|---|----------------------------------|---|---|--|--|------------------------------------|------------------------------------|------|------------------------------------|------|----------------------------------|---------|-----------------------------------|------------|
| 012 OBC  |  | Project:   | Green Vall   | ey East   |  | Model:  |                          | I   | Barossa 1<br>S38-17                 | 7                    |   |                                  | System  | 1   | Heat   | t Loss ^T                                | 81.4 deg. F                        | Ht gain ^T                         | 11   | deg. F                             | GTA: | 2511                             |         | roject #<br>.ayout #              | PJ-<br>JB- |
| 1  |  |  | Oldon van  |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    | <b>3-</b>                          |      |                                    |      |                                  |         | ,                                 |            |
|  | Level 1  |  |  | BA  | SE   |   |                          |   |                                     |                      | _   |                                  |   |   |  |  | _                                  | _                                  |      |                                    |      | _                                |         |                                   |            |
|  | t. exposed wall A  |  |  | 156 A   |  | Α   |                          |   | Α                                   |                      | Α   |                                  | Α   |   | Α  |  | Α                                  | Α                                  |      | Α                                  |      | Α                                |         | Α                                 |            |
| Run ft.  | t. exposed wall B  |  |  | В   |  | В   |                          |   | В                                   |                      | В   |                                  | В   |   | В  |  | В                                  | В                                  |      | В                                  |      | В                                |         | В                                 |            |
|  | Ceiling height   |  |  | 6.0 AG  |  | 6.0 A   | G                        | 6.0   | AG                                  |                      | 6.0 AG  |                                  | 6.0 AG  | 6   | 6.0 AG   |  | 6.0 AG                             | 6.0 AG                             |      | 6.0 AG                             |      | 6.0 AC                           | 3       | 6.0 AG                            | i          |
|  | Floor area   |  |  | 996 Area  |  |   | rea                      |   | Area                                |                      | Area  |                                  | Area  |   | Area   |  | Area                               | Area                               |      | Area                               |      | Ar                               |         | Are                               |            |
| F  |  |  |  |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  | ca      |                                   | a          |
|  | posed Ceilings A   |  |  | Α   |  | Α   |                          |   | Α                                   |                      | Α   |                                  | Α   |   | Α  |  | Α                                  | Α                                  |      | Α                                  |      | Α                                |         | Α                                 |            |
| Expo   | posed Ceilings B   |  |  | В   |  | В   |                          |   | В                                   |                      | В   |                                  | В   |   | В  |  | В                                  | В                                  |      | В                                  |      | В                                |         | В                                 |            |
| E  | Exposed Floors   |  |  | Flr   |  | F   | lr                       |   | Flr                                 |                      | Flr   |                                  | Flr   |   | Flr  |  | Flr                                | Flr                                |      | Flr                                |      | Fir                              | •       | Flr                               |            |
|  | Gross Exp Wall A   |  |  | 936   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Gross Exp Wall B   |  |  | 000   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| Gi   |  | D V-l  |  | 1   | 0-!  |   |                          |   |                                     | 0-1                  |   | 0-!                              |   |   |  | 0-!                                      | 1 0-1                              |                                    | 0-!  |                                    | 0-1- |                                  | 0-!     |                                   |            |
|  | Components   |  |  | Loss  |  |   | oss G                    | iain  | Loss                                | Gain                 | Loss  | Gain                             | Loss G  | ain   | Loss   | Gain                                     | Loss Gair                          | Loss                               | Gain | Loss                               | Gain |                                  | ss Gain | Los                               | SS         |
|  | North Shaded   | 3.55   | 22.93 11.6   |   | 69 35  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | East/West  | 3.55   | 22.93 29.5   | 13 29   | 98 384   |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | South  | 3.55   | 22.93 22.5   | 3 (   | 69 68  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | WOB Windows  | 3.55   | 22.93 27.8   |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  |  |  |  |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Skylight   | 2.03   | 40.10 88.2   |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Doors  | 4.00   | 20.35 2.7  | 21 4  | 27 58  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| Net e  | exposed walls A  | 21.12  | 3.85 0.5   | 896   | 467  | ·   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | exposed walls B  | 17.03  | 4.78 0.6   |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | posed Ceilings A   | 59.22  | 1.37 0.6   |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  |  |  |  |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | posed Ceilings B   | 27.65  | 2.94 1.3   |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| E  | Exposed Floors   | 29.80  | 2.73 0.1   |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| ndation Conduct  |  |  |  | 76  | 18   |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Heat Loss  |  |  | 84  |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| Conductive   |  |  |  | 044   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Heat Gain  |  |  | 4   | 1011   |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| Leakage  | Heat Loss/Gain   |  | 1.0926 0.045   |   | 66 46  | i   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Case 1   |  | 0.07 0.0   | ,   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| ntilation  | Case 2   |  | 14.95 11.8   | 1   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Case 3   | х  | 0.03 0.0   |   | 86 70  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  |  | Α  |  |   | 70   |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Heat Gain People   |  | 23   |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  |  | 1 - 2F no  | roont 440  |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
|  | Appliances Loads   | 1 =.25 pe  | 10em 412   | ,   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| Ap   | Appliances Loads uct and Pipe loss   | 1 =.25 pe  | rcent 412  |   |  |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| Ap<br>Duc  | uct and Pipe loss  |  | 10%  | 5   | 22   |   |                          |   |                                     |                      |   |                                  |   |   |  |  |                                    |                                    |      |                                    |      |                                  |         |                                   |            |
| Ap<br>Duc<br>vel HL Total  | uct and Pipe loss<br>18,033<br>1,465<br>Level 2  | Tot  | al HL for per room   | 1803  | 1465   |   | DIN                      | 11  | MUD                                 |                      | FOY 25 A  |                                  | PWD<br>6 A  |   | GRT<br>51 A  | T  | A                                  | A                                  |      | A                                  |      |                                  |         |                                   |            |
| Ap Duc el HL Total el HG Total  Run ft. Run ft.  | Level 2  t. exposed wall A ceiling height Floor area   | Tot  | 10%<br>al HL for per room  | KI<br>37 A<br>B<br>11.0<br>239 Area   | 1465   | 26 A<br>B<br>11.0<br>181 A                                | rea                      | 13.0  | A<br>B<br>)<br>) Area               |                      | FOY<br>25 A<br>B<br>12.0<br>75 Area   |                                  | 6 A<br>B<br>1.0<br>36 Area  | 11  | 51 A<br>B<br>I.0<br>28 Area                            | r  | A<br>B<br>11.0<br>Area             | A<br>B<br>11.0<br>Area             |      | A<br>B<br>11.0<br>Area             |      | 11.0<br>Ar                       | ea      | 11.0<br>Are                       | ea         |
| Ap Duc el HL Total el HG Total  Run ft. Run ft.  | 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Ceiling height   | Tot  | 10%<br>al HL for per room  | 1803<br>KI<br>37 A<br>B   | 1465   | 26 A<br>B<br>11.0<br>181 A                                | rea                      | 13.0  | A<br>B                              |                      | 25 A<br>B<br>12.0   |                                  | 6 A<br>B<br>1.0   | 11  | 51 A<br>B<br>∣.0                                       | г  | B<br>11.0<br>Area<br>A             | B<br>11.0<br>Area<br>A             |      | B<br>11.0<br>Area<br>A             |      | 11.0                             | ea      | В<br>11.0                         | ea         |
| Ap Duc el HL Total el HG Total  Run ft.  Expc  | Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A   | Tot  | 10%<br>al HL for per room  | KI<br>37 A<br>B<br>11.0<br>239 Area   | 1465   | 26 A<br>B<br>11.0<br>181 A                                | rea                      | 13.0  | A<br>B<br>)<br>) Area               |                      | 25 A<br>B<br>12.0<br>75 Area  |                                  | 6 A<br>B<br>1.0<br>36 Area<br>A   | 11  | 51 A<br>B<br>I.0<br>28 Area<br>A                       | r  | B<br>11.0<br>Area<br>A             | B<br>11.0<br>Area<br>A             |      | B<br>11.0<br>Area<br>A             |      | 11.0<br>Ar<br>A                  |         | 11.0<br>Are                       | ea.        |
| Ap Duc el HL Total el HG Total  Run ft.  Expc Expc   | Level 2  t. exposed wall A  Ceiling height Floor area posed Ceilings A posed Ceilings B  | Tot  | 10%<br>al HL for per room  | 1803<br>KI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B   | 1465   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B                      | rea                      | 13.0  | A<br>B<br>)<br>Area<br>A<br>B       |                      | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B  |                                  | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B                                      | 11  | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B                  | 7  | B<br>11.0<br>Area<br>A<br>B        | B<br>11.0<br>Area<br>A<br>B        |      | B<br>11.0<br>Area<br>A<br>B        |      | B<br>11.0<br>Ar<br>A<br>B        |         | B<br>11.0<br>Are<br>A<br>B        |            |
| Ap Duc el HL Total el HG Total Run ft. Run ft. Expc  | Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings B Exposed Floors  | Tot  | 10%<br>al HL for per room  | 1803<br>KI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B<br>Fir  | 1465   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B                      | rea                      | 13.0<br>30  | A<br>B<br>)<br>Area<br>A<br>B       |                      | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B<br>Fir   |                                  | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>FIr                               | 11<br>42  | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir           | •  | B<br>11.0<br>Area<br>A             | B<br>11.0<br>Area<br>A             |      | B<br>11.0<br>Area<br>A             |      | 11.0<br>Ar<br>A                  |         | B<br>11.0<br>Are<br>A             |            |
| Ap Duc el HL Total el HG Total | uct and Pipe loss 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings B Exposed Floors Gross Exp Wall A   | Tot  | 10%<br>al HL for per room  | 1803<br>KI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B   | 1465   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B                      | rea                      | 13.0  | A<br>B<br>)<br>Area<br>A<br>B       |                      | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B  |                                  | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B                                      | 11<br>42  | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B                  | r  | B<br>11.0<br>Area<br>A<br>B        | B<br>11.0<br>Area<br>A<br>B        |      | B<br>11.0<br>Area<br>A<br>B        |      | B<br>11.0<br>Ar<br>A<br>B        |         | B<br>11.0<br>Are<br>A<br>B        |            |
| Ap Duc el HL Total el HG Total | uct and Pipe loss 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A posed Ceilings B Exposed Floors cross Exp Wall B  | Total  | al HL for per room<br>4G per room x 1  | 180:<br>1 180:<br>37 A B<br>11.0<br>239 Area A B Fir<br>407   | 1465   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>FI<br>286         | rea<br>Ir                | 13.0<br>30<br>143   | A<br>B<br>O Area<br>A<br>B<br>Fir   |                      | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B<br>Fir   |                                  | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir                               | 11<br>42<br>56  | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir           |  | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir |      | B<br>11.0<br>Area<br>A<br>B<br>Fir |      | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc el HL Total el HG Total | Level 2 t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Floors Gross Exp Wall B Components   | Total Total  | al HL for per room  HG per room x 1  | 1803<br>KI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B<br>Fir<br>407   | 1465   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>FI<br>286         | rea<br>Ir                | 13.0<br>30  | A<br>B<br>O Area<br>A<br>B<br>Fir   |                      | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B<br>Fir<br>300                                      | Gain                             | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 11<br>42<br>50<br>ain                                     | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir           | Gain                                     | B<br>11.0<br>Area<br>A<br>B        | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B        | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir |         | B<br>11.0<br>Are<br>A<br>B        |            |
| Ap Duc  I HL Total  I HG Total  Run ft.  Expc Expc Expc Erpc Gr  | Level 2 t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Floors Gross Exp Wall B Components   | Total Total  | al HL for per room  HG per room x 1  | 1803<br>KI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B<br>Fir<br>407   | 1465   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>FI<br>286         | rea<br>Ir                | 13.0<br>30<br>143   | A<br>B<br>O Area<br>A<br>B<br>Fir   |                      | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B<br>Fir<br>300                                      | Gain                             | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 11<br>42<br>56  | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir           |  | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc el HL Total I HG Total Run ft. Run ft. Run ft. Expc Expc E G G  | uct and Pipe loss 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Celling height Floor area aposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded  | Total  Total   | al HL for per room  HG per room x 1  oss Gain  22.93 11.6  | XI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B<br>Fir<br>407   | T Gain   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>F<br>286          | rea<br>Ir                | 13.0<br>30<br>143   | A<br>B<br>O Area<br>A<br>B<br>Fir   |                      | 25 A B 12.0 75 Area A B Fir 300  Loss 12 275  | Gain                             | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 11<br>42<br>56<br>ain<br>128                              | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir<br>61     | Gain                                     | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc  I HL Total  I HG Total  Run ft.  Expc Expc Expc Erpc Gr  | uct and Pipe loss 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A Exposed Floors iross Exp Wall B Components North Shaded EastWest  | Total  Total   | al HL for per room x 1  AG per room x 1  Does Gain  22.93 11.6. 22.93 22.5   | KI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B<br>Fir<br>407   | T Gain   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>F1<br>286         | rea<br>Ir                | 13.0<br>30<br>143<br>sain   | A<br>B<br>O Area<br>A<br>B<br>Fir   |                      | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B<br>Fir<br>300                                      | <u>Gain</u><br>139               | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 11<br>42<br>56<br>ain<br>128                              | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir           | Gain                                     | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc I HL Total I HG Total Run ft. Run ft. Expc Expc Gr Gr   | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Floors Gross Exp Wall B Components North Shaded East/West South  | Total  | al HL for per room x 1  MG per room x 1  OSS Gain  22.93 (22.5)  22.93 (22.5)  | 1803  KI 37 A 11.0 239 Area A B Fir 407   | T Gain   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>F<br>286          | rea<br>Ir                | 13.0<br>30<br>143   | A<br>B<br>O Area<br>A<br>B<br>Fir   |                      | 25 A B 12.0 75 Area A B Fir 300  Loss 12 275  | <u>Gain</u><br>139               | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 11<br>42<br>56<br>ain<br>128                              | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir<br>61     | Gain                                     | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc H HL Total I HG Total Run ft. Run ft. Expc Gr Gr  | uct and Pipe loss 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Celling height Floor area aposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows  | R-Values L<br>3.55<br>3.55<br>3.55   | al HL for per room x 1  Boss Gain 22.93 11.6 22.93 22.55 40.90 23.6  | KI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B<br>Fir<br>407<br>Loss   | T Gain   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>F1<br>286         | rea<br>Ir                | 13.0<br>30<br>143<br>sain   | A<br>B<br>O Area<br>A<br>B<br>Fir   |                      | 25 A B 12.0 75 Area A B Fir 300  Loss 12 275  | <u>Gain</u><br>139               | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 11<br>42<br>56<br>ain<br>128                              | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir<br>61     | Gain                                     | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc H HL Total I HG Total Run ft. Run ft. Expc Gr Gr  | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skylight  | R-Values L 3.55 3.55 3.55 1.99 2.03  | oss Gain 22.93 11.6 22.93 22.5 22.93 22.5 40.90 23.6 40.10 88.2  | 1803 KI 37 A B 11.0 239 Area A B Fir 407 Loss   | T Gain   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>F1<br>286         | rea<br>Ir                | 13.0<br>30<br>143<br>sain   | A B Area A B Flr Loss               | Gain                 | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B<br>Fir<br>300<br>Loss<br>12<br>275<br>23           | Gain<br>139<br>680               | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 11<br>42<br>56<br>ain<br>128                              | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir<br>61     | Gain                                     | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc I HL Total I HG Total Run ft. Run ft. Expc Expc Gr Gr   | uct and Pipe loss 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Celling height Floor area aposed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows  | R-Values L<br>3.55<br>3.55<br>3.55   | al HL for per room x 1  Boss Gain 22.93 11.6 22.93 22.55 40.90 23.6  | 1803 KI 37 A B 11.0 239 Area A B Fir 407 Loss   | T Gain   | 26 A<br>B<br>11.0<br>181 A<br>A<br>B<br>F1<br>286         | rea<br>Ir                | 13.0<br>30<br>143<br>sain   | A B Area A B Flr Loss               | Gain                 | 25 A B 12.0 75 Area A B Fir 300  Loss 12 275  | <u>Gain</u><br>139               | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 11<br>42<br>56<br>ain<br>128                              | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir<br>61     | Gain                                     | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc I HL Total I HG Total Run ft. Run ft. Expc Gr Gr  | uct and Pipe loss 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Floors Gross Exp Wall B Components North Shaded East/West South xisting Windows Skylight Doors   | R-Values L 3.55 3.55 3.55 1.99 2.03  | oss Gain 22.93 11.6 22.93 22.5 22.93 22.5 40.90 23.6 40.10 88.2  | 1803  KI 37 A 11.0 239 Area A B Fir 407   | Gain 2099  | 26 A B 11.0 181 A A B F 1286 L                            | rea<br>Ir                | 13.0<br>30<br>143<br>sain   | A B Area A B Fir B Loss             | Gain<br>58           | 25 A<br>B<br>12.0<br>75 Area<br>A<br>B<br>Fir<br>300<br>Loss<br>12<br>275<br>23           | Gain<br>139<br>680               | 6 A<br>B<br>1.0<br>36 Area<br>A<br>B<br>Fir<br>66                         | 111 4:<br>50<br>ain<br>128                                | 51 A<br>B<br>I.0<br>28 Area<br>A<br>B<br>Fir<br>61     | Gain<br>5 1360                           | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc H HL Total I HG Total Run ft. Expc Exp Gr Gr  | uct and Pipe loss 18,033 1,465  Level 2 t. exposed wall A t. exposed wall B Celling height Floor area posed Ceilings B Exposed focilings B Exposed focilings B Exposed Fore Sexposed Vall B Components North Shaded East/West Soxitish Windows Skylight Doors exposed walls A  | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00   | al HL for per room x 1  al HL for per room x 1  by the per room x 1  coss Gain         | KI<br>37 A<br>B<br>11.0<br>239 Area<br>A<br>B<br>Fir<br>407<br>Loss   | Gain 2099  | 26 A B 11.0 181 A A B F 1286 L                            | rea<br>ir<br>ooss G      | 13.0<br>30<br>143<br>sain   | A B Area A B Fir B Loss             | Gain<br>58           | 25 A B 12.0 75 Area A B Fir 300 Loss 12 275 23 527  | Gain<br>139<br>680               | 6 A B 1.0 36 Area A B Fir 66  Loss 6 11 252                               | 111 4:<br>50<br>ain<br>128                                | 51 A B   | Gain<br>5 1360                           | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc H HL Total I HG Total  Run ft. Run ft. Expt Gr Gr Gr  Net e   | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A posed Ceilings B Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skiylight Doors exposed walls A exposed walls A  | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03  | al HL for per room x1  as San  | 1803  KI 37 A B 11.0 239 Area A B Fir 407  Loss 71 163  | Gain 2099  | 26 A B 11.0 181 A A B F 1286 L                            | rea<br>ir<br>ooss G      | 13.0<br>30<br>143<br>sain   | A B Area A B Fir B Loss             | Gain<br>58           | 25 A B 12.0 75 Area A B Fir 300 Loss 12 275 23 527  | Gain<br>139<br>680               | 6 A B 1.0 36 Area A B Fir 66  Loss 6 11 252                               | 111 4:<br>50<br>ain<br>128                                | 51 A B   | Gain<br>5 1360                           | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc H HL Total H HG Total H HG Total Run ft. Run ft. Expc Expc Gr Gr  Exi   | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Floors Gross Exp Wall B Components North Shaded East/West South kxisting Windows Skylight Doors exposed walls A exposed cellings A   | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22                           | oss Gain 22.93 11.6 22.93 22.5 40.90 23.6 40.10 88.2 2.0.35 2.7 4.78 0.6 9.37 9.6  | 1803  KI 37 A 11.0 239 Area A B Fir 407  Loss 71 16:  | Gain 2099  | 26 A B 11.0 181 A A B F 1286 L                            | rea<br>ir<br>ooss G      | 13.0<br>30<br>143<br>sain   | A B Area A B Fir B Loss             | Gain<br>58           | 25 A B 12.0 75 Area A B Fir 300 Loss 12 275 23 527  | Gain<br>139<br>680               | 6 A B 1.0 36 Area A B Fir 66  Loss 6 11 252                               | 111 4:<br>50<br>ain<br>128                                | 51 A B   28 Area A B Fir   61   Loss   46   1055       | Gain<br>5 1360                           | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc  I HL Total  I HG Total  Run ft.  Expc Expc Expc Expc Expc Expc Expc Exp  | Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A Exposed Floors ross Exp Wall B Components North Shaded East/West South Xisting Windows Skylight Doors exposed walls B exposed walls B exposed walls B posed Ceilings A  | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | oss Gain  22.93 11.6. 22.93 22.5. 40.90 23.6. 40.10 88.2 20.35 2.7. 4.78 0.6. 9.58 1.2 1.37 0.6.   | KI<br>37 A B<br>11.0<br>239 Area A B Fir<br>407 Loss  | Gain 2099  | 26 A B 11.0 181 A A B F 1286 L                            | rea<br>ir<br>ooss G      | 13.0<br>30<br>143<br>sain   | A B Area A B Fir B Loss             | Gain<br>58           | 25 A B 12.0 75 Area A B Fir 300 Loss 12 275 23 527  | Gain<br>139<br>680               | 6 A B 1.0 36 Area A B Fir 66  Loss 6 11 252                               | 111 4:<br>50<br>ain<br>128                                | 51 A B   28 Area A B Fir   61   Loss   46   1055       | Gain<br>5 1360                           | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc N HL Total N HG Total N HG Total N HG Total N HG Total Run ft. Run ft. Expc Expc Expc Expc Expc Expc Expc Expc  | Level 2 t. exposed wall A t. exposed wall B Cellings A posed Cellings A posed Cellings A posed Cellings A posed Cellings B Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skylight Doors exposed walls A exposed walls A exposed walls A exposed malls A exposed malls A exposed malls A exposed malls A exposed lings A posed Cellings A   | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22                           | oss Gain 22.93 11.6 22.93 22.5 40.90 23.6 40.10 88.2 2.0.35 2.7 4.78 0.6 9.37 9.6  | KI<br>37 A B<br>11.0<br>239 Area A B Fir<br>407 Loss  | Gain 2099  | 26 A B 11.0 181 A A B F 1286 L                            | rea<br>ir<br>ooss G      | 13.0<br>30<br>143<br>sain   | A B Area A B Fir B Loss             | Gain<br>58           | 25 A B 12.0 75 Area A B Fir 300 Loss 12 275 23 527  | Gain<br>139<br>680               | 6 A B 1.0 36 Area A B Fir 66 Loss 6 11 252                                | 111 4:<br>50<br>ain<br>128                                | 51 A B   28 Area A B Fir   61   Loss   46   1055       | Gain<br>5 1360                           | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc N HL Total N HG Total N HG Total N HG Total N HG Total Run ft. Run ft. Expc Expc Expc Expc Expc Expc Expc Expc  | Level 2 t. exposed wall A t. exposed wall B Cellings A posed Cellings A posed Cellings A posed Cellings A posed Cellings B Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skylight Doors exposed walls A exposed walls A exposed walls A exposed malls A exposed malls A exposed malls A exposed malls A exposed lings A posed Cellings A   | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | oss Gain  22.93 11.6. 22.93 22.5. 40.90 23.6. 40.10 88.2 20.35 2.7. 4.78 0.6. 9.58 1.2 1.37 0.6.   | KI<br>37 A B<br>11.0<br>239 Area A B Fir<br>407 Loss  | Gain 2099  | 26 A B 11.0 181 A A B F 1286 L                            | rea<br>ir<br>ooss G      | 13.0<br>30<br>143<br>sain   | A B Area A B Fir B Loss             | Gain<br>58           | 25 A B 12.0 75 Area A B Fir 300 Loss 12 275 23 527  | Gain<br>139<br>680               | 6 A B 1.0 36 Area A B Fir 66 Loss 6 11 252                                | 111 4:<br>50<br>ain<br>128                                | 51 A B   28 Area A B Fir   61   Loss   46   1055       | Gain<br>5 1360                           | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc H HL Total I HG Total  Run ft. Run ft. Expc Expc Gr Gr Gr Exi Net e Expc Expc Expc Expc Expc Expc Expc Expc   | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Floors Gross Exp Wall B Components North Shaded East/West South xisting Windows Skylight Doors exposed walls A exposed walls A exposed walls A exposed Cellings B Exposed Floors   | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | DSS Gain  22.93 11.6. 22.93 22.5; 40.90 23.6. 40.10 83.6. 40.10 9.58 1.2. 1.37 0.6. 2.94 1.37 0.6.   | 1803  KI 37 A 11.0 239 Area A B Fir 407  Loss 71 16:  | Gain 2099 2099 217   | 26 A B 11.0 181 A A B F 1286 L                            | rea                      | 13.0<br>30<br>143<br>sain   | A B Area A B Fir S Loss 427 583     | Gain<br>58           | 25 A B 12.0 8 12.0 75 Area A B Fir 300 Loss 12 275 23 527 28 570 237 1133                 | Gain<br>139<br>680               | 6 A B B 1.0 36 Area A B Fir 666 Loss C 11 252                             | 111 4:<br>50<br>ain<br>128                                | 51 A B B O O O O O O O O O O O O O O O O O             | Gain 1360 2 333                          | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc I HL Total I HG Total Run ft. Run ft. Expc Expc Gr Gr Gr Exi Net e Expc Expc Expc Expc Expc Expc Expc Expc  | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skingling height Components Exposed Floors Gross Exp Wall B Components North Shaded EastWest South Existing Windows Skingling Exposed walls A exposed walls B posed Ceilings A exposed Floors citive Heatloss Heat Loss   | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | DSS Gain  22.93 11.6. 22.93 22.5; 40.90 23.6. 40.10 83.6. 40.10 9.58 1.2. 1.37 0.6. 2.94 1.37 0.6.   | KI<br>37 A B<br>11.0<br>239 Area A B Fir<br>407 Loss  | Gain 2099 2177 334   | 26 A B 11.0 181 A A B FI 286 L.                           | rea<br>ir<br>ooss G      | 13.0<br>30<br>143<br>878<br>878<br>21<br>160 122  | A B Area A B Fir B Loss             | Gain 58 79           | 25 A B 12.0 75 Area A B Fir 300 Loss 12 275 23 527  | Gain<br>139<br>680<br>77<br>153  | 6 A B 1.0 36 Area A B Fir 66 Loss 6 11 252                                | 111 4:25 50 ain 128 4:36 5:36 5:36                        | 51 A B   28 Area A B Fir   61   Loss   46   1055       | Gain 5 1360 2 333                        | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc I HL Total I HG Total I HG Total  Run ft.  Expt E Gr Gr Gr  Net e Expt Expt Expt Expt Expt Expt Expt Expt   | Level 2 t. exposed wall A t. exposed wall B Cellings B Exposed Floors area posed Cellings A posed Cellings A posed Cellings A Components North Shaded East/West South Existing Windows Skylight Doors exposed walls A exposed walls A exposed Cellings A posed Cellings B Exposed Floors Components North Shaded East/West Skylight Exposed Walls A exposed walls A exposed walls A exposed Floors citive Heatloss Heat Loss Heat Cash   | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | oss Gain 22.93 11.6. 22.93 22.5 22.93 22.5 22.93 22.5 22.93 23.6 4.78 0.6 2.94 1.37 0.6 2.94 1.37 0.6 2.94 1.37 0.6  | KI<br>37 A<br>11.0<br>239 Area<br>A<br>B<br>Fir<br>407<br>Loss<br>2 71 16:                                      | Gain  Cain  Cain | 26 A B 11.0 181 A A B F 286 L                             | rea                      | 13.6<br>36<br>143<br>iain<br>878<br>21<br>160 122                                       | A B Area A B Fir S Loss Loss 1010   | 58<br>79             | 25 A B B 12.0 8 12.0 8  | Gain 139 680 77 153              | 6 A B B 1.0 36 Area A B Fir 666 Loss © 11 252 55 263                      | 111 4: 56 ain 128 4 4 5 5 6 5 6 5 6 5 6 6 5 6 6 6 6 6 6 6 | 51 A B B 1.0 28 Area A B Fir 61  Loss 15 2462          | Gain 5 1360 2 333                        | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc H HL Total I HG Total  Run ft. Run ft. Expc Gr Gr Gr  Net e Expc Expc Expc Expc Expc Expc Expc Expc   | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Floors Gross Exp Wall B Components North Shaded East/West South kxisting Windows Skylight Doors exposed walls A exposed Cellings B Exposed Floors to the control of | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | oss Gain  22.93 11.6 22.93 22.5 22.93 22.5 40.90 23.6 40.10 88.2 2.0.35 2.7 4.78 0.6 2.94 1.3 2.73 0.1  x  0.4325 0.045  | 180:<br>11.0<br>239 Area<br>A B<br>Fir<br>407<br>Loss<br>71 16:<br>1 336 16:                                    | Gain  Cain  Cain | 26 A B 11.0 181 A A B F 286 L                             | rea                      | 13.0<br>30<br>143<br>878<br>878<br>21<br>160 122  | A B Area A B Fir S Loss 427 583     | Gain 58 79           | 25 A B 12.0 8 12.0 75 Area A B Fir 300 Loss 12 275 23 527 28 570 237 1133                 | Gain<br>139<br>680<br>77<br>153  | 6 A B B 1.0 36 Area A B Fir 666 Loss C 11 252                             | 111 4:25 50 ain 128 4:36 5:36 5:36                        | 51 A B B O O O O O O O O O O O O O O O O O             | Gain 5 1360 2 333                        | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc N HL Total I HG Total I HG Total  Run ft.  Expt Exp Gr Gr  Net e Net e Exp  | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A posed Ceilings A Exposed Floors Gross Exp Wall B Components North Shaded East/West South Existing Windows Skylight Doors exposed walls A exposed walls B posed Ceilings A exposed Floors citive Heatloss Heat Loss Heat Loss Heat Loss Heat Loss Heat Gain Heat Loss/Gain  | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | oss Gain 22.93 11.6. 22.93 22.5 22.93 22.5 40.90 23.6 40.10 88.2 20.35 2.7 4.78 0.6. 2.94 1.3. 2.73 0.1 2.74 0.6 2.94 1.3. 2.75 0.6 2.94 1.3. 2.76 0.6 2.94 1.3. 2.77 0.6  | KI 37 A B 11.0 239 Area A B Fir 407 Loss 5 71 16:   | Gain  Cain  Cain | 26 A B 11.0 181 A A B F 286 L                             | rea                      | 13.6<br>36<br>143<br>iain<br>878<br>21<br>160 122                                       | A B Area A B Fir S Loss Loss 1010   | 58<br>79             | 25 A B B 12.0 8 12.0 8  | Gain 139 680 77 153              | 6 A B B 1.0 36 Area A B Fir 666 Loss © 11 252 55 263                      | 111 4: 56 ain 128 4 4 5 5 6 5 6 5 6 5 6 6 5 6 6 6 6 6 6 6 | 51 A B B 1.0 28 Area A B Fir 61  Loss 15 2462          | Gain 5 1360 2 333                        | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc N HL Total I HG Total I HG Total  Run ft.  Expt Exp Gr Gr  Net e Net e Exp  | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Floors Gross Exp Wall B Components North Shaded East/West South kxisting Windows Skylight Doors exposed walls A exposed Cellings B Exposed Floors to the control of | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | oss Gain  22.93 11.6 22.93 22.5 22.93 22.5 40.90 23.6 40.10 88.2 2.0.35 2.7 4.78 0.6 2.94 1.3 2.73 0.1  x  0.4325 0.045  | KI 37 A B 11.0 239 Area A B Fir 407 Loss 5 71 16:   | Gain  Cain  Cain | 26 A B 11.0 181 A A B F 286 L                             | rea                      | 13.6<br>36<br>143<br>iain<br>878<br>21<br>160 122                                       | A B Area A B Fir S Loss Loss 1010   | 58<br>79             | 25 A B B 12.0 8 12.0 8  | Gain 139 680 77 153              | 6 A B B 1.0 36 Area A B Fir 666 Loss © 11 252 55 263                      | 111 4: 56 ain 128 4 4 5 5 6 5 6 5 6 5 6 6 5 6 6 6 6 6 6 6 | 51 A B B 1.0 28 Area A B Fir 61  Loss 15 2462          | Gain 5 1360 2 333                        | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc self HL Total self HL Total self HL Total self HG T | Level 2 t. exposed wall A t. exposed wall B Cellings A posed Cellings B po | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80 | oss Gain 10: al HL for per room x 1.  22.93 11.6. 22.93 22.5: 22.93 22.5: 4.78 0.6: 9.58 1.2: 1.37 0.6: 2.94 1.3 2.73 0.6: 2.73 0.7  x x  0.4325 0.0452  | 1803  KI 37 A 11.0 239 Area A B Fir 407  Loss 71 163 336 164 332 322  | Gain  Gain  28 2099  206 217  34 2316  99 105  | 26 A B B 11.0 181 A A B B F 286 L.                        | rea ir 894 1181 2075 897 | 13.6<br>36<br>143<br>878<br>21<br>160 122   | A B D Area A B B Fir  Loss  427 583 | 58<br>79             | 25 A B B 12.0 8 12.0 8 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12                         | Gain<br>139<br>680<br>777<br>153 | 6 A B B 1.0 36 Area A B Fir 666 Loss © 111 252 555 263                    | 111 4: 56 ain 128 4 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 | 51 A B B 1.0 28 Area A B Fir 61 Loss 15 2462 3516 1521 | Gain 5 1360 2 333 6 1692                 | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duce the HL Total of the HL | Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A Exposed Floors cross Exp Wall B Components North Shaded East/West South Xisting Windows Skylight Doors exposed walls B posed Ceilings A Exposed Floors cross Exp Wall B Components North Shaded East/West South Xisting Windows Skylight Doors exposed walls B posed Ceilings B Exposed Floors cite Heat Coss Heat Coss Heat Coss Heat Loss Heat Loss Heat Loss Case 1 Case 2 Case 2  | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65                  | oss Gain  22.93 11.6. 22.93 22.5. 22.93 22.5. 40.10 88.2 20.35 2.71 3.7 0.6 9.58 1.2 1.37 0.6 9.58 1.2 1.37 0.6 9.58 1.2 1.37 0.6 9.58 1.2 1.37 0.6 1.38 0.0 1.4.95 0.045 0.03 0.0   | KI 37 A B 11.0 239 Area A B Fir 407 Loss 71 16: 336 16: 336 16: 336 16: 340 340 340 340 340 340 340 340 340 340 | Gain  Gain  28 2099  206 217  34 2316  99 105  | 26 A B B 11.0 181 A A B B F 286 L.                        | rea                      | 13.6<br>36<br>143<br>iain<br>878<br>21<br>160 122                                       | A B Area A B Fir S Loss Loss 1010   | 58<br>79             | 25 A B B 12.0 8 12.0 8  | Gain 139 680 77 153              | 6 A B B 1.0 36 Area A B Fir 666 Loss © 11 252 55 263                      | 111 4: 56 ain 128 4 4 5 5 6 5 6 5 6 5 6 6 5 6 6 6 6 6 6 6 | 51 A B B 1.0 28 Area A B Fir 61  Loss 15 2462          | Gain 5 1360 2 333 6 1692                 | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc el HL Total el HG Total el HG Total el HG Total el HG Total  Run ft.  Run ft.  Expt Expc Expc Expc Expc Expc Expc Expc Expc   | Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A Components North Shaded East/West South Existing Windows Skylight Doors exposed walls A exposed walls A exposed walls A exposed walls B posed Ceilings A posed Ceilings A exposed walls B posed Ceilings A exposed walls B Later to be | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80         | oss Gain 22.93 11.6. 22.93 29.5 22.93 29.5 22.93 22.5 4.78 0.6. 2.94 1.33 2.73 0.1 2.73 0.1 2.73 0.1 2.74 0.6. 2.94 1.35 2.75 0.4325 2.76 0.76 0.76 0.76 0.76 0.76 0.76 0.76 0   | KI<br>37 A B<br>11.0<br>239 Area A B Fir<br>407 Loss<br>5 71 163  | Gain  Gain  2099  217  34  2316 105  09  161   | 26 A B 11.0 181 A A B F F 286 L.                          | rea ir 894 1181 2075 897 | 13.6<br>36<br>143<br>143<br>878<br>21<br>160 122<br>1037<br>47                          | A B D Area A B B Fir  Loss  427 583 | 58<br>79             | 25 A B B 12.0 8 12.0 8 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12                         | Gain<br>139<br>680<br>777<br>153 | 6 A B B 1.0 36 Area A B Fir 666 Loss © 111 252 555 263                    | 111 4: 56 56 56 56 56 56 56 56 56 56 56 56 56             | 51 A B B 0 28 Area A B Fir 61 Loss 155 2462 3516 1521  | Gain 5 1360 2 333 6 1692 77 3 118        | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc el HL Total el HG Total el HG Total el HG Total el HG Total  Run ft.  Expc Expc End Gr Gr  Net e Expc Expc Expc Expc Expc Expc Expc Expc  | Level 2 t. exposed wall A t. exposed wall A t. exposed wall B Celling height Floor area posed Cellings A posed Cellings A posed Cellings A Gross Exp Wall B Components North Shaded East/West South A sixisting Windows Skyilght Exposed Cellings A posed Cellings A  | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80 | oss   Gain   100 | 1800  KI 37 A B 11.0 239 Area A B Fir 407  Loss 71 166 3336 166 3336 166 3326 1336                              | Gain  Gain  28 2099  206 217  34 2316  99 105  | 26 A B 11.0 181 A A B F F 286 L.                          | rea ir 894 1181 2075 897 | 13.6<br>36<br>143<br>878<br>21<br>160 122   | A B D Area A B B Fir  Loss  427 583 | 58<br>79             | 25 A B B 12.0 8 12.0 8 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12                         | Gain<br>139<br>680<br>777<br>153 | 6 A B B 1.0 36 Area A B Fir 666 Loss © 111 252 555 263                    | 111 4: 56 56 56 56 56 56 56 56 56 56 56 56 56             | 51 A B B 1.0 28 Area A B Fir 61 Loss 15 2462 3516 1521 | Gain 5 1360 2 333 6 1692                 | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duce el HL Total el HG TOTA | Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A posed Ceilings B Exposed Floors aross Exp Wall B Components North Shaded East/West South Existing Windows Windows Singles Exposed Floors aross Exp Wall B Components North Shaded East/West South Existing Windows Singles Exposed Geilings A exposed walls B posed Ceilings B Exposed Floors citive Heatloss Heat Loss Heat Loss Heat Gain Case 1 Case 2 Case 3 Heat Gain People Spellances Loads Unt and Pipe loss  | R-Values L<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80         | DSS Gain  22.93 11.6. 22.93 22.5. 40.90 23.6. 40.10 88.2 20.35 2.7. 4.78 0.6. 2.94 1.3. 2.73 0.1:   0.4325 0.045 0.03 0.0 14.95 11.8. 0.03 0.0 14.95 11.8. 0.03 0.03 rcent 412   | KI 37 A B 11.0 239 Area A B Fir 407 Loss 5 71 163   | Gain  28 2099  206 217  34 2316 99 161 1547  | 26 A B 11.0 181 A A B F F 286 L.                          | 894 894 2075 897 70      | 13.6<br>36<br>143<br>143<br>878<br>21<br>160 122<br>1037<br>47                          | A B B                               | 58<br>79             | 25 A B B 12.0 B 12.0 T 5 Area A B Fir 300 Loss 12 275 23 527 28 570 237 1133 2505 1083 84 | Gain<br>139<br>680<br>777<br>153 | 6 A B B 11.0 36 Area A B Fir 66 Loss C 111 252 55 263 515 223 515 223 517 | 111 4: 56 5 6 5 6 6 7 7 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1    | 51 A B B 0 28 Area A B Fir 61 Loss 15 2462 3516 1521 0 | Gain 5 1360 2 333 6 1692 1 77 3 118 1032 | B<br>11.0<br>Area<br>A<br>B<br>Fir | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duc Bi HL Total Bi HG Total Run ft. Run ft. Run ft.  Expr Exp Gr Gr  Sel Net e Net e Expr Exp   | Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A posed Ceilings A posed Ceilings A posed Ceilings A Components North Shaded EastWest South Existing Windows Skylight Doors exposed walls A exposed walls A exposed malls | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80 | DSS Gain  22.93 11.6. 22.93 22.5; 22.93 22.5; 24.90 23.6; 24.137 0.6. 2.94 1.37 0.6. 2.95 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26  | KI<br>37 A<br>8<br>11.0<br>239 Area<br>A<br>B Fir<br>407<br>Loss<br>5 71 163<br>6 336 160                       | Gain  Gain  2099  217  34  2316 105  09  161  1547   | 26 A B B 11.0 181 A A B B S S S S S S S S S S S S S S S S | rea ir 894 1181 2075 897 | 13.6<br>36<br>143<br>143<br>143<br>143<br>144<br>160<br>122<br>1037<br>47<br>72<br>1547 | A B D Area A B B Fir  Loss  427 583 | 58<br>79<br>137<br>6 | 25 A B B 12.0 8 12.0 8 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12                         | Gain 139 680 77 153 1049 48      | 6 A B B 1.0 36 Area A B Fir 666 Loss © 111 252 555 263                    | 111 4: 56 5: 163 7 11 1 1                                 | 51 A B B 0 28 Area A B Fir 61 Loss 155 2462 3516 1521  | Gain 5 1360 2 333 6 1692 77 8 118 1032   | B 11.0 Area A B Fir Loss Gain      | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |
| Ap Duce H HL Total H HG Total H H | Level 2 t. exposed wall A t. exposed wall B Ceiling height Floor area posed Ceilings A posed Ceilings B Exposed Floors aross Exp Wall B Components North Shaded East/West South Existing Windows Windows Singles Exposed Floors aross Exp Wall B Components North Shaded East/West South Existing Windows Singles Exposed Geilings A exposed walls B posed Ceilings B Exposed Floors citive Heatloss Heat Loss Heat Loss Heat Gain Case 1 Case 2 Case 3 Heat Gain People Spellances Loads Unt and Pipe loss  | R-Values L<br>3.55<br>3.55<br>3.55<br>3.55<br>1.99<br>2.03<br>4.00<br>17.03<br>8.50<br>59.22<br>27.65<br>29.80 | DSS Gain  22.93 11.6. 22.93 22.5. 40.90 23.6. 40.10 88.2 20.35 2.7. 4.78 0.6. 2.94 1.3. 2.73 0.1:   0.4325 0.045 0.03 0.0 14.95 11.8. 0.03 0.0 14.95 11.8. 0.03 0.03 rcent 412   | KI<br>37 A<br>8<br>11.0<br>239 Area<br>A<br>B Fir<br>407<br>Loss<br>5 71 163<br>6 336 160                       | Gain  28 2099  206 217  34 2316 99 161 1547  | 26 A B B 11.0 181 A A B B S S S S S S S S S S S S S S S S | 894 894 2075 897 70      | 13.6<br>36<br>143<br>143<br>878<br>21<br>160 122<br>1037<br>47                          | A B B                               | 58<br>79             | 25 A B B 12.0 B 12.0 T 5 Area A B Fir 300 Loss 12 275 23 527 28 570 237 1133 2505 1083 84 | Gain<br>139<br>680<br>777<br>153 | 6 A B B 11.0 36 Area A B Fir 66 Loss C 111 252 55 263 515 223 515 223 517 | 111 4: 56 5 6 5 6 6 7 7 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1    | 51 A B B 0 28 Area A B Fir 61 Loss 15 2462 3516 1521 0 | Gain 5 1360 2 333 6 1692 1 77 3 118 1032 | B 11.0 Area A B Fir Loss Gain      | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Area<br>A<br>B<br>Fir | Gain | B<br>11.0<br>Ar<br>A<br>B<br>Fir | r       | B<br>11.0<br>Are<br>A<br>B<br>Fir |            |

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



55,473

26,865

btu/h

Total Heat Loss

Total Heat Gain

### Heatloss/Gain Calculations CSA-F280-12

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

e-mail hvac@gtadesigns.ca

| Part   |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           | ivac @gta   | -         |      |            |       |       |      |       |     |      |      |         |         |
|--|------------------|--|----------|-------------|------------|--------|--------|--------|---------------|-------------|-----------|---------------|-----------|-----------|------------|---------|-----------|---------|-----------|-------------|-----------|------|------------|-------|-------|------|-------|-----|------|------|---------|---------|
| Part   |                  |  | Builder: | Bay         | yview Well | ington | _      | Date:  |               |             |           |               |           | _         |            |         |           | W       | eather D  | Data        | Bradf     | ord  | 44         | -9.4  | 4 86  | 22   | 48.2  |     |      | Drai | inat #  | Page 5  |
| Part      | 2012 OBC         |  | Project: | Gr          | een Valley | / East | _ '    | Model: |               |             |           |               |           | _         | Sy         | stem    | 1         | ŀ       | Heat Los  | s ^T 81.4   | deg. F    | F    | lt gain ^T |       | 11 de | g. F | GTA:  | 251 | 11   |      |         |         |
| Part      |                  | 11 2   |          |             |            |        | ~      |        | <b>-110</b> a |             | 250       |               |           | _         |            |         |           | _       |           |             |           |      |            |       |       | _    |       |     |      |      |         |         |
| Part      | Rur              |  |          |             |            |        | 51     |        | ENS 2         | 1           |           |               |           | 3         |            |         |           |         | SED 4     | 7           |           |      |            | ic    |       |      | NS    |     | Α    |      | Α       |         |
| This part   1   1   1   1   1   1   1   1   1  |                  |  |          |             |            | В      |        | В      |               | •           |           | _             |           |           |            |         |           | В       |           | -           | В         |      |            |       |       |      |       |     | В    |      | В       |         |
| Expand Callings   1  |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       | 9.  |      |      |         |         |
| Property State   Prop   |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         | ea        |             |           |      |            | l     |       |      | ı     |     |      |      |         | ea      |
| Equipment of the Company Notice   19   19   19   19   19   19   19   1   |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Control   Cont   |                  | Exposed Floors   |          |             |            |        |        |        | r             |             |           |               |           |           |            | r       |           |         |           |             |           |      |            |       |       |      |       |     | Flr  |      | Fir     | r       |
| Control   Cont   |                  |  |          |             |            | 396    |        | 54     |               | 9           | 9         | 30            | 6         |           | 63         |         |           | 297     |           | 63          |           |      | 288        |       | 1     | 198  |       |     |      |      |         |         |
| March   Bankel   25.5   25.20   11.50   25.5   |                  | Components   | R-Values | Loss        | Gain       | Loss   | Gain   | Lo     | oss G         | Gain        | Loss      | Gain          | Loss      | Gain      | Lo         | oss G   | Gain      | Los     | ss Gai    | in          | Loss (    | ain  | Los        | Ga Ga | in    | Loss | Gain  |     | Loss | Gain | Lo      | ss Gain |
| South   Signature   Sout   |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           | 8           | 183       | 93   |            |       |       |      |       |     |      |      |         |         |
| ## Separate  |                  |  |          |             |            | 32 7   | 34 946 |        | 400           | 400 4       | 007       |               | 4 550     | 709       | 7          | 161     | 207       | 42      | 963 1     | 1241        |           |      |            |       |       | 13 2 | 298 3 | 84  |      |      |         |         |
| Sheeling   1-20   1-2   |                  | Existing Windows   |          |             |            |        |        | 8      | 183           | 180 1       | 367       | 360           |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Met represent with 1 1730   277   288   289   279      |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Not opposed worked   1.00      |                  |  |          |             |            |        |        |        |               |             |           |               | _         |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Exposed Cellings A   92.2   1.30   0.44   31   42   20   0.50   0.2   32   160   22   170   0.50   170   180   170   180   170   180   170   180   170   180   1   |                  |  |          |             |            | 364 17 | 10 235 | 46     | 220           | 30 8        | 397       | 54 26         | 1271      | 172       | 56         | 268     | 36        | 255     | 1219      | 165 55      | 263       | 36   | 288 13     | 5/7   | 186 1 | 8 28 | 1 1   | 19  |      |      |         |         |
| Expended Collings A   27.5   2.5   1.37   1.51      | E                | Exposed Ceilings A   |          |             |            | 311 4  | 27 200 | 50     | 69            | 32 16       | 6 228     | 107 28        | 4 390     | 182       | 70         | 96      | 45        | 150     | 206       | 96 60       | 82        | 39   | 56         | 77    | 36 1  | 17 1 | 61    | 75  |      |      |         |         |
| Provide Consecution    | E                | Exposed Ceilings B   |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Tead Conductive   Missic Cost  | Foundation Con-  |  | 29.80    | 2.73        | 0.17       |        |        |        |               | 2           | 79        | 5 16          | 6 453     | 3 28      | 70         | 191     | 12        | 13      | 36        | 2           |           |      |            |       |       |      |       |     |      |      |         |         |
| Milestropy   Mil   |                  |  |          |             |            | 29     | 01     |        | 472           |             | 1071      |               | 3032      | 2         |            | 716     |           |         | 2424      |             | 529       |      | 14         | 154   |       | 13   | 143   |     |      |      |         |         |
| Case      |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           | 167  |            |       |       |      | 5     |     |      |      |         |         |
| Case   2   | Air Leakage      |  |          |             |            | 7      | 71 63  |        | 125           | 11          | 285       | 24            | 806       | 58        |            | 190     | 14        |         | 644       | 68          | 141       | 8    |            | 886   | 10    | 3    | 357   | 26  |      |      |         |         |
| See   X   0.00   0.07   29   59   59   1   20   20   1   20   20   1   20   20   | Ventilation      |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Ageinmost scaled   1-25 process   4125   |                  | Case 3   | x        |             |            |        |        |        | 16            | 17          | 36        |               | 102       |           |            | 24      | 21        |         |           |             | 18        | 12   |            | 49    | 15    |      | 45    | 40  |      |      |         |         |
| Dott and Pipe Note   1070   16.502   1070   16.502   1070   10.701   16.502   10.701   10.7   |                  |  | 1 – 25   | noroont .   |            | 2      | 478    |        |               |             | 1         | 239           | 1         | 239       |            |         |           | 1       |           | 239         |           |      |            |       |       |      |       |     |      |      |         |         |
| Level 4  16,992   Total His (pre per com   19,779)   Total His (pre per com   19,779)   Total His (pre per com   1,779)   Total His (pre per   |                  |  | 1 =.23   | Jercent     |            |        |        |        |               |             |           |               | 1 384     | 1 152     | 1          | 91      | 30        |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Level 4   Run ft. exposed wall A   A   A   A   A   A   A   A   A   A   |                  |  |          |             |            | 37     |        |        | 613           |             | 1392      |               | 4325      |           |            | 1021    |           | :       |           |             | 687       |      | 18         |       |       | 17   |       |     |      |      |         |         |
| Exposed Cellings A B B B B B B B B B B B B B B B B B B   |                  | n ft. exposed wall A<br>n ft. exposed wall B<br>Ceiling height |          |             |            | В      |        | В      |               |             | В         |               | В         |           | В          |         |           | В       | 22        |             | В         |      | В          |       |       | В    |       |     | В    |      | В       | 03      |
| Exposed Cellings B Exposed Cellings B Fir  |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         | ed .      |             |           |      |            | ı     |       |      | ı     |     |      |      |         | ea      |
| Gross Exp Wall A Components Review Loss Gain L |                  | Exposed Ceilings B   |          |             |            |        |        | В      |               |             | В         |               |           |           | В          |         |           | В       |           |             | В         |      | В          |       |       |      |       |     |      |      |         |         |
| Gross Exp Wail E    Components R-Values Loss   Gain   Loss |                  |  |          |             |            | Flr    |        | FI     | r             |             | Flr       |               | Flr       |           | Fl         | r       |           | Flr     |           |             | Flr       |      | Flr        |       |       | Flr  |       |     | Flr  |      | Flr     | •       |
| North Shaded   3.55   22.93   11.02  |                  | Gross Exp Wall B   |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| EastWest   3.55   22.93   22.50  |                  |  |          |             |            | Loss   | Gain   | Lo     | oss G         | Gain        | Loss      | Gain          | Loss      | Gain      | Lo         | oss G   | Gain      | Lo      | ss Gai    | in          | Loss (    | Sain | Los        | Ga Ga | in    | Loss | Gain  |     | Loss | Gain | Lo      | ss Gain |
| South   3.55   22.93   22.50   |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Existing Windows   1.99  |                  | South  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Doors   4.00   20.35   2.75  |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Net exposed valis A   17.03   4.78   0.65     Net exposed Cellings A   59.22   1.37   0.64     Exposed Cellings B   27.65   2.94   1.37     Exposed Floors   29.80   2.73   0.17     Foundation Conductive Heatloss  |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Exposed Ceilings A   59.22   1.37   0.64     Exposed Ceilings B   27.65   2.94   1.37     Exposed Floors   29.80   2.73   0.17     Foundation Conductive Heatloss  |                  | let exposed walls A  | 17.03    | 4.78        | 0.65       |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Exposed Ceilings B   27.85   2.94   1.37   |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Exposed Floors 29.80 2.73 0.17 Foundation Conductive Heat Loss   |                  | Exposed Ceilings A   |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Total Conductive   |                  | Exposed Floors   |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Heat Gain  |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Air Leakage Heat Loss/Gain 0.0000 0.0453  Case 1 0.00 0.07  Ventilation Case 2 14.95 11.88  Case 3 x 0.03 0.07  Heat Gair People 239  Appliances Loads 1 = 25 percent 4126  Duct and Pipe loss 10%  Level HL Total 0 Total HL for per room  Level HG Total 0 Total HG per room x 1.3   | Total Conductive |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Case 2   | Air Leakage      | Heat Loss/Gain   |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Case 3 x 0.03 0.07   Heat Gain People  | Ventilation      |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Heat Gain People   | Vendiadon        |  | x        |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Duct and Pipe loss 10% Level HL Total 0 Total HL for per room Level HG Total 0 Total HG per room x 1.3   |                  | Heat Gain People   |          |             | 239        |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Level HL Total 0 Total HL for per room Level HG Total 0 Total HG per room x 1.3  |                  |  | 1 =.25   | percent     |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| Level HG Total 0 Total HG per room x 1.3   |                  |  | Т        | otal HL for |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
| I review and take responsibility for the design work and am qualified in the appropriate category as an "other designer" under   |                  |  |          |             |            |        |        |        |               |             |           |               |           |           |            |         |           |         |           |             |           |      |            |       |       |      |       |     |      |      |         |         |
|  |                  |  |          |             |            |        |        |        | oview -       | nd take rec | oneihili. | for the deci- | ın work a | nd am «·· | alified in | the arm | nronrista | catege- | v se sn " | other doci- | aner" und | ar.  |            |       |       |      |       |     |      | eı   | 8-12 P- | ckane   |

32964

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

Mare Maleta

David DaCosta

Package A1



2985 Drew Road, Suite 202, Mississauga, Ontario L4T 0A4 Tel: 905-671-9800 e-mail hvac@gtadesigns.ca

System Design Option
Exhaust only / forced air system

HRV WITH DUCTING / forced air system

Part 6 design

HRV simplified connection to forced air system

HRV full ducting/not coupled to forced air system

1 2

3 x

4

Project # Layout #

David DaCosta

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

Division C subsection 3.2.5. of the Building Code. Individual BCIN: 32964

| Package:          | Package A1  |                                     | 200.47                       |                           |
|-------------------|---|-------------------------------------|------------------------------|---------------------------|
| Project:          | Bradford  | Model:                              | S38-17                       |                           |
|                   | RESIDENTIAL MECHANICAL  |                                     |                              |                           |
|                   | For systems serving one dwelling unit & cor   | nforming to the Ontario Building    | 1 Code, O.reg 332/12         |                           |
|                   | Location of Installation  | Total Ve                            | entilation Capacity 9.32.3.  | 3(1)                      |
| Lot #             | Plan #  | 1010                                |                              | •(.)                      |
| T                 |   | Bsmt & Master Bdrm                  | 2 @ 21.2 cfr                 |                           |
| Township          | Bradford  | Other Bedrooms  Bathrooms & Kitchen | 3 @ 10.6 cfr<br>5 @ 10.6 cfr |                           |
| Roll #            | Permit #  | Other rooms                         | 4 @ 10.6 cfr                 |                           |
|                   |   |                                     | Total                        | 169.6                     |
| Address           |   |                                     |                              |                           |
|                   |   | Principal                           | Ventilation Capacity 9.32.   | 3 4(1)                    |
|                   | Builder   | i imelpai                           | Tommanon Supusity 51021      | 011(1)                    |
| Name              |   | Master bedroom                      | 1 @ 31.8 cfr                 |                           |
| Address           | Bayview Wellington  | Other bedrooms                      | 3 @ 15.9 cfr<br>Total        | m <u>47.7</u> cfm<br>79.5 |
| Addiess           |   |                                     | Total                        | 79.5                      |
| City              |   |                                     |                              |                           |
|                   |   |                                     | ipal Exhaust Fan Capacit     |                           |
| Tel               | Fax   | Make                                | Model                        | Location                  |
|                   |   | VanEE                               | V150H75NS                    | Base                      |
|                   | Installing Contractor   |                                     |                              |                           |
| Name              |   | 140 cfm                             |                              | Sones or Equiv.           |
| Address           |   | н                                   | eat Recovery Ventilator      |                           |
| Addicas           |   | Make                                | VanEE                        |                           |
| City              |   | Model                               | V150H75NS                    |                           |
| Tel               | Fax   | Sensible efficiency @               | 140 cfm high                 | 80 cfm low 60%            |
| 101               | I ax  | Sensible efficiency @               |                              | 75%                       |
|                   |   | Note: Installer to bala             | ance HRV/ERV to within 10    |                           |
| 0)   11           | Combustion Appliances 9.32.3.1(1)   | Supple                              | emental Ventilation Capac    | eity                      |
| a) <u>x</u><br>b) | Direct vent (sealed combustion) only Positive venting induced draft (except fireplaces) | Total ventilation capac             | iitv                         | 169.6                     |
| c)                | Natural draft, B-vent or induced draft fireplaces                                       | Less principal exhaust              | ,                            | 79.5                      |
| d)                | Solid fuel (including fireplaces)   | REQUIRED suppleme                   | ntal vent. Capacity          | 90.1 cfm                  |
| e)                | No combustion Appliances  |                                     |                              |                           |
|                   |   | Sur                                 | pplemental Fans 9.32.3.5.    |                           |
|                   | Heating System  | Location                            | cfm Model                    | Sones                     |
| Х                 | Forced air  | Ens                                 | 50 XB50                      | 0.3                       |
|                   | Non forced air  | Bath                                | 50 XB50                      | 0.3                       |
|                   | Electric space heat (if over 10% of heat load)  |                                     |                              |                           |
|                   |   |                                     |                              |                           |
|                   | House Type 9.32.3.1(2)  | ,,,                                 |                              |                           |
| l x               | Type a) or b) appliances only, no solid fuel  | all fans HVI listed                 | Make Broan                   | or Equiv.                 |
|                   | Type I except with solid fuel (including fireplace)  Any type c) appliance              |                                     | Designer Certification       |                           |
| IV —              | Type I or II either electric space heat   |                                     | s ventilation system has be  | en designed               |
| Other             | Type I. II or IV no forced air  |                                     | Ontario Building Code        | -                         |

| L boroby cortify t | Designer Certification  |        |       |  |  |  |  |  |  |
|--------------------|---|--------|-------|--|--|--|--|--|--|
| , ,                | I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code. |        |       |  |  |  |  |  |  |
| Name               | David D   | aCosta |       |  |  |  |  |  |  |
| Signature          | Have  | Macon  |       |  |  |  |  |  |  |
| HRAI#              | 5190  | BCIN#  | 32964 |  |  |  |  |  |  |
| Date               | July 23   | , 2021 |       |  |  |  |  |  |  |

# ♦GTA\DESIGNS

## **Energy Efficiency Design Summary: Prescriptive Method**

(Building Code Part 9, Residential)

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Project # PJ-00041 Layout # JB-07358

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

This form is used by a designer to demonstrate that the energy efficiency design of a house complies with the building code using the prescriptive method described in Subsection 3.1.1. of SB-12. This form is applicable where the ratio of gross area of windows/sidelights/skylights/glazing in doors and sliding glass doors to the gross area of peripheral walls is not more than 22%.

|   |               | Fo                    | or use by    | Princip      | oal Authori | ty            |                  |                             |              |                    |
|---|---------------|-----------------------|--------------|--------------|-------------|---------------|------------------|-----------------------------|--------------|--------------------|
| Application No:   |               |                       |              |              | Model/Cer   | tification Nu | mber             |                             |              |                    |
|   |               |                       |              |              |             |               |                  |                             |              |                    |
| A. Project Information  |               |                       |              |              |             |               |                  |                             |              |                    |
| Building number, street name                                  |               |                       | ossa 1       | 7            |             |               | Unit num         | ber                         | Lot/Con      |                    |
|   |               |                       | 38-17        |              |             |               |                  |                             |              |                    |
| Municipality Bradford   |               | Pos                   | tal code     |              | Reg. Plan   | number / oth  | ner descri       | ption                       |              |                    |
| B. Prescriptive Compliance [indica                            | te the buildi | ng code co            | mpliance     | packa        | ge being e  | mployed in    | the hous         | e design]                   |              |                    |
| SB-12 Prescriptive (input design pa                           | ckage):       |                       |              | Pack         | age A1      |               |                  | Table                       | 3.1.1.2.     | <u>A</u>           |
| C. Project Design Conditions                                  |               |                       |              |              |             |               |                  |                             |              |                    |
| Climatic Zone (SB-1):   | Н             | leat. Equi            | p. Effici    | iency        |             |               | Spa              | ce Heating F                | uel Sourc    | ce                 |
| ✓ Zone 1 (< 5000 degree days)                                 | J             | / ≥ 92% A             | AFUE         |              | <b>✓</b>    | Gas           |                  | Propane                     |              | Solid Fuel         |
| ☐ Zone 2 (≥ 5000 degree days)                                 |               | ≥ 84%                 | < 92% A      | FUE          |             | Oil           |                  | Electric                    |              | Earth Energy       |
| Ratio of Windows, Skylights & Glas                            | s (W, S &     | G) to Wall            | I Area       |              |             |               | Other            | <b>Building Ch</b>          | aracterist   | tics               |
| Area of Walls = <u>414.61</u> m <sup>2</sup> or <u>4462.9</u> | ft²           |                       |              |              |             | ost&Beam      |                  | ICF Above                   | Grade        | ☐ ICF Basement     |
| 71100 01 VValie = <u></u> 01 <u></u>                          | . \           | W,S &G %              | <u>8</u> = 6 | 3.7 <u>%</u> |             | on-ground     |                  | Walkout Ba                  | sement       |                    |
|   |               |                       |              |              | ☑ Air Co    | onditioning   |                  | Combo Uni                   | t            |                    |
| Area of W, S & G = $35.952$ m <sup>2</sup> or $387.0$         | ft² U         | tilize Wind           |              | Yes          | Air S       | ourced Hea    | t Pump (         | ASHP)                       |              |                    |
|   |               | Averagin              | g 🗸          | No           | Grou        | nd Source I   | Heat Pun         | np (GSHP)                   |              |                    |
| D. Building Specifications [provide                           | values and    | ratings of t          | the energ    | y effici     | ency comp   | onents prop   | posed]           |                             |              |                    |
| Energy Efficiency Substitutions                               |               |                       |              |              |             |               |                  |                             |              |                    |
| ☐ ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5))                       |               |                       |              |              |             |               |                  |                             |              |                    |
| Combined space heating and domestic                           |               |                       |              | (7) / 3.     | 1.1.3.(7))  |               |                  |                             |              |                    |
| Airtightness substitution(s)                                  | Та            | able 3.1.1.4          |              | quired:      |             |               |                  | Permitted S                 |              |                    |
| Airtightness test required                                    | ☐ Ta          | able 3.1.1.4          | l.C          | quired:      |             |               |                  | Permitted S                 |              |                    |
| (Refer to Design Guide Attached)                              |               |                       |              | quired:      |             |               |                  | Permitted S                 | Substitution | n:                 |
| Building Component  |               | um RSI/R-<br>ximum U- |              | or           |             | Buile         | ding Co          | mponent                     |              | Efficiency Ratings |
| Thermal Insulation  | Nomin         | al                    | Effecti      | ve           | Window      | rs & Doo      | <b>rs</b> Provid | de U-Value <sup>(1)</sup> c | r ER rating  | J                  |
| Ceiling with Attic Space                                      | 60            |                       | 59.22        | 2            | Windows     | S/Sliding G   | lass Do          | ors                         |              | 1.6                |
| Ceiling without Attic Space                                   | 31            |                       | 27.65        | 5            | Skylights   | i             |                  |                             |              | 2.8                |
| Exposed Floor   | 31            |                       | 29.80        | )            | Mechan      | icals         |                  |                             |              |                    |
| Walls Above Grade   | 22            |                       | 17.03        | 3            |             | Equip.(AFL    |                  |                             |              | 96%                |
| Basement Walls  | 20            | ).0ci                 | 21.12        | 2            | HRV Effi    | ciency (SR    | E% at 0°         | (C)                         |              | 75%                |
| Slab (all >600mm below grade)                                 | Х             |                       | Х            |              | DHW He      | ater (EF)     |                  |                             |              | 0.80               |
| Slab (edge only ≤600mm below grade)                           | 10            |                       | 11.13        | 3            | DWHR (      | CSA B55.1     | (min. 42%        | efficiency))                |              | #Showers 2         |
| Slab (all ≤600mm below grade, or heated)                      | 10            |                       | 11.13        | 3            | Combine     | d Heating     | System           |                             |              |                    |
| (1) U value to be provided in either $W/(m^2 \cdot K)$ or Bt  |               |                       |              |              |             |               |                  |                             |              |                    |
| E. Designer(s) [name(s) & BCIN(s), if a                       | applicable, c | of person(s)          |              |              | mation her  |               |                  | at design mee               | ts building  | code]              |
| Name  |               |                       | BC           | IN           |             | Signature     |                  | 11                          | 11/          | 2 /                |
| David DaCosta   |               |                       |              | 329          | 964         |               |                  | Mane                        | 14C=         | <del>~~</del>      |



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Project # PJ-00041
Layout # JB-07358

Package:Package A1System:System 1Project:BradfordModel:\$38-17

### Project: S38-17 Air Leakage Calculations **Building Air Leakage Heat Loss Building Air Leakage Heat Gain** HL^T В LRairh Vb HLleak В LRairh Vb HG^T **HG Leak** 0.018 0.393 32215 81.4 18533 0.097 32215 Levels Air Leakage Heat Loss/Gain Multiplier Table (Section 11) 1 2 3 4 Level Building Level Conductive Air Leakage Heat Loss Level (LF) (LF) (LF) (LF) Multiplier Factor (LF) **Heat Loss** Level 1 0.5 8481 1.0926 1.0 0.6 0.5 0.4 Level 2 0.4325 0.3 12856 0.3 0.3 0.4 18533 0.2659 Level 3 0.2 13941 0.2 0.2 Level 4 0 0.0000 Air Leakage Heat Gain Levels this Dwelling **HG LEAK** 616 0.0453 3 **BUILDING CONDUCTIVE HEAT GAIN** 13602 Ventilation Calculations **Ventilation Heat Loss Ventilation Heat Gain** Vent Vent **Ventilation Heat Loss** Ventilation Heat Gain **PVC** (1-E) HRV HLbvent PVC HG^T **HGbvent** 1.08 81.4 0.17 1188 79.5 944 79.5 11 Case 1 Case 1 **Ventilation Heat Loss (Exhaust only Systems)** Ventilation Heat Gain (Exhaust Only Systems) Case 1 - Exhaust Only Case 1 - Exhaust Only Multiplier Case Case LVL Cond. HL HGbvent 944 Level LF HLbvent Multiplier 0.07 Level 1 0.5 8481 0.07 Building 13602 Level 2 12856 0.3 0.03 1188 13941 Level 3 0.2 0.02 Level 4 0 0 0.00 Case 2 Case 2 **Ventilation Heat Loss (Direct Ducted Systems)** Ventilation Heat Gain (Direct Ducted Systems) Case Multiplier Multiplier C HL^T (1-E) HRV С HG^T 14.95 11.88 1.08 81.4 0.17 1.08 11 Case 3 Case 3 Ventilation Heat Loss (Forced Air Systems) **Ventilation Heat Gain (Forced Air Systems)** Case **HLbvent** Vent Heat Gain Multiplier Multiplier HGbvent HG\*1.3 Total Ventilation Load 1188 0.03 944 0.07 944 Foundation Conductive Heatloss Level 1 Level 1 2233 Watts 7618 Btu/h **Foundation Conductive Heatloss Level 2** Level 2 Watts Btu/h Slab on Grade Foundation Conductive Heatloss Watts Btu/h Walk Out Basement Foundation Conductive Heatloss Watts Btu/h

## **Envelope Air Leakage Calculator**

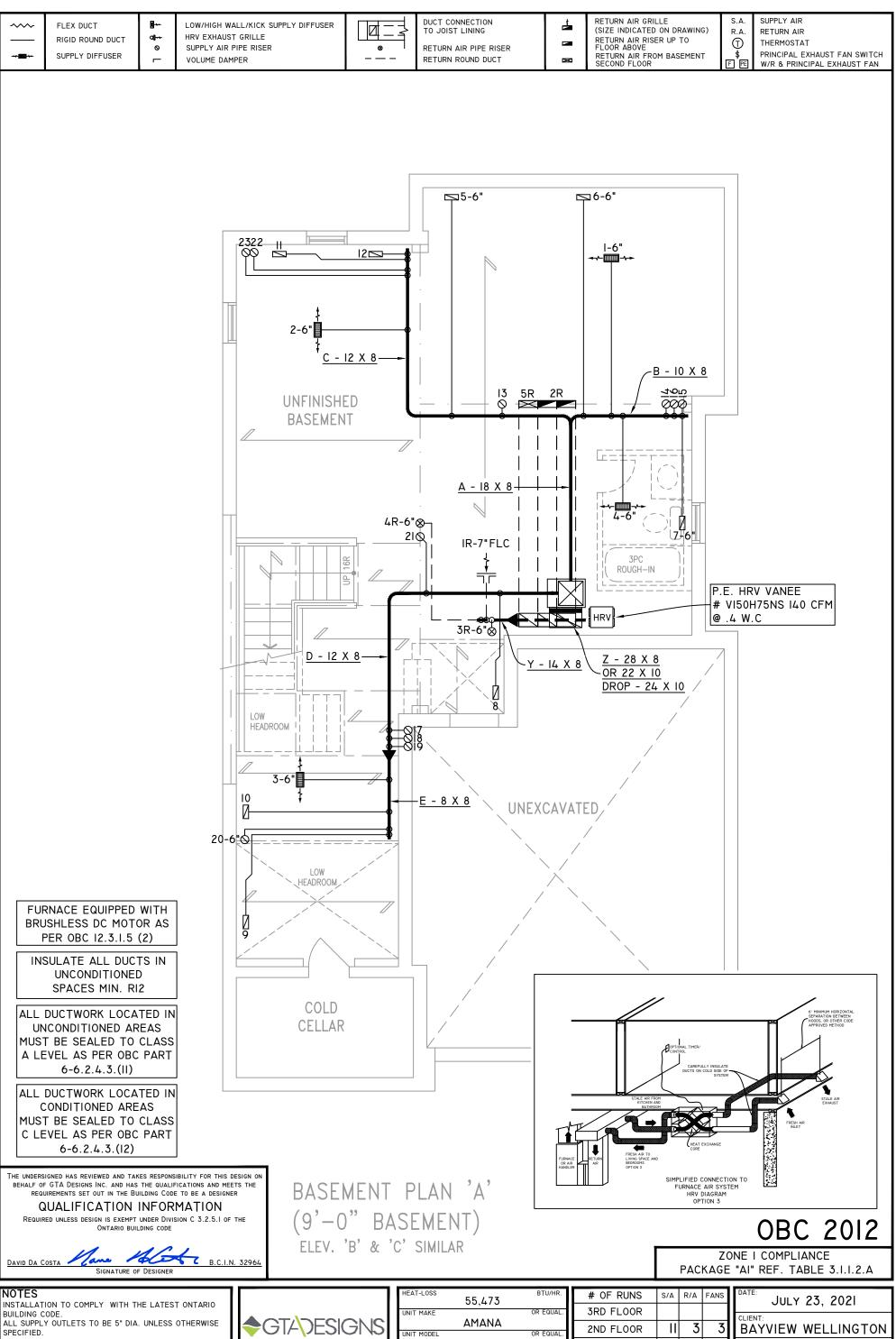
Supplemental tool for CAN/CSA-F280

| Weather Station                   | Description                                |
|-----------------------------------|--|
| Province:                         | Ontario                                    |
| Region:                           | Bradford ▼                                 |
| Weather Station Location:         | Open flat terrain, grass                   |
| Anemometer height (m):            | 10   |
| Local Shie                        | lding                                      |
| Building Site:                    | Suburban, forest ▼                         |
| Walls:                            | Heavy ▼                                    |
| Flue:                             | Heavy ▼                                    |
| Highest Ceiling Height (m):       | 8.53                                       |
| Building Confi                    | guration                                   |
| Type:                             | Detached                                   |
| Number of Stories:                | Two  |
| Foundation:                       | Shallow                                    |
| House Volume (m <sup>3</sup> ):   | 912.33                                     |
| Air Leakage/Ve                    | entilation                                 |
| Air Tightness Type:               | Present (1961-) (ACH=3.57)                 |
| Custom BDT Data:                  | 3.57 ACH @ 50 Pa                           |
| Mechanical Ventilation (L/s):     | Total Supply: Total Exhaust:  39.75  39.75 |
|                                   |  |
| Flue #:                           | #1 #2 #3 #4                                |
| Diameter (mm):                    | 0 0 0 0                                    |
|                                   |  |
| Heating Air Leakage Rate (ACH/H): | 0.393                                      |
| Cooling Air Leakage Rate (ACH/H): | 0.097                                      |

## **Residential Foundation Thermal Load Calculator**

Supplemental tool for CAN/CSA-F280

| Weat                         | her Sta | tion Description                  |
|------------------------------|---------|-----------------------------------|
| Province:                    |         | Ontario                           |
| Region:                      |         | Bradford ▼                        |
|                              | Site D  | escription                        |
| Soil Conductivity:           |         | High conductivity: moist soil   ▼ |
| Water Table:                 |         | Normal (7-10 m, 23-33 Ft) ▼       |
| Fou                          | ındatio | on Dimensions                     |
| Floor Length (m):            | 18.87   |                                   |
| Floor Width (m):             | 4.90    |                                   |
| Exposed Perimeter (m):       | 47.55   |                                   |
| Wall Height (m):             | 3.05    |                                   |
| Depth Below Grade (m):       | 1.22    | Insulation Configuration          |
| Window Area (m²):            | 1.77    |                                   |
| Door Area (m²):              | 1.95    |                                   |
|                              | Radi    | ant Slab                          |
| Heated Fraction of the Slab: | 0       |                                   |
| Fluid Temperature (°C):      | 33      |                                   |
|                              | Desig   | n Months                          |
| Heating Month                | 1       |                                   |
|                              | Founda  | ation Loads                       |
| Heating Load (Watts):        |         | 2233                              |



NOTES

PROVIDE BALANCING DAMPERS ON ALL BRANCHES. ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY)
INSULATE DUCTS IN UNCONDITIONED SPACES RI2 UNDERCUT

ALL DOORS I" MIN. CONTRACTOR MUST WORK FROM APPROVED PLANS.
ANY ALTERATIONS TO THIS ORIGINAL PLAN ARE NOT THE

RESPONSIBILITY OF GTA DESIGNS.
GTA DESIGNS MUST BE CONSULTED IF KITCHEN EXHAUST FAN EXCEEDS 700 CFM DEPRESSURIZATION MAY OCCUR WITH IN THE DWELLING.

2985 DREW ROAD SUITE 202, MISSISSAUGA, ONT.

L4T 0A4 TEL: 905-67I-9800 EMAIL: DAVE@GTADESIGNS.CA WEB: WWW.GTADESIGNS.CA

| HEAT-LOSS            | BTU/HR.   |
|----------------------|-----------|
| EE / 73              | -         |
| 55,473               |           |
| LIBUT MAKE           | OR EQUAL. |
| UNIT MAKE            | OR EQUAL. |
| ΔΜΔΝΔ                |           |
| ALIANA               |           |
| UNIT MODEL           | OR EQUAL. |
| AMECO40407A          | NIA       |
| AMEC960603A          | ANA       |
| UNIT HEATING INPUT   | BTU/HR.   |
| (0.000               |           |
| 60,000               |           |
| INUT USATING QUEDUT  | DTUUD     |
| UNIT HEATING OUTPUT  | BTU/HR.   |
| 57,600               |           |
| 37,000               |           |
| A/C COOLING CAPACITY | TONS.     |
| ۸-                   |           |
| 2.5                  |           |
| FAN SPEED            | CFM       |
| 929                  |           |
| 929                  |           |

| # OF RUNS | S/A | R/A | FANS |
|-----------|-----|-----|------|
| 3RD FLOOR |     |     |      |
| 2ND FLOOR | Ш   | 3   | 3    |
| IST FLOOR | 8   | I   | 2    |
| BASEMENT  | 4   | -   |      |
|           |     |     |      |
|           |     |     |      |

**BASEMENT** 

2511

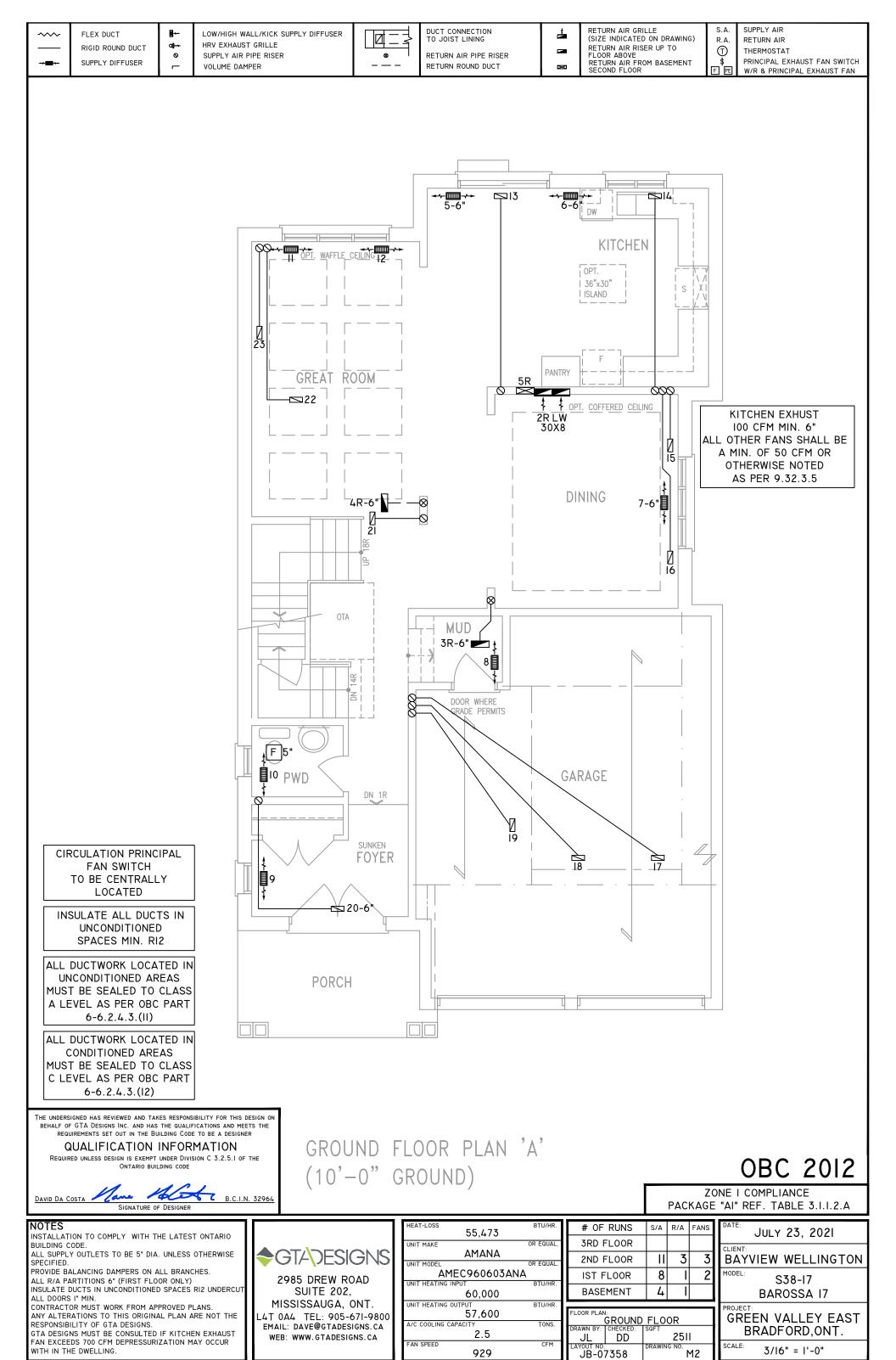
ΜI

DD

JB-07358

MODEL: S38-I7 BAROSSA 17 **GREEN VALLEY EAST** BRADFORD, ONT. SCALE:

3/16" = 1'-0"



RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) DUCT CONNECTION TO JOIST LINING SUPPLY AIR FLEX DUCT LOW/HIGH WALL/KICK SUPPLY DIFFUSER 4 RETURN AIR R.A HRV EXHAUST GRILLE RETURN AIR RISER UP TO FLOOR ABOVE RIGID ROUND DUCT 1 THERMOSTAT 0 SUPPLY AIR PIPE RISER RETURN AIR PIPE RISER 8 RETURN AIR FROM BASEMENT SECOND FLOOR PRINCIPAL EXHAUST FAN SWITCH SUPPLY DIFFUSER **VOLUME DAMPER** RETURN ROUND DUCT OPT. RAISED TRAY CEILING .60"x42" GLASS SHOWER-MASTER BEDROOM OVAL TUB **ENSUITE** 5R HW I4X8 WIC (F)5' 15 ENS.2 21 4R HW 14X8 LINEN LAUNDRY 16 BEDROOM 2 OTB ₹3R LW 88 M BEDROOM 3 **BATH** BEDROOM 4 18 **----**VAULTED | CEILING 20-6" INSULATE ALL DUCTS IN UNCONDITIONED SPACES MIN. RI2 ALL DUCTWORK LOCATED IN UNCONDITIONED AREAS MUST BE SEALED TO CLASS ROOF BELOW A LEVEL AS PER OBC PART 6-6.2.4.3.(11) ROOF BELOW ALL DUCTWORK LOCATED IN CONDITIONED AREAS MUST BE SEALED TO CLASS C LEVEL AS PER OBC PART 6-6.2.4.3.(12)

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE

REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER QUALIFICATION INFORMATION

Required unless design is exempt under Division C 3.2.5.I of the ONTARIO BUILDING CODE

B.C.I.N. 32964

SECOND FLOOR PLAN 'A'

UNIT MAKE

OBC 2012

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

INSTALLATION TO COMPLY WITH THE LATEST ONTARIO

BUILDING CODE. ALL SUPPLY OUTLETS TO BE 5" DIA. UNLESS OTHERWISE

PROVIDE BALANCING DAMPERS ON ALL BRANCHES. ALL R/A PARTITIONS 6" (FIRST FLOOR ONLY) INSULATE DUCTS IN UNCONDITIONED SPACES RIZ UNDERCUT ALL DOORS I\* MIN.

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WEB: WWW.GTADESIGNS.CA

| • | Ш | UNIT MODEL (         |
|---|---|----------------------|
|   |   | AMEC960603ANA        |
|   | Ш | UNIT HEATING INPUT   |
|   |   | 60,000               |
|   | Ш | UNIT HEATING OUTPUT  |
| ) |   | 57,600               |
|   | Ш | A/C COOLING CAPACITY |
|   |   | 2.5                  |
|   | Ш | FAN SPEED            |
|   | П | 929                  |

55,473

**AMANA** 

OR EQUAL

BTU/HR

CFM

| # OF       | RUNS   | S/A         | R/A    | FANS |
|------------|--------|-------------|--------|------|
| 3RD F      | FLOOR  |             |        |      |
| 2ND I      | LOOR   | Ш           | 3      | 3    |
| IST F      | LOOR   | 8           | I      | 2    |
| BASE       | MENT   | 4           | -      |      |
| FLOOR PLAN | SECOND | FLO<br>SQFT |        |      |
| JL         | DD     |             | 251    | l    |
| JB-07358   |        | DRAWIN      | IG NO. | 13   |

JB-07358

| DATE:        | JULY 23, 2021        |
|--------------|----------------------|
| CLIENT: BAYV | IEW WELLINGTON       |
| MODEL:       | S38-I7<br>BAROSSA I7 |
| PROJECT:     |                      |

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

FLEX DUCT RIGID ROUND DUCT SUPPLY DIFFUSER

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



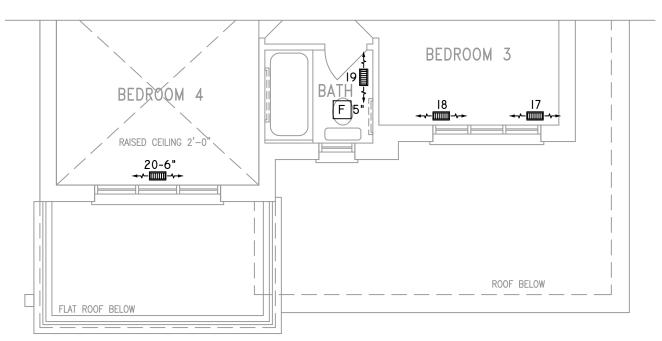
DUCT CONNECTION TO JOIST LINING RETURN AIR PIPE RISER RETURN ROUND DUCT

4

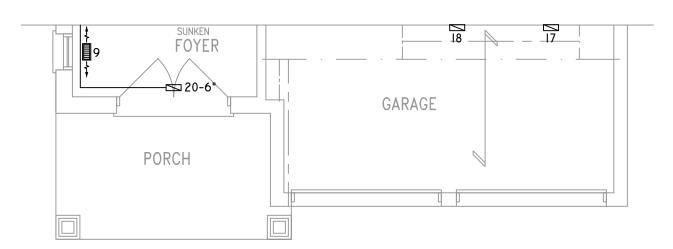
RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) RETURN AIR RISER UP TO FLOOR ABOVE RETURN AIR FROM BASEMENT SECOND FLOOR

R.A. 1

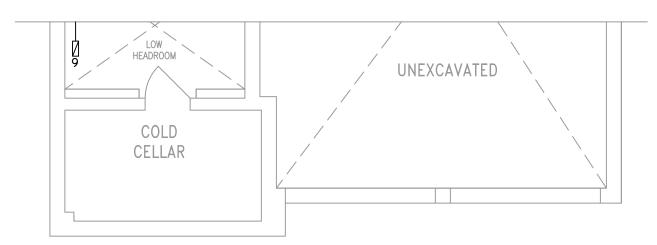
SUPPLY AIR RETURN AIR THERMOSTAT PRINCIPAL EXHAUST FAN SWITCH W/R & PRINCIPAL EXHAUST FAN



PART. SECOND FLOOR PLAN 'B'



PART. GROUND FLOOR PLAN 'B' (10'-0" GROUND)



PART. BASEMENT PLAN 'B'

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

## QUALIFICATION INFORMATION

Required unless design is exempt under Division C 3.2.5.I of the ONTARIO BUILDING CODE

SIGNATURE OF DESIGNER

B.C.I.N. 32964

OBC 2012

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

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

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# GTADESIGNS

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

| 55,473 UNIT MAKE       | QUAL. |
|------------------------|-------|
| SITT TIAKE             |       |
| ΔΜΔΝΔ                  | QUAL. |
|                        | QUAL. |
| UNIT MODEL OR E        |       |
| AMEC960603ANA          |       |
| UNIT HEATING INPUT BT  | U/HR. |
| 60,000                 |       |
| UNIT HEATING OUTPUT BT | U/HR. |
| 57,600                 |       |
| A/C COOLING CAPACITY T | ONS.  |
| 2.5                    |       |
| FAN SPEED              | CFM   |
| 929                    |       |

HEAT-LOSS

| # OF RUNS                     | S/A      | R/A  | FANS  |
|-------------------------------|----------|------|-------|
|                               | 3/A      | IVA  | 1 ANS |
| 3RD FLOOR                     | <u> </u> |      |       |
| 2ND FLOOR                     | l II     | 3    | 3     |
| IST FLOOR                     | 8        |      | 2     |
| BASEMENT                      | 4        | -    |       |
| ELOOD BLAN                    |          |      |       |
| FLOOR PLAN:<br><b>ΡΔΡΤΙΔΙ</b> | ΡΙ ΔΝ    | J(S) |       |

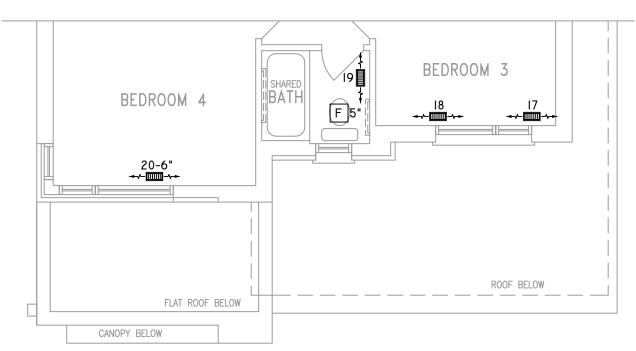
|          |          | _      | -      |
|----------|----------|--------|--------|
|          |          |        |        |
| OOR PLAN | l·       |        |        |
| P        | ARTIAL   | PI AN  | J(S)   |
|          |          |        | 1(0)   |
| RAWN BY: | CHECKED: | SQFT   |        |
| JI       | ממ ו     |        | 25II I |
| YOUT NO. | , ,,,    | DDAWIN | IC NO  |
| TOOL NO. | 7750     | DRAWIN | IG NO. |
| .JH-()   | / うちお    | l      | 14177  |

| JULY 23, 2021              |
|----------------------------|
| CLIENT: BAYVIEW WELLINGTON |
| MODEL: S38-I7              |
| BAROSSA 17                 |
| PROJECT: GREEN VALLEY EAST |

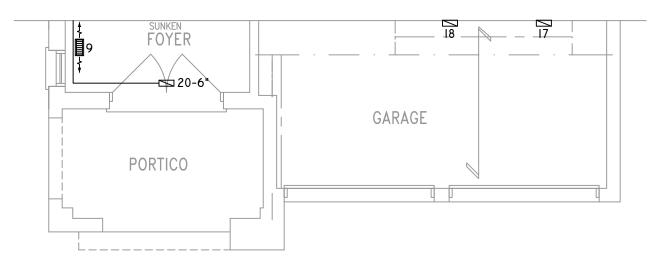
BRADFORD, ONT.

3/16" = 1'-0"

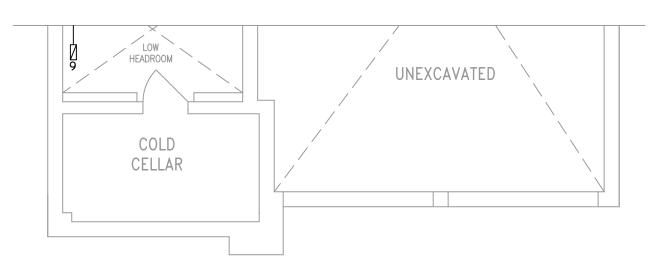
RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) SUPPLY AIR DUCT CONNECTION LOW/HIGH WALL/KICK SUPPLY DIFFUSER FLEX DUCT TO JOIST LINING R.A. RETURN AIR HRV EXHAUST GRILLE **a}**→ ⊗ RETURN AIR RISER UP TO FLOOR ABOVE RIGID ROUND DUCT 1 THERMOSTAT RETURN AIR PIPE RISER SUPPLY AIR PIPE RISER 8 SUPPLY DIFFUSER PRINCIPAL EXHAUST FAN SWITCH RETURN AIR FROM BASEMENT SECOND FLOOR VOLUME DAMPER RETURN ROUND DUCT



PART. SECOND FLOOR PLAN 'C'



PART. GROUND FLOOR PLAN 'C' (10'-0" GROUND)



PART. BASEMENT PLAN 'C'

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER QUALIFICATION INFORMATION Required unless design is exempt under Division C 3.2.5.I of the ONTARIO BUILDING CODE Ane 166 B.C.I.N. 32964

OBC 2012

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

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

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

| HEAT-LOSS            | BTU/HR.   |
|----------------------|-----------|
| 55,473               |           |
| UNIT MAKE            | OR EQUAL. |
| AMANA                |           |
| UNIT MODEL           | OR EQUAL. |
| AMEC960603ANA        |           |
| UNIT HEATING INPUT   | BTU/HR.   |
| 60,000               |           |
| UNIT HEATING OUTPUT  | BTU/HR.   |
| 57,600               |           |
| A/C COOLING CAPACITY | TONS.     |
| 2.5                  |           |
| FAN SPEED            | CFM       |
| 929                  |           |
|                      |           |

| -                  |      |      |      |
|--------------------|------|------|------|
| # OF RUNS          | S/A  | R/A  | FANS |
| 3RD FLOOR          |      |      |      |
| 2ND FLOOR          | Ш    | 3    | 3    |
| IST FLOOR          | 8    | I    | 2    |
| BASEMENT           | 4    |      |      |
|                    |      |      |      |
| FLOOR PLAN:        |      |      | - 1  |
| PARTIAL            |      | 1(2) |      |
| DRAWN BY: CHECKED: | SOFT |      |      |

2511

DRAWING NO. M5

DD

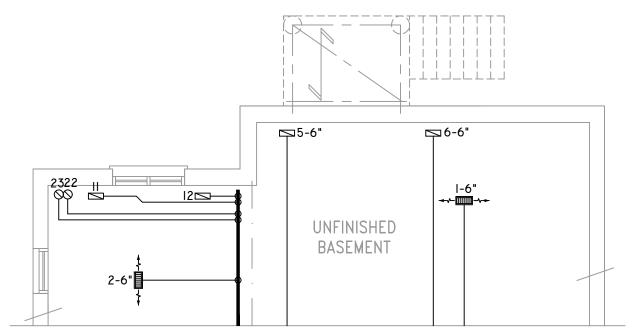
JB-07358

| JULY 23, 2021              |
|----------------------------|
| CLIENT: BAYVIEW WELLINGTON |
| MODEL: S38-I7              |
| BAROSSA 17                 |
| PROJECT: GREEN VALLEY EAST |

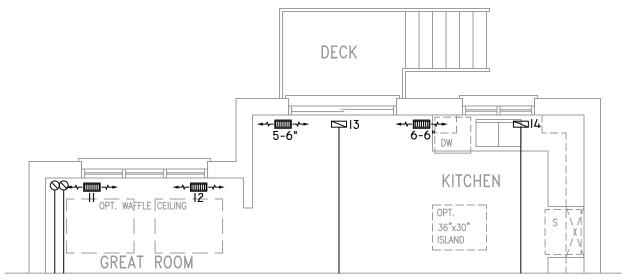
BRADFORD, ONT.

3/16" = 1'-0"

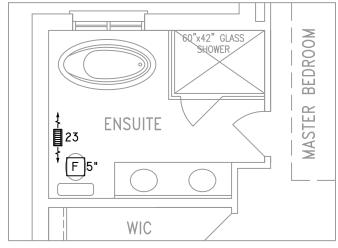
RETURN AIR GRILLE (SIZE INDICATED ON DRAWING) SUPPLY AIR DUCT CONNECTION LOW/HIGH WALL/KICK SUPPLY DIFFUSER TO JOIST LINING R.A RETURN AIR HRV EXHAUST GRILLE **aj**↔ 0 RETURN AIR RISER UP TO FLOOR ABOVE RIGID ROUND DUCT 1 THERMOSTAT SUPPLY AIR PIPE RISER RETURN AIR PIPE RISER RETURN AIR FROM BASEMENT SECOND FLOOR PRINCIPAL EXHAUST FAN SWITCH SUPPLY DIFFUSER VOLUME DAMPER RETURN ROUND DUCT



PART. BASEMENT PLAN EL. 'A', 'B' & 'C' W/ 9R OR MORE W.O.D. CONDITION



PART. GROUND FLOOR PLAN EL. 'A', 'B' & 'C' W/ 9R OR MORE W.O.D. CONDITION



OPT. SECOND FLOOR W/ ALT. ENSUITE LAYOUT

THE UNDERSIGNED HAS REVIEWED AND TAKES RESPONSIBILITY FOR THIS DESIGN ON BEHALF OF GTA DESIGNS INC. AND HAS THE QUALIFICATIONS AND MEETS THE REQUIREMENTS SET OUT IN THE BUILDING CODE TO BE A DESIGNER

QUALIFICATION INFORMATION

Required unless design is exempt under Division C 3.2.5.I of the ONTARIO BUILDING CODE

OBC 2012

JULY 23, 2021

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

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

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# **GTADESIGNS**

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

| HEAT-LOSS            | BTU/HR.   |
|----------------------|-----------|
| 55,473               |           |
| UNIT MAKE            | OR EQUAL. |
| AMANA                |           |
| UNIT MODEL           | OR EQUAL. |
| AMEC960603ANA        |           |
| UNIT HEATING INPUT   | BTU/HR.   |
| 60,000               |           |
| UNIT HEATING OUTPUT  | BTU/HR.   |
| 57,600               |           |
| A/C COOLING CAPACITY | TONS.     |
| 2.5                  |           |
| FAN SPEED            | CFM       |
| 929                  |           |

| # OF RUNS              | S/A | R/A  | FANS |
|------------------------|-----|------|------|
| 3RD FLOOR              |     |      |      |
| 2ND FLOOR              | Ш   | 3    | 3    |
| 2175 1 20017           |     |      |      |
| IST FLOOR              | 8   |      | 2    |
| BASEMENT               | 4   |      |      |
| •                      |     |      | · ·  |
| FLOOR PLAN:<br>PADTIAI |     | 1(6) |      |

DD

JB-07358

2511

DRAWING NO. M6

| ı | ,                          |
|---|----------------------------|
|   | CLIENT: BAYVIEW WELLINGTON |
|   | S38-I7 BAROSSA I7          |
|   | GREEN VALLEY EAST          |

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