

J4

J5

J6

B<sub>5</sub>L

B1

B2

**B**3

B4L

B<sub>6</sub>L

B<sub>1</sub>A

10-00-00

8-00-00

4-00-00

12-00-00

12-00-00

8-00-00

8-00-00

8-00-00

4-00-00

4-00-00

9 1/2" NI-40x

9 1/2" NI-40x

9 1/2" NI-40x

1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

|     | C   | onnector   | Summary     |
|-----|-----|------------|-------------|
|     | Qty | Manuf      | Product     |
|     | 13  | H1         | IUS2.56/9.5 |
| 4   | 4   | <b>H</b> 1 | IUS2.56/9.5 |
| 1   | 2   | H1         | IUS2.56/9.5 |
| '   | 16  | H1         | IUS2.56/9.5 |
| 1 2 | 2   | H1         | IUS2.56/9.5 |
| 1.  | 1   | H2         | HUS1.81/10  |
| Ľ   | 1   | H2         | HUS1.81/10  |

MFD

MFD

MFD MFD

MFD

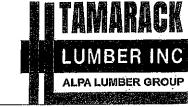
MFD

MFD

MFD

MFD

MFD



FROM PLAN DATED:

**BUILDER: GREENPARK HOMES** 

**SITE:** RUSSELL GARDENS PH 3

MODEL: MOUNTAINASH 3

**ELEVATION: 3** 

LOT: 245

CITY: WATERDOWN

SALESMAN: MARIO DICIANO

DESIGNER: AJ REVISION:

NOTES:

REFER TO THE **NORDIC INSTALLATION**GUIDE FOR PROPER STORAGE AND
INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED

BLOCKS REQ'D UNDER CONCENTRATED
LOADS. SEE FIGURE 1. CANTILEVERED
JOISTS INCLUDING CANT' OVER BRICK REI
I-JOIST BLOCKING ALONG BEARING AND
RIMBOARD CLOSURE AT ENDS. SEE
FIGURES 4 & 5 FOR REINFORCEMENT
REQUIREMENTS. FOR HOLES INCLUDING
DUCT CHASE AND FIELD CUT OPENINGS

SEE FIGURE 7, TABLES 1 & 2. CERAMIC TIL

APPLICATION AS PER O.B.C 9.30.6.

LOADING:

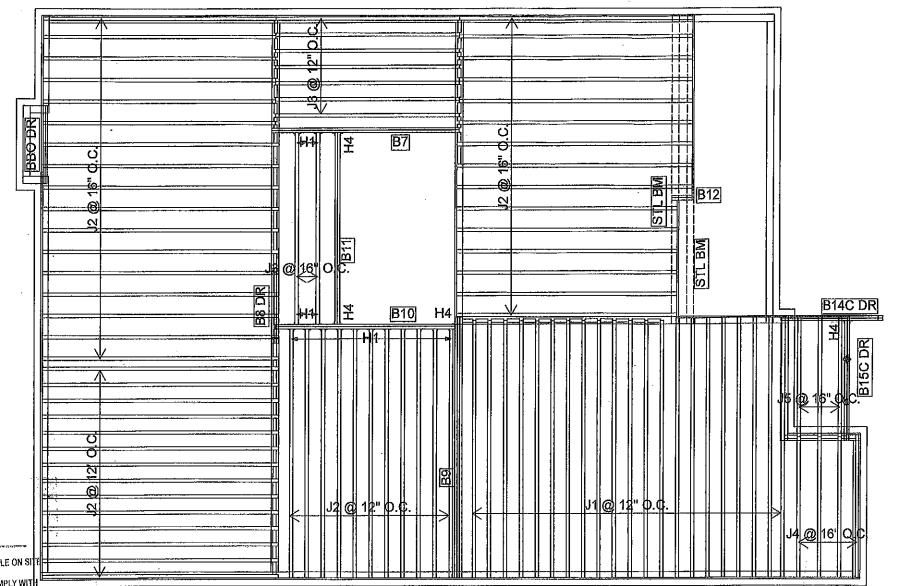
DESIGN LOADS: L/480.000 LIVE LOAD: 40.046/ft² DEAD LOAD: 20,046/ft²

**SUBFLOOR: 3/4" GLUED AND NAILED** 

**DATE:** 2020-04-15

# 1st FLOOR

**DECK CONDITION** 



CITY OF HAMILTON
Building Division
21-105 900

Perinit No. 27-105 900

THE OWNER AND/OR CONTRACTOR SHALL COMPLY WITH AND ONTARIO BUILDING CODE AND ALL OTHER APPLICABLE LAW

These drawings and/or specific

| blen reviewed by |          | Products                               | ·     |         |          |
|------------------|----------|--|-------|---------|----------|
| EB PlotID1       | Length   | Product                                | Plies | Net Qty | Fab Type |
| JoAte.           | 18-00-00 | 9 1/2" NI-40x                          | 1     | 21      | MFD      |
| J2               | 16-00-00 | 9 1/2" NI-40x                          | 1     | 57      | MFD      |
| J3               | 12-00-00 | 9 1/2" NI-40x                          | 1     | 9       | MFD      |
| J4               | 10-00-00 | 9 1/2" NI-40x                          | 1     | 4       | MFD      |
| J5               | 8-00-00  | 9 1/2" NI-40x                          | 1     | 3       | MFD      |
| B9               | 18-00-00 | 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP | 3     | 3       | MFD      |
| B10              | 12-00-00 | 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP | 2     | 2       | MFD      |
| B11              | 12-00-00 | 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP | 2     | 2       | MFD      |
| B7               | 12-00-00 | 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP | 2     | 2       | MFD      |
| B14C DR          | 8-00-00  | 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP | 2     | 2       | MFD      |
| B15C DR          | 8-00-00  | 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP | 2     | 2       | MFD      |
| B8 DR            | 6-00-00  | 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP | 3 -   | 3       | MFD      |
| B12              | 2-00-00  | 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP | 2     | 2       | MFD      |

| Connector Summary |    |             |  |  |  |  |  |
|-------------------|----|-------------|--|--|--|--|--|
| Qty Manuf Product |    |             |  |  |  |  |  |
| 15                | H1 | IUS2.56/9.5 |  |  |  |  |  |
| 3                 | H4 | HGUS410     |  |  |  |  |  |
| 1                 | H4 | HGUS410     |  |  |  |  |  |



FROM PLAN DATED:

**BUILDER: GREENPARK HOMES** 

**SITE:** RUSSELL GARDENS PH 3

MODEL: MOUNTAINASH 3

**ELEVATION: 3** 

LOT: 245

**CITY: WATERDOWN** 

**SALESMAN: MARIO DICIANO** 

DESIGNER: AJ REVISION:

### NOTES:

REFER TO THE NORDIC INSTALLATION **GUIDE** FOR PROPER STORAGE AND INSTALLATION, SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS, MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURE 7 TABLES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD **CUT OPENINGS** SEE FIGURE 7 TABLES 1 & 2 OF THE INSTALLATION GUIDE. CERANIC TILE APPLICATION AS PER O.B.C. 9.30.6

### LOADING:

DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 20.0 lb/ft<sup>2</sup>

**SUBFLOOR: 5/8" GLUED AND NAILED** 

DATE: 2020-02-14

# 2nd FLOOR

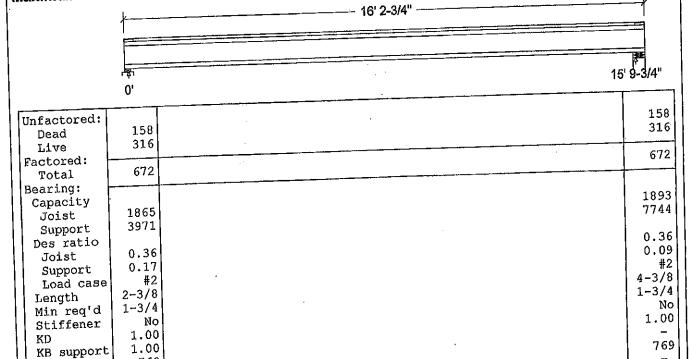
STD

# **Design Check Calculation Sheet**

Nordic Sizer - Canada 7.2

| 1 | Loads: |      | 1            | D- t | Location | [ft:] | Magnitude | Unit |
|---|--------|------|--------------|------|----------|-------|-----------|------|
| - | Load   | Type | Distribution | tern | Start    | End_  | Start Er  |      |
| ١ |        |      | Full Area    |      |          |       | 20.00     | psf  |
| ١ | Loadl  | Dead | Full Area    |      |          |       | 40.00     | psf  |
|   | Load2  | Live | FULL MIGG    |      |          |       |           |      |

# Maximum Reactions (lbs) and Support Bearing (in):



Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

# Nordic 9-1/2" NI-40x Floor joist @ 12" o.c.

Supports: 1 - Lumber Sill plate, No.1/No.2; 2 - Lumber Wall, No.1/No.2; Total length: 16' 2-3/4"; Clear span: 15' 8"; 3/4" nailed and glued OSB sheathing This section PASSES the design code check.

# Limit States Design using CSA O86-14 and Vibration Criterion:

769

fcp sup

| FILLISTATES DOSIS | arr dome       |        |        | FT d de       | Analysis/Design | - 1    |
|-------------------|----------------|--------|--------|---------------|-----------------|--------|
| m 14 and 02       | Analysis Value | Design | Value  |               | Vf/Vr = 0.35    | $\neg$ |
| Criterion         | Vf = 672       | Vr =   | 1895   | lbs           | , -, , -        | ļ      |
| Shear             | V **           | Mr =   | 4824   | lbs-ft _      | ME/Mr = 0.55    |        |
| Moment(+)         | Mf = 2657      |        | 1/360  | in jo         | 16E8SICN 0.22   |        |
|                   | 0.12 = < L/999 | 0.53 = |        | . A 61        | 0.60            | - 1    |
| 1 022300          | 0.24 = L/802   | 0.40 = | ъ/480  | 1 TT 15 W/W W | LE O AE         | - 1    |
| Live Defl'n       | 0.2.           | 0.79 = | L/240  | in // 2/ 1/2  | 0.45            | - 1    |
| Total Defl'n      | 0.35 = L/535   |        | L/360  | in 3          | (0.54           | - 1    |
| 1 1 2 2 2 1 1 2   | In 28 = ĭ./672 | 0.53 = | P\ 200 | 1 1111        | מ חווש אאירי    | - 1    |

|   | Additional<br>FACTORS:<br>Vr<br>Mr+<br>E1           | 1895<br>4824                                  | KD<br>1.00<br>1.00<br>million     | кн<br>1.00<br>1.00<br>-                                   | KZ<br>-<br>-<br>-                 | KL<br>-<br>1.000  | KT<br><br> | KS<br>-<br>-<br>- | <br>-<br>-<br>KN | LC#<br>#2<br>#2<br>#2 |          |  |
|---|---|---|-----------------------------------|---|-----------------------------------|---|------------|-------------------|------------------|-----------------------|----------|--|
|   | EI<br>CRITICAL LO<br>Shear<br>Moment (+<br>Deflecti | : LC f<br>on: LC f<br>LC f<br>LC f            |                                   | 5D + 1.5I<br>D (perma<br>D + 1.0L<br>D + 1.0L<br>D + 1.0L | nnent)<br>(live<br>(tota<br>(bare | . joist)<br>- 1.5L                                      |            |                   |                  |                       |          |  |
| - | l all Load  | Sup<br>pes: D=d<br>L=l<br>tterns:<br>d Combin | port 2 -<br>ead W=wi<br>ive(use,0 | nd S=sn<br>occupancy                                      | ow H=0                            | - 1.5L<br>earth,grou<br>live(storatern load<br>in the A | in thi     | s span            |                  | e<br>Canforms to      | OBG 2012 |  |
|   |   |   |                                   |   |                                   | s<br>ad loads   |            |                   |                  | AMENDED               | 2020     |  |

1. WoodWorks analysis and design are in accordance with the 2015 National Building Code of Canada (NBC), Division B, Design Notes: Part 4, and the CSA O86-14 Engineering Design in Wood standard, Update No. 2 (June 2017).

2. Please verify that the default deflection limits are appropriate for your application.

3. Refer to Nordic Structures technical documentation for installation guidelines and construction details.

4. Nordic I-joists are listed in CCMC evaluation report 13032-R.

5. Joists shall be laterally supported at supports and continuously along the compression edge.

6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of this component based on the design criteria and loadings shown.



DWG NO. THW5933 -20 COMPONENT ONLY

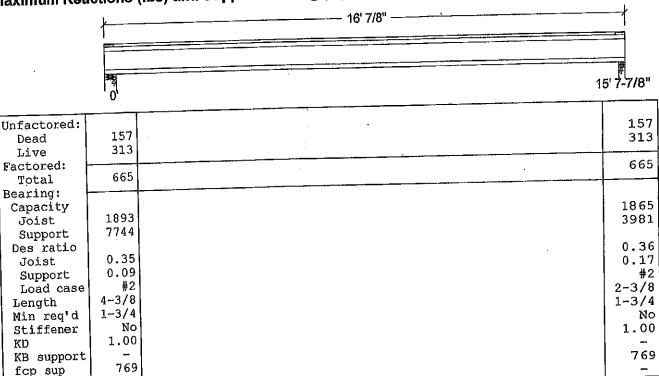
## **Design Check Calculation Sheet**

Nordic Sizer - Canada 7.2

### I nade:

| Load  | Type         | Distribution           | Pat-<br>tern | Location<br>Start | [ft]<br>End | Start End | Unit       |
|-------|--------------|------------------------|--------------|-------------------|-------------|-----------|------------|
| Load1 | Dead<br>Live | Full Area<br>Full Area |              |                   |             | 1 20,00   | psf<br>psf |

# Maximum Reactions (lbs) and Support Bearing (in):



Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

### Nordic 9-1/2" NI-40x Floor joist @ 12" o.c.

Supports: All - Lumber Wall, No.1/No.2

Total length: 16' 7/8"; Clear span: 15' 6-1/8"; 5/8" nailed and glued OSB sheathing with 1/2" gypsum ceiling This section PASSES the design code check.

# Limit States Design using CSA O86-14 and Vibration Criterion:

|              | Analysis Value                 | Design | Value     | Unit            | Analysis/Design |
|--------------|--------------------------------|--------|-----------|-----------------|-----------------|
| Criterion    | Analysis Value Vf = 665        | Vr =   | 1895      | l.bs            | Vf/Vr = 0.35    |
| Shear        | V +                            | Mr =   | 4824      | lbs-ft          | Mf/Mr = 0.54    |
| Moment(+)    | Mf = 2604                      |        | L/360     | in              | 0.22            |
| Perm. Defl'n | $0.12 = \langle L/999 \rangle$ | 0.52 = | L/480     | 1 1             | FESSION 0.60    |
| Live Defl'n  | 0.23 = L/805                   | 0.39 = |           | ( ) ( ) ( ) ( ) | V.C.            |
| Total Defl'n | 0.35 = L/537                   | 0.78 = | L/240     | in Ja           | 47620 0.45      |
|              | 0.27 = L/691                   | 0.52 = | L/360     | in /3/          | 610.94          |
| Bare Dell'n  | 1 0.27                         | l      | 1 K l Q 5 | I FH HOR COM    | £ 10.94         |

| Additional Data: FACTORS: f/E Vr 1895 Mr+ 4824 EI 218.1   | 1.00 1<br>1.00 1<br>million   | KH KZ<br>.00 -<br>.00 -   | KL<br>-<br>1.000                   | KT<br>-<br>-<br>-    | KS<br>-<br>-<br>- | KN<br>-<br>-<br>- | LC#<br>#2<br>#2<br>#2  |  |  |
|---|---|---|------------------------------------|----------------------|-------------------|-------------------|------------------------|--|--|
| LC LC Bearing : Sup   | 2 = 1.25D<br>1 = 1.0D<br>1 = 1.0D +<br>2 = 1.0D +<br>3 = 1.0D +<br>4 = 1.0D +<br>5 = 1.0D +<br>6 = 1.0D +<br>7 = 1.0D +<br>7 = 1.0D +<br>7 = 1.0D +<br>8 = 1.0D +<br>8 = 1.0D +<br>8 = 1.0D +<br>9 = 1.0D | + 1.5L<br>(permanent)<br>1.0L (live<br>1.0L (total)<br>1.0L (bare<br>#2 = 1.25D<br>#2 = 1.25D | e joist)<br>+ 1.5L<br>+ 1.5L       | oundwate             | r E≕ea            | rthquake          |                        |  |  |
| Load Types: D=d L=1 Load Patterns: All Load Combin  | ead W=wind<br>ive(use,occu<br>s=S/2 L=L+I<br>ations (LCs)   | mpancy) Ls= s =no pat are listed  | live(stor<br>tern load<br>in the A | l in thi<br>Analysis | s span<br>output  | :                 | CANFORMS TO<br>AMENDED |  |  |
| Eleff = 258.29 lb-in^2 K= 4.94e06 lbs "Live" deflection is due to all non-dead loads (live, wind, snow)  Design Notes:  1. WoodWorks analysis and design are in accordance with the 2015 National Building Code of Canada (NBC), Division B, Part 4, and the CSA 086-14 Engineering Design in Wood standard, Update No. 2 (June 2017). Part 4, and the CSA official deflection limits are appropriate for your application. 2. Please verify that the default deflection limits are appropriate for your application. 3. Refer to Nordic Structures technical documentation for installation guidelines and construction details. 4. Nordic I-joists are listed in CCMC evaluation report 13032-R. 5. Joists shall be laterally supported at supports and continuously along the compression edge. 6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or 6. The design assumptions and specifications, and/or designs furnished, and the correctness or accuracy of this information is their incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis does not constitute a record of the structural integrity of the building nor suitability of the design responsibility. This analysis does not constitute a record of the structural adequacy of this component based on the design criteria and loadings shown. |   |   |                                    |                      |                   |                   |                        |  |  |



DWO NO. TAM 5934-20 STRUCTURAL COMPONENT ONLY

Address:

City, Province, Postal Code: WATERDOWN

Customer:

CCMC 12472-R

Specifier:

ΑJ Designer. Company:

Code reports: B2 02-01-02

**B**1

Total Horizontal Product Length = 02-01-02

tion Summary (Down / Uplift) (lbs)

| Reaction Sum             | mary (Down / L | Jplift) (lbs)<br>Dead _ | Snow             | Wind |
|--------------------------|----------------|-------------------------|------------------|------|
| Bearing                  | Live<br>66 / 0 | 58 / 0                  | 69 / 0<br>63 / 0 |      |
| B1, 5-1/4"<br>B2, 4-1/8" | 61 / 0         | 54/0                    | 0070             |      |

| DZ, *              | j-1/0              |   |                          |     |   |                   | Live               | Dead                             | Snow : Wind     | Illudary                             |
|--------------------|--------------------|---|--------------------------|-----|---|-------------------|--------------------|----------------------------------|-----------------|--------------------------------------|
| Tag<br>0<br>1<br>2 | ROOF               | Load Type Unf. Lin. (lb/ft) | Ref.<br>L<br>L<br>L<br>L |     | End<br>02-01-02<br>02-01-02<br>02-01-02<br>00-05-04<br>02-01-02 | Top<br>Top<br>Top | 33<br>22<br>5<br>6 | 0.65<br>10<br>30<br>11<br>3<br>3 | 1.00 1.15<br>63 | 00-00-00<br>n\a<br>n\a<br>n\a<br>n\a |
| 4                  | LOS LIGOT MAGAILLE |   |                          | Daw | and!  |                   |                    |                                  |                 |                                      |

| 4 F03 11001 III                        |  | Factored<br>Resistance    | Demand/<br>Resistance | Case    | Location             |
|--|--|---------------------------|-----------------------|---------|----------------------|
| Controls Summary Pos. Moment End Shear | Factored Demand<br>57 ft-lbs<br>30 lbs | 23220 ft-lbs<br>11571 lbs | 0.2%<br>0.3%          | 13<br>1 | 01-01-02<br>01-02-12 |

1.8 Span / Depth

| Bearing Supports         Dim. (LxW)         Demand Support         Resistance Support           B1         Beam         5-1/4" x 3-1/2"         243 lbs         2.5%           B2         Beam         4-1/8" x 3-1/2"         222 lbs         2.9% | Member | Material Unspecified Unspecified |
|---|--------|----------------------------------|
|---|--------|----------------------------------|

### Notes

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Unbalanced show loads determined from building constant and constant a Resistance Factor phi has been applied to all presented results per CSA O86.

Unbalanced snow loads determined from building geometry were used in selected products

verification. Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



Tributary

Snow : Wind

Address:

City, Province, Postal Code: WATERDOWN

Customer: Code reports:

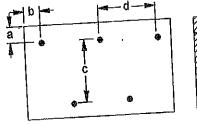
CCMC 12472-R

Specifier: Designer:

Company:

ΑJ

Connection Diagram: Full Length of Member



c = 5-1/2" ( d = 1/2" ( a minimum = 2" b minimum = 3"

Connectors are: Nails ARDOX SPIRAL



STRUCTURAL Disclosure ONLY

Use of the Boise Cascade Software is subject to the terms of the End User

License Agreement (EULA). Completeness and accuracy of Input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Bolse Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes, To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER® , AJS™,

Job name: Specifier: Address: City, Province, Postal Code: WATERDOWN ΑJ Designer: Company: Customer: CCMC 12472-R Code reports: **B**2 80-90-80 Total Horizontal Product Length = 06-06-08 **B1** Reaction Summary (Down / Uplift) (lbs) Wind Snow 439 / 0 Live 739 / 0 Bearing 647/0 191 / 0 B1, 5-1/2" 1075 / 0 592/0 Tributary Wind B2, 3-7/16" Snow Dead Live 1.15 1.00 0.65 1.00 00-00-00 Loc. End Start **Load Summary** Ref. 10 Load Type Тор nla 06-06-08 00-00-00 100 Description Unf. Lin. (lb/ft) 06-06-08 Top n\a 00-05-08 Self-Weight 90 181 0 Unf. Lin. (lb/ft) 01-02-00 Top n\a 01-02-00 103 WALL Conc. Pt. (lbs) 205 1 02-06-00 Top n\a 02-06-00 J5(i2259) 95 2 190 Conc. Pt. (lbs) 03-10-00 Top n\a 03-10-00 J5(12257) 104 209 3 Conc. Pt. (lbs) Top 04-11-10 n\a 04-11-10 451 J5(12258) Conc. Pt. (lbs) 124 4 06-04-12 Top n\a 06-04-12 378 J5(i2261) 180 5 Conc. Pt. (lbs) 198 Top n\a 01-08-04 01-08-04 252 120 B15(i2117) 132 6 Conc. Pt. (lbs) Top 02-11-08 02-11-08 GIRDER 7 Conc. Pt. (lbs) GIRDER 8 Demand/ Factored Location Case Resistance Resistance 02-11-07 **Factored Demand** 15.1% **Controls Summary** 23220 ft-lbs 01-03-00 3502 ft-lbs 1 18.8% Pos. Moment 11571 lbs 03-02-12 2178 lbs 35 n\a **End Shear** n\a 03-02-12 L/999 (0.033") 51 Total Load Deflection n\a n\a 03-02-12 L/999 (0.019") 35 Live Load Deflection n\a n\a 0.033" Max Defl. 7,5 Span / Depth Demand/ Demand/ Resistance Resistance Material Member Support Spruce-Pine-Fir Demand Bearing Supports Dlm. (LxW) 9.9% 19.7% 2332 lbs Unspecified 5-1/2" x 3-1/2" 16.4% Wall/Plate 24.7% 2424 lbs **B**1 3-7/16" x 3-1/2" Column **B2** 

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced. AMENDED 2020 Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Unbalanced snow loads determined from building geometry were used in selected product's

verification. Design based on Dry Service Condition. PROVINCE OF ONL

CONFORMS TO OBC 2012

Address:

City, Province, Postal Code: WATERDOWN

Customer:

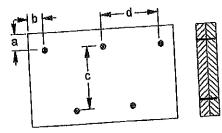
CCMC 12472-R

Specifier: Designer: Company:

ΑJ

Code reports:

# Connection Diagram: Full Length of Member



a minimum = 2" b minimum = 3" c = 5-1/2" U d = 18 8

Calculated Side Load = 315.7 lb/ft Connectors are:

3%" ARDOX SPIRAL

S. KATSOULAKOS POVINCE OF STA DWS NO. TAM 16920 -20

STRUCTURAL Disclosure OHLY

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of sultability for a particular application. application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALCO, BC FRAMER® , AJSTM

Address: City, Province, Postal Code: WATERDOWN

Specifier: Designer:

ΑJ

Wind

Live

Customer: Code reports:

CCMC 12472-R

Company:

В2 07-08-00

**B1** 

Total Horizontal Product Length = 07-06-00 Snow

n Summary (Down / Uplift) (lbs)

| Reaction Sum                    | Live           | Dead               |
|---------------------------------|----------------|--------------------|
| Bearing<br>B1, 5-1/2"<br>B2, 2" | 115/0<br>113/0 | 485 / 0<br>452 / 0 |
|                                 |                |                    |

| <u>Tag</u><br>0<br>1 | d Summary  Description  Self-Weight  WALL | Load Type Unf. Lin. (lb/ft) Unf. Lin. (lb/ft) | Ref.<br>L<br>L | Start<br>00-00-00<br>00-00-00<br>00-02-12 | End<br>07-06-00<br>07-06-00<br>07-06-00 | Top<br>Top<br>Top | <u>1.00</u><br>31 | 10<br>100<br>100 | 4,00 1.10 | 00-00-00<br>n\a<br>n\a |
|----------------------|---|---|----------------|---|---|-------------------|-------------------|------------------|-----------|------------------------|
| 2                    | FC3 Floor Material                        | Unf. Lin. (lb/ft)                             | -              |   |   |                   |                   |                  |           |                        |

| Controls Summary Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. | Factored Demand 1075 ft-lbs 464 lbs L/999 (0.017") L/999 (0.003") 0.017" 8.8 | Factored<br>Resistance<br>15093 ft-lbs<br>7521 lbs<br>n\a<br>n\a<br>n\a | Demand/<br>Resistance<br>7.1%<br>6.2%<br>n\a<br>n\a | 0<br>0<br>0<br>4<br>5<br>4 | 03-10-12<br>01-03-00<br>03-10-12<br>03-10-12<br>03-10-12 |
|---|--|---|---|----------------------------|--|
| Span / Depth  | 8.8  |   |   |                            |  |

|  |  | Demand                       | Demand/<br>Resistance<br>Support | Demand<br>Resistance<br>Member | Material                  |
|--|--|------------------------------|----------------------------------|--------------------------------|---------------------------|
| Bearing Supports B1 Wall/Plate B2 Hanger | Dim. (LxW)<br>5-1/2" x 3-1/2"<br>2" x 3-1/2" | Demand<br>679 lbs<br>633 lbs | 8.8%<br>n\a                      | 4.4%<br>11.4%                  | Spruce-Pine-Fir<br>HUC410 |

Header for the hanger HUC410 is a Double 1-3/4" x 9-1/2" LVL Beam. Hanger model HUC410 and seat length were input by the user. Hanger has not been analyzed for adaquate capacity. adequate capacity.

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

CONFORMS TO OBC 2012

AMENDED 2020 Hanger Manufacturer: Unassigned Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code; Part 9



Tributary

Wind

4 45

Snow

Address:

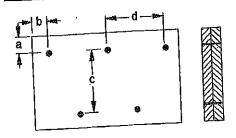
City, Province, Postal Code: WATERDOWN Customer:

CCMC 12472-R

Specifier:

Designer: Company: ΑJ

Connection Diagram: Full Length of Member



a minimum = 2" b minimum = 3"

Code reports:

c = 5-1/2" d d = 200 0

Connectors are: \_\_\_\_\_ Nails

SK" ARDOX SPIRAL

S. KATSOULAKOS NOVINCE OF OTHE

STRUCTURAL DISCIONITEMENT ONLY

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™,

Job name: Specifier: Address: City, Province, Postal Code: WATERDOWN ΑJ Designer: Company: Customer: CCMC 12472-R Code reports: В2 07-03-08 Total Horizontal Product Length = 07-03-08 **B**1 Reaction Summary (Down / Uplift) (lbs) Wind Snow Dead Live 587 / 0 Bearing 383 / 0 600 / 0 B1, 3" Tributary 392 / 0 Wind Snow B2, 4" Dead Live 1.15 1.00 0.65 00-00-00 1.00 Loc. End Start 10 **Load Summary** Ref. 07-03-08 Top n\a Load Type 00-00-00 53 Tag Description 106 Unf. Lin. (lb/ft) n\a 07-03-08 Top 00-00-00 100 Self-Weight Unf. Lin. (lb/ft) 0 07-03-08 Top 00-00-00 FC3 Floor Material Unf. Lin. (lb/ft) 1 WALL Demand/ 2 Factored Location Case Resistance Resistance 03-07-04 Factored Demand 9.1% **Controls Summary** 23220 ft-lbs 01-00-08 2118 ft-lbs 1 8.0% Pos. Moment 11571 lbs 03-07-04 930 lbs n\a End Shear n\a 03-07-04 L/999 (0.026") 5 n\a **Total Load Deflection** n\a 03-07-04 L/999 (0.01") n\a Live Load Deflection n\a 0.026" Max Defi. 8.6 Span / Depth Demand/ Demand/ Resistance Resistance Material Member Support Spruce-Pine-Fir Demand Bearing Supports Dlm. (LxW) 10.2% 20.2% 1307 lbs **HGUS410** 3" x 3-1/2" 7.8% Wall/Plate n\a 1338 lbs **B**1 4" x 3-1/2" Hanger **B2** 

Describucion

Hanger model HGUS410 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

Design meets Code minimum (L/240) Total load deflection criteria. Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBG 2012

AMENDED 2020

S. KATSOULAKOS

TOWNICE OF OTHER p6 4 Address: City, Province, Postal Code: WATERDOWN

Customer:

Code reports:

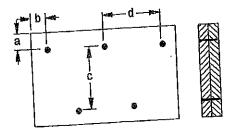
CCMC 12472-R

Specifier: Designer:

Company:

ΑJ

Connection Diagram: Full Length of Member



a minimum = 2"

c = 5-1/2" qb minimum = 3"

Connectors are:

3K" ARDOX SPIRAL



888 NO. FAN 169 23-20

Disclosure COMPONENT ONLY

Use of the Bolse Cascade Software Is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of sultability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Bolse Cascade engineered wood products must be in accordance with current installation Gulde and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

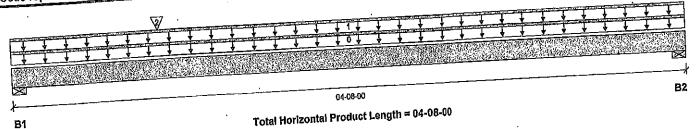
BC CALC®, BC FRAMER® , AJS™,

Customer: CCMC 12472-R

Code reports:

Specifier: Designer.

Company:



nmary (Down / Uplift) (lbs)

Snow

Wind

CONFORMS TO OBC 2012

| Reaction Summer | , , , , , , , , , , , , , , , , , , , | Dead |
|-----------------|---------------------------------------|------|
| Ph              | Live                                  | 4505 |

| Bearing | 2950 / 0 | 1585/1  |
|---------|----------|---------|
| B1, 4"  |          | 682 / 0 |
| · .     | 1262 / 0 | 00270   |
| B2, 4"  |          |         |

| Logi | d Summary     |                   | Ref. | Start    | End      | Loc. | 1.00   | 0.66 1 | 00-00-00   |
|------|---------------|-------------------|------|----------|----------|------|--------|--------|------------|
|      | Description   | Load Type         | 1    | 00-00-00 | 04-08-00 | Top: | 000    | 165    | n\a        |
| Tag  | Self-Weight   | Unf. Lin. (lb/ft) | 1    | 00-00-00 | 04-08-00 | Top  | 330    |        | n\a        |
| 0    | Smoothed Load | Unf. Lin. (lb/ft) | L .  | 01-00-04 | 01-00-04 | Тор  | . 2669 | 1428   |            |
| า    | SHOOTHED FORM | Conc. Pt. (lbs)   | L.   | 01-000.  | =        |      |        |        | SESSION IN |

| 2 B10((1810)  |  | Factored                                      | Demand/<br>Resistance               | Case                  | Location   |
|---|--|---|-------------------------------------|-----------------------|--|
| Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. Span / Depth | Factored Demand<br>4176 ft-lbs<br>4794 lbs<br>L/999 (0.011")<br>L/999 (0.007")<br>0.011" | Resistance 36222 ft-lbs 17356 lbs n\a n\a n\a | 11.5%<br>27.6%<br>n\a<br>n\a<br>n\a | 1<br>1<br>4<br>5<br>4 | 01-00-04<br>01-01-08<br>02-02-00<br>02-02-00<br>02-02-00 |

| B1 | Supports Wall/Plate Wall/Plate | Dlm. (LxW)<br>4" x 5-1/4"<br>4" x 5-1/4" | Demand<br>6406 lbs<br>2745 lbs | Resistance<br>Support<br>22.9%<br>9.8% | Material<br>Spruce-Pine-Fir<br>Spruce-Pine-Fir |
|----|--------------------------------|--|--------------------------------|--|--|
| B2 | MalliLiaro                     |  |                                |  |  |

B10(i1818)

В1

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume unbraced length of Top: 00-03-09, Bottom: 00-03-09.

Resistance Factor phi has been applied to all presented results per CSA 086. AMENDED 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



PROVIDE3 ROWS OF 31/2" ARDOX "O/C FOR SPIRAL NAILS @ B MULTI-PLY NAILING, MAINTAIN A MIN. 24 LUMBER EDGE/END DISTANCE DO NOT USE ALR NAILS PLES.



Wind

1.15

Snow

Dead

Live

Tributary

### DWG NO. TAM 5 935 -20 STRUCTURAL COMPONENT ONLY

Disclosure

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BC CALC®, BC FRAMER® , AJS™

Job name. Specifier: Address: City, Province, Postal Code: Customer: CCMC 12472-R

Designer: Company:

Wind

Code reports: В2 11-03-08

Total Horizontal Product Length = 11-03-08 **B1** LIMISE (Ihe) Snow

|          | Summary | (Down / | Upiniy | (Ins) |
|----------|---------|---------|--------|-------|
| Reaction | Summary | (2000)  |        | Dead  |

| 1/COOCIO:  | Live     | Dodu   |
|------------|----------|--------|
| Bearing    | 2633 / 0 | 1409/0 |
| B1, 2-1/2" | 203310   | 1105/0 |
| •          | 2057 / 0 | 110070 |
| B2, 4"     | 2007.    |        |

| Tag<br>O         | d Summary Description Self-Weight       | Load Type<br>Unf. Lin. (lb/ft)<br>Unf. Lin. (lb/ft)                      | Ĺ      | 01-00-00 | 10-06-08             |            | 315<br>967        | 10<br>158<br>483  |
|------------------|---|--|--------|----------|----------------------|------------|-------------------|-------------------|
| 1<br>2<br>3<br>4 | Smoothed Load<br>J1(i1626)<br>J2(i1788) | Conc. Pt. (lbs)<br>Conc. Pt. (lbs)<br>Conc. Pt. (lbs)<br>Conc. Pt. (lbs) | L<br>L | 11-00-08 | 11-00-08<br>02-08-06 | Top<br>Top | 232<br>323<br>308 | 116<br>162<br>212 |

| 5 B11((1835)  |  | Factored                                      | Demand/<br>Resistance   | Case                  | Location   |
|---|--|---|-------------------------|-----------------------|--|
| Controls Summary Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. | Factored Demand 13379 ft-lbs 5679 lbs L/324 (0.403") L/499 (0.261") 0.403" | Resistance 23220 ft-lbs 11571 lbs n\a n\a n\a | 74.1%<br>72.1%<br>71.1% | 1<br>1<br>4<br>5<br>4 | 05-00-08<br>01-00-00<br>05-06-08<br>05-06-08<br>05-06-08 |

| Span / Depth          | 13.1                            |                    |                  |        |                                       |   |
|-----------------------|---------------------------------|--------------------|------------------|--------|---------------------------------------|---|
| Bearing Support       | S Dim. (LxW)<br>2-1/2" x 3-1/2" | Demand<br>6712 lbs | Support<br>53.5% | Ramhar | Material<br>VL 2.0 3100 SP<br>HGUS410 | _ |
| B1 Beans<br>B2 Hanger | 4" x 3-1/2"                     | 4467 lbs           | n\a              |        |                                       |   |

Header for the hanger HGUS410 at B2 is a Triple 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HGUS410 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

Design meets Code minimum (L/240) Total load deflection criteria. Design meets Code minimum (L/360) Live load deflection criteria.

13.7

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned Resistance Factor phi has been applied to all presented results per CSA O86. tion to beend on Canadian I imit States Design, as per NBCC 2015 and CSA 086.

CONFORMS TO OBC 2012

OVINCE OF ONTH DWG NO. TAN 5936-20

Wind

1.15

Snow

1.00

Dead

0.65

Live

1.00

Tributary

00-00-00 n∖a n\a n\a n\a n\a

STRUCTURAL

Disclosure ONLY Use of the Boise Cascade Software is

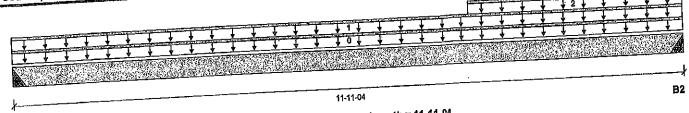
subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Gulde and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

RC CALCO, BC FRAMER® , AJSTM

Customer: CCMC 12472-R Code reports:

Specifier:

Designer: Company:



**B**1

2

Total Horizontal Product Length = 11-11-04 Snow

Reaction Summary (Down / Uplift) (lbs)

| Keaction own.               | Live               | Dead               |
|-----------------------------|--------------------|--------------------|
| Bearing<br>B1, 4"<br>B2, 4" | 294 / 0<br>947 / 0 | 204 / 0<br>531 / 0 |
|                             |                    |                    |

Dead Live 1.00 1.15 0.65 1.00 00-00-00 Loc. **Load Summary** End Start Ref. 10 Load Type Top 11-11-04 n\a Tag Description 00-00-00 Unf. Lin. (lb/ft) L 13 27 Top 11-11-04 Self-Weight 00-00-00 n\a 0 Unf. Lin. (lb/ft) L 120 240 Top FC3 Floor Material 11-11-04 08-01-04 1 Unf. Lin. (lb/ft) STAIR

| 2 STAIN   |  | Factored                                      | Demand/<br>Resistance                             | Case                  | Location   |
|---|--|---|---|-----------------------|--|
| Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. Span / Depth | Factored Demand 3203 ft-lbs 1432 lbs L/999 (0.098") L/999 (0.061") 0.098" 14.4 | Resistance 23220 ft-lbs 11571 lbs n\a n\a n\a | Resistance<br>13.8%<br>12.4%<br>n\a<br>n\a<br>n\a | 1<br>1<br>4<br>5<br>4 | 08-03-05<br>10-09-12<br>06-04-05<br>08-05-10<br>06-04-05 |

|    | Supports | Dim. (LxW)<br>4" x 3-1/2" | Demand<br>696 lbs | Demand/<br>Resistance<br>Support<br>n\a | Demand/<br>Resistance<br>Member<br>4.1%<br>12.2% | Material<br>HGUS410<br>HGUS410 | <del></del> |
|----|----------|---------------------------|-------------------|---|--|--------------------------------|-------------|
| B1 | Hanger   |                           | 2083 lbs          | n\a                                     | 12.2%  | 110000110                      |             |
| B2 | Hanger   | 4" x 3-1/2"               |                   |   |  |                                |             |

Header for the hanger HGUS410 at B1 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HGUS410 and seat length were input by the user. Hanger has not been analyzed for

Header for the hanger HGUS410 at B2 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF.

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition. Supportance Factor · Normal Part code : Part 9 PROVIDE3 ROWS OF 31/2" ARDOX " Maile @ /2 " 0/6 FOR



Tributary

Wind

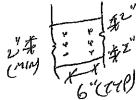
Snow

### Disclosure

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BC CALC®, BC FRAMER® , AJS™,

Address: Specifier: City, Province, Postal Code: Designer: Customer: Company: CCMC 12472-R Code reports: **B2** 01-04-02 Total Horizontal Product Length = 01-04-02 В1 Reaction Summary (Down / Uplift) (lbs) Wind Snow Dead Bearing 45/0 32/0 30/0 B1, 5-1/4" 39/0 29/0 28/0 B2, 4-1/8" Tributary Wind Snow Dead Live 1.15 1.00 0.65 1.00 Load Summary Loc. End 00-00-00 Start Ref. Load Type 10 Tag Description 01-04-02 Top 00-00-00 L n\a Unf. Lin. (lb/ft) 63 30 33 Self-Weight 01-04-02 Top 00-00-00 L Unf. Lin. (lb/ft) n\a 3 6 ROOF 01-04-02 Top 1 00-00-00 L Unf. Lin. (lb/ft) n\a 3 PROFESSION N FC3 Floor Material 6 01-04-02 Top 2 00-05-04 Unf. Lin. (lb/ft) FC3 Floor Material Demand/ Factored Location Case Resistance Resistance Factored Demand **Controls Summary** 00-08-10 13 n\a 23220 ft-lbs S. KATSOULAMOS 12 ft-lbs 00-05-04 Pos. Moment 13 0.5% 11571 lbs 55 lbs **End Shear** 0.9 Span / Depth OLINCE OF ONTE Demand/ Demand/ Resistance Resistance Material Member Support Demand Bearing Supports Dim. (LxW) Unspecified 0.6% DWG NO. TAM 5936-20 1.4% 137 lbs 5-1/4" x 3-1/2" Unspecified Beam **B**1 0.7% STRUCTURAL 1.6% 123 lbs 4-1/8" x 3-1/2" Beam **B2** COMPONENT ONLY Disclosure Use of the Boise Cascade Software is Notes Calculations assume member is fully braced. . subject to the terms of the End User Resistance Factor phi has been applied to all presented results per CSA O86. License Agreement (EULA). BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086. Completeness and accuracy of input Unbalanced snow loads determined from building geometry were used in selected products must be reviewed and verified by a qualified engineer or other appropriate CONFORMS TO OBC 2012 expert to assure its adequacy, prior to verification. anyone relying on such output as Design based on Dry Service Condition. AMENDED 2020 evidence of sultability for a particular Importance Factor: Normal Part code: Part 9 application. The output here is based on building code-accepted design properties and analysis methods.



PROVIDE3 ROWS OF 3½" ARDOX SPIRAL NAILS @ 6 " 0/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS Installation of Bolse Cascade engineered wood products must be in accordance with current installation

Guide and applicable building codes. To

BC CALC®, BC FRAMER®, AJS™

questions, please call (800)232-0788

obtain Installation Guide or ask

before Installation.

Address: Specifier: City, Province, Postal Code: Designer: **Customer:** Company: CCMC 12472-R Code reports: **B2** 11-11-14 Total Horizontal Product Length = 11-11-14 **B1** Reaction Summary (Down / Uplift) (lbs) Wind Snow Live Bearing 811/0 1431 / 0 B1, 5-1/2" 359 / 0 563 / 0 B2, 5-1/2" Tributary Wind Dead Snow Live 1,00 1.15 1.00 0.65 **Load Summary** Loc. End Start Ref. 00-00-00 Load Type 10 Tag Description 11-11-14 Top 00-00-00 L Unf. Lin. (lb/ft) n\a 9 Self-Weight 19 04-03-08 0 Top 00-04-00 L Unf. Lin. (lb/ft) n\a FC3 Floor Material 11 21 1 11-06-06 Top 04-03-08 L Unf. Lin. (lb/ft) n∖a FC3 Floor Material 248 497 2 01-07-06 Top 01-07-06 L Conc. Pt. (lbs) PROFESSION W n\a 162 323 3 J2(11743) 02-11-06 Top 02-11-06 L Conc. Pt. (lbs) 524 933 J2(i1788) 04-01-12 Top 4 04-01-12 Conc. Pt. (lbs) 5 B11(i1835) Demand/ Factored Location Case Resistance S. KATSOULAHOS Resistance **Factored Demand Controls Summary** 04-01-12 1 34.3% 23220 ft-lbs 7954 ft-lbs Pos. Moment 1 01-03-00 26.9% 11571 lbs 3108 lbs POVINCE OF OUTHER **End Shear** 05-06-00 4 38.0% n\a L/631 (0.213") Total Load Deflection 05-06-00 5 35.9% n\a L/1003 (0.134") Live Load Deflection 05-06-00 n\a n\a 0.213" Max Defl. 14.1 Span / Depth Demand/ COMPONENT ONFA Demand/ Resistance Resistance Material Disclosure Member Support Bearing Supports Dlm. (LxW) Demand Spruce-Pine-Fir Use of the Bolse Cascade Software Is 13.5% 26.7% 3161 lbs 5-1/2" x 3-1/2" subject to the terms of the End User Wall/Plate **B**1 Spruce-Pine-Fir 5.5% 10.9% 1293 lbs 5-1/2" x 3-1/2" License Agreement (EULA). Wall/Plate **B2** Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate Notes Design meets Code minimum (L/240) Total load deflection criteria. expert to assure its adequacy, prior to CONFORMS TO OBC 2012 Design meets Code minimum (L/360) Live load deflection criteria. anyone relying on such output as evidence of suitability for a particular Calculations assume member is fully braced. AMENDED 2020 application. The output here is based on Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086. building code-accepted design properties and analysis methods. Installation of Boise Cascade Design based on Dry Service Condition. engineered wood products must be in Importance Factor : Normal Part code : Part 9 accordance with current Installation Guide and applicable building codes. To PROVIDE 3 ROWS OF 31/2" ARDOX obtain installation Guide or ask SPIRAL HAILS @ /2- " O/C FOR questions, please call (800)232-0788 before installation. MULTI-PLY NAILING, MAINTAIN

a onth 2 "LIIMRER EDGE/END

BC CALC®, BC FRAMER® , AJS™,

lob name: Specifier: Address: City, Province, Postal Code: Designer: Company: Customer: CCMC 12472-R Code reports: В2 16-03-10 Total Horizontal Product Length = 16-03-10 В1 Reaction Summary (Down / Uplift) (lbs) Wind Snow Live 242/0 Bearing 250/0 B1, 4-3/8" 1327 / 0 2264/0 Tributary B2, 5-1/4" Wind Snow Dead Live 1,15 1.00 0.65 1.00 00-00-00 Loc. End **Load Summary** Start 14 Ref. Load Type 16-03-10 Top n\a 00-00-00 Tag Description L 11 Unf. Lin. (lb/ft) 21 16-00-14 Top n\a 00-00-00 Self-Weight L 5 9 Unf. Lin. (lb/ft) 15-08-10 qoT PROFESSION n\a FC3 Floor Material 00-00-00 1087 1 Unf. Lin. (lb/ft) 2021 15-08-10 Top FC3 Floor Material 15-08-10 Conc. Pt. (lbs) S. KATSOULAHOS

| Controls Summary Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. | Factored Demand 2550 ft-lbs 594 lbs L/999 (0.108") L/999 (0.055") 0.108" 19.7 | Factored Resistance 36222 ft-lbs 17356 lbs n\a n\a n\a | Demand/<br>Resistance<br>7.0%<br>3.4%<br>n\a<br>n\a<br>n\a | Case 1 1 4 5 4 | 08-01-06<br>15-00-14<br>08-01-06<br>08-01-06<br>08-01-06 |
|---|---|--|--|----------------|--|
| Span / Depth  | ·-·   |  |  |                |  |

| Bearing Outplate | <u>Dim. (LxW)</u><br>4-3/8" x 5-1/4"<br>5-1/4" x 5-1/4" | Demand<br>678 lbs<br>5055 lbs | Demand/<br>Resistance<br>Support<br>4.8%<br>29.8% | Resistance<br>Member<br>2.4%<br>15.0% | Material<br>Spruce-Pine-Fir<br>Spruce-Pine-Fir |
|------------------|---|-------------------------------|---|---------------------------------------|--|
| KA ARCIIII IMAA  |   |                               |   |                                       |  |

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

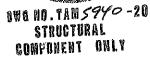
AMENDED 2020 Calculations assume member is fully braced. Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

PROVIDE 3 ROWS OF 31/2" ARDOX SPIRAL NAILS @ /2 " 0/C FOR MULTI-PLY NAILING, MAINTAIN

THE STREET EDGE/END



OVINCE OF OUT

### Disclosure

Use of the Bolse Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a CONFORMS TO UBC 2012 qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Bolse Cascade engineered wood products must be in accordance with current Installation Gulde and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER® , AJS™

Address: Specifier: City, Province, Postal Code: Designer: Customer: Company: CCMC 12472-R Code reports: **B2** 11-09-00 Total Horizontal Product Length = 11-09-00 **B**1 Reaction Summary (Down / Uplift) (lbs) Wind Snow Live Bearing 1460 / 0 2744/0 B1, 2-5/8" 2658 / 0 4654 / 0 B2, 5-1/2" Tributary Wind Snow Dead Live 1.15 1.00 0.65 1.00 **Load Summary** End Loc. Start 00-00-00 Ref. Load Type 14 Tag Description 11-09-00 Top 00-00-00 n\a Unf. Lin. (lb/ft) 164 328 Self-Weight 11-04-10 Top 01-04-10 L n\a Unf. Lin. (lb/ft) 298 Smoothed Load 597 01-01-08 Top 01-01-08 n\a Conc. Pt. (lbs) 107 214 Top 02-08-08 2 02-08-08 PROFESSIO/V Conc. Pt. (lbs) n∖a 284 567 J5(i1381) 04-00-08 Top 3 04-00-08 Conc. Pt. (lbs) n\a 107 214 J5(I1568) Top 4 05-04-08 05-04-08 Conc. Pt. (lbs) 90 180 n\a J5(i1381) 06-08-08 Top 5 06-08-08 Conc. Pt. (lbs) 54 Top 6 J5(i1434) 07-07-02 07-07-02 Conc. Pt. (lbs) , KATSOULAIOOS 2266 11-06-04 Top 7 B2(11474) 11-06-04 Conc. Pt. (lbs) 1(1599) Demand/ **Factored** PONINCE OF ORTHAR Location | Case Resistance Resistance **Factored Demand Controls Summary** 05-04-08 1 47.0% 36222 ft-lbs 17040 ft-lbs 01-00-02 Pos. Moment 33.5% 17356 lbs 5820 lbs 05-07-09 4 **End Shear** 144 NO. TAN 5941 -20 64.0% L/375 (0.358") n\a **Total Load Deflection** 05-07-09 5 62.6% STRUCTÚRÁL n\a L/575 (0.234") 05-07-09 Live Load Deflection n\a COMPONENT ONLY n\a 0.358" Max Defl. 14.1 Disclosure Span / Depth Use of the Boise Cascade Software is Demand/ subject to the terms of the End User Demand/ Resistance Resistance License Agreement (EULA). Material Completeness and accuracy of input Member Support Demand Bearing Supports Dim. (LxW) Unspecified must be reviewed and verified by a 35.3% 80.7% 5941 lbs 2-5/8" x 5-1/4" qualified engineer or other appropriate Spruce-Pine-Fir Beam <u>B1</u> 29,2% 58.0% 10303 lbs expert to assure its adequacy, prior to 5-1/2" x 5-1/4" Wall/Plate **B2** anyone relying on such output as evidence of suitability for a particular application. The output here is based on Notes Design meets Code minimum (L/240) Total load deflection criteria. building code-accepted design CONFORMS TO OBE 2012 Design meets Code minimum (L/360) Live load deflection criteria. properties and analysis methods. Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00. Installation of Boise Cascade engineered wood products must be in AMENDED 2020 Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086. accordance with current installation Guide and applicable building codes. To obtain Installation Guide or ask

PROVIDE3 ROWS OF 312"

SPIRAL NAILS @ 12 " 0/C FOR

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

BC CALC®, BC FRAMER®, AJS™,

questions, please call (800)232-0788

before installation.

Customer: Code reports:

**B**1

CCMC 12472-R

Specifier: Designer:

Company:

Wind



Total Horizontal Product Length = 07-08-12

Snow

Tributary

Summary (Down / Uplift) (lbs)

| Reaction Suit | Live    |        |  |  |  |
|---------------|---------|--------|--|--|--|
| Bearing       | 73 / 0  | 55 / 0 |  |  |  |
| B1, 2"        | , - , - | 57/0   |  |  |  |
| B2 3-1/2"     | 75 / 0  | 01,0   |  |  |  |

| Load Summary Tag Description  O Self-Weight 1 FC2 Floor Material | Load Type<br>Unf. Lin. (lb/ft)<br>Unf. Lin. (lb/ft) | Ref.<br>L<br>L | Start<br>00-00-00<br>00-00-00 | 07-08-12<br>07-08-12 |  | 1.00<br>19 | <b>0.65</b><br>5<br>10 | 1.00 1.15<br>00-00-00<br>n\a |  |
|--|---|----------------|-------------------------------|----------------------|--|------------|------------------------|------------------------------|--|
|--|---|----------------|-------------------------------|----------------------|--|------------|------------------------|------------------------------|--|

| •   | _  | Factored  | Demand/<br>Resistance | Case                  | Location   |
|---|--|---|-----------------------|-----------------------|--|
| Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. Span / Depth | Factored Demand<br>320 ft-lbs<br>133 lbs<br>L/999 (0.009")<br>L/999 (0.005")<br>0.009" | Resistance<br>11610 ft-lbs<br>5785 lbs<br>n\a<br>n\a<br>n\a | 2.8% 2.3% n\a n\a n\a | 1<br>1<br>4<br>5<br>4 | 03-09-10<br>00-11-08<br>03-09-10<br>03-09-10<br>03-09-10 |

|                                     |  | Dand                         | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material                 |
|-------------------------------------|--|------------------------------|----------------------------------|---------------------------------|--------------------------|
| Bearing Support B1 Hanger B2 Column | S Dlm. (LxW)<br>2" x 1-3/4"<br>3-1/2" x 1-3/4" | Demand<br>178 lbs<br>184 lbs | n\a<br>3.7%                      | 4.2%<br>2.5%                    | HUS1.81/10<br>Unspedfied |

Header for the hanger HUS1.81/10 at B1 is a Triple 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

Design meets Code minimum (L/240) Total load deflection criteria. Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

CONFORMS TO OBC 2012

Hanger Manufacturer: Unassigned

AMENDED 2020 Resistance Factor phl has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



Wind

Snow

Dead

Live

### DWG NO. TAN 5942-20 STRUCTŪRĀL COMPONENT ONLY Disclosure

Use of the Bolse Cascade Software Is subject to the terms of the End User. License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. installation of Bolse Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™

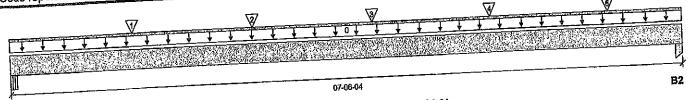
Customer: Code reports:

CCMC 12472-R

Specifier: Designer:

Company:

Wind



Snow

В1 Summary (Down / Uplift) (lbs)

Total Horizontal Product Length = 07-06-04

| Reaction                            | Summary (Down , Spins) | Dead               |
|-------------------------------------|------------------------|--------------------|
| Bearing<br>B1, 2-5/8"<br>B2, 1-3/4" | 610 / 0                | 324 / 0<br>325 / 0 |

| D2., | <b>.</b>  |   |                          |                                  |  |                                 | Live                            |
|------|---|---|--------------------------|----------------------------------|--|---------------------------------|---------------------------------|
| Log  | d Summary   |   | Þof                      | Start                            | End  | Loc.                            | 1.00                            |
| Tag  | Description Self-Weight J5(i1374) J5(i1381) J5(i1568) J5(i1381) | Load Type Unf. Lin. (lb/ft) Conc. Pt. (lbs) Conc. Pt. (lbs) Conc. Pt. (lbs) Conc. Pt. (lbs) | Ref.<br>L<br>L<br>L<br>L | 00-00-00<br>01-04-08<br>02-08-08 | 07-06-04<br>01-04-08<br>02-08-08<br>04-00-08<br>05-04-08 | Top<br>Top<br>Top<br>Top<br>Top | 287<br>210<br>337<br>210<br>180 |
| - T  | 15(11/34)   | Conc. Pt. (lbs)   | -                        | 00 40                            |  |                                 |                                 |

| 5 J5(i1434)           | Oblight in the A           |                        |                       |      |                      |
|-----------------------|----------------------------|------------------------|-----------------------|------|----------------------|
| 5 80(11.5.)           |                            | Factored<br>Resistance | Demand/<br>Resistance | Case | Location             |
| Controls Summary      | Factored Demand            | 11610 ft-lbs           | 24,6%                 | 1    | 04-00-08             |
| Pos. Moment           | 2854 ft-lbs                | 5785 lbs               | 22.7%                 | 1    | 01-00-02             |
| End Shear             | 1313 lbs<br>L/999 (0.074") | n\a                    | n\a                   | 4    | 03-09-08<br>03-09-08 |
| Total Load Deflection | L/999 (0.048")             | n\a                    | n\a                   | 5    | 03-09-08             |
| Live Load Deflection  | 0.074"                     | n\a                    | n\a                   | 4    | 03-03-05             |
| Max Defl.             | 9.2                        |                        |                       |      |                      |
| Span / Depth          | V                          |                        |                       |      |                      |

| Bearing Supports         Dim. (LxW)         Demand           B1         Beam         2-5/8" x 1-3/4"         1320 lbs           B2         Column         1-3/4" x 1-3/4"         1327 lbs | Demand/<br>Resistance<br>Support<br>53.8%<br>53.3% | Demand/<br>Resistance<br>Member<br>23.5%<br>35.5% | Material<br>Unspecified<br>Unspecified |
|--|--|---|--|
|--|--|---|--|

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria. Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.

Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



Tributary

00-00-00

n\a

n\a

n\a

n\a

n∖a

Wind

1.15

Snow

1.00

Dead

0.65

144

105

168

105

90

5

Disclosure Use of the Bolse Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate CONFORMS TO ORC 2012 expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Bolse Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALO®, BC FRAMER®, AJS™

Customer: Code reports:

CCMC 12472-R

Specifier: Designer: Company:

Wind

Loc.

Top

CONFORMS TO OBC 2012

End

**B**1

07-10-10 Total Horizontal Product Length = 07-10-10

Snow

Start

# Reaction Summary (Down / Uplift) (lbs)

|            | Live    | Dead    |
|------------|---------|---------|
| Bearing    | 773 / 0 | 405 / 0 |
| B1, 3-1/2" |         | 406 / 0 |
| B2 3-1/2"  | 775 / 0 | 40070   |

| Load Summary    | Load Type         | Rei. |
|-----------------|-------------------|------|
| Tag Description |                   | 1    |
| O-Is Majorhi    | Unf. Lin. (lb/ft) | -    |

07-10-10 00-00-00 110 220 06-05-04 Self-Weight CoT 0 01-01-04 Unf. Lin. (lb/ft) 73 147 Smoothed Load 00-06-08 Top 1 00-06-08 Conc. Pt. (lbs) 112 225 07-01-04 Top J3(172) 2 07-01-04

Conc. Pt. (lbs) J3(162)

| 3 J3(l62)             | Colle' Lr' (199) | -                      |                       |      |          |
|-----------------------|------------------|------------------------|-----------------------|------|----------|
|                       | •                | Factored<br>Resistance | Demand/<br>Resistance | Case | Location |
| Controls Summary      | Factored Demand  | 11610 ft-lbs           | 27.9%                 | 1    | 04-05-04 |
| Pos. Moment           | 3234 ft-lbs      | 5785 ibs               | 25.6%                 | 1    | 06-09-10 |
| End Shear             | 1482 lbs         | -:                     | n\a                   | 4    | 03-11-04 |
| Total Load Deflection | L/999 (0.09")    | n\a                    | n\a                   | 5    | 03-11-04 |
| Live Load Deflection  | L/999 (0.059")   | n\a                    | n\a                   | 4    | 03-11-04 |
| Max Defl.             | 0.09"            | n\a                    | 11 (80)               |      |          |

Demand/ Demand/ Resistance Resistance Material Member Support Demand Bearing Supports Dim. (LxW) Unspecified 22.3% 33.5% 1665 lbs 3-1/2" x 1-3/4" Unspecified Column **B**1 22.4% 33.6% 3-1/2" x 1-3/4" 1671 lbs Column

B2

Span / Depth

Design meets Code minimum (L/240) Total load deflection criteria.

9.4

Design meets Code minimum (L/360) Live load deflection criteria. Calculations assume unbraced length of Top: 00-05-04, Bottom: 00-05-04.

AMENDED 2020 Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



Wind

1.15

Snow

1.00

Dead

0.65

5

Live

1.00

**B2** 

Tributary

00-00-00

n\a

n\a

n\a

DWG NO. TAN 5944-20 STRUCTURAL Disclosure ONLY

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BC CALC®, BC FRAMER® , AJS™,

Customer: Code reports:

В1

CCMC 12472-R

Specifier: Designer: Company:

07-07-10 **B**3 03-02-00 B2

Total Horizontal Product Length = 10-09-10

Snow

Wind

ummary (Down / Uplift) (ibs)

|            | Live    | Dead    |  |
|------------|---------|---------|--|
| Bearing    |         | 0/22    |  |
| B1, 1-3/4" | 24 / 65 | •       |  |
| •          | 701 / 0 | 434 / 0 |  |
| B2, 3-1/2" | 400.14  | 94/0    |  |
| B3, 1-7/8" | 128 / 1 | 0.17.0  |  |

| Loa | d Summary          | L d Turno                      | Ref. | Start    | End      | Loc. | 1.00 | 0.66    | 1.00 | 1.15 | 00-00-00 |
|-----|--------------------|--------------------------------|------|----------|----------|------|------|---------|------|------|----------|
| Tag | Description        | Load Type<br>Unf. Lin. (lb/ft) | L    | 00-00-00 | 10-09-10 | •    | 16   | 10<br>8 |      |      | n\a      |
| 0   | Self-Weight        | Unf. Lin. (lb/ft)              | L    | 00-00-00 | 03-00-04 |      | . –  | 00      |      |      | n\a      |
| 1   | FC1 Floor Material | Unf. Lin. (lb/ft)              | L    | 03-00-04 | 10-09-10 | Тор  | 40   | 20      |      |      | n\a      |
| 2   | FC1 Floor Material | Conc. Pt. (lbs)                | Ĺ    | 03-01-02 | 03-01-02 | Top  | 428  | 223     |      |      | 11100    |
| 3   | B6L(1449)          | Colle: Er (los)                | _    |          |          |      |      |         | •    |      |          |

| ·                     |                 | Factored<br>Resistance | Demand/<br>Resistance | Case | Location_ |
|-----------------------|-----------------|------------------------|-----------------------|------|-----------|
| Controls Summary      | Factored Demand | 23220 ft-lbs           | 2.0%                  | 3    | 07-07-05  |
| Pos. Moment           | 464 ft-lbs      | -23220 ft-lbs          | 2,2%                  | 1    | 03-02-00  |
| Neg. Moment           | -505 ft-lbs     | 11571 lbs              | 1.9%                  | 1    | 09-10-04  |
| End Shear             | 216 lbs         | 11571 lbs              | 3.0%                  | 1    | 04-01-04  |
| Cont. Shear           | 342 lbs         | n\a                    | n\a                   | 10   | 07-03-00  |
| Total Load Deflection | L/999 (0.006")  | n\a                    | n\a                   | 13   | 07-03-00  |
| Live Load Deflection  | L/999 (0.003")  | n/a                    | n\a                   | 10   | 01-10-14  |
| Total Neg. Defl.      | L/999 (-0.001") | n\a<br>n\a             | n\a                   | 10   | 07-03-00  |
| Max Defl.             | 0.006"          | 1110                   | ••••                  |      |           |
| Span / Depth          | 9.5             |                        |                       |      |           |

|          |                      |                                    | 5aud                | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material        |
|----------|----------------------|------------------------------------|---------------------|----------------------------------|---------------------------------|-----------------|
|          | Supports<br>Column   | Dim. (LxW)<br>1-3/4" x 3-1/2"      | Demand<br>16 lbs    | 0.3%                             | 0.2%                            | Unspecified     |
| B1<br>B1 | Unliff               |                                    | 126 lbs<br>1595 lbs | 16.0%                            | 10.7%                           | Unspecified     |
| B2<br>B3 | Column<br>Wall/Plate | 3-1/2" x 3-1/2"<br>1-7/8" x 3-1/2" | 309 lbs             | 7.7%                             | 3.9%                            | Spruce-Pine-Fir |

1WG NO. YAW 5945-20 STRUCTURAL COMPONENT ONLY

POVINCE OF CHAPTER

96 1h

Tributary

Snow Wind

Dead

Live

Uplift of 128 lbs found at bearing B1. (SIM PSON 2-42-54 @ 17-

Customer: CCMC 12472-R Code reports:

Specifier: Designer: Company:

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

CONFORMS TO OBC 2012

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

PROVIDE 3 ROWS OF 31/2" ARDOX SPIRAL NAILS @ /2" 0/6 FOR MULTI-PLY NAILING, MAINTAIN A MIN.2" LUMBER EDGE/END DISTANCE. DO NOT USE AIR NAILS



OWO NO. TAM 5945 -20 STRUCTURAL COMPONENT 'ONLY

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BC CALC®, BC FRAMER®, AJS™

Customer: Code reports:

CCMC 12472-R

Specifier: Designer: Company:

Wind

CONFORMS TO OBC 2012

03-11-14 Total Horizontal Product Length = 03-11-14

Snow

B2

Tributary

00-00-00

n\a

n\a

n\a

**B1** Summary (Down / Uplift) (lbs)

| Reaction S                      | ummary (Down 7 Oph | Dead               |
|---------------------------------|--------------------|--------------------|
| Bearing<br>B1, 2"<br>B2, 4-3/8" | 440 / 0<br>416 / 0 | 229 / 0<br>219 / 0 |

0.65 1.00 1,00 **Load Summary** Loc. End Start Ref. 5 Load Type 03-11-14 Top Tag Description 00-00-00 L Unf. Lin. (lb/ft) 60 120 03-07-08 Top Self-Weight 00-00-00 L Unf. Lln. (lb/ft) 106 212 QOT 01-02-10 STAIR 1 01-02-10 L 105 Conc. Pt. (lbs) 209 PROFESSION OF Top 02-06-10 2 J5(i69) 02-06-10 Conc. Pt. (lbs) 3 J5(i69) Damand!

|   |   | Factored  | Demand/<br>Resistance              | Case             | Location   |
|---|---|---|------------------------------------|------------------|--|
| Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. Span / Depth | 923 ft-lbs<br>696 lbs<br>L/999 (0.006")<br>L/999 (0.004")<br>0.006" | Resistance<br>11610 ft-lbs<br>5785 lbs<br>n\a<br>n\a<br>n\a | 7.9%<br>12.0%<br>n\a<br>n\a<br>n\a | 1<br>1<br>4<br>5 | 01-10-10<br>00-11-08<br>01-10-10<br>01-10-10<br>01-10-10 |

| Bearing Supports         Dim. (LxW)           B1         Hanger         2" x 1-3/4"           B2         Wall/Plate         4-3/8" x 1-3/4" | Demand<br>946 lbs<br>898 lbs | Demand/<br>Resistance<br>Support<br>n\a<br>19.1% | Demand/<br>Resistance<br>Member<br>22.2%<br>9.6% | Material<br>HUS1.81/10<br>Spruce-Pine-Fir |
|---|------------------------------|--|--|---|
|---|------------------------------|--|--|---|

Header for the hanger HUS1.81/10 at B1 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria. Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

# POVINCE OF OUTE DWG NO. TAM 5946-20

Wind

1.15

Snow

Dead

Live

## STRUCTURAL COMPONENT ONLY

### Disclosure

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BC CALC®, BC FRAMER®, AJS™

Specifier: City, Province, Postal Code: WATERDOWN Address: AJ Designer: Customer: Company: CCMC 12472-R Code reports: B2 08-08-14 Total Horizontal Product Length = 08-08-14 В1 Reaction Summary (Down / Uplift) (lbs) Wind Snow Live 92/0 Bearing 576 / 0 270/0 B1, 12-3/8" 76/0 577 / 0 254/0 B2, 2-1/2" Wind Tributary Snow Live Dead 1.15 1.00 0.65 1,00 **Load Summary** Loc. 00-00-00 End Start Ref. 10 Load Type 08-08-14 Top Tag Description 00-00-00 n\a Unf. Lin. (lb/ft) 3 5 Self-Weight 08-08-14 Top 00-00-00 0 n\a L Unf. Lin. (lb/ft) 46 23 FC3 Floor Material 08-06-06 Top STROFESSIONAL STROFESSIONAL 00-06-14 1 n\a Unf. Lin. (lb/ft) 100 FC3 Floor Material 08-08-14 Top 01-00-06 2 n\a Unf. Lin. (lb/ft) 40 44 02-04-14 Top WALL 02-04-14 3 Conc. Pt. (lbs) 40 44 **WODOW** 06-04-14 Top 06-04-14 4 Conc. Pt. (lbs) 21 WODNIW 08-07-10 Top 08-07-10 5 Conc. Pt. (lbs) FC3 Floor Material 6 S. KATSOUL Demand/ Factored Location Case Resistance Resistance Factored Demand 04-09-06 **Controls Summary** 0 9,8% TOWNCE OF ONTHE 15093 ft-lbs 1478 ft-lbs 01-09-14 0 Pos. Moment 8.3% 7521 lbs 622 lbs 04-09-06 35 **End Shear** n\a L/999 (0.035") n\a 04-09-06 Total Load Deflection 51 n\a L/999 (0.013") n\a Live Load Deflection 35 04-09-06 n\a n\a 0.035" Max Deft. 9,6 Disclosure Span / Depth Use of the Boise Cascade Software Is Demand/ Demand/ subject to the terms of the End User Resistance Resistance License Agreement (EULA). Material Member Completeness and accuracy of input Support Demand Bearing Supports Dim. (LxW) Spruce-Pine-Fir 2.3% must be reviewed and verified by a 4.7% 12-3/8" x 3-1/2" 807 lbs Spruce-Pine-Fir qualified engineer or other appropriate Wall/Plate 11.6% **B**1 23.1% 808 lbs 2-1/2" x 3-1/2" expert to assure its adequacy, prior to Wall/Plate **B2** anyone relying on such output as evidence of suitability for a particular application. The output here is based on Design meets Code minimum (L/240) Total load deflection criteria. building code-accepted design CONFORMS TO OBC 2012 Design meets Code minimum (L/360) Live load deflection criteria. properties and analysis methods. Installation of Bolse Cascade Calculations assume member is fully braced. Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 engineered wood products must be in BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86. accordance with current installation Guide and applicable building codes. To Unbalanced snow loads determined from building geometry were used in selected product's obtain Installation Guide or ask questions, please call (800)232-0788

before Installation.

BC CALC®, BC FRAMER® , AJS™,

PROVIDE 3 ROWS OF 31/2" ARDOX

verification.

Design based on Dry Service Condition.

Importance Factor · Normal Part code : Part 9

City, Province, Postal Code: WATERDOWN

Customer:

CCMC 12472-R

Specifier: Designer:

Company:

ΑJ

Wind

Code reports: **B2** 07-08-00

В1

Total Horizontal Product Length = 07-06-00

Reaction Summary (Down / Uplift) (lbs)

| Reaction Sur | Illiary (Botton - I | Dead    | Snow   |
|--------------|---------------------|---------|--------|
| Bearing      | Live                | 478 / 0 | 86 / 0 |
| B1, 5-1/2"   | 84 / 0<br>86 / 0    | 465 / 0 | 82 / 0 |
| B2, 4"       | 55. 4               |         |        |

|     |             |                   |      |          |          |      | Live | Dead | Snow | Wind | Tributary |
|-----|-------------|-------------------|------|----------|----------|------|------|------|------|------|-----------|
| Loa | ad Summary  | Load Type         | Ref. | Start    | End      | Loc. | 1.00 | 0.65 | 1,00 | 1.15 | 00-00-00  |
| Tag | Description | Unf. Lin. (lb/ft) | L    | 00-00-00 | 07-06-00 | Тор  |      | 10   |      |      | n\a       |
| 0   | Self-Weight | Unf. Lin. (lb/ft) | L    | 00-00-00 | 07-06-00 | Тор  |      | 100  |      |      | n\a       |
| 1   | WALL .      | Unf. Lin. (lb/ft) | L    | 00-05-08 | 07-06-00 | Тор  | 12   | 6    | 0.4  |      | n\a       |
| 2   | R1(i2378)   | Conc. Pt. (lbs)   | L    | 02-05-00 | 02-05-00 | -    | 44   | 40   | 84   |      | n\a       |
| 3   | WINDOW      | Conc. Pt. (lbs)   | L    | 05-01-00 | 05-01-00 | Тор  | 44   | 40   | 84   |      | 11.0      |
| 4   | WINDOW      | Collo. 1 ti (INO) |      |          |          |      |      |      |      |      |           |

|   |  | Factored<br>Resistance                        | Demand/<br>Resistance             | Case _                   | Location   |
|---|--|---|-----------------------------------|--------------------------|--|
| Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. Span / Depth | Factored Demand 1060 ft-lbs 471 lbs L/999 (0.019") L/999 (0.006") 0.019" 8.6 | 15093 ft-lbs<br>7521 lbs<br>n\a<br>n\a<br>n\a | 7.0%<br>6.3%<br>n\a<br>n\a<br>n\a | 0<br>0<br>35<br>51<br>35 | 03-10-00<br>01-03-00<br>03-10-00<br>03-10-00<br>03-10-00 |

|               |                        |                 | Demand             | Demand/<br>Resistance<br>Support | Demand/<br>Resistance<br>Member | Material                   |
|---------------|------------------------|-----------------|--------------------|----------------------------------|---------------------------------|----------------------------|
| Bearing<br>B1 | Supports<br>Wall/Plate | 5-1/2" x 3-1/2" | 669 lbs<br>651 lbs | 4.0%<br>n\a                      | . 4.4%<br>5.9%                  | Spruce-Pine-Fir<br>HGUS410 |
| D2            | Hanger                 | 4" x 3-1/2"     | 001100             | 11101                            |                                 |                            |

Header for the hanger HGUS410 at B2 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HGUS410 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.



Tributary

dwg no. TAN 5948 -20 COMPONENT ONLY

Address: City, Province, Postal Code: WATERDOWN

CCMC 12472-R

Specifier: Designer:

Company:

ΑJ

Notes

Customer:

Code reports:

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

CONFORMS TO OBC 2012 Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.

Hanger Manufacturer: Unassigned

AMENDED 2020

Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Unbalanced snow loads determined from building geometry were used in selected product's

verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

PROVIDE3 ROWS OF 3½" ARDOX SPIRAL NAILS @ /2" 0/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2"LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS



DWG NO. TAM 5948-20 STRUCTURAL COMPONENT 'ONLY

Disclosure

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BC CALC®, BC FRAMER® , AJS™,

City, Province, Postal Code: WATERDOWN Specifier: ΑJ Designer: Customer: Company: CCMC 12472-R Code reports: В2 06-06-08 Total Horizontal Product Length = 06-06-08 **B**1 Reaction Summary (Down / Uplift) (lbs) Wind Snow Dead Live Bearing 28/0 578/0 423 / 80 B1, 5-1/2" 52/0 734/0 236 / 0 B2, 3-7/16" Wind Tributary Snow Dead Live **Load Summary** 1.16 1.00 1.00 0.65 Loc. Start End Ref. 00-00-00 Load Type 10 Tag Description 06-06-08 Τop 00-00-00 Unf. Lin. (lb/ft) n\a Self-Weight 100 0 COT 06-06-08 00-05-08 Unf. Lin. (lb/ft) n\a 80 WALL 521 1 229 04-01-14 Top 04-01-14 Conc. Pt. (lbs) n\a -72 2 48 00-02-06 Top 00-02-06 Conc. Pt. (lbs) n\a J5(i2419) 3 -80 Top 00-02-06 00-02-06 Conc. Pt. (lbs) 4 J5(i2419) 176 88 01-02-00 Top 01-02-00 Conc. Pt. (lbs) 102 5 J4(i2436) 203 Top 02-06-00 02-06-00 Conc. Pt. (lbs) J4(12371) Demand/ Factored Location Case Resistance Resistance **Factored Demand Controls Summary** 03-11-05 0 11.4% 15093 ft-lbs 1717 ft-lbs Pos. Moment 05-05-09 0 11.5% POVINCE OF ONLY 7521 lbs 861 lbs **End Shear** 03-05-00 58 n\a L/999 (0.023") n\a **Total Load Deflection** 03-04-00 85 n\a L/999 (0.008") n\a Live Load Deflection 03-05-00 58 n\a n\a 0.023" Max Defi. OWS NO. TAM 5949 -20 7.5 Span / Depth STRUCTURAL Disclosure ONLY Demand/ Demand/ Resistance Resistance Material Use of the Bolse Cascade Software is Member Support Demand Bearing Supports Dim. (LxW) subject to the terms of the End User Spruce-Pine-Fir 5.9% 5.4% 1385 lbs 5-1/2" x 3-1/2" Wall/Plate License Agreement (EULA). **B**1 Unspecified 10.7% 16.1% 1027 lbs Completeness and accuracy of input 3-7/16" x 3-1/2" Column B<sub>2</sub> must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to Notes Design meets Code minimum (L/240) Total load deflection criteria. anyone relying on such output as CONFORMS TO OBC 2012 Design meets Code minimum (L/360) Live load deflection criteria. evidence of sultability for a particular application. The output here is based on Calculations assume unbraced length of Top: 02-01-08, Bottom: 02-01-08. building code-accepted design AMENDED 2020 Resistance Factor phi has been applied to all presented results per CSA O86. properties and analysis methods. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086. Installation of Bolse Cascade Unbalanced snow loads determined from building geometry were used in selected product's engineered wood products must be in accordance with current installation Guide and applicable building codes. To verification. Design based on Dry Service Condition. obtain Installation Guide or ask PROVIDES ROWS OF 31/2"

SPIRAL NAILS @ 8 " O/C FOR

MULTI-PLY NAILING, MAINTAIN

Importance Factor: Normal Part code: Part 9

BC CALC®, BC FRAMER® , AJS™,

before Installation.

questions, please call (800)232-0788

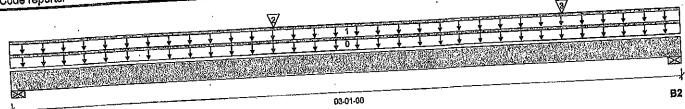
JON HOURS Specifier: Address: City, Province, Postal Code: WATERDOWN

Designer: Company:

ΑJ

Customer: Code reports:

CCMC 12472-R



Total Horizontal Product Length = 03-01-00 В1 Lini(64) /the\

| Reaction Summar    | y (Down / Upilit<br>Live | ) (105)<br>Dead    | Snow | Wind |      |      |      |      |           |
|--------------------|--------------------------|--------------------|------|------|------|------|------|------|-----------|
| Bearing<br>'B1, 3" | 770/0                    | 525 / 0<br>624 / 0 |      |      |      |      |      |      |           |
| B2, 3"             | 968 / 0                  | 02-11-             |      |      | Live | Dead | Snow | Wind | Tributary |

1.15 1.00 1.00 0.65 Loc. 00-00-00 End **Load Summary** Start Ref. 10 Load Type Top 03-01-00 00-00-00 n\a Tag Description L 233 Unf. Lin. (lb/ft) 303 03-01-00 Top Self-Weight 00-00-00 n\a L Unf. Lin. (lb/ft) 201 402 01-02-08 Top 01-02-08 E13(i595) n\a 1 L Conc. Pt. (lbs) 201 402 02-06-08 Top 02-06-08 J2(i2020) 2 3 POFESSION W Conc. Pt. (lbs) J2(12020)

| 3 02(12020)  |   | Factored                                      | Demand/<br>Resistance                           | Case_                 | Location   |
|--|---|---|---|-----------------------|--|
| Pos. Moment End Shear Total Load Deflection Live Load Deflection Max Defl. | Tactored Demand 1310 ft-lbs 1022 lbs L/999 (0.002") L/999 (0.001") 0.002" | Resistance 23220 ft-lbs 11571 lbs n\a n\a n\a | Resistance<br>5,6%<br>8,8%<br>n\a<br>n\a<br>n\a | 1<br>1<br>4<br>5<br>4 | 01-03-02<br>01-00-08<br>01-06-04<br>01-06-04<br>01-06-04 |
| n 1 Manth  | 3.4   |   |   |                       |  |

| Span / Depth     | 3.4 |                                |  |   |  |
|------------------|-----|--------------------------------|--|---|--|
| Boaring Supports |     | Demand<br>1812 lbs<br>2233 lbs | Demand/<br>Resistance<br>Support<br>28.0%<br>34.6% | Demand/<br>Resistance<br>Member<br>14.1%<br>17.4% | Material<br>Spruce-Pine-Fir<br>Spruce-Pine-Fir |

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



PROVIDE3 ROWS OF 3½" ARDOX SPIRAL NAILS @ € "O/C FOR MULTI-PLY NAILING, MAINTAIN

CONFORMS TO OBC 2012



OWB NO. TAN 5950 -20 STRUCTURAL

Disclosure NENT ONLY

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RC CALC®, BC FRAMER® , AJS™,