

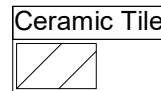
MODEL: TYPE B - 3101- END1
- EL.A
+ OPT. LOGGIA

REVISION: November 20, 2021

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

SE033147 - SE033160
SE039915 - SE039923



Products				
PlotID	Length	Product	Plies	Net Qty
B15	13-00-00	11 7/8" NI-20	1	1
B16	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B23	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B24	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1
B25	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
Ca1	17-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1
Ca2	92-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	10
J2	14-00-00	11 7/8" NI-20	1	7
J3	13-00-00	11 7/8" NI-20	1	28
J4	12-00-00	11 7/8" NI-20	1	6
J5	12-00-00	11 7/8" NI-20	2	4
J6	11-00-00	11 7/8" NI-20	1	22
J7	8-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	8		HU310
H3	1		HUS1.81/10
H4	24		LT251188
H5	2		MIT311.88-2

DESIGN LOADING:

LIVE LOAD = 40 PSF
DEAD LOAD = 15 PSF
DEAD LOAD @TILE = 20 PSF

RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED*

APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

Provide I-Joist Blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

JT/PL: 45147/111207/114626

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: (333170)338990

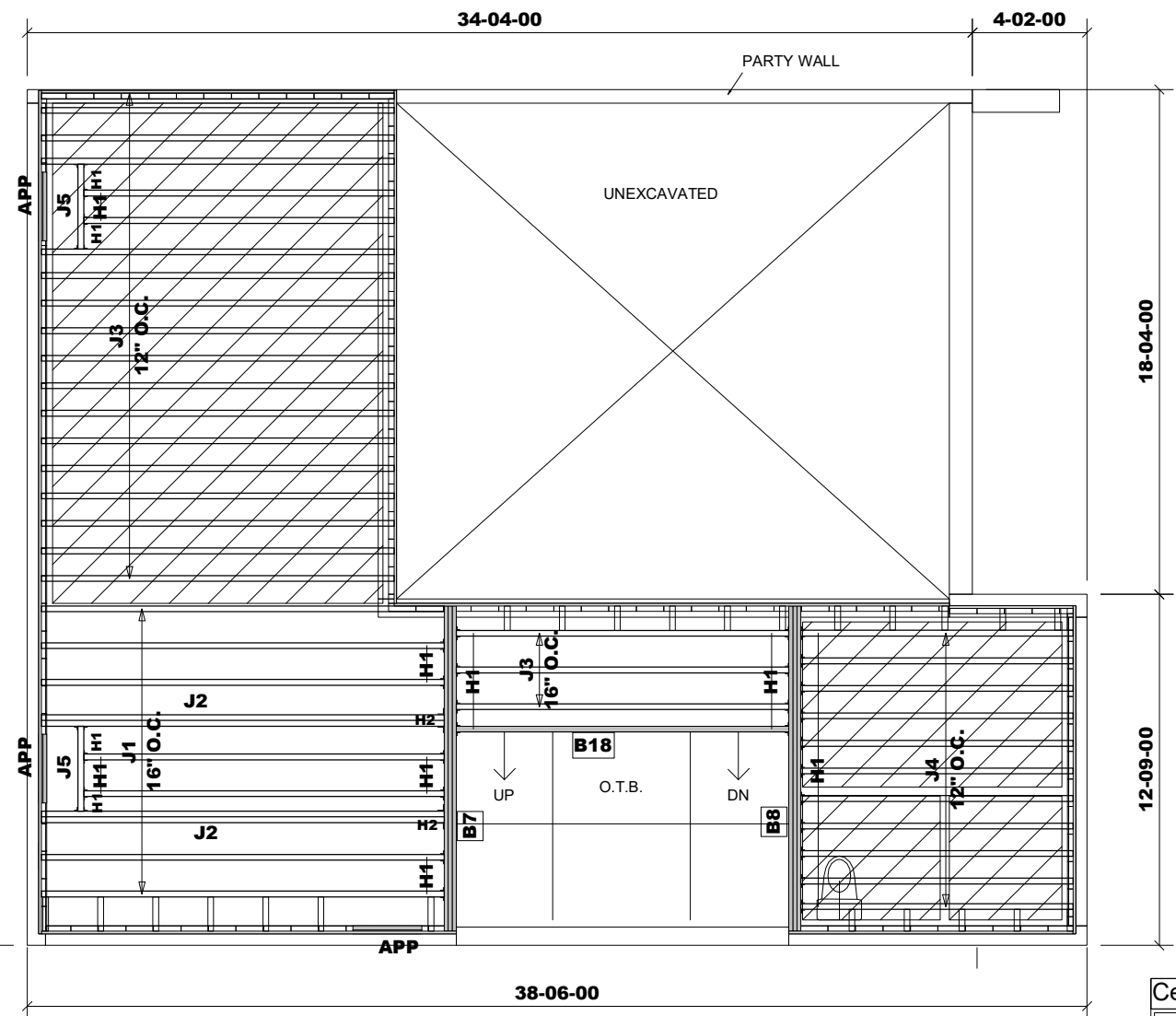
Project: Pine Valley

Date: May 18, 2021

Sheet: 1 of 9

Maple, Ontario

Home Lumber

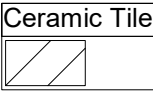


Products				
PlotID	Length	Product	Plies	Net Qty
B7	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3
B8	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3
B18	13-00-00	11 7/8" NI-20	1	1
Ca1	125-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	7
J2	15-00-00	11 7/8" NI-20	2	4
J3	13-00-00	11 7/8" NI-20	1	22
J4	10-00-00	11 7/8" NI-20	1	11
J5	4-00-00	11 7/8" NI-20	1	2

Connector Summary			
PlotID	Qty	Manuf	Product
H1	33		LT251188
H2	2		MIT311.88-2

RIMBOARD
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DESIGN LOADING:
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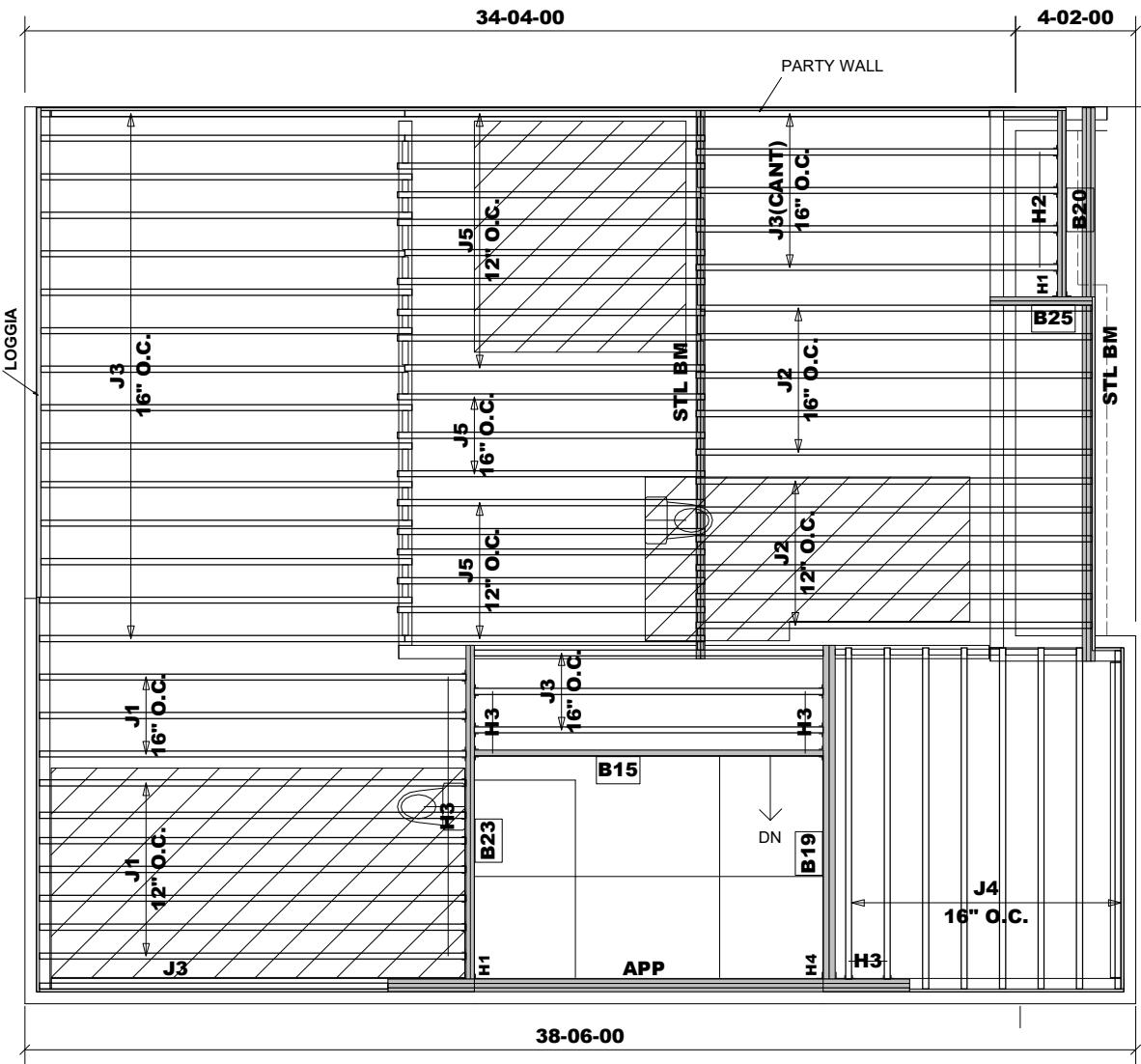
Ceramic tile application as per O.B.C. 9.30.6
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Squash blocks are required under concentrated loads.

**MODEL: TYPE B - 3101- END1
- EL.A + B**

REVISION: November 8, 2021

First Floor Framing

Do not scale - refer to architectural plans for dimensions



MODEL: TYPE B - 3101- END1
- EL.B
+ OPT. LOGGIA

REVISION: November 20, 2021

Second Floor Framing

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Products				
PlotID	Length	Product	Plies	Net Qty
B15	13-00-00	11 7/8" NI-20	1	1
B19	12-00-00	11 7/8" NI-20	2	2
B20	7-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B23	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B25	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
Ca1	17-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1
Ca2	94-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	10
J2	14-00-00	11 7/8" NI-20	1	11
J3	13-00-00	11 7/8" NI-20	1	24
J4	12-00-00	11 7/8" NI-20	1	8
J5	11-00-00	11 7/8" NI-20	1	19

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	4		HU310
H3	18		LT251188
H4	1		MIT311.88-2

DESIGN LOADING:

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RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

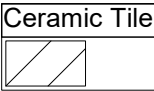
SUBFLOOR - 3/4" NAILED & GLUED*

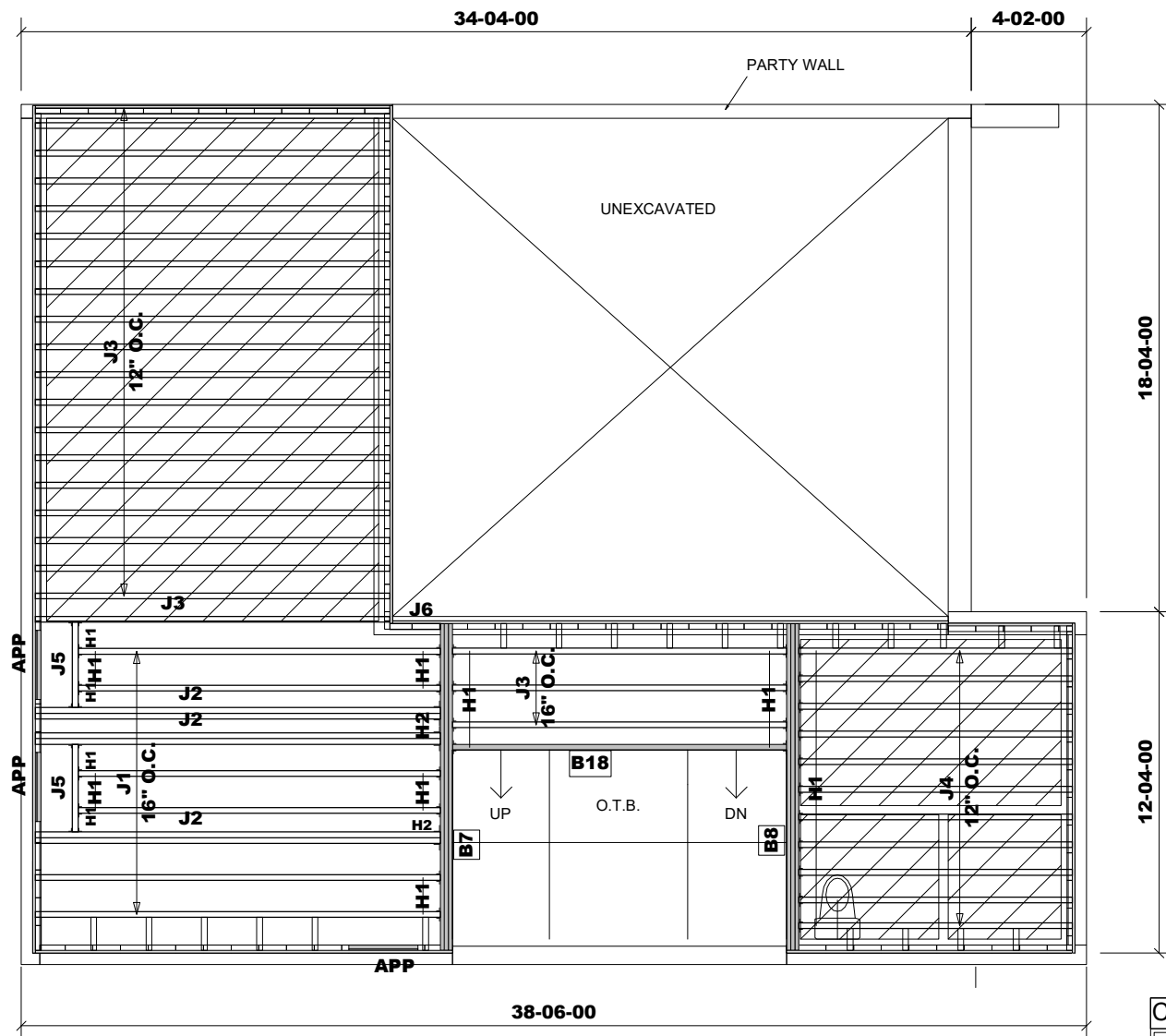
APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

Provide I-Joist Blocking between cantilevered joists (along bearing) and rimboard closure at ends.

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Squash blocks are required under concentrated loads.



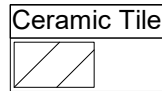


Products				
PlotID	Length	Product	Plies	Net Qty
B7	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3
B8	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3
B18	13-00-00	11 7/8" NI-20	1	1
Ca1	125-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	6
J2	15-00-00	11 7/8" NI-20	2	6
J3	13-00-00	11 7/8" NI-20	1	23
J4	10-00-00	11 7/8" NI-20	1	11
J5	4-00-00	11 7/8" NI-20	1	2
J6	2-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	33		LT251188
H2	3		MIT311.88-2

RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED*
APP - AS PER PLAN
BBO - BEAM BY OTHERS

DESIGN LOADING:
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DEAD LOAD @TILE = 20 PSF



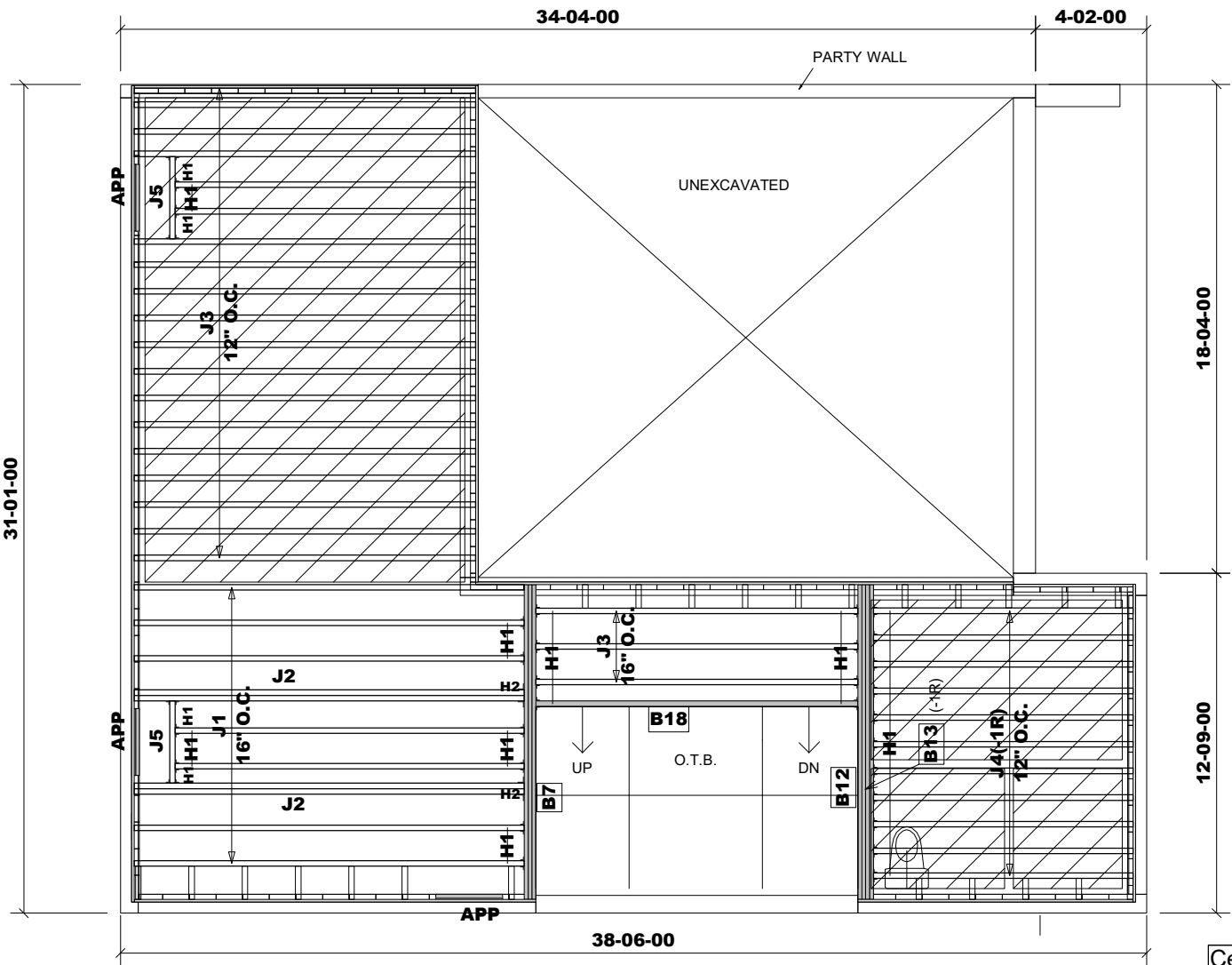
Ceramic tile application as per O.B.C. 9.30.6
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MODEL: TYPE B - 3101- END1
- EL.A + B
W/OPT. LOGGIA

REVISION: November 8, 2021

First Floor Framing

Do not scale - refer to architectural plans for dimensions

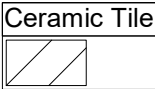


Products				
PlotID	Length	Product	Plies	Net Qty
B7	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3
B12	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B13	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B18	13-00-00	11 7/8" NI-20	1	1
Ca1	125-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	7
J2	15-00-00	11 7/8" NI-20	2	4
J3	13-00-00	11 7/8" NI-20	1	22
J4	10-00-00	11 7/8" NI-20	1	11
J5	4-00-00	11 7/8" NI-20	1	2

Connector Summary			
PlotID	Qty	Manuf	Product
H1	33		LT251188
H2	2		MIT311.88-2

RIMBOARD
1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED*
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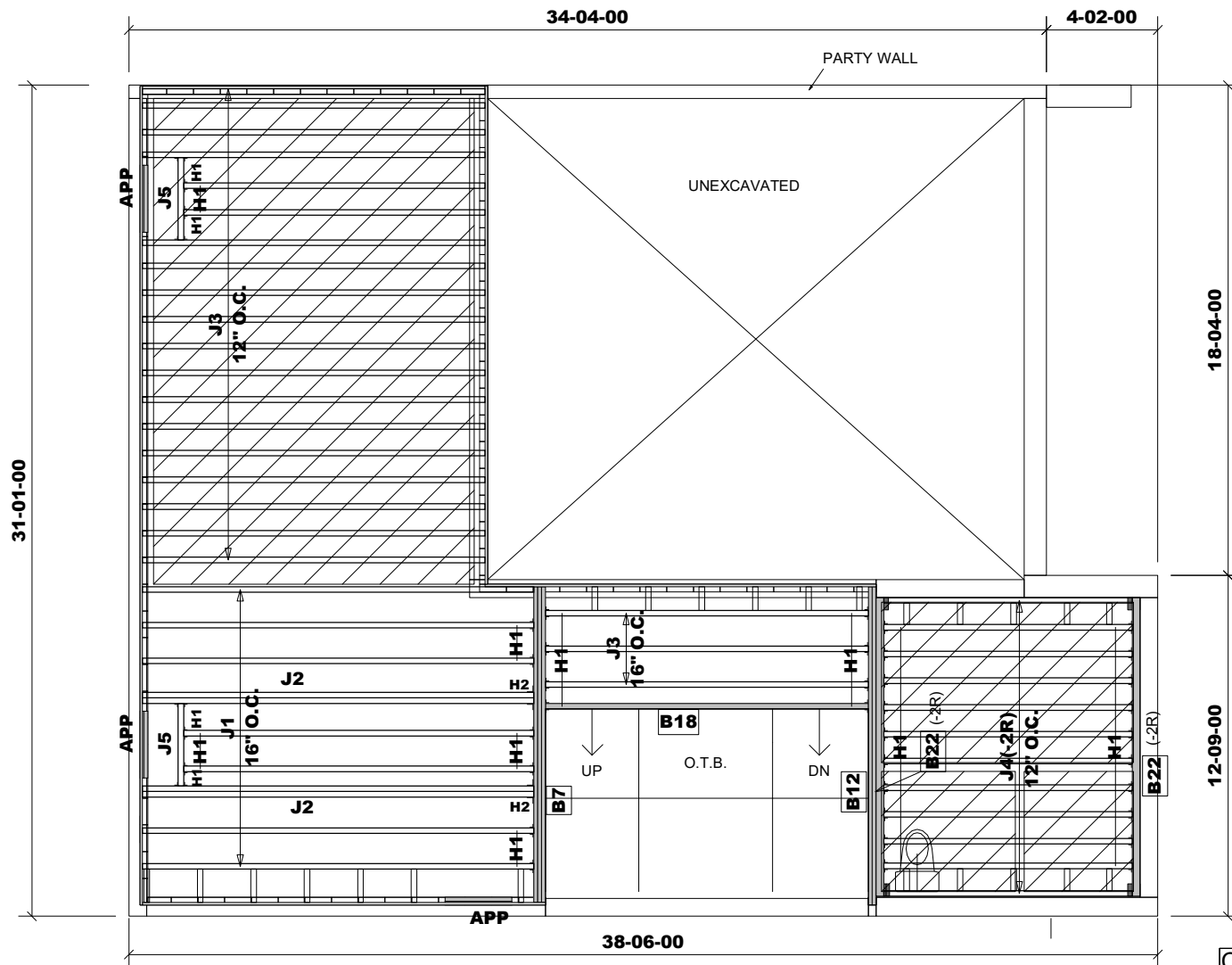
Ceramic tile application as per O.B.C. 9.30.6
Blocking panels are required over all interior supports
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MODEL: TYPE B - 3101- END1
- EL.A + B
W/SUNNKEN FOYER(-1R)

REVISION: November 8, 2021

First Floor Framing

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Products				
PlotID	Length	Product	Plies	Net Qty
B7	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3
B12	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B18	13-00-00	11 7/8" NI-20	1	1
B22	12-00-00	11 7/8" NI-80	1	2
Ca1	92-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	7
J2	15-00-00	11 7/8" NI-20	2	4
J3	13-00-00	11 7/8" NI-20	1	22
J4	10-00-00	11 7/8" NI-20	1	12
J5	4-00-00	11 7/8" NI-20	1	2

Connector Summary			
PlotID	Qty	Manuf	Product
H1	42		LT251188
H2	2		MIT311.88-2

RIMBOARD

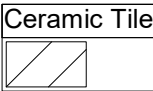
1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED*

APP - AS PER PLAN
BBO - BEAM BY OTHERS

DESIGN LOADING:

LIVE LOAD = 40 PSF
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DEAD LOAD @TILE = 20 PSF



Ceramic tile application as per O.B.C. 9.30.6

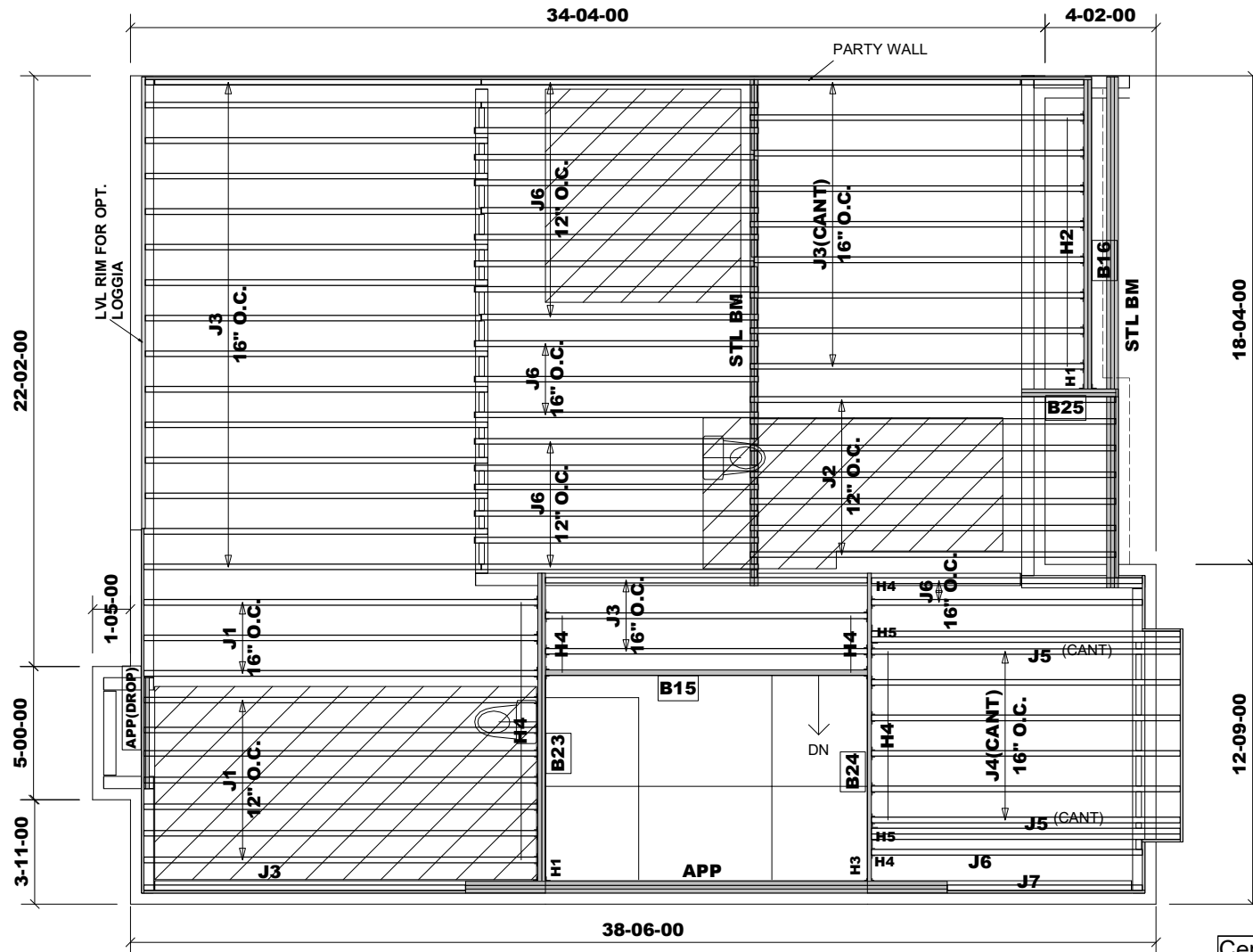
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

MODEL: TYPE B - 3101- END1
- EL.A + B
W/SUNNKEN FOYER(-2R)

REVISION: November 8, 2021

First Floor Framing

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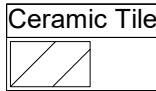


MODEL: TYPE B - 3101- END1
- EL.A(W/OPT. FIREPLACE)
+ OPT. LOGGIA

REVISION: November 20, 2021

Second Floor Framing

Do not scale - refer to architectural plans for dimensions



Products				
PlotID	Length	Product	Plies	Net Qty
B15	13-00-00	11 7/8" NI-20	1	1
B16	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B23	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B24	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1
B25	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
Ca1	17-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1
Ca2	92-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	10
J2	14-00-00	11 7/8" NI-20	1	7
J3	13-00-00	11 7/8" NI-20	1	28
J4	12-00-00	11 7/8" NI-20	1	6
J5	12-00-00	11 7/8" NI-20	2	4
J6	11-00-00	11 7/8" NI-20	1	22
J7	8-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	8		HU310
H3	1		HUS1.81/10
H4	24		LT251188
H5	2		MIT311.88-2

DESIGN LOADING:

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DEAD LOAD = 15 PSF
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RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

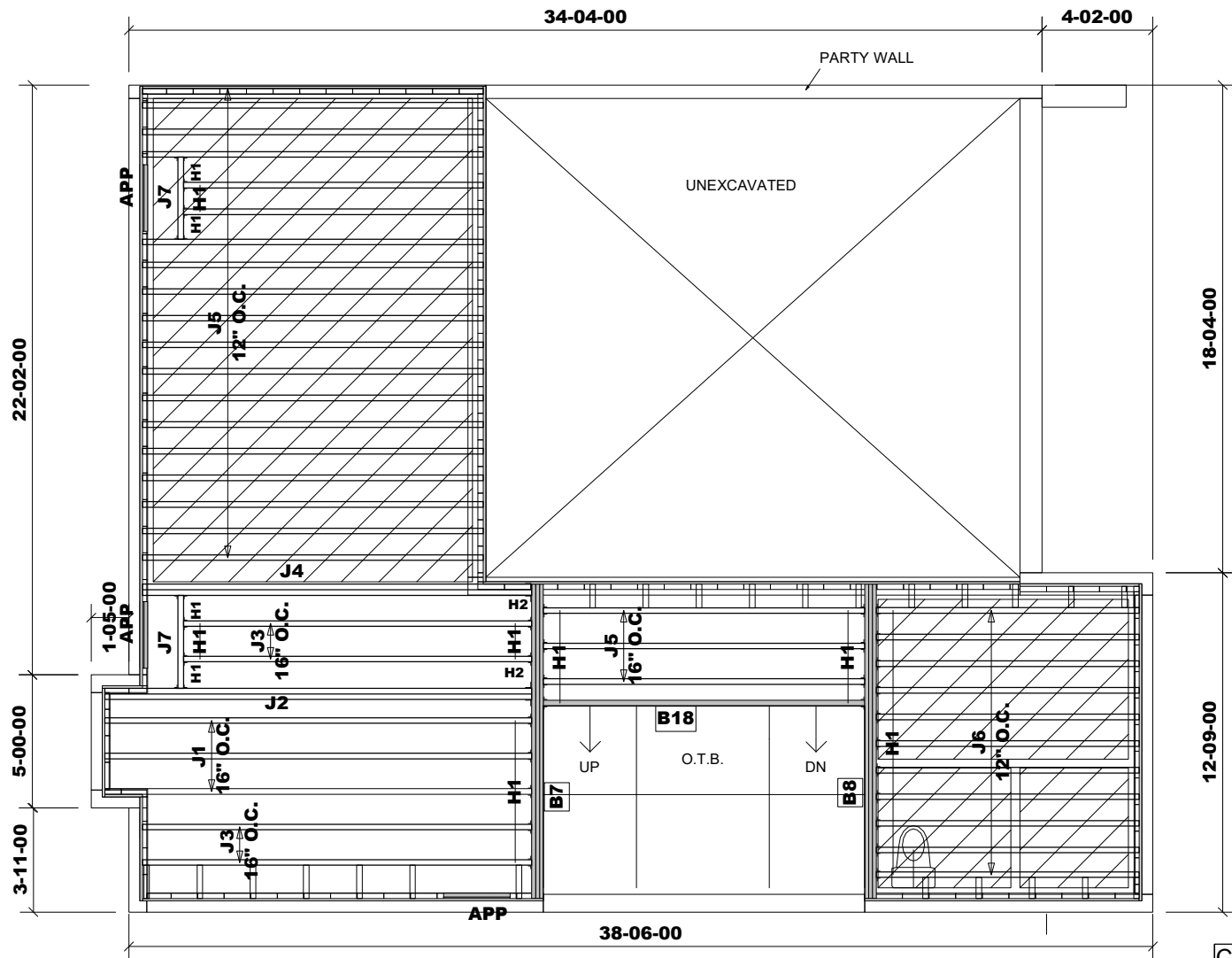
SUBFLOOR - 3/4" NAILED & GLUED*

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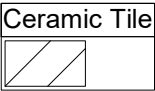


Products				
PlotID	Length	Product	Plies	Net Qty
B7	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3
B8	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3
B18	13-00-00	11 7/8" NI-20	1	1
Ca1	127-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	17-00-00	11 7/8" NI-20	1	3
J2	17-00-00	11 7/8" NI-20	2	2
J3	15-00-00	11 7/8" NI-20	1	4
J4	15-00-00	11 7/8" NI-20	2	2
J5	13-00-00	11 7/8" NI-20	1	22
J6	10-00-00	11 7/8" NI-20	1	11
J7	4-00-00	11 7/8" NI-20	1	2

Connector Summary			
PlotID	Qty	Manuf	Product
H1	34		LT251188
H2	2		MIT311.88-2

RIMBOARD
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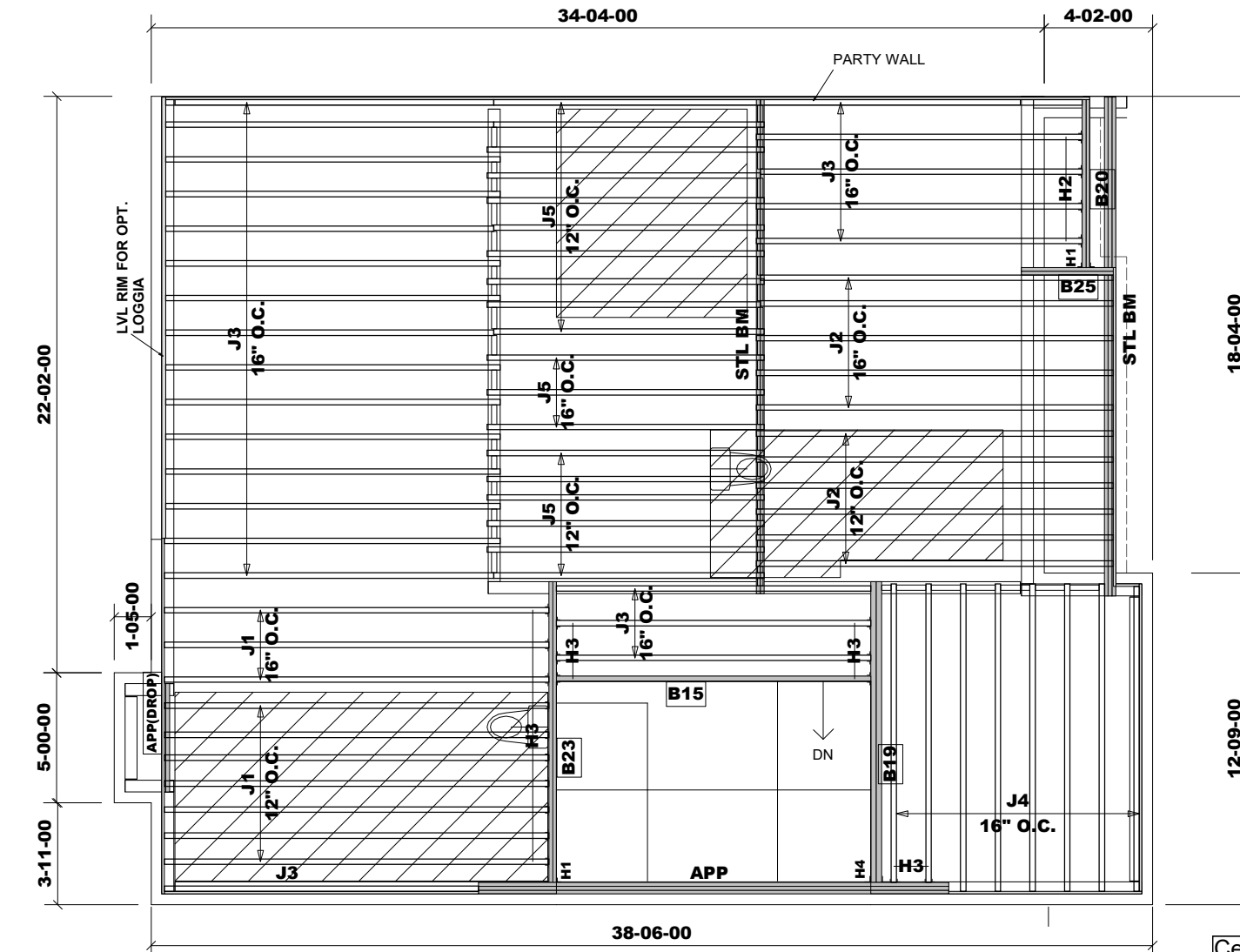
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MODEL: TYPE B - 3101- END1
- EL.A + B
W/OPT. FIREPLACE

REVISION: November 8, 2021

First Floor Framing

Do not scale - refer to architectural plans for dimensions



Products				
PlotID	Length	Product	Plies	Net Qty
B15	13-00-00	11 7/8" NI-20	1	1
B19	12-00-00	11 7/8" NI-20	2	2
B20	7-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B23	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B25	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
Ca1	17-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1
Ca2	94-00-00	1 1/8" x 11 7/8" Rim Board	1	1
J1	15-00-00	11 7/8" NI-20	1	10
J2	14-00-00	11 7/8" NI-20	1	11
J3	13-00-00	11 7/8" NI-20	1	24
J4	12-00-00	11 7/8" NI-20	1	8
J5	11-00-00	11 7/8" NI-20	1	19

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	4		HU310
H3	18		LT251188
H4	1		MIT311.88-2

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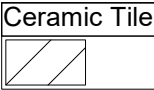
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**MODEL: TYPE B - 3101- END1
- EL.B(W/OPT. FIREPLACE)
+ OPT. LOGGIA**

REVISION: November 20, 2021

Second Floor Framing

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Customer: **Gold Park**
Job Address: **Pine Valley**
City: **Vaughan**
Job Track: **45147(3101)**

Job Name: **338989-A**
Level: **2nd Floor - Supply/BOM**
Label: **B15 - i16474**
Type: **Beam**

1 Ply Member
11 7/8" NI-20

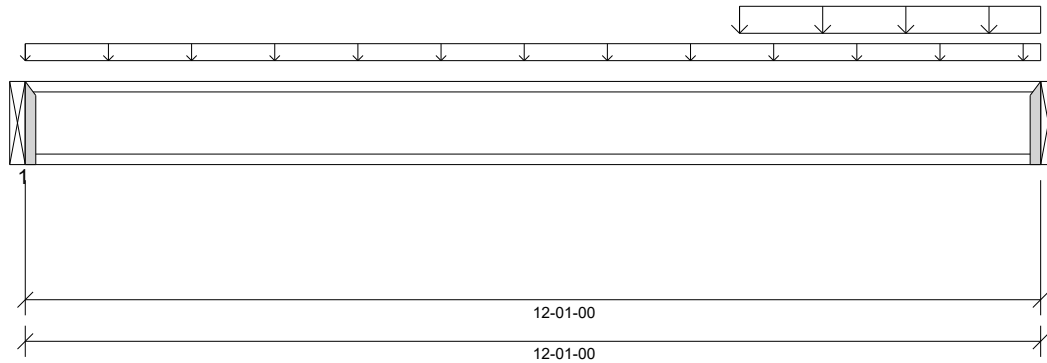
Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure version
8.4.2.2861 dated 9.13

Report Version: 2020.06.20

11/06/2021 15:44



DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)
Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 12'- 1"

Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 769 psi Beam @ 12'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 8 1/8"	1.25D + 1.5L	1.00	2069 lb ft	5580 lb ft	Passed - 37%
Factored Shear:	12'- 15/16"	1.25D + 1.5L	1.00	1214 lb	2240 lb	Passed - 54%
Live Load (LL) Pos. Defl.:	6'- 6 7/16"	L		0.111"	L/360	Passed - L/999
Live Load (LL) Neg. Defl.:	12'- 1"	L		0.016"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 6"	D + L		0.163"	L/240	Passed - L/887
Total Load (TL) Neg. Defl.:	12'- 1"	D + L		0.023"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	1.00	422 lb		1970 lb	-	Passed - 21%
2	1-12	1.25D + 1.5L	1.00	1216 lb		1970 lb	-	Passed - 62%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	LT251188	-	-	-	-	Connector manually specified by the user.
2	LT251188	-	-	-	-	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 1"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	12'- 1"	FC1 Floor Decking (Plan View Fill)	Top	9 lb/ft	18 lb/ft	-	-
Uniform	8'- 6"	12'- 1"	User Load	Top	60 lb/ft	160 lb/ft	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B2(i16484)	104 lb	194 lb	-	-
2	12'- 1"	12'- 1"	B3(i16483)	255 lb	598 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



SE-039915

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

2nd Floor - Supply/BOM\Flush Beams\B16(i17779) (Flush Beam)

PASSED

BC CALC® Member Report

Dry | 1 span | No cant.

November 20, 2021 11:25:09

Build 7773

Job name: 45147(3101)

File name: 338989-A.mmdl

Address: Pine Valley

Description: 2nd Floor - Supply/BOM\Flush Beams\B16(i17779)

City, Province, Postal Code: Vaughan, ON

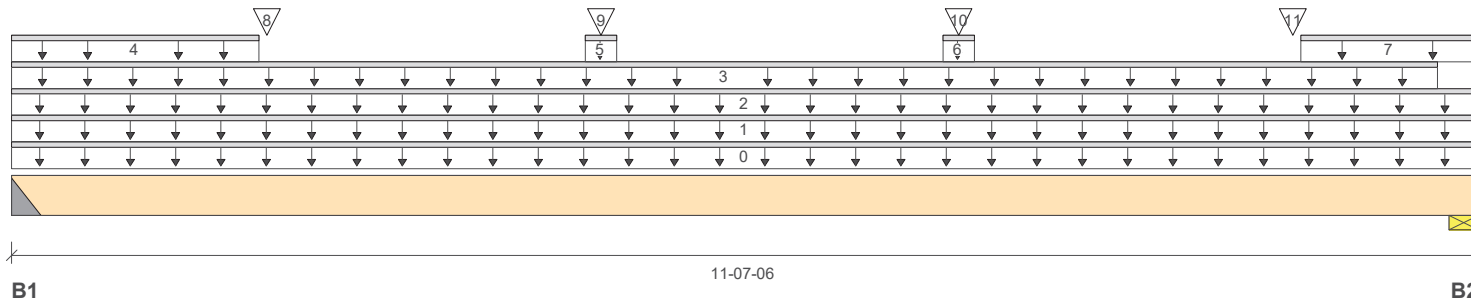
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Total Horizontal Product Length = 11-07-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	347 / 0	1208 / 0	609 / 0	
B2, 2-3/8"	330 / 0	1208 / 0	612 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-07-06	Top		12			00-00-00
1	E14(i15201)	Unf. Lin. (lb/ft)	L	00-00-00	11-07-06	Top		101			n/a
2	User Load	Unf. Lin. (lb/ft)	L	00-00-00	11-07-06	Top		14	21		n/a
3	User Load	Unf. Lin. (lb/ft)	L	00-00-00	11-03-08	Top	60	23			n/a
4	E14(i15201)	Unf. Lin. (lb/ft)	L	00-00-00	01-11-08	Top		56	84		n/a
5	E14(i15201)	Unf. Lin. (lb/ft)	L	04-06-08	04-09-08	Top			84		n/a
6	E14(i15201)	Unf. Lin. (lb/ft)	L	07-04-08	07-07-08	Top			84		n/a
7	E14(i15201)	Unf. Lin. (lb/ft)	L	10-02-08	11-07-06	Top		56	84		n/a
8	E14(i15201)	Conc. Pt. (lbs)	L	02-00-04	02-00-04	Top		77	109		n/a
9	-	Conc. Pt. (lbs)	L	04-08-00	04-08-00	Top		154	217		n/a
10	-	Conc. Pt. (lbs)	L	07-06-00	07-06-00	Top		154	218		n/a
11	E14(i15201)	Conc. Pt. (lbs)	L	10-01-12	10-01-12	Top		77	109		n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	7616 ft-lbs	35392 ft-lbs	21.5%	13	05-07-08
End Shear	2300 lbs	14464 lbs	15.9%	13	10-05-02
Total Load Deflection	L/957 (0.143")	n/a	25.1%	35	05-09-05
Live Load Deflection	L/999 (0.063")	n/a	n/a	51	05-09-05
Max Defl.	0.143"	n/a	n/a	35	05-09-05
Span / Depth	11.5				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 3-1/2"	2770 lbs	n/a	32.4%	HGUS410
B2	Wall/Plate 2-3/8" x 3-1/2"	2759 lbs	54.0%	27.2%	Spruce-Pine-Fir


 NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 12" O.C., STAGGERED IN TWO ROWS

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
2nd Floor - Supply/BOM\Flush Beams\B16(i17779) (Flush Beam)**PASSED**BC CALC® Member Report
Build 7773

Dry | 1 span | No cant.

November 20, 2021 11:25:09

Job name: 45147(3101)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-RFile name: 338989-A.mmdl
Description: 2nd Floor - Supply/BOM\Flush Beams\B16(i17779)
Specifier:
Designer: NL
Company: Alpa Roof Trusses**Notes**

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
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.
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
Calculations assume unbraced length of Top: 00-00-00, Bottom: 01-01-08.

**Disclosure**

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.

SE-039916(2)

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,



Customer: **Gold Park**
 Job Address: **Pine Valley**
 City: **Vaughan**
 Job Track: **45147(3101)**

Job Name: **338989-A**
 Level: **1st Floor - Supply/BOM**
 Label: **B18 - i16468**
 Type: **Beam**

1 Ply Member
11 7/8" NI-20

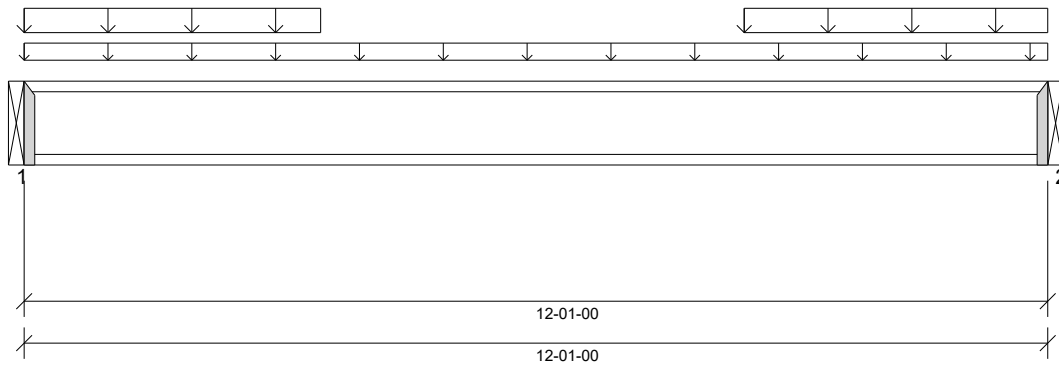
Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in Mitek® Structure version
 8.4.2.2861 Undated 9.13

Report Version: 2020.06.20

11/08/2021 08:36



DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)
 Design Methodology: LSD
 Service Condition: Dry
 LL Deflection Limit: L/360,
 TL Deflection Limit: L/240,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 12'- 1"

Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 769 psi Beam @ 12'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 2 1/8"	1.25D + 1.5L	1.00	2258 lb ft	5580 lb ft	Passed - 40%
Factored Shear:	12'- 15/16"	1.25D + 1.5L	1.00	1096 lb	2240 lb	Passed - 49%
Live Load (LL) Pos. Defl.:	6'- 5/8"	L		0.140"	L/360	Passed - L/999
Live Load (LL) Neg. Defl.:	12'- 1"	L		0.017"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 5/8"	D + L		0.204"	L/240	Passed - L/711
Total Load (TL) Neg. Defl.:	12'- 1"	D + L		0.025"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	1.00	1090 lb		1970 lb	-	Passed - 55%
2	1-12	1.25D + 1.5L	1.00	1098 lb		1970 lb	-	Passed - 56%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	LT251188		-	-	-	Connector manually specified by the user.
2	LT251188		-	-	-	Connector manually specified by the user.

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 1"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	-0'	12'- 1"	FC2 Floor Decking (Plan View Fill)	Top	9 lb/ft	18 lb/ft	-	-
Uniform	0'	3'- 6"	User Load	Top	45 lb/ft	120 lb/ft	-	-
Uniform	8'- 6"	12'- 1"	User Load	Top	45 lb/ft	120 lb/ft	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B7(i17052)	231 lb	534 lb	-	-
2	12'- 1"	12'- 1"	B8(i17064)	233 lb	538 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



SE-039917



Customer: **Gold Park**
Job Address: **Pine Valley**
City: **Vaughan**
Job Track: **45147(3101)**

Job Name: **338989-B**
Level: **2nd Floor - Supply/BOM**
Label: **B19 - i17676**
Type: **Beam**

2 Ply Member
11 7/8" NI-20

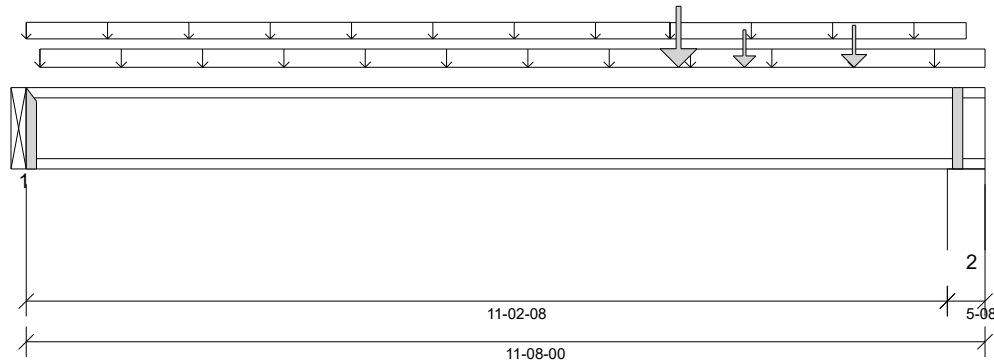
Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in Mitek® Structure version
8.4.2.2861 Undated 9.13

Report Version: 2020.06.20

11/20/2021 08:47



DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)
Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 7'- 10"

Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 615 psi Wall @ 11'- 3 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 11 1/4"	1.25D + 1.5L	1.00	6112 lb ft	11144 lb ft	Passed - 55%
Factored Shear:	11'- 2 7/16"	1.25D + 1.5L	1.00	2593 lb	4474 lb	Passed - 58%
Live Load (LL) Pos. Defl.:	6'- 2 3/8"	L		0.109"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 9/16"	D + L		0.214"	L/240	Passed - L/629

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	1.00	1244 lb		3940 lb	-	Passed - 32%
2	5-08	1.25D + 1.5L	1.00	2638 lb		4474 lb	16894 lb	Passed - 59%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	MIT311.88-2		-	-	-	Connector manually specified by the user.
* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.						

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	11'- 8"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	7'- 10"	FC1 Floor Decking (Plan View Fill)	Top	9 lb/ft	18 lb/ft	-	-
Uniform	0'- 2"	11'- 8"	User Load	Top	60 lb/ft	-	-	-
Uniform	7'- 10"	11'- 5 1/4"	FC1 Floor Decking (Plan View Fill)	Top	7 lb/ft	14 lb/ft	-	-
Point	7'- 11 1/4"	7'- 11 1/4"	B15(i17776)	Back	255 lb	598 lb	-	-
Point	8'- 8 7/8"	8'- 8 7/8"	J3(i17778)	Back	138 lb	276 lb	-	-
Point	10'- 7/8"	10'- 7/8"	J3(i17775)	Back	167 lb	333 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	APP(i17765)	544 lb	387 lb	-	-
2	11'- 2 1/2"	11'- 8"	4(i15211)	873 lb	1021 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

PLY TO PLY CONNECTION

Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



SE-039918

BC CALC® Member Report

Dry | 1 span | No cant.

November 20, 2021 11:24:22

Build 7773

Job name: 45147(3101)

File name: 338989-B.mmdl

Address: Pine Valley

Description: 2nd Floor - Supply/BOM\Flush Beams\B20(i17903)

City, Province, Postal Code: Vaughan, ON

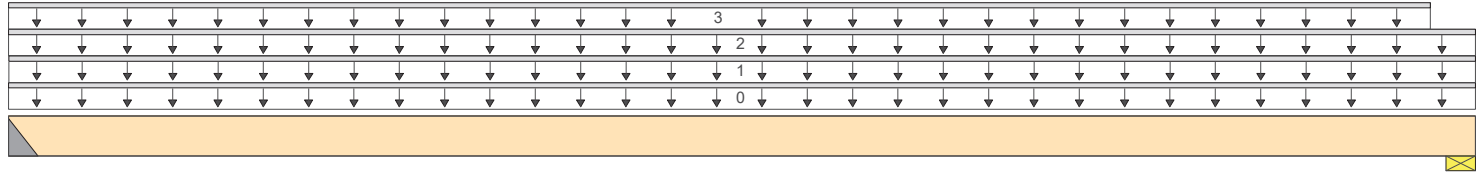
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



06-05-06

B1

B2

Total Horizontal Product Length = 06-05-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	192 / 0	662 / 0	337 / 0	
B2, 2-3/8"	182 / 0	664 / 0	340 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	06-05-06	Top		12			00-00-00
1	E14(i15201)	Unf. Lin. (lb/ft)	L	00-00-00	06-05-06	Top		157	84		n/a
2	User Load	Unf. Lin. (lb/ft)	L	00-00-00	06-05-06	Top		14	21		n/a
3	User Load	Unf. Lin. (lb/ft)	L	00-00-00	06-03-00	Top	60	23			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2290 ft-lbs	35392 ft-lbs	6.5%	13	03-02-08
End Shear	975 lbs	14464 lbs	6.7%	13	01-01-14
Total Load Deflection	L/999 (0.013")	n/a	n/a	35	03-02-08
Live Load Deflection	L/999 (0.006")	n/a	n/a	51	03-02-08
Max Defl.	0.013"	n/a	n/a	35	03-02-08
Span / Depth	6.3				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 3-1/2"	1525 lbs	n/a	17.9%	HGUS410
B2	Wall/Plate 2-3/8" x 3-1/2"	1522 lbs	29.8%	15.0%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 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.
 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
 Calculations assume unbraced length of Top: 00-00-00, Bottom: 01-01-08.



NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 6" O.C., STAGGERED IN TWO ROWS



Customer: **Gold Park**
Job Address: **Pine Valley**
City: **Vaughan**
Job Track: **45147(3101)**

Job Name: **338989-FOYER(-2R)**
Level: **1st Floor - Supply/BOM**
Label: **B22 - i17125**
Type: **Beam**

1 Ply Member
11 7/8" NI-80

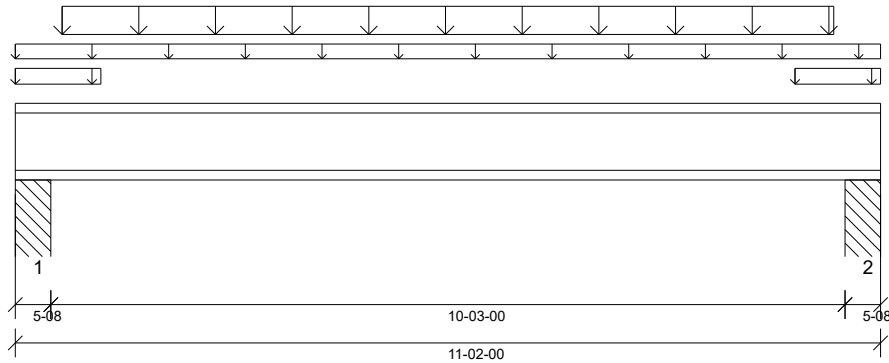
Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure version
8.4.2.2861 Indate 9.13

Report Version: 2020.06.20

11/08/2021 09:55



DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)
Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

Factored Resistance of Support Material:

- 1334 psi Column @ 0'- 4 1/2"
- 1334 psi Column @ 10'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 1 1/4"	1.25D + 1.5L	1.00	5756 lb ft	11610 lb ft	Passed - 50%
Factored Shear:	10'- 8 7/16"	1.25D + 1.5L	1.00	2140 lb	2340 lb	Passed - 91%
Live Load (LL) Pos. Defl.:	5'- 7"	L		0.138"	L/360	Passed - L/893
Total Load (TL) Pos. Defl.:	5'- 7"	D + L		0.209"	L/240	Passed - L/588

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	2167 lb		2340 lb	25687 lb	Passed - 93%
2	5-08	1.25D + 1.5L	1.00	2167 lb		2340 lb	25688 lb	Passed - 93%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	11'- 2"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	-0'	11'- 2"	FC2 Floor Decking (Plan View Fill)	Top	3 lb/ft	6 lb/ft	-	-
Uniform	-0'	1'- 1 1/4"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	20 lb/ft	-	-
Uniform	0'- 7 1/4"	10'- 6 3/4"	Smoothed Load	Front	96 lb/ft	192 lb/ft	-	-
Uniform	10'- 3/4"	11'- 2"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	20 lb/ft	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	Pt1(i17114)	524 lb	1009 lb	-	-
2	10'- 8 1/2"	11'- 2"	Pt1(i17135)	524 lb	1009 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
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- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



SE-039920

BC CALC® Member Report

Dry | 1 span | No cant.

November 20, 2021 11:18:32

Build 7773

Job name: 45147(3101)

File name: 338989-B.mmdl

Address: Pine Valley

Description: 2nd Floor - Supply/BOM\Flush Beams\B23(i18052)

City, Province, Postal Code: Vaughan, ON

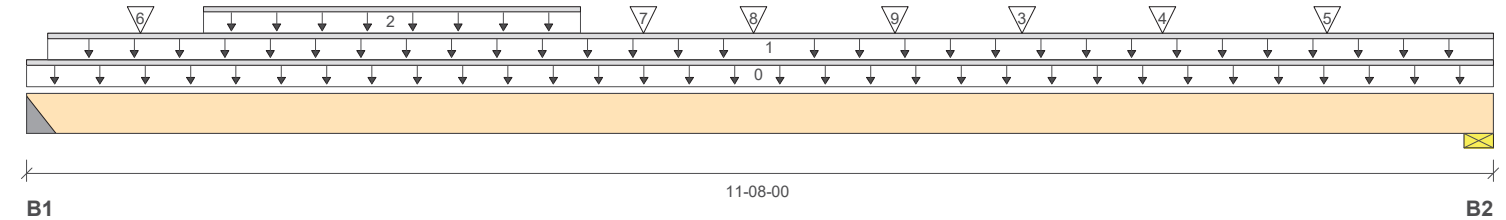
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	1820 / 0	1313 / 0		
B2, 5-1/2"	2304 / 0	1588 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-08-00	Top		12			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-02-00	11-08-00	Top		60			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	01-04-14	04-04-14	Top	301	151			n/a
3	-	Conc. Pt. (lbs)	L	07-11-00	07-11-00	Top	539	276			n/a
4	-	Conc. Pt. (lbs)	L	09-00-07	09-00-07	Top	668	334			n/a
5	-	Conc. Pt. (lbs)	L	10-04-02	10-04-02	Top	724	362			n/a
6	J1(i18041)	Conc. Pt. (lbs)	L	00-10-14	00-10-14	Top	378	189			n/a
7	J1(i18043)	Conc. Pt. (lbs)	L	04-10-14	04-10-14	Top	283	141			n/a
8	J1(i18045)	Conc. Pt. (lbs)	L	05-09-06	05-09-06	Top	301	151			n/a
9	J1(i18038)	Conc. Pt. (lbs)	L	06-10-14	06-10-14	Top	317	159			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	13412 ft-lbs	35392 ft-lbs	37.9%	1	05-09-06
End Shear	5011 lbs	14464 lbs	34.6%	1	10-02-10
Total Load Deflection	L/601 (0.223")	n/a	39.9%	4	05-09-06
Live Load Deflection	L/1022 (0.131")	n/a	35.2%	5	05-09-06
Max Defl.	0.223"	n/a	n/a	4	05-09-06
Span / Depth	11.3				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 3-1/2"	4370 lbs	n/a	51.2%	HGUS410
B2	Wall/Plate 5-1/2" x 3-1/2"	5441 lbs	45.9%	23.2%	Spruce-Pine-Fir



NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 8" O.C., STAGGERED IN TWO ROWS

BC CALC® Member Report

Dry | 1 span | No cant.

November 20, 2021 11:18:32

Build 7773

Job name: 45147(3101)

File name: 338989-B.mmdl

Address: Pine Valley

Description: 2nd Floor - Supply/BOM\Flush Beams\B23(i18052)

City, Province, Postal Code: Vaughan, ON

Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses

Notes

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

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

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

Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-11-00.



Disclosure

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SE-039921(2)

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

2nd Floor - Supply/BOM\Flush Beams\B24(i17609) (Flush Beam)

BC CALC® Member Report

Dry | 1 span | No cant.

November 20, 2021 11:26:42

Build 7773

Job name: 45147(3101)

File name: 338989-A.mmdl

Address: Pine Valley

Description: 2nd Floor - Supply/BOM\Flush Beams\B24(i17609)

City, Province, Postal Code: Vaughan, ON

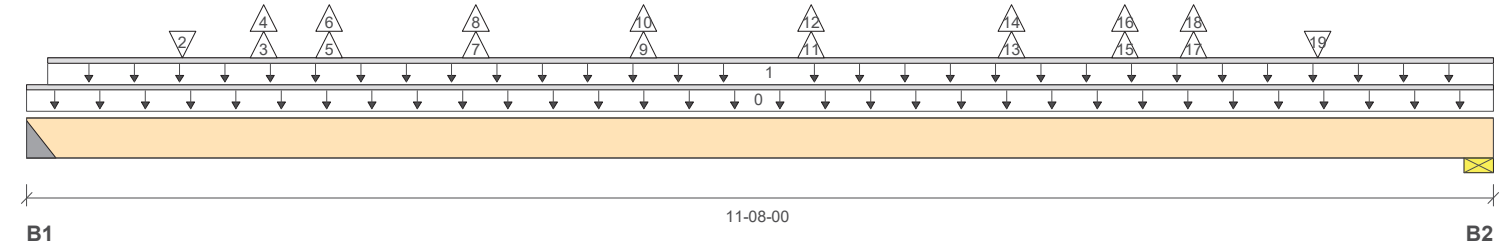
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Total Horizontal Product Length = 11-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	1407 / 22	927 / 0	0 / 69	
B2, 5-1/2"	2017 / 21	1248 / 0	0 / 67	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-08-00	Top		6			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-02-00	11-08-00	Top		60			n/a
2	J6(i17455)	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Top	291	146			n/a
3	J5(i17488)	Conc. Pt. (lbs)	L	01-10-10	01-10-10	Top	120	30	-18		n/a
4	J5(i17488)	Conc. Pt. (lbs)	L	01-10-10	01-10-10	Top	-3				n/a
5	J4(i17469)	Conc. Pt. (lbs)	L	02-04-14	02-04-14	Top	174	51	-29		n/a
6	J4(i17469)	Conc. Pt. (lbs)	L	02-04-14	02-04-14	Top	-4				n/a
7	J4(i17446)	Conc. Pt. (lbs)	L	03-06-14	03-06-14	Top	258	100	-10		n/a
8	J4(i17446)	Conc. Pt. (lbs)	L	03-06-14	03-06-14	Top	-7				n/a
9	J4(i17494)	Conc. Pt. (lbs)	L	04-10-14	04-10-14	Top	276	106	-11		n/a
10	J4(i17494)	Conc. Pt. (lbs)	L	04-10-14	04-10-14	Top	-7				n/a
11	J4(i17494)	Conc. Pt. (lbs)	L	06-02-14	06-02-14	Top	276	106	-11		n/a
12	J4(i17494)	Conc. Pt. (lbs)	L	06-02-14	06-02-14	Top	-7				n/a
13	-	Conc. Pt. (lbs)	L	07-10-00	07-10-00	Top	854	353	-10		n/a
14	-	Conc. Pt. (lbs)	L	07-10-00	07-10-00	Top	-7				n/a
15	-	Conc. Pt. (lbs)	L	08-08-13	08-08-13	Top	447	187	-29		n/a
16	-	Conc. Pt. (lbs)	L	08-08-13	08-08-13	Top	-5				n/a
17	J5(i17448)	Conc. Pt. (lbs)	L	09-03-06	09-03-06	Top	188	65	-18		n/a
18	J5(i17448)	Conc. Pt. (lbs)	L	09-03-06	09-03-06	Top	-3				n/a
19	-	Conc. Pt. (lbs)	L	10-03-04	10-03-04	Top	537	269			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	11148 ft-lbs	17696 ft-lbs	63.0%	21	06-02-14
End Shear	4306 lbs	7232 lbs	59.5%	21	10-02-10
Total Load Deflection	L/367 (0.365")	n/a	65.4%	56	05-10-14
Live Load Deflection	L/590 (0.227")	n/a	61.0%	83	05-10-14
Max Defl.	0.365"	n/a	n/a	56	05-10-14
Span / Depth	11.3				

Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger 2" x 1-3/4"	3269 lbs	n/a	76.6%	HUS1.81/10
B2	Wall/Plate 5-1/2" x 1-3/4"	4586 lbs	77.4%	39.1%	Spruce-Pine-Fir



BC CALC® Member Report

Dry | 1 span | No cant.

November 20, 2021 11:26:42

Build 7773

Job name: 45147(3101)

File name: 338989-A.mmdl

Address: Pine Valley

Description: 2nd Floor - Supply/BOM\Flush Beams\B24(i17609)

City, Province, Postal Code: Vaughan, ON

Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses

Notes

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

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

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.

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

Calculations assume unbraced length of Top: 00-00-00, Bottom: 01-01-10.



Disclosure

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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.

SE-039922(2)

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

BC CALC® Member Report

Dry | 1 span | No cant.

November 20, 2021 09:19:21

Build 7773

Job name: 45147(3101)

File name: 338989-A.mmdl

Address: Pine Valley

Description: 2nd Floor - Supply/BOM\Flush Beams\B25(i17772)

City, Province, Postal Code: Vaughan, ON

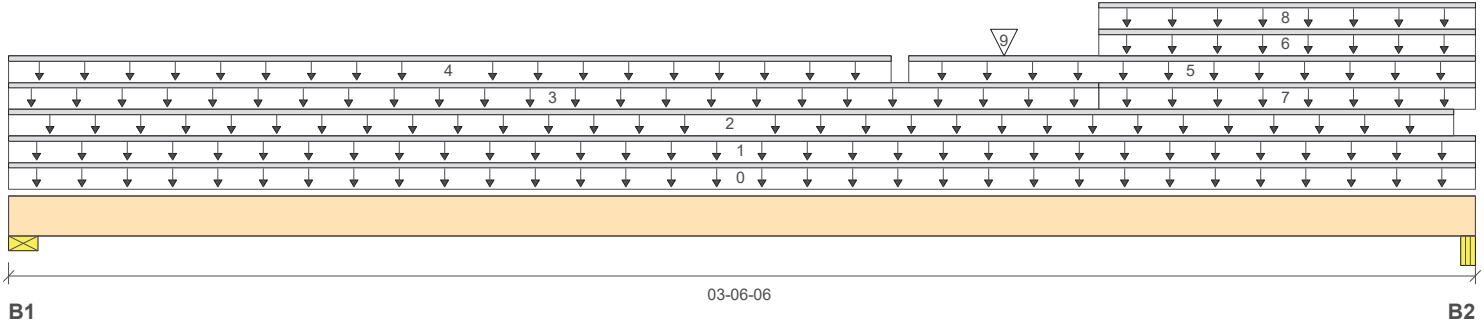
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 5-1/2"	187 / 0	683 / 0	434 / 0	
B2, 4-1/8"	327 / 0	1530 / 0	1121 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-06-06	Top		12			00-00-00
1	FC1 Floor Decking (Plan View Fill)	Unf. Lin. (lb/ft)	L	00-00-00	03-06-06	Top	5				n/a
2	User Load	Unf. Lin. (lb/ft)	L	00-00-00	03-05-12	Top	27	10			n/a
3	FC1 Floor Decking (Plan View Fill)	Unf. Lin. (lb/ft)	L	00-00-00	02-07-08	Top	20	10			n/a
4	User Load	Unf. Lin. (lb/ft)	L	00-00-00	02-01-08	Top		60			n/a
5	E15(i15200)	Unf. Lin. (lb/ft)	L	02-02-00	03-06-06	Top		101			n/a
6	E15(i15200)	Unf. Lin. (lb/ft)	L	02-07-08	03-06-06	Top		154	231		n/a
7	User Load	Unf. Lin. (lb/ft)	L	02-07-08	03-06-06	Top			21		n/a
8	FC1 Floor Decking (Plan View Fill)	Unf. Lin. (lb/ft)	L	02-07-08	03-06-06	Top	6				n/a
9	-	Conc. Pt. (lbs)	L	02-04-12	02-04-12	Top	344	1680	1326		n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2718 ft-lbs	35392 ft-lbs	7.7%	13	02-03-00
End Shear	2596 lbs	14464 lbs	17.9%	13	02-02-06
Total Load Deflection	L/999 (0.003")	n/a	n/a	35	01-11-07
Live Load Deflection	L/999 (0.001")	n/a	n/a	51	01-11-07
Max Defl.	0.003"	n/a	n/a	35	01-11-07
Span / Depth	2.9				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 5-1/2" x 3-1/2"	1691 lbs	14.3%	7.2%	Spruce-Pine-Fir
B2	Beam 4-1/8" x 3-1/2"	3920 lbs	44.1%	22.3%	Unspecified

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 4" O.C., STAGGERED IN TWO ROWS



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
2nd Floor - Supply/BOM\Flush Beams\B25(i17772) (Flush Beam)**PASSED**BC CALC® Member Report
Build 7773

Dry | 1 span | No cant.

November 20, 2021 09:19:21

Job name: 45147(3101)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-RFile name: 338989-A.mmdl
Description: 2nd Floor - Supply/BOM\Flush Beams\B25(i17772)
Specifier:
Designer: NL
Company: Alpa Roof Trusses**Notes**

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
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.
Importance Factor : Normal Part code : Part 9
Calculations assume unbraced length of Top: 00-00-00, Bottom: 01-10-08.

**Disclosure**

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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.

SE-039923(2)

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,



Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor - Supply/BOM\Flush Beams\B7(i16360) (Flush Beam)

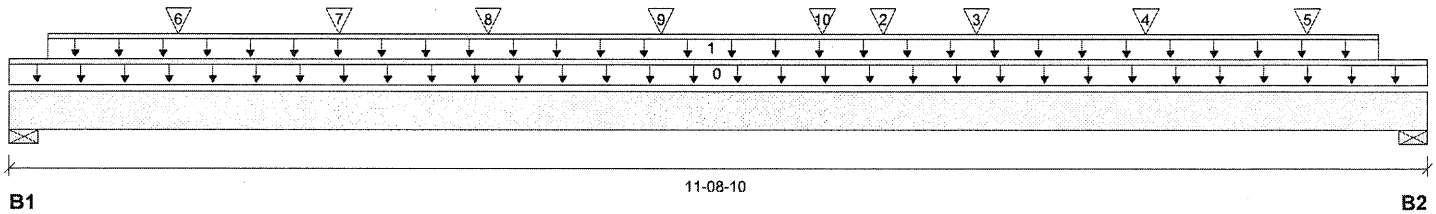
PASSED

 BC CALC® Member Report
 Build 7773

Dry | 1 span | No cant.

May 18, 2021 13:10:59

 Job name: 45147(3101)
 Address: Pine Valley
 City, Province, Postal Code: Vaughan, ON
 Customer: Gold Park
 Code reports: CCMC 12472-R

 File name: 333169-A.mmdl
 Description: 1st Floor - Supply/BOM\Flush Beams\B7(i16360)
 Specifier:
 Designer: NL
 Company: Alpa Roof Trusses


Total Horizontal Product Length = 11-08-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-3/4"	2193 / 0	1495 / 0		
B2, 2-3/8"	2815 / 0	1816 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-08-10	Top		18			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-03-12	11-03-12	Top		60			n/a
2	B6(i16409)	Conc. Pt. (lbs)	L	07-02-10	07-02-10	Top	534	250			n/a
3	-	Conc. Pt. (lbs)	L	07-11-15	07-11-15	Top	719	359			n/a
4	-	Conc. Pt. (lbs)	L	09-04-11	09-04-11	Top	747	373			n/a
5	-	Conc. Pt. (lbs)	L	10-08-11	10-08-11	Top	636	318			n/a
6	J1(i16388)	Conc. Pt. (lbs)	L	01-04-10	01-04-10	Top	412	206			n/a
7	J1(i16410)	Conc. Pt. (lbs)	L	02-08-10	02-08-10	Top	412	206			n/a
8	-	Conc. Pt. (lbs)	L	03-11-07	03-11-07	Top	811	360			n/a
9	J1(i16361)	Conc. Pt. (lbs)	L	05-04-10	05-04-10	Top	373	186			n/a
10	J1(i16359)	Conc. Pt. (lbs)	L	06-08-10	06-08-10	Top	353	176			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	18345 ft-lbs	55211 ft-lbs	33.2%	1	06-08-10
End Shear	6204 lbs	21696 lbs	28.6%	1	10-06-06
Total Load Deflection	L/651 (0.212")	n/a	36.8%	4	05-10-10
Live Load Deflection	L/1073 (0.129")	n/a	33.6%	5	05-10-10
Max Defl.	0.212"	n/a	n/a	4	05-10-10
Span / Depth	11.6				

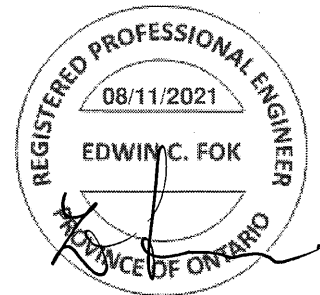
Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-3/4" x 5-1/4"	5159 lbs	91.3%	46.0%	Spruce-Pine-Fir
B2	Wall/Plate 2-3/8" x 5-1/4"	6493 lbs	84.6%	42.7%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 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
 Calculations assume unbraced length of Top: 00-00-00, Bottom: 01-01-08.

NAIL ONE PLY TO ANOTHER WITH
 3-1/2" SPIRAL NAILS @ 6" O/C
 STAGGERED IN 2 ROWS



SG033153



Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

1st Floor - Supply/BOM\Flush Beams\B8(i16411) (Flush Beam)

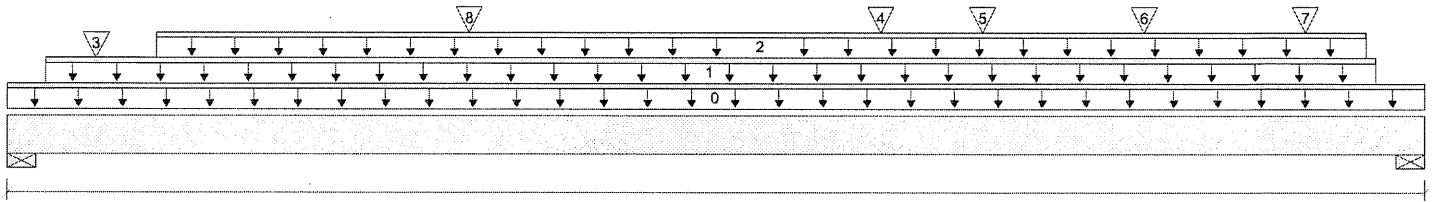
PASSED

 BC CALC® Member Report
 Build 7773

Dry | 1 span | No cant.

May 18, 2021 13:10:59

 Job name: 45147(3101)
 Address: Pine Valley
 City, Province, Postal Code: Vaughan, ON
 Customer: Gold Park
 Code reports: CCMC 12472-R

 File name: 333169-A.mmdl
 Description: 1st Floor - Supply/BOM\Flush Beams\B8(i16411)
 Specifier:
 Designer: NL
 Company: Alpa Roof Trusses


B1

11-08-10

B2

Total Horizontal Product Length = 11-08-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-3/4"	2023 / 0	1381 / 0		
B2, 2-3/8"	2453 / 0	1621 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-08-10	Top		18			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-03-12	11-03-12	Top		60			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	01-02-12	11-02-13	Top	210	105			n/a
3	J4(i16389)	Conc. Pt. (lbs)	L	00-08-12	00-08-12	Top	179	90			n/a
4	B6(i16409)	Conc. Pt. (lbs)	L	07-02-10	07-02-10	Top	538	252			n/a
5	J3(i16378)	Conc. Pt. (lbs)	L	08-00-12	08-00-12	Top	278	139			n/a
6	J3(i16422)	Conc. Pt. (lbs)	L	09-04-12	09-04-12	Top	325	162			n/a
7	J3(i16370)	Conc. Pt. (lbs)	L	10-08-12	10-08-12	Top	286	143			n/a
8	User Load	Conc. Pt. (lbs)	L	03-09-12	03-09-12	Top	720	270			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	16342 ft-lbs	55211 ft-lbs	29.6%	1	06-08-12
End Shear	5461 lbs	21696 lbs	25.2%	1	10-06-06
Total Load Deflection	L/724 (0.191")	n/a	33.2%	4	05-11-12
Live Load Deflection	L/999 (0.115")	n/a	n/a	5	05-11-12
Max Defl.	0.191"	n/a	n/a	4	05-11-12
Span / Depth	11.6				

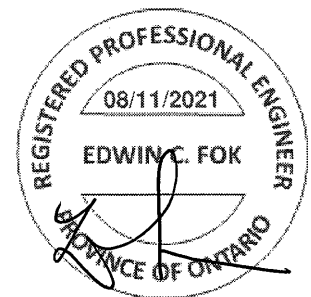
Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-3/4" x 5-1/4"	4760 lbs	84.2%	42.5%	Spruce-Pine-Fir
B2	Wall/Plate 2-3/8" x 5-1/4"	5705 lbs	74.4%	37.5%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 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
 Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-09-08.

NAIL ONE PLY TO ANOTHER WITH
 3-1/2" SPIRAL NAILS @ 6" O/C
 STAGGERED IN 2 ROWS



SG033154

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

1st Floor - Supply/BOM\Flush Beams\B12(i16550) (Flush Beam)

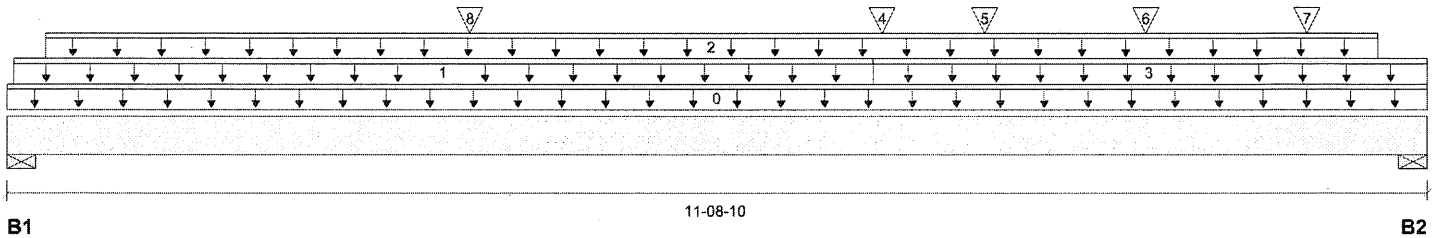
PASSED

 BC CALC® Member Report
 Build 7773

Dry | 1 span | No cant.

May 18, 2021 14:16:03

 Job name: 45147(3101)
 Address: Pine Valley
 City, Province, Postal Code: Vaughan, ON
 Customer: Gold Park
 Code reports: CCMC 12472-R

 File name: 333169-FOYER(-1R).mmdl
 Description: 1st Floor - Supply/BOM\Flush Beams\B12(i16550)
 Specifier:
 Designer: NL
 Company: Alpa Roof Trusses


Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-3/4"	910 / 0	789 / 0		
B2, 2-3/8"	1350 / 0	1036 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-08-10	Top		12			00-00-00
1	FC2 Floor Decking (Plan View Fill)	Unf. Lin. (lb/ft)	L	00-00-10	07-01-12	Top	9	4			n/a
2	User Load	Unf. Lin. (lb/ft)	L	00-03-12	11-03-12	Top		60			n/a
3	FC2 Floor Decking (Plan View Fill)	Unf. Lin. (lb/ft)	L	07-01-12	11-08-10	Top	6				n/a
4	B6(i16409)	Conc. Pt. (lbs)	L	07-02-10	07-02-10	Top	538	252			n/a
5	J3(i16559)	Conc. Pt. (lbs)	L	08-00-12	08-00-12	Top	276	138			n/a
6	J3(i16558)	Conc. Pt. (lbs)	L	09-04-12	09-04-12	Top	330	165			n/a
7	J3(i16562)	Conc. Pt. (lbs)	L	10-08-12	10-08-12	Top	295	148			n/a
8	User Load	Conc. Pt. (lbs)	L	03-09-12	03-09-12	Top	720	270			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	9294 ft-lbs	35392 ft-lbs	26.3%	1	07-02-10
End Shear	3159 lbs	14464 lbs	21.8%	1	10-06-06
Total Load Deflection	L/859 (0.161")	n/a	27.9%	4	05-10-12
Live Load Deflection	L/999 (0.091")	n/a	n/a	5	05-10-12
Max Defl.	0.161"	n/a	n/a	4	05-10-12
Span / Depth	11.6				

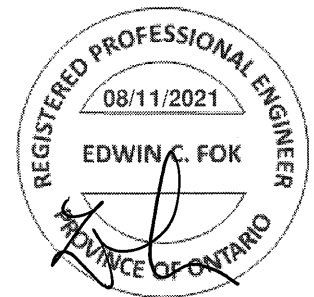
Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-3/4" x 3-1/2"	2351 lbs	62.4%	31.5%	Spruce-Pine-Fir
B2	Wall/Plate 2-3/8" x 3-1/2"	3320 lbs	64.9%	32.7%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 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
 Calculations assume unbraced length of Top: 00-00-00, Bottom: 07-00-00.

NAIL ONE PLY TO ANOTHER WITH
 3-1/2" SPIRAL NAILS @12" O/C
 STAGGERED IN 2 ROWS



SE033158



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor - Supply/BOM\Flush Beams\B13(i16552) (Flush Beam)

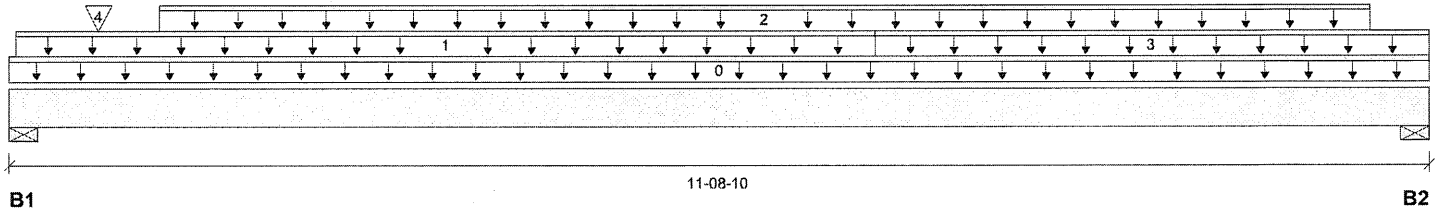
PASSED

 BC CALC® Member Report
 Build 7773

Dry | 1 span | No cant.

May 18, 2021 14:16:03

 Job name: 45147(3101)
 Address: Pine Valley
 City, Province, Postal Code: Vaughan, ON
 Customer: Gold Park
 Code reports: CCMC 12472-R

 File name: 333169-FOYER(-1R).mmdl
 Description: 1st Floor - Supply/BOM\Flush Beams\B13(i16552)
 Specifier:
 Designer: NL
 Company: Alpa Roof Trusses


Total Horizontal Product Length = 11-08-10

Reaction Summary (Down / Uplift) (lbs)

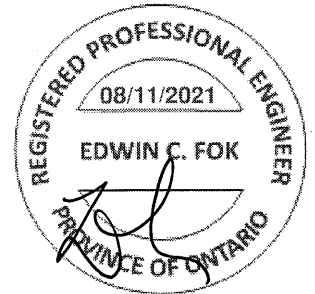
Bearing	Live	Dead	Snow	Wind
B1, 1-3/4"	1133 / 0	639 / 0		
B2, 2-3/8"	1119 / 0	632 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-08-10	Top		12			00-00-00
1	FC2 Floor Decking (Plan View Fill)	Unf. Lin. (lb/ft)	L	00-00-10	07-01-12	Top	9	4			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	01-02-12	11-02-13	Top	200	100			n/a
3	FC2 Floor Decking (Plan View Fill)	Unf. Lin. (lb/ft)	L	07-01-12	11-08-10	Top	6	3			n/a
4	J4(i16539)	Conc. Pt. (lbs)	L	00-08-12	00-08-12	Top	167	84			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	7545 ft-lbs	35392 ft-lbs	21.3%	1	05-08-12
End Shear	2347 lbs	14464 lbs	16.2%	1	10-06-06
Total Load Deflection	L/1064 (0.13")	n/a	22.6%	4	05-08-12
Live Load Deflection	L/999 (0.083")	n/a	n/a	5	05-08-12
Max Defl.	0.13"	n/a	n/a	4	05-08-12
Span / Depth	11.6				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-3/4" x 3-1/2"	2498 lbs	66.3%	33.4%	Spruce-Pine-Fir
B2	Wall/Plate 2-3/8" x 3-1/2"	2469 lbs	48.3%	24.3%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 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
 Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-09-09.

NAIL ONE PLY TO ANOTHER WITH
 3-1/2" SPIRAL NAILS @ 12" O/C
 STAGGERED IN 2 ROWS

SG033159