

		**					
		Products				Connector	Summary
PlotID	Length	Product	Plies	Net Qty	Qty	Manuf	Product
J1	22-00-00	9 1/2" NI-40x	1	5	6	H1	IUS2.56/
J2	20-00-00	9 1/2" NI-40x	1	12	8	H1	IUS2.56/
J3	18-00-00	9 1/2" NI-40x	1	7	1	H3	HUS1.81
J4	16-00-00	9 1/2" NI-40x	1	3	1	H4	HGUS41
J5	14-00-00	9 1/2" NI-40x	1	25	L	-	
J6	10-00-00	9 1/2" NI-40x	1	1			
J7	8-00-00	9 1/2" NI-40x	1	1			
J8	18-00-00	9 1/2" NI-80	1	11			
B3 <	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1			•
B4 ′	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2			
B5 ′	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1			
B1 🗸	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	6			
B2 √	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2			

Product IUS2.56/9.5

IUS2.56/9.5

HUS1.81/10

HGUS410

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 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7 TABLES 1 & 2 OF THE INSTALLATION GUIDE. CERAMIC 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> TILED AREAS: 20 lb/ft2

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



FROM PLAN DATED:

**MARCH 2017** 

**BUILDER: GREENYORK HOMES** 

SITE: **OSTIENSE** 

**MODEL:** AUBURN 12

**ELEVATION: 1** 

LOT:

**CITY: BRAMPTON** 

SALESMAN: RD **DESIGNER:** LBV **REVISION:** 

**DATE:** 2017-06-08

1st FLOOR



ENGINEERING ONLY - DIMENSIONS TO BE VERIFIED ON SITE SUPPORTING STRUCTURE TO BE VERIFIED BY QUALIFIED BUILDING DESIGNER. ALL CONVENTIONAL FRAMING TO BE SPECIFIED, REVIEWED, AND CONFIRMED BY BUILDING DESIGNER PRIOR TO JOIST(S) AND FLOOR BEAM(S) INSTALLATION. ALL NOTES DESIGNATING MORE OR LESS DAS PER PLAN WORKD DO NOT REPRESENT A PART OF THE SCOPE OF WORK WITHIN THE BOUNDARIES OF THE SEAL. THIS WORK IS DELEGATED TO A QUALIFIED BUILDING DESIGNER HAVING BOUNDARIES OF THE SEAL. THIS WORK IS DELEGATED TO A QUALIFIED BUILDING DESIGNER HAVING RESPONSIBILITY FOR THIS PROJECT. ALL BEAMS NOT ADDRESSED IN THIS DESCRIPTION AND LABELLED ON THIS LAYOUT ARE BEAMS SPECIFIED BY BUILDING DESIGNER AND/OR PROJECT ENGINEER AND ARE TO BE REVIEWED AND CONFIRMED BY THE SAME DESIGNER(S) PRIOR TO FABRICATION TO ENSURE ADEQUATE LOAD CAPACITY WITH RESPECT TO THE FLOOR SYSTEM COMPONENTS REVIEWED IN THIS SUBMISSION. MUNICIPALITY HAVING JURISDICTION TO OBTAIN LOT SPECIFIC SCHEDULE 1 FORM FROM THIS OFFICE PRIOR TO BUILDING PERMIT APPROVAL.

INSTALLERS OF THIS FLOOR SYSTEM AND THEIR COMPANIES HAVE THE RESPONSIBILITY OF ENSURING THEY HAVE A CORY OF THE MORDIUS INSTALLERS OF THIS FLOOR SYSTEM AND THEIR COMPANIES HAVE THE RESPONSIBILITY OF ENSURING THEY HAVE A CORY OF THE MORDIUS INSTALLERS OF THIS FLOOR SYSTEM AND THEIR COMPANIES HAVE THE RESPONSIBILITY OF ENSURING THEY HAVE A CORY OF THE MORDIUS INSTALLERS OF THIS FLOOR SYSTEM AND THEIR COMPANIES HAVE THE RESPONSIBILITY OF ENSURING THEY HAVE A CORY OF THE MORDIUS INSTALLERS OF THIS FLOOR SYSTEM AND THEIR COMPANIES HAVE THE RESPONSIBILITY OF ENSURING THEY HAVE A CORY OF THE MORDIUS INSTALLERS OF THIS FLOOR SYSTEM AND THEIR COMPANIES HAVE THE RESPONSIBILITY OF ENSURING THEY HAVE A CORY OF THE MORDIUS INSTALLERS.

HAVE A COPY OF THE NORDIC INSTALLATION GUIDE AND ANY OTHER MANUFACTURERS PRODUCT LITERATURE WHICH WILL AID IN THE OVERALL PROPER INSTALLATION OF THIS FLOOR SYSTEM. INSTALLERS ARE TO READ WHILE AID IN THE OVERALL PROPER INSTALLATION OF THIS FLOOR SYSTEM. INSTALLERS ARE TO READ ALL PRODUCT LITERATURE AND INSTALLATION GUIDELINES BEFORE PROCEEDING. THE SUPPLIER AND SEALING ENGINEER OF THIS FLOOR SYSTEM ARE NOT RESPONSIBLE FOR SURPLUS OR DEFICIT OF PRODUCTS AT PROJECT'S END. THIS LAYOUT IS A GUIDE ONLY. CONFIRMATION OF ALL QUANTITIES, LENGHTS, AND DETAILS, REMAINS THE RESPONSIBILITY OF THE FLOOR SYSTEM INSTALLATION CONTRACTOR.

DWG# TAM 3080777 THROUGH DWG# TAM 308/1/17, INCLUSIVE DATED 6/15/7

SEALED STRUCTURAL COMPONENTS ONLY:
SEALED, THIRD PARTY LVL TYPE BEAMS, BUILT-UP CONVENTIONAL BEAMS, HEADERS, AND CONCENTRATED
LOADED NORDIC WOOD-I JOIST ONLY. 2 X 6 SQUASH BLOCK REQUIRED AT ALL EXTERIOR SUPPORTS OR AS PEF
PROJECT ENGINEER'S SPECIFICATIONS, WEB FILLER REINFORCEMENT REQUIRED AT ALL HANGER SUPPORTED

OIST EXCEEDING A REACTION OF 1500 LBS (FACTORED)-SEE DETAILS.

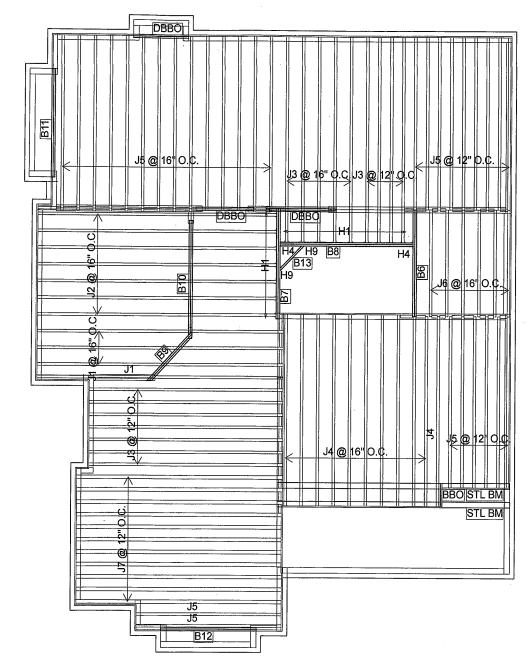
A COMPLETE FRAMING PLAN REQUIRES THE NORDIC PUBLISHED LITERATURE, WHICH INCLUDES INSTALLATION REQUIREMENTS, HANDLING AND STORAGE GUIDELINES, AND FORMS AN INTEGRAL PART OF THIS SEALED DOCUMENT. INSTALL SQUASH BLOCKS FOR TRANSFERRING POINT LOADS FROM GIRDER TRUSSES, HEADERS, AND BEAMS DOWN TO FOUNDATION COMPONENTS. FOR PROPER INSTALLATION, SEE NORDIC LITERATURE. PROVIDE 2 X 4 OR 2 X 6 STUD GRADE OR BETTER SQUASH BLOCKS, MATCHING SUPPORTED WALL WIDTH ABOVE BLOCKS. INSTALL SQUASH BLOCKS ON EACH SIDE OF JOIST. BLOCKING TO BE 1/160 DEEPER THAN JOIS DEPTH. SEE NORDIC LITERATURE FOR NAILING REQUIREMENT

I REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK ON BEHALE OF A FIRM REGISTERED UNDER SUBSECTION 3.2.5 OF THE ONTARIO BUILDING CODE. AMOUNT HE FIRM IS REGISTERED, IN APPROPRIATE CLASSES AND/OR CATEGORIES

REGISTERED FIRM: MICRO CITY ENGINEERING SERVICES INC.

DWG # TAM\_30812-7 BCIN: 26064 FIRM: 29991 SEALED STRUCTURAL





		Products			
PlotiD	Length	Product	Plies	Net Qty	Qty
J1	22-00-00	9 1/2" NI-40x	1	4	16
J2	20-00-00	9 1/2" NI-40x	1	7	2
J3	18-00-00	9 1/2" NI-40x	1	16	1
J4	16-00-00	9 1/2" NI-40x	1	11	1
J5	14-00-00	9 1/2" NI-40x	1	31	
J6	10-00-00	9 1/2" NI-40x	1	6	
J7	18-00-00	9 1/2" NI-80	1	11	
B8 ~	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	
B10~	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	
B11.⁄	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	
B6 🗸	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	
B7 🗸	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	
B12 /	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	
B9 /	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	
B13 /	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	

Connector Summary

Product

LS90

LS90

IUS2.56/9.5

HGUS410

Manuf

H1

H4

H9

H9

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. JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURE 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR **HOLES** INCLUDING **DUCT CHASE** AND FIELD CUT OPENINGS SEE FIGURE 7 TABLES 1 &2 OF THE INSTALLATION GUIDE. CERAMIC 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> TILED AREAS: 20 lb/ft2

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



FROM PLAN DATED: **MARCH 2017** 

BUILDER:

**GREENYORK HOMES** 

SITE: **OSTIENSE** 

**MODEL:** AUBURN 12

**ELEVATION: 1** 

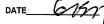
LOT:

**CITY: BRAMPTON** 

SALESMAN: RD **DESIGNER:** LBV **REVISION:** 

**DATE:** 2017-06-08

2nd FLOOR



ENGINEERING ONLY - DIMENSIONS TO BE VERIFIED ON SITE SUPPORTING STRUCTURE TO BE VERIFIED BY QUALIFIED BUILDING DESIGNER. ALL CONVENTIONAL FRAMING TO BE SPECIFIED, REVIEWED, AND CONFIRMED BY BUILDING DESIGNER PRIOR TO JOIST(S) AND FLOOR BEAM(S) INSTALLATION. ALL NOTES DESIGNATING MORE OR LESS DAS PER PLAN WORKD DO NOT REPRESENT A PART OF THE SCOPE OF WORK WITHIN THE BOUNDARIES OF THE SEAL. THIS WORK IS DELEGATED TO A QUALIFIED BUILDING DESIGNER HAVING RESPONSIBILITY FOR THIS PROJECT. ALL BEAMS NOT ADDRESSED IN THIS DESIGNER HAVING RESPONSIBILITY FOR THIS PROJECT. ALL BEAMS NOT ADDRESSED IN THIS DESCRIPTION AND LABELLED ON THIS LAYOUT ARE BEAMS SPECIFIED BY BUILDING DESIGNER AND/OR PROJECT ENGINEER AND ARE TO BE REVIEWED AND CONFIRMED BY THE SAME DESIGNER(S) PRIOR TO FABRICATION TO ENSURE ADEQUATE LOAD CAPACITY WITH RESPECT TO THE FLOOR SYSTEM COMPONENTS REVIEWED IN THIS SUBMISSION.

MUNICIPALITY HAVING JURISDICTION TO OBTAIN LOT SPECIFIC SCHEDULE 1 FORM

FROM THIS OFFICE PRIOR TO BUILDING PERMIT APPROVAL.
INSTALLERS OF THIS FLOOR SYSTEM AND THEIR COMPANIES HAVE THE RESPONSIBILITY OF ENSURING THEY INSTALLERS OF THIS FLOOR SYSTEM AND THEIR COMPANIES HAVE THE RESPONSIBILITY OF ENSURING THEY HAVE A COPY OF THE NORDIC INSTALLATION GUIDE AND ANY OTHER MANUFACTURER'S PRODUCT LITERATURE WHICH WILL AID IN THE OVERALL PROPER INSTALLATION OF THIS FLOOR SYSTEM. INSTALLERS ARE TO READ ALL PRODUCT LITERATURE AND INSTALLATION GUIDELINES BEFORE PROCEEDING. THE SUPPLIER AND SEALING ENGINEER OF THIS FLOOR SYSTEM ARE NOT RESPONSIBLE FOR SURPLUS OR DEFICIT OF PRODUCTS AT PROJECT'S END. THIS LAYOUT IS A GUIDE ONLY. CONFIRMATION OF ALL QUANTITIES, LENGHTS, AND DETAILS, REMAINS THE RESPONSIBILITY OF THE FLOOR SYSTEM INSTALLATION CONTRACTOR.

# DWG# TAM 35979 PHROUGH DWG# TAM 308067 2INCLUSIVE DATED 6/57.7

SEALED STRUCTURAL COMPONENTS ONLY:
SEALED, THIRD PARTY LVL TYPE BEAMS, BUILT-UP CONVENTIONAL BEAMS, HEADERS, AND CONCENTRATED LOADED NORDIC WOOD-I JOIST ONLY, 2X 6 SQUASH BLOCK REQUIRED AT LL EXTERIOR SUPPORTS OR AS PEF PROJECT ENGINEER'S SPECIFICATIONS, WEB FILLER REINFORCEMENT REQUIRED AT ALL HANGER SUPPORTED

OIST EXCEEDING A REACTION OF 1500 LBS (FACTORED)-SEE DETAILS.

A COMPLETE FRAMING PLAN REQUIRES THE NORDIC PUBLISHED LITERATURE, WHICH INCLUDES INSTALLATION REQUIREMENTS, HANDLING AND STORAGE GUIDELINES, AND FORMS AN INTEGRAL PART OF THIS SEALED DOCUMENT. INSTALL SQUASH BLOCKS FOR TRANSFERRING POINT LOADS FROM GIRDER TRUSSES, HEADERS, AND BEAMS DOWN TO FOUNDATION COMPONENTS. FOR PROPER INSTALLATION, SEE NORDIC LITERATURE. PROVIDE 2 X 4 OR 2 X 6 STUD GRADE OR BETTER SQUASH BLOCKS, MATCHING SUPPORTED WALL WIDTH ABOVE BLOCKS. INSTALL SQUASH BLOCKS ON EACH SIDE OF JOIST. BLOCKING TO BE 1/160 DEEPER THAN JOIS DEPTH. SEE NORDIC LITERATURE FOR NAILING REQUIREMENT

I REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK ON BEHALD BOTH STORY REGISTERED UNDER SUBSECTION 3.2.5 OF THE ONTARIO BUILDING CODE AND LABOR AND LAB

REGISTERED FIRM: MICRO CITY ENGINEERING SERVICES INC.

308137 BCIN: FIRM: 29991 SEALED STRUCTURAL



# **Schedule 1: Designer Information**

Use one form for each individual who review	vs and takes re			e project.
A. Project Information		Application no		
Building number, street name			Unit no.	Lot/con.
Municipality CITY OF BRAMPTON	Postal code	Plan number/ other descri	otion	,
B. Individual who reviews and take	s responsibil	ity for design activities		
Name		Firm		and a first section of the second section of the second section of the second section
SAM KATSOULAKOS, P. ENG.		MICRO CITY ENGI	NEERING SERVICE	S INC.
Street address			Unit no.	Lot/con.
R.R #1, PO BOX 61				
Municipality GLENCOE	Postal code N0L 1M0	Province ONTARIO	E-mail	
Telephone number	Fax number	ONTAKIO	Cell number	
(519) 287-2242 Business	(519) 287-5750	0		
C. Design activities undertaken by	ndividual ide	ntified in Section B. IBI	ilding Code Table	9 3.5.2.1 of
Division C				
☐ House	☐ HVAC -	– House	☑ Building Stru	ctural
☐ Small Buildings		g Services	☐ Plumbing — H	
☐ Large Buildings		on, Lighting and Power	☐ Plumbing — Al	
☐ Complex Buildings	☐ Fire Pro	otection	☐ On-site Sewa	
Description of designer's work GREENYC	ORK HOMES -	OSTIENSE – MODEL: AUB	<u> URN 12 – ELEV. 1</u>	
1ST FLOOR (SCHEDULE IS NOT ISSUED				
REVIEW PRE-ENGINEERED FLOOR SYS			OUT PLACEMENT P	LAN SUPPLIED BY
TAMARACK ROOF TRUSSES INC. (SEE DESCRIPTION OF TRUSSES INC. (SEE D	)VVG #1AW3U81	12-17 DATED 6-15-17). DIEEN BY OHALIEIEN BLIILI	JING DESIGNED	
	VVLD AND VLI	VILED BY QUALIFIED BUILD	JING DESIGNER.	
D. Declaration of Designer				
I, <u>SAM KATSOULAKOS, P. ENG</u>		de	eclare that (choose o	ne as appropriate):
(print name				
区 I review and take responsibili C, of the Building Code. I am	ty for the design	n work on behalf of a firm reg	istered under subsec	ction 3.2.4.of Division
o, or the Building Code. Faire	quamou, and m	o mm to regiotorea, in the ap	propriate diacocorda	logorico.
Individual BCIN: <u>2606</u>	<u> </u>			
Firm BCIN: 2999	1			
☐ I review and take responsibilit			opriate category as a	n "other designer"
under subsection 3.2.5.of Divi	sion C, of the B	uilding Code.		
Individual BCIN:				
Basis for exemption from	registration:			
☐ The design work is exempt from		on and qualification requirem	onte of the Building (	Codo
1	_	-	ents of the building t	Joue.
Basis for exemption from	registration and	ı qualilication		
I certify that:	-	and hand and and are the second of the		
The information contained in this search at the searc		_		
I have submitted this application with a submitted this application.  2. **The submitted this application with a submitted this applicati	ıtrı tne knowledç	ge and consent of the firm.		
Date	1577	Signature of Designer		

#### NOTE:

- 1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the
  Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

DWG#TAN3081217-\$ 67577 DWG#TAN3081417-\$

# **Schedule 1: Designer Information**

A: Project Information	ws and takes re	Application in	ACMENIA DAN PROPERTY DE LE MANTEN DE PERE PARA LE PARA DAN PARA DAN PROPERTY DE LA CARACITA DEL CARACITA DE LA CARACITA DEL CARACITA DE LA CARACITA DEL CARACITA DE LA CARACITA DE LA CARACITA DE LA CARACITA DEL CARACITA DE LA CARACITA DE LA CARACITA DE LA CARACITA DEL CARACITA DEL CARACITA DE LA CARACITA DE LA CARACITA DE LA CARACITA DEL CARACITA	e project.
Building number, street name			Unit no.	Lot/con.
Municipality CITY OF BRAMPTON	Postal code	Plan number/ other descri	ption	
B. Individual who reviews and take	s responsibili			
Name SAM KATSOULAKOS, P. ENG.		Firm MICRO CITY ENGI	NEERING SERVICE	S INC.
Street address R.R #1, PO BOX 61			Unit no.	Lot/con.
Municipality GLENCOE	Postal code	Province ONTARIO	E-mail	
Telephone number (519) 287-2242 Business	NoL 1M0 Fax number (519) 287-5750		Cell number	7
C. Design activities undertaken by			_ ⊔ilding Code Table	e 3.5.2.1. of
Division C]				
☐ House☐ Small Buildings	☐ HVAC - ☐ Building		⊠ Building Stru     □ Plumbing – H	
☐ Large Buildings		on, Lighting and Power	☐ Plumbing – Al	
☐ Complex Buildings	☐ Fire Pro	otection	☐ On-site Sewa	
Description of designer's work GREENYC 2ND FLOOR (SCHEDULE IS NOT ISSUE	ORK HOMES - (	OSTIENSE - MODEL: AUB	URN 12 – ELEV. 1	
REVIEW PRE-ENGINEERED FLOOR SYS	TEM COMPON	SIFIC) ENT DRAWINGS AND LAYO	OUT PLACEMENT PL	AN SUPPLIED BY
TAMARACK ROOF TRUSSES INC. (SEE D	)WG #TAM3081	3-17 DATED 6-15-17).		D'III OOI I EIED D'
SUPPORTING STRUCTURE TO BE REVIE	EWED AND VEF	RIFED BY QUALIFIED BUILI	DING DESIGNER.	
D. Declaration of Designer				
I, <u>SAM KATSOULAKOS, P. ENG</u>		de	eclare that (choose o	ne as appropriate):
(print name) 区 I review and take responsibility C, of the Building Code. I am o	ty for the design	work on behalf of a firm reg e firm is registered, in the ap	istered under subsec propriate classes/cat	etion 3.2.4.of Division degories.
Individual BCIN: <u>2606</u>	4			
Firm BCIN: <u>2999</u>	1			
☐ I review and take responsibilit under subsection 3.2.5.of Divi Individual BCIN:	y for the design sion C, of the Bu	and am qualified in the appruilling Code.	opriate category as a	n "other designer"
Basis for exemption from	registration:			
☐ The design work is exempt fro  Basis for exemption from	-	on and qualification requirem qualification:		Code.
I certify that:	J	1		
The information contained in this so	chedule is true to	o the best of my knowledge.		
I have submitted this application wi	th the knowledg	e and consent of the firm.		
			0	
	21517			
Date 6	アレフソフ	Signature of Designer		1

#### NOTE:

- 1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
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DWG#TAN 30813-17-8 6-15-7 DWG#TAN 30815-17-8

# NORDIC STRUCTURES

COMPANY
TAMARACK LUMBER
BURLINGTON
June 8, 2017 14:48

PROJECT J8 GRD FLR

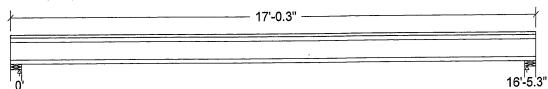
### **Design Check Calculation Sheet**

Nordic Sizer - Canada 6.4

#### Loads:

Load	Type	Distribution	Pat-	Location	[ft]	Magnitude		Unit
	1 **		tern	Start	End	Start	End	
Load1	Dead	Full Area				20.00		psf
Load2	Live	Full Area	·			40.00		psf

### Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in):



Unfactored:			170
Dead	170		170
Live	340		340
Factored:			700
Total	723		723
Bearing:			
Resistance			1000
Joist	1893		1893
Support	10829		10829
Des ratio		•	
Joist	0.38		0.38
Support	0.07		0.07
Load case	#2		#2
Length	4-3/8		4-3/8
Min req'd	1-3/4		1-3/4
Stiffener	No		No
Kd	1.00		1.00
KB support	1.00		1.00
fcp sup	769		769
Kzcp sup	1.15		1.15

\*Minimum bearing length for joists is 2" for exterior supports

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

### Nordic Joist 9-1/2" NI-80 Floor joist @ 12" o.c.

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

Total length: 17'-0.3"; 5/8" nailed and glued OSB sheathing

This section PASSES the design code check.

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

Analysis Value	Design Value	Unit	Analysis/Design
Vf = 699	Vr = 1895	lbs	Vf/Vr = 0.37
Mf = 2871	Mr = 8958	lbs-ft	Mf/Mr = 0.32
$0.10 = \langle L/999 \rangle$	0.55 = L/360	in 🚜	OFESSION 0.19
0.21 = L/961	0.41 = L/480	in 🖊 🧸	0.50
0.31 = L/640	0.82 = L/240	in 🔑	20.37
0.23 = L/861	0.55 = L/360	in S	6.42
lmax = 16'-5	Lv = 17'-5	ft w	KATSOULAKOS 50.83
= 0.032	= 0.039	in S	KATSOULAKUS 20.83
	Vf = 699 Mf = 2871 0.10 = <l 999<br="">0.21 = L/961 0.31 = L/640 0.23 = L/861 Lmax = 16'-5</l>	Vf = 699 Mf = 2871 0.10 = <l 999<br="">0.21 = L/961 0.31 = L/640 0.23 = L/861 0.24 = L/240 0.25 = L/360 0.27 = L/360 0.28 = L/240 0.29 = L/360 0.20 = L/360 0.21 = L/360 0.21 = L/360 0.22 = L/360 0.23 = L/361 0.24 = L/360 0.25 = L/360 0.27 = L/360</l>	Vf = 699 Vr = 1895 lbs Mf = 2871 Mr = 8958 lbs-ft 0.10 = <l 0.55="L/360" 999="" in<br="">0.21 = L/961 0.41 = L/480 in 0.31 = L/640 0.82 = L/240 in 0.23 = L/861 0.55 = L/360 in Lmax = 16'-5 Lv = 17'-5 ft</l>

P642 POLINCE OF ONLE DWO NO. TAM30795-17 STRUCTURAL COMPONENT ONLY

#### Nordic Sizer - Canada 6.4

Page 2

İ	Additional	Data:							•			
١	FACTORS:		KD	KH	KZ	KL	KT	KS	KN	LC#		
١	Vr	1895	1.00	1.00	_	_	_	-	_	#2		
١	Mr+	895 <sup>8</sup>	1.00	1.00	-	1.000	-	-	-	#2		
١	EI	324.1 m	illion	_	_		-	-	_	#2		
١	CRITICAL LC	DAD COMBI	INATIONS	<b>S</b> :								
١	Shear										•	
1	Moment(+)											
1	Deflectio											
				0 + 1.0L	•	•						
١				0 + 1.0L	•	•						
				) + 1.0L								
1	Bearing											
				LC #2 = 1				_				
1	Load Type											
I						ive(stora			r=rire			
ı	Load Patt											
١	All Load		ions (L	cs) are l	.isted	in the An	arysis	output				
١	CALCULATION		_			4 04	06.31					
٠	Deflectio							<b>, , ,</b> ,			•	
١	"Live" de	flection	= Defle	ection fr	om all	non-dead	loads	(Tive,	wina, sno	)w)		
ŀ	ļ				<del></del>							

#### **Design Notes:**

CONFORMS TO OBC 2012

- 1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC Part 4) and the CSA O86-14 Engineering Design in Wood standard (May 2014 edition).
- 2. Please verify that the default deflection limits are appropriate for your application.
- 3. Refer to 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.



DWO NO . TAM 30795-17 STRUCTURAL COMPONENT ONLY

# NORDIC STRUCTURES

COMPANY
TAMARACK LUMBER
BURLINGTON
June 8, 2017 14:51

PROJECT J4 GRD FLR

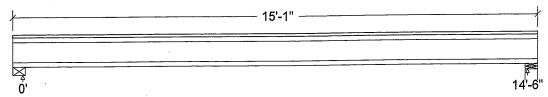
### **Design Check Calculation Sheet**

Nordic Sizer - Canada 6.4

#### Loads:

Load	Type	Distribution	Pat-	Location	[ft]	Magnitu	de	Unit
12000	71		tern	Start	End	Start	End	
Load1	Dead	Full Area				20.00		psf
Load2	Live	Full Area				40.00		psf

# Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in):



Unfactored: Dead Live	201 402	201 402
Factored: Total	855	855
Bearing: Resistance Joist Support	1893	1893 7735
Des ratio Joist Support	0.45 -	0.45 0.11 #2
Load case Length Min req'd	#2 4-3/8 1-3/4	4-3/8 1-3/4
Stiffener Kd	No 1.00	No 1.00 1.00
KB support fcp sup Kzcp sup	-	769 1.15

\*Minimum bearing length for joists is 2" for exterior supports

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

#### Nordic Joist 9-1/2" NI-40x Floor joist @ 16" o.c.

Supports: 1 - Steel Beam, W; 2 - Lumber Wall, No.1/No.2; Total length: 15'-1.0"; 5/8" nailed and glued OSB sheathing This section PASSES the design code check.

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

Criterion	Analysis Value	Design	Value	Unit	Analysis/Design
Shear	Vf = 822	Vr =	1895	lbs	Vf/Vr = 0.43
Moment(+)	Mf = 2979	Mr =	4824	lbs-ft	EESME/ME = 0.62
Perm. Defl'n	$0.11 = \langle L/999 \rangle$	0.48 =	L/360	in por	0.23
Live Defl'n	0.23 = L/771	0.36 =	L/480	in /O	20.62
Total Defl'n	0.34 = L/514	0.73 =	L/240	in /5/	6357
Bare Defl'n	0.27 = L/643	0.48 =	L/360	in 🖫	KATSOULAKOS 3.56
Vibration	Lmax = 14'-6	Lv =	15 <b>'-</b> 4	ft 19 s	KATSOULAKUS 📆
Defl'n	= 0.038	=	0.046	in 🕶 🖰	<b>Ø.</b> 83
L					

DWO NO.TAM 30796-17
STRUCTURAL
COMPONENT ONLY

#### Nordic Sizer - Canada 6.4

Page 2

Additional Data:						1	
FACTORS: f/E KD KH	KZ	KL	KT	KS	KN		
Vr 1895 1.00 1.00	-	_	_	-	-	#2	
Mr+ 4824 1.00 1.00	-	1.000	-		-	#2	
EI 218.1 million -	-	-	-	-	-	#2	
CRITICAL LOAD COMBINATIONS:							
Shear : LC $\#2 = 1.25D + 1.5L$							
Moment(+): LC $\#2 = 1.25D + 1.5L$							
Deflection: LC #1 = 1.0D (permane							
LC #2 = 1.0D + 1.0L (							
LC #2 = 1.0D + 1.0L (							
LC #2 = 1.0D + 1.0L (							
Bearing : Support 1 - LC #2 = 1.2 Support 2 - LC #2 = 1.2	. + UC:	1.Э <u>Б</u> 1 БТ					
Support 2 - LC #2 = 1.2   Load Types: D=dead W=wind S=snow	. ד ענ. במ— 4	rth arou	ndwatei	r E=ear	thquake		
Lelive(use, occupancy)	T.e=li	ve (stora	re . ean :	ipment)	f=fire		
Load Patterns: s=S/2 L=L+Ls _=no	patte	rn load	in this	s span			
All Load Combinations (LCs) are lis	ted i	n the An	elvsis	output			
CALCULATIONS:		0110 1111		I			
Deflection: Eleff = 268e06 lb-i	n2 K	= 4.94e	06 lbs				
"Live" deflection = Deflection from	all	non-dead	loads	(live,	wind, sn	wo.	
Tive deflection - Deflection from							

#### **Design Notes:**

CONFORMS TO OBC 2012

- 1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC Part 4) and the CSA O86-14 Engineering Design in Wood standard (May 2014 edition).
- 2. Please verify that the default deflection limits are appropriate for your application.
- 3. Refer to 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.

POVINCE OF ON IF DWG NO . TAH30796-17

STRUCTURAL COMPONENT ONLY

# NORDIC **STRUCTURES**

COMPANY TAMARACK LUMBER BURLINGTON June 8, 2017 14:48

**PROJECT** J3 GRD FLR

### **Design Check Calculation Sheet**

Nordic Sizer - Canada 6.4

#### Loads:

Load	Туре	Distribution	Pat-	Location Start	[ft] End	Magnitude Start	End	Unit
Load1 Load2	Dead Live	Full Area Full Area				20.00 40.00		psf psf

Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in):

— 16'**-**0.2" -

	O	 5'-5.3"
Unfactored: Dead Live	160 320	160 320
Factored: Total	681	681
Bearing:		
Resistance		1893
Joist	1893	7735
Support	7735	
Des ratio		0.36
Joist	0.36	0.09
Support	0.09	#2
Load case	#2	4-3/8
Length	4-3/8	1-3/4
Min req'd	1-3/4	No
Stiffener	No	1.00
Kd	1.00	1.00
KB support	1.00	769
fcp sup	769	1.15
Kzcp sup	1.15	

\*Minimum bearing length for joists is 2" for exterior supports

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

# Nordic Joist 9-1/2" NI-40x Floor joist @ 12" o.c. Supports: All - Lumber Wall, No.1/No.2

Total length: 16'-0.2"; 5/8" nailed and glued OSB sheathing This section PASSES the design code check.

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

				1 /2 /
Criterion	Analysis Value	Design Value	Unit	Analysis/Design
		Vr = 1895	lbs	Vf/Vr = 0.35
Shear	Vf = 656			Mf/Mr = 0.53
	Mf = 2533	Mr = 4824	lbs-ft	111111111111111111111111111111111111111
Moment(+)		0.51 = L/360	in green	GESSION 0.21
Perm. Defl'n	$0.11 = \langle L/999$	0.51 = L/360	1 11 M	(C) (VA) ( )
	0.22 = L/837	0.39 = L/480	lin / V	0.57
Live Defl'n		0,00	1 . #.50 4	0.43
Total Defl'n	0.33 = L/558	0.77 = L/240	in //	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		0.51 = L/360	in /3 📞	20.50
Bare Defl'n	0.26 = L/719	1 0 0 0 =	1 9	
	Lmax = 15'-5	$I_{vv} = 16'-3$	ft	KATSOULAKOS S
Vibration	IIIIaz Io	<del>-</del> '	in [2] S.	KAISUULANOO 26.84
Defl'n	= 0.036	= 0.042	T11 ( 20)	<u> </u>
L				
·			E #	

'DWG NO . TAN 307*97-*17 STRUCTURAL

COMPONENT ONLY

#### J3 GRD FLR

#### Nordic Sizer - Canada 6.4

Page 2

Additiona										
FACTORS:	f/E	KD	KH	KZ	KL	KT	KS	KN		
			1.00	-	_	-	_	-	#2	
	4824		1.00	-	1.000	-	-	-	#2 #2	
	218.1 m			-	-	-	-	-	#∠	
CRITICAL L	OAD COME	SINATIONS	S:							
Shear	: LC #2	= 1.2	5D + 1.5	_						
Moment(+	) : LC #2	= 1.2	5D + 1.5	Ĺ						
Deflecti	on: LC #1				,					
			D + 1.0L							
			D + 1.0L D + 1.0L							
Bearing	: Suppo	)rt	LC #2 = :	1 25D +	1.5T.			•		
Tood Tun	og D=des	od W=wi	nd S=sno	ow H=e	arth,grou	ndwate	r E=ear	thquake		
Load Typ	T.=1ix	re (use . o	ccupancy	) Ls=1	ive(stora	ge,equ:	ipment)	f=fire		
Load Pat	terns: s=	=S/2 L=	L+Ls =1	no patt	ern load	in this	sspan			
All Load	Combinat	ions (L	Cs) are	listed	in the An	alysis	output			
CALCULATI			•							
Deflecti	on: ETef	f =	258e06 l	o-in2	K= 4.94e	06 lbs				
"Live" d	eflection	n = Defl	ection f	rom all	non-dead	loads	(live,	wind, sn	10M…)	

#### **Design Notes:**

CONFORMS TO OBC 2012

- 1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC Part 4) and the CSA O86-14 Engineering Design in Wood standard (May 2014 edition).
- 2. Please verify that the default deflection limits are appropriate for your application.
- 3. Refer to 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.

ROVINCE OF ON

DVO NO. TAN 39797-17 STRUCTURAL COMPONENT ONLY



COMPANY
TAMARACK LUMBER
BURLINGTON
June 8, 2017 15:09

PROJECT J7 2ND FLR

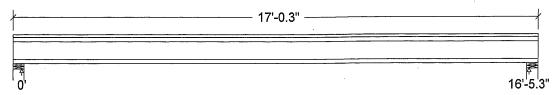
#### **Design Check Calculation Sheet**

Nordic Sizer - Canada 6.4

#### Loads:

Load	Type	Distribution	Pat-	Location [ft]		Magnitude		Unit
			tern	Start	End	Start	End	
Load1	Dead	Full Area				20.00	-	psf
Load2	Live	Full Area				40.00		psf

### Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in):



	Infactored: Dead Live	170 340		170 340
	Tactored: Total	723		723
	Bearing:	723	:	
$\prod^{2}$	Resistance			
	Joist	1893		1893
	Support	10829		10829
Ш	Des ratio			1
	Joist	0.38		0.38
	Support	0.07		0.07
	Load case	#2		#2
	Length	4-3/8		4-3/8
	Min req'd	1-3/4		1-3/4
	Stiffener	No		No
	Kd	1.00		1.00
	KB support	1.00		1.00
	fcp sup	769		769
$\ \cdot\ $	Kzcp sup	1.15		1.15

\*Minimum bearing length for joists is 2" for exterior supports

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

#### Nordic Joist 9-1/2" NI-80 Floor joist @ 12" o.c.

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

Total length: 17'-0.3"; 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:

Criterion	Analysis Value	Design Value	Unit_	Analysis/Design							
Shear	Vf = 699	Vr = 1895	lbs	Vf/Vr = 0.37							
Moment(+)	Mf = 2871	Mr = 8958	lbs-ft	Mf/Mr = 0.32							
Perm. Defl'n	$0.10 = \langle L/999 \rangle$	0.55 = L/360	in 🚜	SESSION 0.19							
Live Defl'n	0.21 = L/961	0.41 = L/480	in water	0.50							
Total Defl'n	0.31 = L/640	0.82 = L/240	in 🎾	0.37							
Bare Defl'n	0.23 = L/861	0.55 = L/360	in /5 (	6137/ 20.42							
Vibration	Lmax = 16'-5	Lv = 17'-10	ft 🖟	6131/ 39.42							
Defl'n	= 0.030	= 0.039	in S	KATSUULANUS 20.78							
	#										

DWO NO .TAM30798.17 STRUCTURAL COMPONENT ONLY

ONNCE OF O

J7 2ND FLR

#### Nordic Sizer - Canada 6.4

Page 2

Additional										
FACTORS:									LC#	
Vr	1895	1.00	1.00	-	-	-	-	-	#2	
Mr+	8958	1.00	1.00	-	1.000	-	-	-	#2	
EI			_	-	_	-		-	#2	
CRITICAL LO										
Shear										
Moment(+)										
Deflection			-							
			) + 1.0L		•					
			) + 1.0L							
					joist)	•				
Bearing										
T 1 M			LC #2 = 1			ndustos	. F-oar	+hauska		
Load Type					ive(stora					
Load Patt								1 1116		
All Load										
CALCULATIO		LOITO (TI	Jaj ale i	.iscea .	III CIIC AII	ατγοτο	Jucpuc			
Deflection		= ?	367006 11	-in2 1	K= 4 94e	06 lbs				
"Live" de							(live.	wind. sr	now)	
Trve de	STICCTION	- Delle	SCCTOIL II	.Om all	non acaa	10000	\		,	

#### **Design Notes:**

CONFORMS TO OBC 2012

- 1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC Part 4) and the CSA O86-14 Engineering Design in Wood standard (May 2014 edition).
- 2. Please verify that the default deflection limits are appropriate for your application.
- 3. Refer to 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.

S. KATSOULAKOS S.

DWO NO . TAM3079817 STRUCTURAL COMPONENT ONLY



# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B7(i3589)

BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:00:53

Build 5033

Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

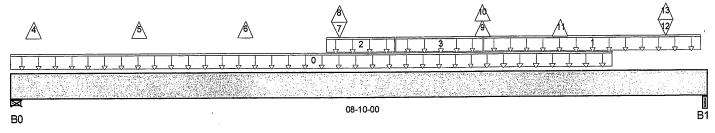
Description: Designs\Flush Beams\1st Floor\Flush Beams\87(i3589)

Specifier:

Designer: LBV

Company:

Misc:



Reaction Summary (Down / Uplift) (lbs)										
Be aring	Live	Dead	Snow	Wind						
B0, 5-1/2"	917/856	91 / 0								
B1 3-1/4"	996/1.372	0 / 111								

۱۸	ad Summary					Live	Dead	Snow	Wind	ırıb.
	Description	Load Type	Rei	f. Start	En d	1.00	0.65	1.00	1.15	
0	Smoothed Load	Unf. Lin. (lb/ft)	L	00-00-00	07-07-08	143	36			n/a
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	05-11-12	08-09-00	14	7			n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	03-11-12	04-10-00		3			n/a
3	FC2 Floor Material	Unf. Lin. (lb/ft)	L	04-10-00	05-11-12	46	23			n/a
4	J2(i3494)	Conc. Pt. (lbs)	L	00-03-08	00-03-08	-92				n/a
5	J2(i3587)	Conc. Pt. (lbs)	Ł	01-07-08	01-07-08	-92				n/a
6	J2(i3587)	Conc. Pt. (lbs)	L	02-11-08	02-11-08	-92				n/a
7	-	Conc. Pt. (lbs)	L	04-01-10	04-01-10	63	32			n/a
8	_	Conc. Pt. (lbs)	L	04-01-10	04-01-10	-92				n/a
9	-	Conc. Pt. (lbs)	L	05-11-08	05-11-08	543	-484			n/a
10	_	Conc. Pt. (lbs)	L	05-11-08	05-11-08	-1,707				n/a
11	J2(i3497)	Conc. Pt. (lbs)	L	06-11-08	06-11-08	-92				n/a
12	J2(i3500)	Conc. Pt. (lbs)	L	08-03-08	08-03-08	121	30			n/a
13	, ,	Conc. Pt. (lbs)	L	08-03-08	08-03-08	-61				n/a

	Factored	Factored	Demand /	Load	Location
Controls Summary	Dem and	Resistance	Resistance	Case	
Pos. Moment	2,961 ft-lbs	25,408 ft-lbs	11.7%	3	04-03-08
Neg. Moment	-5,687 ft-lbs	-25,408 ft-lbs	22.4%	2	05-11-12
End Shear	2,161 lbs	11,571 lbs	18.7%	2	07-09-04
Uplift	2,197 lbs	n/a	n/a	2	08-10-00
Total Load Defl.	L/999 (0.046")	n/a	n/a	6	04-06-12
Live Load Defl.	L/999 (-0.068")	n/a	n/a	9	04-10-00
Total Neg. Defl.	L/999 (-0.073")	n/a	n/a	7	04-10-00
Max Defl.	-0.073"	n/a	n/a	7	04-10-00
Span / Depth	10.4	n/a	n/a		00-00-00

De man d

Dim. (L x W)

De m an d/	De mand/	
Resistance	Resistance	
Support	Member	Material

DWG NO. TAM 20799-17
STRUCTURAL
COMPONENT ONLY

Page 1 of 2

**Bearing Supports** 



### Boise Cascade Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B7(i3589)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:00:53

Build 5033 File Name: AUBURN 12 EL 1.mmdl

Job Name: Address: City, Province, Postal Code:BRAMPTON,

Specifier:
Designer: LBV
Company:

Customer: Code reports:

CCMC 12472-R

Misc:

B0	Wall/Plate	5-1/2" x 3-1/2"	1,490 lbs	14.5%	6.3%	Unspecified
B1	Beam	3-1/4" x 3-1/2"	2,197 lbs	36.2%	15.8%	Unspecified

#### **Cautions**

Uplift of 2,197 lbs found at span 1 - Right. Es 1 - 7522-en. B1)

#### Notes

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 086.

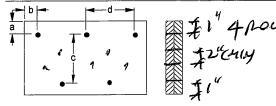
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

#### Connection Diagram



Calculated Side Load = 380.0 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d 🦙 🥶 i Nails

312" ARDOX SPIRAL

#### Disclosure

Description: Designs\Flush Beams\1st Floor\Flush Beams\87(i3589)

Completeness and accuracy of input must be verified by anyone w ho w ould rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered w ood products must be in accordance w ith current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

BC CALO®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



DWG NO.TAM30749-17 STRUCTURAL COMPONENT ONLY



# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP -1st-Floor\...\B11(i3220)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:00:55

BC CALC® Design Report



**Build 5033** 

Job Name: Address:

City, Province, Postal Code:BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

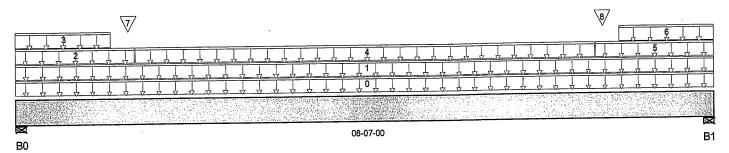
Description: Designs\Flush Beams\1st Floor\Flush Beams\B11(i3220)

Specifier:

Designer: LBV

Company:

Misc:



Total Horizontal Product Length = 08-07-00

Reaction Summary (Down	/ Uplift) (lbs)	De ad	Snow	Wind	-
Be aring	Live				
B0, 5-1/2"	220/0	507/0	459/0		
•	220/0	507/0	460/0		
B1,5-1/2"	22070	00170			

_					Live	Dead	Snow Wind	irib.
	ad Summary Description	Load Type	Ref. Star	t End	1.00	0.65	1.00 1.15	
0	LOWROOF	Unf. Lin. (lb/ft)	L 00-00	-00 08-07-00	17	15	32	n/a
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L '00-00	-00 08-07-00	18	9		n/a
2	E37(i3290)	Unf. Lin. (lb/ft)	L 00-00	-00 01-05-08	3	81		n/a
3	E37(i3290)	Unf. Lin. (lb/ft)	L 00-00	-00 01-02-00	16	19	75	n/a
4	E38(i3291)	Unf. Lin. (lb/ft)	L 01-05	-08 07-01-08	3	41		n/a
5	E33(i3137)	Unf. Lin. (lb/ft)	L 07-01	-08 08-07-00	)	81		n/a
6	E33(i3137)	Unf. Lin. (lb/ft)	L 07-05	-00 08-07-00	16	19	75	n/a
7	E37(i3290)	Conc. Pt. (lbs)	L 01-04	-08 01-04-08	3 50	106	234	n/a
. <i>1</i>	E37(13290) E33(13137)	Conc. Pt. (lbs)	L 07-02		3 50	106	235	n/a

Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
1.776 ft-lbs	25,408 ft-lbs	7%	13	04-03-08
•	11.571 lbs	9.6%	13	01-03-00
•	n/a	n/a	45	04-03-08
•	n/a	n/a	61	04-03-08
•	n/a	n/a	45	04-03-08
	n/a	n/a		00-00-00
		Demand         Resistance           1,776 ft-lbs         25,408 ft-lbs           1,105 lbs         11,571 lbs           L/999 (0.031")         n/a           L/999 (0.015")         n/a           0.031"         n/a	Demand         Resistance         Resistance           1,776 ft-lbs         25,408 ft-lbs         7%           1,105 lbs         11,571 lbs         9.6%           L/999 (0.031")         n/a         n/a           L/999 (0.015")         n/a         n/a           0.031"         n/a         n/a	Dem and         Resistance         Resistance         Case           1,776 ft-lbs         25,408 ft-lbs         7%         13           1,105 lbs         11,571 lbs         9.6%         13           L/999 (0.031")         n/a         n/a         45           L/999 (0.015")         n/a         n/a         61           0.031"         n/a         n/a         45

Poori	ng Supports	Dim.(L x W)	Demand	De man d/ Re sistance Support	Demand/ Resistance Member	Material
B0	Wall/Plate Wall/Plate	5-1/2" x 3-1/2"	1,432 lbs	13.9%	6.1%	Un specified
B1		5-1/2" x 3-1/2"	1,433 lbs	13.9%	6.1%	Un specified

Notes



DWG NO. TAN3080217 STRUCTURAL COMPONENT ONLY



### Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B11(i3220)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:00:55

BC CALC® Design Report

**Build 5033** Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B11(i322

Specifier:

Designer: LBV

Company.

Misc:

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.

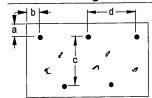
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA CONFORMS TO OBC 2012

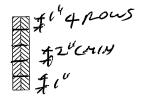
Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

#### **Connection Diagram**





a minimum = **2**" b minimum = 3"

c = 3 - 1/2"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record. Member has no side loads.

Connectors are: 16d .: Nails

312" ARDOX SPIRAL

#### Di sclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered w ood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

BC CALO®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



DWO NO . TAN 30800. 17 STRUCTURAL COMPONENT ONLY



BC CALC® Design Report

# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B9(i3340)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:00:58

**Build 5033** 

Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\89(i3340)

Specifier:

Designer: LBV

Company.

Misc:

05-01-08 B1

Total Horizontal Product Length = 05-01-08

Reaction Summary (Down / Uplift) ( lbs )						
Bearing	Live	De ad	Snow	Wind		
B0, 7-1/16"	609/0	330/0				
B1, 4-1 1/16"	651/0	349/0				

Load Summan			Live	Dead	Snow Wind	Trib.
Load Summary Tag Description	Load Type	Ref. Start	En d 1.00	0.65	1.00 1.15	
0 J1(i3491)	Conc. Pt. (lbs)	L 01-09-00	01-09-00 582	291		n/a
1 J1(i3492)	Conc. Pt. (lbs)	L 03-07-00	03-07-00 678	339		n/a

Domand/

	Factored	Factored	Demand /	Load	Location
Controls Summary	Demand	Resistance	Resistance	Case	
Pos. Moment	1,708 ft-lbs	25,408 ft-lbs	6.7%	1	03-07-00
End Shear	1,400 lbs	11,571 lbs	12.1%	1	03-11-06
Total Load Defl.	L/999 (0.008")	n/a	n/a	4	02-08-00
Live Load Defl.	Ľ⁄999 (0.005")	n/a	n/a	5	02-08-00
Max Defl.	0.008"	n/a	n/a	4	02-08-00
Span / Depth	5.4	n/a	n/a		00-00-00

Beari	ng Supports	Dim . (L x W)	De man d	Resistance Support	Resistance Member	Material
B0	Wall/Plate	7-1/16" x3-1/2"	•	6.6%	4.4%	Unspecified
B1	Post	4-11/16" x3-1/2		10.7%	7.1%	Unspecified

#### Notes

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: 01-06-09, Bottom: 01-06-09.

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 2010 and CSA CONFORMS TO OBC 2012

O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO . TAN 30801.17 STRUCTURAL COMPONENT ONLY



### Boise Cascade Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B9(i3340)

BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:00:58

**Build 5033** 

Job Name:

Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B9(i334(

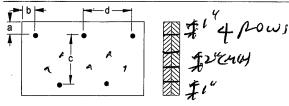
Specifier:

Designer: LBV

Company:

Misc:

#### **Connection Diagram**



a minimum = 2" c = 3-1/2" b minimum = 3" d = 20 4

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record. Member has no side loads.

Connectors are: 16d 🚰 💀 Nails

312" ARDOX SPIRAL

#### Disclosure

Completeness and accuracy of input must be verified by anyone w ho w ould rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered w ood products must be in accordance w ith current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO.TAM3080/-17 STRUCTURAL COMPONENT ONLY



# Boise Cascade Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B13(i3617)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:00

BC CALC® Design Report

**Build 5033** 

Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdi

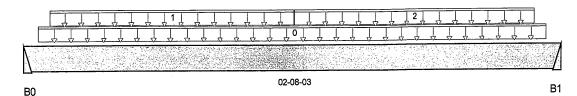
Description: Designs\Flush Beams\1st Floor\Flush Beams\B13(i3617)

Specifier:

Designer: LBV

Company:

Misc:



Total Horizontal Product Length = 02-08-03

Reaction Summary (Down / Uplift) (lbs)							
Be aring	Live	Dead	Snow	Wind			
B0	64 / 0	32 / 0					
B1	64 / 0	32 / 0					

١.	ad Summanı					Live 1.00	Dead	Snow Wind		Trib.
Load Summary Tag Description		Load Type	Re	Ref. Start			0.65	1.00 1.15	1.15	
0	ROOF	Unf. Lin. (lb/ft)	L	00-00-14	02-07-05	40	15			n/a
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-01-10	01-04-02	4	2			n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	01-04-02	02-06-09	16	8			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	85 ft-lbs	12,704 ft-lbs	0.7%	1	01-04-01
End Shear	58 lbs	5,785 lbs	1%	1	00-11-08
Total Load Defl.	L/999 (0")	n/a	n/a	4	01-04-01
Live Load Defl.	L/999 (0")	. n/a	n/a	5	01-04-01
Max Defl.	0"	n/a	n/a	4	01-04-01
Span / Depth	3.1	n/a	n/a		00-00-00

Bear	ing Supports	Dim . (L x W)	De man d	De man d/ Re s is tance Support	De mand/ Resistance Member	Material
B0	Hanger	2" x 1-3/4"	135 lbs	n/a	3.2%	LS90
B1	Hanger	2" x 1-3/4"	135 lbs	n/a	3.2%	LS90

#### Notes

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: 00-01-12, Bottom: 00-01-12.

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 2010 and CSA

O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

#### Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here 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 1-800-964-6999 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



DWG NO. TAM 3080117 STRUCTURAL COMPONENT ONLY



# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B12(i3737)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:01

BC CALC® Design Report

Build 5033 Job Name: Address:

City, Province, Postal Code:BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

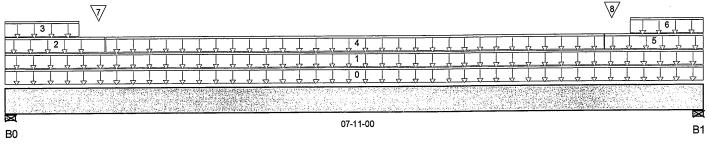
Description: Designs\Flush Beams\1st Floor\Flush Beams\B12(i3737)

Specifier:

Designer: LBV

Company:

Misc:



Total Horizontal Product Length = 07-11-00

Reaction Summary	(Down / Uplift) (lbs)				
Bearing	Live	De ad	Snow	Wind	
B0, 5-1/2"	178/0	433/0	253/0		
B1. 5-1/2"	178/0	433/0	253/0		

۱۵	ad Summary					Live	ive Dead	Snow Wind	i rib.
Tag Description		Load Type		Ref. Start I		1.00	0.65	1.00 1.15	
0	LOWROOF	Unf. Lin. (lb/ft)	L	00-00-00	07-11-00	17	15	32	n/a
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-11-00	11	6		n/a
2	E35(i3287)	Unf. Lin. (lb/ft)	L	00-00-00	01-01-08		81		n/a
3	E35(i3287)	Unf. Lin. (lb/ft)	L	00-00-00	00-10-00	17	15	32	n/a
4	E36(i3288)	Unf. Lin. (lb/ft)	L	01-01-08	06-09-08		41		n/a
5	E34(i3281)	Unf. Lin. (lb/ft)	L	06-09-08	07-11-00		81		n/a
6	E34(i3281)	Unf. Lin. (lb/ft)	L	07-01-00	07-11-00	17	15	32	n/a
7	E35(i3287)	Conc. Pt. (lbs)	L	01-00-08	01-00-08	53	94	100	n/a
8	E34(i3281)	Conc. Pt. (lbs)	L	06-10-08	06-10-08	53	94	100	n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,168 ft-lbs	25,408 ft-lbs	4.6%	13	03-11-08
End Shear	727 lbs	11,571 lbs	6.3%	13	01-03-00
Total Load Defl.	L/999 (0.017")	n/a	n/a	45	03-11-08
Live Load Defl.	L/999 (0.007")	n/a	n/a	61	03-11-08
Max Defl.	0.017"	n/a	n/a	45	03-11-08
Span / Depth	9	n/a	n/a		00-00-00

Bear	ing Supports	Dim . (L x W)	De man d	De mand/ Re s istance Support	De mand/ Resistance Member	Material
B0	Wall/Plate	5-1/2" x 3-1/2"	1,010 lbs	9.8%	4.3%	Unspecified
B1	Wall/Plate	5-1/2" x 3-1/2"	1,010 lbs	9.8%	4.3%	Unspecified

Notes



DWG NO . TAM 3080317 STRUCTÚRAL COMPONENT ONLY



# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B12(i3737)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:01

BC CALC® Design Report

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B12(i37;

Specifier:

Designer: LBV

Company:

City. Province, Postal Code: BRAMPTON, Customer:

Build 5033

Job Name:

Address:

Code reports:

CCMC 12472-R

Misc:

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 086.

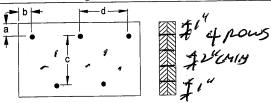
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA CONFORMS TO OBC 2012

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

#### Connection Diagram



a minimum = #" d = 233 b minimum = 3"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record. Member has no side loads.

Connectors are: 16d 🦳 r Nails

312" ARDOX SPIRAL

#### Disclosure

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DWG NO. TAM STRUCTURAL COMPONENT ONLY



# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B8(i3598)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:03

BC CALC® Design Report



**Build 5033** 

Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

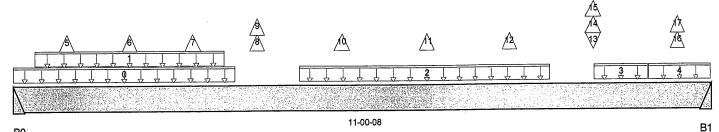
Description: Designs\Flush Beams\1st Floor\Flush Beams\88(i3598)

Specifier:

Designer: LBV

Company:

Misc:



B0

Total Horizontal Product Length = 11-00-08

Reaction Summary (Do	wn / Uplift) (lbs)								
Be aring	Live	De ad	S	now	Win	d			
BO	1,045 / 1,490	0 / 169							
B1	535 / 1,615	0/488							
					Live	Dead	Snow	Wind	Trib
Load Summary Tag Description	Load Type	Re f.	Start	En d	1.00	0.65	1.00	1.15	
0 ROOF	Unf. Lin. (lb/ft)	L	00-00-00	03-06-00	240	120			n/a
1 Smoothed Load	Unf. Lin. (lb/ft)	L	00-04-00	03-04-00	62				n/a
2 Smoothed Load	Unf. Lin. (lb/ft)	L	04-06-00	08-06-00	62				n/a
3 FC2 Floor Material	Unf. Lin. (lb/ft)	L	09-02-04	10-00-08		3			n/a
4 FC2 Floor Material	Unf. Lin. (lb/ft)	L	10-00-08	11-00-08	46	23			n/a
5 J3(i3544)	Conc. Pt. (lbs)	L	00-10-00	00-10-00	-287	-113			n/a
6 J3(i3547)	Conc. Pt. (lbs)	L	01-10-00	01-10-00	-287	-112			n/a
7 J3(i3547)	Conc. Pt. (lbs)	L	02-10-00	02-10-00	-287	-112			n/a
8 J3(i3549)	Conc. Pt. (lbs)	L	03-10-00	03-10-00	72	-131			n/a
9 J3(i3549)	Conc. Pt. (lbs)	L	03-10-00	03-10-00	-334				n/a
10 J3(i3545)	Conc. Pt. (lbs)	L	05-02-00	05-02-00	-382	-150			n/a
11 J3(i3546)	Conc. Pt. (lbs)	L	06-06-00	06-06-00		-150			n/a
12 J3(i3445)	Conc. Pt. (lbs)	L	07-10-00	07-10-00	-382	-152			n/a
13 -	Conc. Pt. (lbs)	L	09-02-01	09-02-01	138	32			n/a
14 -	Conc. Pt. (lbs)	L	09-02-01	09-02-01		-154			n/a
15 -	Conc. Pt. (lbs)	L	09-02-01	09-02-01	-382				n/a
16 J3(i3447)	Conc. Pt. (lbs)	L	10-06-00	10-06-00	57	-163			n/a
- V - · · /			40.00.00	40.00.00	20.0				n/a

10-06-00

Conc. Pt. (lbs)

10-06-00 -382



n/a

DWO NO . TAM 3080417 STRUCTURAL COMPONENT ONLY

17 J3(i3447)



# Boise Coscode Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B8(i3598)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

BC CALC® Design Report

Build 5033 Job Name: Address:

City, Province, Postal Code:BRAMPTON,

Customer:

Code reports: CCMC 12472-R File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B8(i359\)

June 8, 2017 16:01:03

Specifier:

Designer: LBV Company:

Misc:

Code reports.					
Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,987 ft-lbs	25,408 ft-lbs	7.8%	3	03-00-00
Neg. Moment	-7.742 ft-lbs	-25.408 ft-lbs	30.5%	2	05-02-00
End Shear	3.026 lbs	11.571 lbs	26.1%	2	10-01-00
Uplift	3.033 lbs	n/a	n/a	2	11 <i>-</i> 00-08
Total Load Defl.	L/999 (0.03")	n/a	n/a	6	04-06-00
Live Load Defl.	L/731 (-0.178")		49.2%	9	05-06-00
Total Neg. Defl.	L/581 (-0.224")		41.3%	7	05-06-00
•	-0.224"	n/a	n/a	7	05-06-00
Max Defl. Span / Depth	-0.22 <del>4</del> 13.7	n/a	n/a	·	00-00-00

Bo arij	ng Supports	Dim . (L × W)	De man d	De mand/ Resistance Support	De mand/ Resistance Member	Material
BO	Hanger	2" x3-1/2"	1.415 lbs	n/a	28.6%	HGUS410
B0	Hanger Uplift	2" x3-1/2"	2.447 lbs	n/a	0.23	HGUS410
Б0 В1		2" x3-1/2"	363 lbs	n/a	35.5%	HGUS410
ві В1	Hanger Hanger Uplift	2" x3-1/2"	3,033 lbs	n/a	0.28	HGUS410

#### Cautions

Uplift of 3,033 lbs found at span 1 - Right. Hanger B1 cannot handle uplift of -3,033 lbs. - (SIMPSON HOUS 410 ED-31)

CONFORMS TO OBG 2012

#### Notes

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 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



STRUCTURAL COMPONENT ONLY



### Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B8(i3598)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:03

BC CALC® Design Report

\*

Build 5033

Job Name: Address:

City, Province, Postal Code:BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

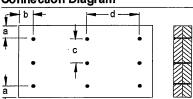
Description: Designs\Flush Beams\1st Floor\Flush Beams\B8(i3598

Specifier:

Designer: LBV Company.

Misc:

Connection Diagram



a minimum = 2" b minimum = 3" c=2-3/4" d= 4 1

Calculated Side Load = 487.9 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Septer Nails

BK" ARDOX SPIRAL

#### Disclosure

Completeness and accuracy of input must be verified by anyone w ho w ould rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered w ood products must be in accordance w ith current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Pb 3/

DWG NO .TAM30604-17 STRUCTURAL COMPONENT ONLY



# | Boise Cascade | Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0-3100 SP | 1st Floor\Flush Beams\B6(i3616)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:06

BC CALC® Design Report

**Build 5033** Job Name: Address:

City, Province, Postal Code:BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

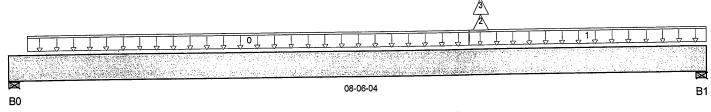
Description: Designs\Flush Beams\1st Floor\Flush Beams\86(i3616)

Specifier:

Designer: LBV

Company.

Misc:



Total Horizontal Product Length = 08-06-04

Reaction Summary (Down /	Uplift) (lbs) Live	De ad	Snow	Wind	
B0, 2-3/4"	461/474	51 / 0			
B1, 2-3/4"	878 / 1,016	8/0			

					Live	Dead	Snow Wind	Trib.
Load Summary Tag Description		Load Type	Ref. Start	En d	1.00	0.65	1.00 1.15	
	0 FC2 Floor Material	Unf. Lin. (lb/ft)	L 00-02-12	05-07-04	30	15		n/a
	1 FC2 Floor Material	Unf. Lin. (lb/ft)	ı 05-07-04	08-06-04	47	23		n/a
		Conc. Pt. (lbs)	L 05-09-00	05-09-00	1,040	-172		n/a
	2 B8 (i3598)	• •		05-09-00				n/a
	3 B8(i3598)	Conc. Pt. (lbs)	L 03-08-00	00-00-00	1,100			

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,067 ft-lbs	25,408 ft-lbs	12.1%	3	05-09-00
	-4,100 ft-lbs	-25,408 ft-lbs	16.1%	2	05-09-00
Neg. Moment End Shear	1,500 lbs	11,571 lbs	13%	4	07-06-00
	1,517 lbs	n/a	n/a	4	08-06-04
Uplift	L/999 (0.041")	n/a	n/a	6	04-07-03
Total Load Defl.	L/999 (-0.049")		n/a	9	04-08-01
Live Load Defl.	L/999 (-0.049")		n/a	7	04-08-01
Total Neg. Defl.	-0.049"	n/a	n/a	7	04-08-01
Max Defl. Span / Depth	10.3	n/a	n/a		00-00-00

Pooris	ng Supports	Dim . (L x W)	De man d	De man d/ Re sistance Support	Resistance Member	Material
B0	Wall/Plate	2-3/4" x 3-1/2"	755 lbs	14.7%	6.4%	Un specified
B1	Wall/Plate	2-3/4" x 3-1/2"	1,517 lbs	29.5%	12.9%	Un specified

Cautions

Uplift of 1,517 lbs found at span 1 - Right.

(SIMPSON 2 H25A + 3-3/49 COMMON TOENAUS CO.BI)

Notes



DWG NO . TAM 3065-17 STRUCTURAL COMPONENT ONLY

Page 1 of 2



# Boiso Cascado Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\Flush Beams\B6(i3616)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:06

BC CALC® Design Report



**Build 5033** 

Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B6(i3616

Specifier:

Designer:

Company:

Misc:

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 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA CONFORMS TO OBC 2012

Design based on Dry Service Condition.

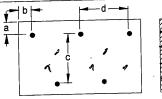
Importance Factor: Normal Part code: Part 9

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered w ood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Connection Diagram



a minimum = ?" b minimum = 3"

Calculated Side Load = 104.4 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record. Nails دنہ " منا Nails

Connectors are: 1

316" ARDOX SPIRAL

ROVINCE OF

DWG NO . TAN 30805-17 STRUCTURAL COMPONENT ONLY



## Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B10(i3410)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:09

BC CALC® Design Report



**Build 5033** 

Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

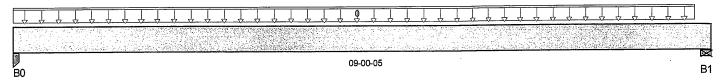
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B10(

Specifier:

Designer: LBV

Company:

Misc:



Total Horizontal Product Length = 09-00-05

Reaction Summary (Down / Uplift) (Ibs)							
Be aring	Live	De ad	Snow	Wind			
B0, 5-5/16"	2,671/0	1,380/0					
B1, 3"	2,178/0	1,132/0					

Load Summary				. L	_ive	Dead	Snow	Wind	Trib.
	g Description	Load Type	Ref. Start	End 1	1.00	0.65	1.00	1.15	
0	Smoothed Load	Unf. Lin. (lb/ft)	L 00-00-00	08-09-13 5	550	275			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	10,040 ft-lbs	25,408 ft-lbs	39.5%	1	04-01-13
End Shear	4,360 lbs	11,571 lbs	37.7%	1	07-11-13
Total Load Defl.	L/557 (0.182")	0.423"	43.1%	4	04-07-13
Live Load Defl.	L/999 (0.12")	n/a	n/a	5	04-07-13
Max Defl.	0.182"	n/a	n/a	4	04-07-13
Span / Depth	10.7	n/a	n/a		00-00-00

				De mand/ Resistance	Demand/ Resistance	
Bea	ring Supports	Dim. (L x W)	De m an d	Support	Member	Material
B0	Post	5-5/16" x3-1/2"	5,731 lbs	37.8%	25.2%	Unspecified
B1	Wall/Plate	3" x 3-1/2"	4,682 lbs	54.9%	36.6%	Unspecified

#### Notes

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: 01-01-08, Bottom: 01-01-08.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA CONFORMS TO OBC 2012 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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OWO NO . TAN 30806 17

STRUCTURAL COMPONENT ONLY



# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B10(i3410)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:09

BC CALC® Design Report

\*

Dry | 1 span | No cantilevers | 0/12 slop

Build 5033 Job Name:

Address: City, Province, Postal Code:BRAMPTON,

Customer:

Code reports: CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

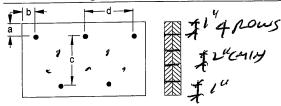
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B1

Specifier:

Designer: LBV Company:

Misc:

#### **Connection Diagram**



a minimum = **t**" c = **1** b minimum = 3" d = **4** 

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record. Member has no side loads.

Connectors are: 16d Spiker Nails

312" ARDOX SPIRAL

#### Disclosure

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DWG NO. TAM 3060617 STRUCTURAL COMPONENT ONLY



# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B1(i3667)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:14

BC CALC® Design Report

**Build 5033** Job Name:

Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

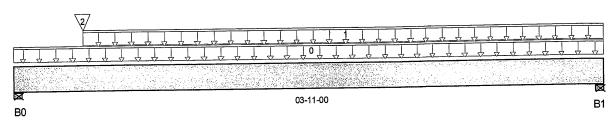
Description: Designs\Flush Beams\Basment\Flush Beams\B1(i3667)

Specifier:

Designer: LBV

Company:

Misc:



Total Horizontal Product Length = 03-11-00

Reaction Summary (Down	/ Uplift) (lbs)	_		ME. d		
Be aring	Live	De ad	Snow	Wind		
B0, 3-1/2"	53 / 0	204/0				
B1, 3-1/2"	53 / 0	204/0				

				Live	Dead	Snow Wind	i rib.
Load Summary Tag Description	Load Type	Ref. Start	En d	1.00	0.65	1.00 1.15	
<del></del>		I 00-00-00	03-11-00		81		n/a
0 E6(i800)	Unf. Lin. (lb/ft)			27	13		n/a
1 FC1 Floor Material	Unf. Lin. (lb/ft)	L 00-05-08	03-11-00		13		n/a
2 Rk1(i3702)	Conc. Pt. (lbs)	L 00-05-08	00-05-08	14	<i>(</i>		II/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	218 ft-lbs	16,515 ft-lbs	1.3%	0	01-11-05
End Shear	140 lbs	7.521 lbs	1.9%	0	01-01-00
Total Load Defl.	L/999 (0.001")	n/a	n/a	4	01-11-05
Live Load Defl.	L/999 (0")	n/a	n/a	5	01 -11-05
Max Defl.	0.001"	n/a	n/a	4	01-11-05
Snan / Denth	4.4	n/a	n/a		00-00-00

				De mand/ Resistance	Resistance Member	Material
Bear	ing Supports	Dim. (L x W)	Demand	Support	2.9%	Unspecified
B0	Wall/Plate	3-1/2" x 3-1/2"	285 lbs	6.7%		·
B1	Wall/Plate	3-1/2" x 3-1/2"	285 lbs	6.7%	2.9%	Unspecified

#### Notes

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 086.

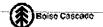
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA CONFORMS TO OBC 2012 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



STRUCTURAL COMPONENT ONLY



# PEGISC COSCORD DOUBLE 1-3/4" x 9-1/2" VERSA-LAM® 2.0-3100 SP Basment\Flush Beams\B1(i3667)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:14

BC CALC® Design Report

**Build 5033** 

Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B1(i366'

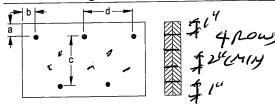
Specifier:

Designer: LBV

Company:

Misc:

#### **Connection Diagram**



a minimum = **f**" b minimum = 3"

c**=3-1/2**"

Calculated Side Load = 7.6 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are:

312" ARDOX SPIRAL

#### Disclosure

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DWG NO . TAM 30807-17 STRUCTURAL COMPONENT ONLY



# Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B2(i3688)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:14

Build 5033 Job Name: File Name: AUBURN 12 EL 1.mmdl

Job Name

Description: Designs\Flush Beams\Basment\Flush Beams\B2(i3688)

Addres s: City, Province, Postal Code:BRAMPTON, Specifier:

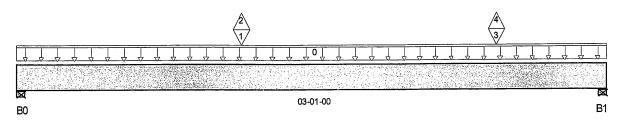
Customer:

Designer: LBV

Code reports:

CCMC 12472-R

Company. Misc:



Total Horizontal Product Length = 03-01-00

Reaction Summary (Down / Uplift) ( lbs )							
Be aring	Live	De ad	Snow	Wind			
B0, 3-1/2"	573/12	418/0					
B1, 3-1/2"	703/20	481/0		•			

Load Summary			Live	Dead	Snow Wind	Trib.
Tag Description	Load Type	Ref. Start	En d 1.00	0.65	1.00 1.15	
0 E15(i818)	Unf. Lin. (lb/ft)	L 00-00-00	03-01-00 224	189		n/a
1 - `´´	Conc. Pt. (lbs)	L 01-02-00	01-02-00 292	143		n/a
2 -	Conc. Pt. (lbs)	L 01-02-00	01-02-00 -16			n/a
3 -	Conc. Pt. (lbs)	L 02-06-00	02-06-00 292	143		n/a
4 -	Conc. Pt. (lbs)	L 02-06-00	02-06-00 -16		•	n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	919 ft-lbs	25,408 ft-lbs	3.6%	1	01-03-09
End Shear	1,202 lbs	11,571 lbs	10.4%	1	01-01-00
Total Load Defl.	L/999 (0.002")	n/a	n/a	6	01-06-06
Live Load Defl.	L/999 (0.001")	n/a	n/a	8	01-06-06
Max Defl.	0.002"	n/a	n/a	6	01-06-06
Span / Depth	3.3	n/a	n/a		00-00-00

				Demand/ Resistance	Demand/ Resistance		
Bea	ring Supports	Dim. (L x W)	De m an d	Support	Member	Material	
B0	Wall/Plate	3-1/2" x 3-1/2"	1,382 lbs	21.1%	9.2%	Unspecified	
B1	Wall/Plate	3-1/2" x 3-1/2"	1,655 lbs	25.3%	11.1%	Unspecified	

#### Notes

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 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86. CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



ps 1/2

DWG NO.TAM200017 STRUGTURAL COMPONENT ONLY



## Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B2(i3688)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:14

BC CALC® Design Report

Build 5033

Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B2(i368-

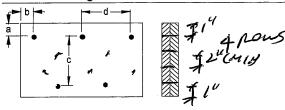
Specifier:

Designer: LBV Company:

Misc:

CCMC 12472-R

#### **Connection Diagram**



a minimum = # b minimum = 3"

Calculated Side Load = 394.2 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Cog Gor Nails

314" ARDOX SPIRAL

#### Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered w ood products must be in accordance w ith current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO . TAM 3000617 STRUCTURAL COMPONENT ONLY



# Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B5(i3596)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:15

BC CALC® Design Report



BC CALCO Design Repor

Build 5033 Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B5(i3596)

Specifier:

Designer: LBV

Company:

Misc:

BO	04-05-00	B1

Total Horizontal Product Length = 04-05-00

Reaction Summary (Down / Uplift) ( lbs )									
Be aring (	Live	De ad	Snow	Wind					
B0, 2-5/8"	523/0	272/0							
B1	569/0	295/0							

١٥	ad Summary				Live	Dead	Snow	Wind	Trib.
	au Summary Description	Load Type	Ref. Start	En d	1.00	0.65	1.00	1.15	
0	ROOF	Unf. Lin. (lb/ft)	L 00-02-12	04-05-00	240	120			n/a
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L 00-02-12	04-05-00	21	10			n/a

	Factored	Factored	Demand /	Load	Location
Controls Summary	Demand	Resistance	Resistance	Case	
Pos. Moment	1,209 ft-lbs	12,704 ft-lbs	9.5%	1	02-02-13
End Shear	1,120 lbs	5,785 lbs	19.4%	1	01-00-02
Total Load Defl.	L/999 (0.011")	n/a	n/a	4	02-02-13 `
Live Load Defl.	Ľ/999 (0.007'')	n/a	n/a	5	02-02-13
Max Defl.	0.011"	n/a	n/a	4	02-02-13
Span / Depth	5.3	n/a	n/a		00-00-00

				De mand/ Re sistance	Demand/ Resistance		
Beari	ng Supports	Dim.(LxW)	Demand	Support	Member	Material	
B0	Beam	2-5/8" x 1-3/4"	1,126 lbs	45.9%	20.1%	Unspecified	
B1	Hanger	2" x 1-3/4"	1,222 lbs	n/a	28.6%	HUS1.81/10	

#### Notes

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 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA

O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

#### Disclosure

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STRUCTURAL COMPONENT ONLY



# Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B3(i3597)

BC CALC® Design Report



Dry | 2 spans | Left cantil ever | 0/12 slope (deg)

June 8, 2017 16:01:15

Build 5033

Job Name: Address:

City, Province, Postal Code:BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

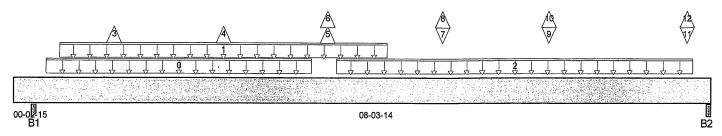
Description: Designs\Flush Beams\Basment\Flush Beams\B3(i3597)

Specifier:

Designer: LBV

Company:

Misc:



#### Total Horizontal Product Length = 08-06-13

Reaction Summary (Do	wn / Uplift) (lbs)	•						
Bearing	Live	De ad S	Snow	Win	d			
B1, 3-1/2"	1,274 / 670	346/0					**** **********************************	
B2, 5-1/4"	899/627	207/0						
Load Summary				Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	Ref. Start	En d	1.00	0.65	1.00	1.15	
0 ROOF	Unf. Lin. (lb/ft)	L 00-04-11	03-07-11	240	120			n/a
1 Smoothed Load	Unf. Lin. (lb/ft)	L 00-06-11	04-06-11	112	10			n/a

Tag	Description	Load Type	Ret	f. Start	En d	1.00	0.65	1.00	1.15	
0	ROOF	Unf. Lin. (lb/ft)	L	00-04-11	03-07-11	240	120			n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-06-11	04-06-11	112	10			n/a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	03-11-03	08-04-03	16	8			n/a
3	J2(i3645)	Conc. Pt. (lbs)	, L	01-02-11	01-02-11	-123				n/a
4	J2(i3631)	Conc. Pt. (lbs)	L	02-06-11	02-06-11	-123				n/a
5	-	Conc. Pt. (lbs)	L	03-09-14	03-09-14	439	-39			n/a
6	-	Conc. Pt. (lbs)	L	03-09-14	03-09-14	-728				n/a
7	J2(i3647)	Conc. Pt. (lbs)	L	05-02-11	05-02-11	146	12			n/a
8	J2(i3647)	Conc. Pt. (lbs)	L	05-02-11	05-02-11	-121				n/a
9	J2(i3662)	Conc. Pt. (lbs)	L	06-06-11	06-06-11	146	12			n/a
10	J2(i3662)	Conc. Pt. (lbs)	L	06-06-11	06-06-11	-121				n/a
11	-	Conc. Pt. (lbs)	L	08-03-02	08-03-02	145	63			n/a
12	-	Conc. Pt. (lbs)	L	08-03-02	08-03-02	-81				n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location	
Pos. Moment	4,403 ft-lbs	12,704 ft-lbs	34.7%	1	03-09-07	
Neg. Moment	-2,456 ft-lbs	-12,704 ft-lbs	19.3%	4	03-09-07	
End Shear	1,318 lbs	5,785 lbs	22.8%	1	07-04-01	
Cont. Shear	1,932 lbs	5,785 lbs	33.4%	1	01-02-03	
Uplift	694 lbs	n/a	n/a	4	00-02-15	
Uplift	754 lbs	n/a	n/a	4	08-06-13	
Total Load Defl.	L/747 (0.128")	0.397"	32.1%	6	04-01-02	
Live Load Defl.	L/999 (0.107")	n/a	n/a	8	04-01-02	
Total Neg. Defl.	L/999 (-0.055")	n/a	n/a	7	04-03-01	
Max Defl.	0.128"	n/a	n/a	6	04-01-02	
Span / Depth	10	n/a	n/a		00-00-00	

De man d

Dim. (L x W)

Demand/ Demand/ Resistance Resistance Support Member Material DWG NO. TAMBOBIO. 17
STRUCTURAL
COMPONENT ONLY

Page 1 of 2

**Bearing Supports** 



## Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B3(i3597)

Dry | 2 spans | Left cantilever | 0/12 slope (deg)

June 8, 2017 16:01:15

BC CALC® Design Report

Build 5033 Job Name: Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B3(i359)

Specifier:

Designer: LBV Company.

Misc:

31.4% Unspecified **B1** 3-1/2" x 1-3/4" 2,343 lbs 47.1% Post 32.8% 14.3% Unspecified B2 5-1/4" x 1-3/4" 1,608 lbs Beam

Cautions

Uplift of 694 lbs found at span 1 - Right. Uplift of 754 lbs found at span 2 - Right.

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.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA CONFORMS TO OBG 2012 O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Cantilevers require sheathed bottom flanges, blocking at cantilever support and closure at ends.

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DWG NO . TAN 308/017 STRUCTURAL COMPONENT ONLY



### Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B4(i3591)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:15

Build 5033 Job Name: Address:

City, Province, Postal Code:BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

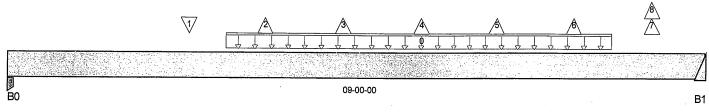
File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B4(i3591)

Specifier:

Designer: LBV Company:

Misc:



#### Total Horizontal Product Length = 09-00-00

Reaction Summary (Down / Uplift) (Ibs)									
Bearing	Live	De ad	Snow	Wind					
B0, 3-1/2"	591/331	182/0							
B1	443/613	0/40							

Lo	ad Summary					Live	Dead	Snow	Wind	Trib.
Та	g Description	Load Type	Re	f. Start	En d	1.00	0.65	1.00	1.15	
0	Smoothed Load	Unf. Lin. (lb/ft)	L	02-09-08	07-09-08	82				n/a
1	B5 (i3596)	Conc. Pt. (lbs)	L	02-03-14	02-03-14	546	283			n/a
2	J2(i3605)	Conc. Pt. (lbs)	L	03-03-08	03-03-08	-153	-35			n/a
3	J2(i3653)	Conc. Pt. (lbs)	L	04-03-08	04-03-08	-153	-35			n/a
4	J2(i3699)	Conc. Pt. (lbs)	L	05-03-08	05-03-08	-153	-35			n/a
5	J2(i3648)	Conc. Pt. (lbs)	L	06-03-08	06-03-08	-153	-35			n/a
6	J2(i3719)	Conc. Pt. (lbs)	L	07-03-08	07-03-08	-153	-35			n/a
7	J2(i3613)	Conc. Pt. (lbs)	L	08-03-08	08-03-08	74	-52			n/a
8	J2(i3613)	Conc. Pt. (lbs)	L	08-03-08	08-03-08	-179				n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,301 ft-lbs	25,408 ft-lbs	9.1%	1	02-03-14
Neg. Moment	-1,775 ft-lbs	-25,408 ft-lbs	7%	4	05-03-08
End Shear	1,102 lbs	11,571 lbs	9.5%	1	01-01-00
Uplift	969 lbs	n/a	n/a	2	09-00-00
Total Load Defl.	L/999 (0.038")	n/a	n/a	6	04-03-08
Live Load Defl.	L/999 (0.034")	n/a	n/a	8	04-05-00
Total Neg. Defl.	L/999 (-0.028")	n/a	n/a	7	04-11-00
Max Defl.	0.038"	n/a	n/a	6	04-03-08
Span / Depth	10.9	n/a	n/a		00-00-00

Beari	ng Supports	Dim . (L x W)	De man d	De mand/ Re sistance Support	De mand/ Re s istance Me m be r	Material
B0	Post	3-1/2" x 3-1/2"	1,115 lbs	11.2%	7.5%	Unspecified
B1	Hanger	2" x 3-1/2"	629 lbs	n/a	11.4%	HGUS410
B1	Hanger Uplift	2" x 3-1/2"	969 lbs	n/a	0.09	HGUS410

#### Cautions



DWG NO .TAM 300LL 17 STRUCTURAL COMPONENT ONLY



BC CALC® Design Report

### Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B4(i3591)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

June 8, 2017 16:01:15

**Build 5033** 

Job Name:

Address:

City, Province, Postal Code: BRAMPTON,

Customer:

Code reports:

CCMC 12472-R

File Name: AUBURN 12 EL 1.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B4(i359

Specifier:

Designer: LBV

Company: Misc:

Uplift of 969 lbs found at span 1 - Right. Hanger B1 cannot handle uplift of -969 lbs.

SIMPSON HEUS410 ea.B),

**Notes** 

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: 02-03-00, Bottom: 02-03-00.

Hanger Manufacturer: Unassigned

Resistance Factor phi has been applied to all presented results per CSA O86.

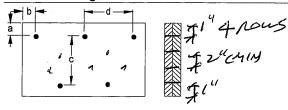
BC CALC® analysis is based on Canadian Limit States Design, as per NECCAS 19 and CSA 12

O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Connection Diagram



a minimum = #" b minimum = 3"

Calculated Side Load = 22.8 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

34" ARDOX SPIRAL

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